



2019  
Knowledge  
Without Borders



# FINAL PROGRAM

Combined AACPD<sup>M</sup> 73<sup>rd</sup> Annual  
and IAACD 2<sup>nd</sup> Triennial Meeting

SEPTEMBER 18-21, 2019  
ANAHEIM, CALIFORNIA USA



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# AACPDM

We are excited to welcome you to Anaheim for the combined 73rd American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) Annual and 2nd Triennial International Alliance of Academies of Childhood Disability (IAACD) Meeting. The theme for the meeting is "Knowledge without Borders" which is an invitation to think outside of the box so we can come up with new problem-solving approaches through collective creativity and innovation. Each year the annual meeting provides the Academy the opportunity to showcase its mission and to fulfill its vision; namely, to be a global leader in the multidisciplinary scientific education of health professionals and researchers dedicated to the well-being of people with and at risk for cerebral palsy and other childhood-onset disabilities.

The Scientific Program Committee, chaired by Dr. Veronica Schiariti and Dr. Francisco Valencia with IAACD Co-Chair Dr. Diane Damiano, put together an outstanding scientific program that represents the state-of-the-science in cerebral palsy and other childhood-onset disabilities. The committee was challenged to select the 120 scientific papers and 283 scientific posters from near record-breaking number of quality submissions received for this year's meeting.

This year's program offers you engaging keynote speakers, learning experiences, and networking opportunities. Our keynote speakers are dynamic leaders in their fields. They will be speaking about important topics from the genetic basis of Cerebral Palsy to brain-computer interfaces. A wide range of topics will be presented during the 41 Instructional Courses, 28 Breakfast Seminars, 42 Focused Symposia and 6 Debate/Current Controversies that promote translation of research into practice. Focused learning experiences are offered through our pre-conference program, which includes a neurogenetics course organized by the International Cerebral Palsy Genomics Consortium (ICPGC); a course on how to adopt the ICF through the lifespan; a course on rehabilitation and use of motion analysis for single event multi-level surgery; a clinical workshop on how to use the Hammersmith Infant Neurological Examination (HINE); a course on educational strategies for health care providers serving children with medical complexity; a CP Register congress giving the opportunity to those working on and with CP Registers and surveillance systems to come together, share results and brainstorm barriers, concerns and new initiatives; our traditional orthopaedic day and hands-on course on how to use ultrasound guidance for chemodenervation treatments.

The interdisciplinary nature of our society makes this meeting an excellent opportunity to brainstorm, discuss clinical challenges, and form future collaborations.

Beyond educational sessions, we invite you to network during the Welcome Reception held in the Grand Plaza, Wine & Cheese Poster and Exhibit Review, and take part in the "Get Up and Go" activities hosted by the Adapted Sports and Recreation Committee between sessions. I also hope you join us for the networking dinner on Friday night in which we will have live music and lots of fun. During the meeting, please use our mobile app to navigate the program, access electronic abstracts, ask questions of our speakers, and share your insights.

We are grateful to the generosity of our sponsors and exhibitors who contribute to the success of our annual meetings. As always, the annual meeting provides a wonderful forum to learn, engage, network, and create new collaborations.

With best wishes,



Mauricio R. Delgado, MD  
AAPDM First Vice-President



Francisco Valencia, MD  
Scientific Programming Committee



Veronica Schiariti, MD, MHSc, PhD  
Scientific Programming Committee



Diane Damiano, PhD, PT  
IAACD Co-Chair

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# American Academy for Cerebral Palsy and Developmental Medicine

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## Combined AACPDM 73rd Annual and IAACD 2nd Triennial Meeting

September 17-21, 2019  
Anaheim, California

## Future Annual Meetings

September 22-26, 2020  
New Orleans, Louisiana

October 6-9, 2021  
Quebec, QC, Canada

## AACPDM Office

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Website: [www.aacpdm.org](http://www.aacpdm.org)

**Tuesday, September 17, 2019**

8:00 am - 5:00 pm	Orthopedic Day <b>(TICKET)</b>
8:00 am - 5:00 pm	International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting <b>(TICKET)</b>
1:00 pm - 5:00 pm	Neuromuscular Ultrasound: Hands On Ultrasound Training Course for Chemodenervation Procedures Part I <b>(TICKET)</b>

**Wednesday, September 18, 2019**

7:30 am - 11:30 am	AACPD Board & Committee Breakfast / Meetings
8:00 am - 12:00 pm	International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting/Neurogenetics Symposium <b>(TICKET)</b>
8:00 am - 12:00 pm	<b>Pre-Conference Sessions</b> PC1: Rehabilitation and Use of Motion Analysis for Single Event Multi-Level Surgery <b>(TICKET)</b>
10:00 am - 12:00 pm	Lower Extremity Osteotomies in Pediatric Orthopaedics: Hands-On Sawbones Session
12:00 pm - 1:00 pm	AACPD Board & Committee Luncheon
1:00 pm - 5:00 pm	Neuromuscular Ultrasound: Hands On Ultrasound Training Course for Chemodenervation Procedures Part II <b>(TICKET)</b>
1:00 pm - 5:00 pm	<b>Pre-Conference Sessions</b> PC2: Practical Approaches to Complex Care: Building your Clinical and Teaching Toolkit <b>(TICKET)</b> PC3: Fourth World CP Register and Surveillance Congress <b>(TICKET)</b> PC4: The ICF in a Global Context: Towards a systematic adoption across settings throughout the lifespan <b>(TICKET)</b> PC5: Hammersmith Infant Neurological Examination Clinical Workshop <b>(TICKET)</b>
1:00 pm - 5:00 pm	Board of Directors Meeting
6:00 pm - 6:30 pm	Scholarship Meet and Greet
6:30 pm - 8:00 pm	Welcome Reception at the Grand Plaza <b>(TICKET)</b>

**Thursday, September 19, 2019**

7:00 am - 8:00 am	Continental Breakfast
7:00 am - 8:00 am	Breakfast Seminars 1-10
7:00 am - 8:00 am	Focused Symposia 1-5
7:00 am - 8:00 am	Current Controversies 1
7:00 am - 8:00 am	Advisor Support Program Meet & Greet Breakfast
8:15 am - 10:15 am	<b>General Session</b> Opening Address <i>Jilda Vargus-Adams, MD, MSc to Mauricio R. Delgado, MD</i> IAACD Update <i>Hans Forssberg, MD</i> The AACPD in Historical Perspective - From Physician Discussion Group to Multi-Discipline International Organization <i>Alfred L. Scherzer, MD, EdD, FAAP</i> Presidential Guest Lecture <i>Rune Simeonsson, PhD, MSPH</i> Presidential Guest Lecture <i>Jozef Gécz, PhD</i>
10:15 am - 10:45 am	Get Up and Move - Yoga
10:45 am - 12:30 pm	<b>Free Paper Sessions A-D</b> A: Genetics/Epidemiology B: Motion Analysis/Gait C: Global/ICF/Surveillance D: Participation
10:45 am - 12:15 pm	Focused Symposia 6-16
10:45 am - 12:15 pm	Current Controversies 2
12:30 pm - 1:45 pm	AACPD Membership Business Meeting & Boxed Lunch (members only) <b>(TICKET)</b>
2:00 pm - 4:00 pm	<b>General Session</b> Corbett Ryan Pathways Pioneer Award <i>Jason Benetti</i> Presidential Guest Lecture <i>Jon R. Davids, MD</i> Mentorship Award <i>Garey Noritz, MD</i> Presidential Guest Lecture <i>Audrey Thurm, PhD</i> Mac Keith Press Basic Science Lecture <i>Elaine Y. Hsiao, PhD</i>
4:15 pm - 6:15 pm	Instructional Courses 1-14
6:30 pm - 8:00 pm	Wine & Cheese Poster and Exhibit Review in the Exhibit Hall

**Friday, September 20, 2019**

7:00 am - 8:00 am	Continental Breakfast
7:00 am - 8:00 am	Breakfast Seminars 11-20
7:00 am - 8:00 am	Focused Symposia 17-20
7:00 am - 8:00 am	Current Controversies 3
8:15 am - 9:45 am	<b>General Session</b> Lifetime Achievement Award <i>Barry Russman, MD</i> Presidential Guest Lecture <i>Leigh Hochberg, MD, PhD</i> Presidential Guest Lecture <i>Daniel Kraft, MD</i>
8:15 am - 10:15 am	Lifespan Committee Adult Care and Aging SIG Meeting
10:00 am - 10:30 am	Get Up and Move - Yoga
10:30 am - 12:15 pm	<b>Free Paper Sessions E-H</b> E: Intervention and Assessment F: Tone Management G: Orthopaedics H: Rehab, Training and Dose
10:30 am - 12:00 pm	Current Controversies 4-5
10:30 am - 12:00 pm	Focused Symposia 21-27
12:15 pm - 1:15 pm	<b>Non CME Luncheon Options</b> International Networking Luncheon <b>(TICKET)</b> Ipsen Presentation Theater <b>(TICKET)</b>
1:30 pm - 3:30 pm	<b>General Session</b> Duncan Wyeth Award <i>Kyle Pease</i> Presidential Guest Lecture <i>Steven Cramer, MD</i> Cathleen Lyle Murray Award <i>Judith E. Heumann</i> Presidential Guest Lecture <i>Tom DiBello, CO, FAAOP</i> Gayle G. Arnold Lecture <i>Erik Carter, PhD</i>
1:30 pm - 3:30 pm	Complex Care SIG Meeting
3:30 pm - 4:30 pm	Poster Walk in the Exhibit Hall
3:40 pm - 3:55 pm	Get Up and Move - Latin Cardio Dance
4:30 pm - 6:30 pm	Instructional Courses 15-28
7:00 pm - 12:00 am	Networking Dinner and Celebration <b>(TICKET)</b>

**Saturday, September 21, 2019**

7:00 am - 8:00 am	Continental Breakfast
7:00 am - 8:00 am	Breakfast Seminars 21-28
7:00 am - 8:00 am	Current Controversies 6
7:00 am - 8:00 am	Focused Symposia 28-32
8:15 am - 10:00 am	<b>Free Paper Sessions I-L</b> I: Imaging J: Transitions/Adult Care K: Early Development L: Sensory and Pain
8:15 am - 9:45 am	Focused Symposia 33-42
9:30 am - 3:30 pm	AACPD Community Forum
10:00 am - 10:30 am	Get Up and Move - Adapted Basketball Competition
10:30 am - 12:00 pm	<b>General Session</b> Gayle G. Arnold Award Presentation CPF Update EACD Update AusAACPD Update AMexPCTND Update Lifeshots Award Winner Chambers Family Lifespan Lecture 2020 Annual Meeting Introduction
12:00 pm - 1:00 pm	Board & Committee Lunch Meetings
1:00 pm - 5:00 pm	Board of Directors Meeting
1:30 pm - 3:30 pm	Instructional Courses 29-41

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 Diane Damiano, PhD, PT - IAACD Co-Chair  
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 Sean Tabaie, MD  
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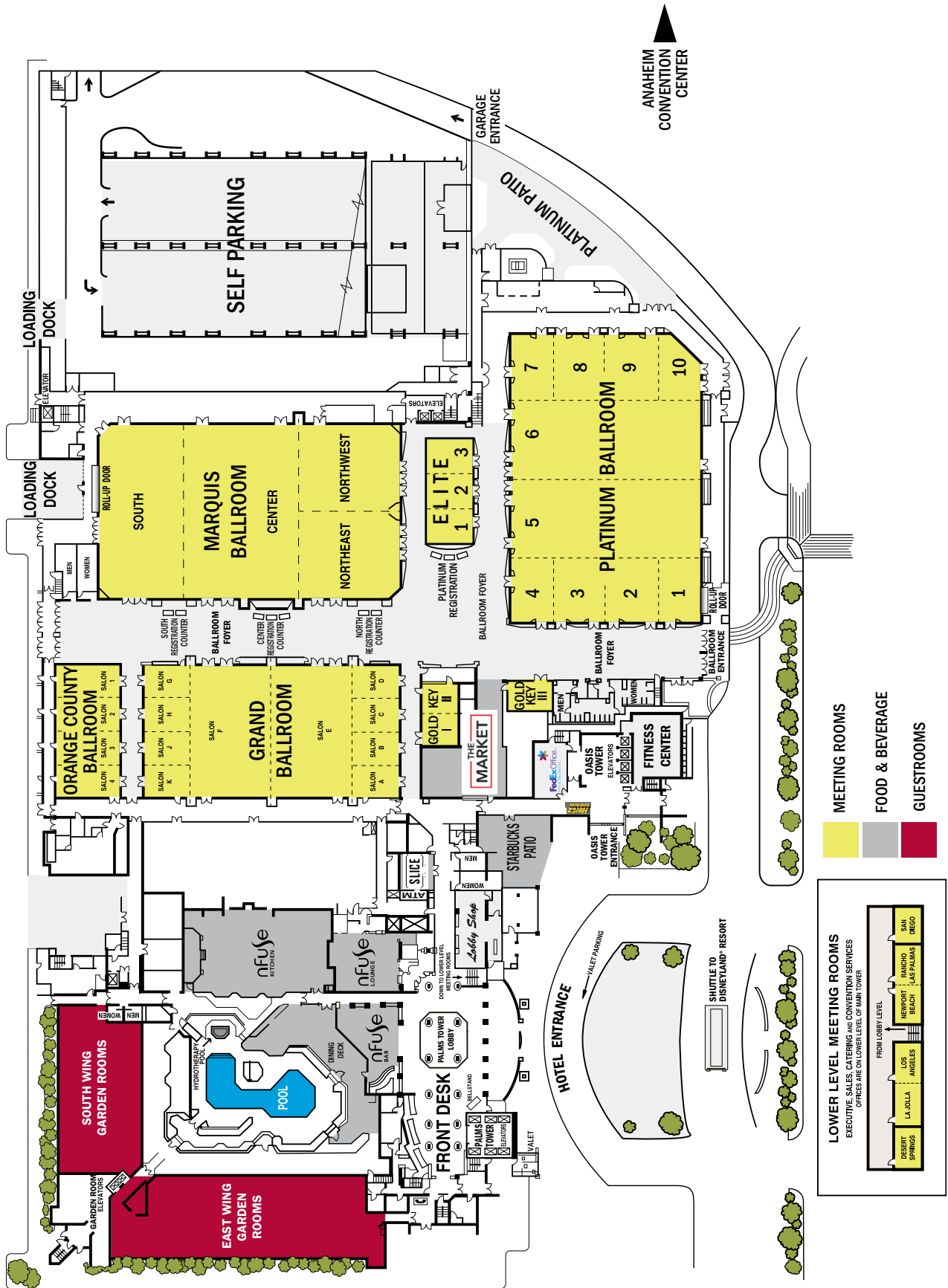
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 Danny M. Weigl, MD; Israel  
 Tamer A. El-Sobky, MD; Saudi Arabia  
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Rachel M. Thompson, MD  
 Eileen G. Fowler, PhD, PT

Winthrop Phelps, MD.....	1948	Robert V. Groover, MD.....	1985
George G. Deaver, MD.....	1949	Alfred L. Scherzer, MD.....	1986
Earl R. Carlson, MD.....	1950	Robert P. Christopher, MD.....	1987
Bronson Crothers, MD.....	1951	Leon Root, MD.....	1988
Leslie B. Hohman, MD.....	1952	Alfred Healy, MD.....	1989
Arnold Gesell, MD.....	1953	Gayle G. Arnold, MD.....	1990
Meyer A. Perlstein, MD.....	1954	James R. Gage, MD.....	1991
Lenox D. Baker, MD.....	1955	John F. McLaughlin, MD.....	1992
Margaret H. Jones Kanaar, MD.....	1956	Michael A. Alexander, MD.....	1993
Nicholson J. Eastman, MD.....	1957	Helen M. Horstmann, MD.....	1994
William T. Green, MD.....	1958	Charlene Butler, EdD.....	1995
Alvin J. Ingram, MD.....	1959	Robert K. Rosenthal, MD.....	1996
Raymond R. Rembolt, MD.....	1960	Peter L. Rosenbaum, MD.....	1997/1998
G.W.R. Eggers, MD.....	1961	Dennis C. Harper, PhD.....	1999
Jessie Wright, MD.....	1962	John F. Mantovani, MD.....	2000
Russell Meyers, MD.....	1963	Michael D. Sussman, MD.....	2001/2002
Eric Denhoff, MD.....	1964	James A. Blackman, MD.....	2003
Chester A. Swinyard, MD.....	1965	Robert W. Armstrong, MD.....	2004
Samuel B. Thompson, MD.....	1966	Luciano S. Dias, MD.....	2005
Sedgwick Mead, MD.....	1967	Barry S. Russman, MD.....	2006
William Berenberg, MD.....	1968	William L. Oppenheim, MD.....	2007
William J. Hillman, MD.....	1969	Diane L. Damiano, PhD PT.....	2008
Harriet E. Gillette, MD.....	1970	Hank G. Chambers, MD.....	2009
Henry H. Banks, MD.....	1971	Deborah J. Gaebler-Spira, MD.....	2010
Lawrence T. Taft, MD.....	1972	Scott A. Hoffinger, MD.....	2011
Robert L. Samilson, MD.....	1973	Joseph P. Dutkowsky, MD.....	2012
Elliott D. O'Reilly, MD.....	1974	Maureen E. O'Donnell, MD MSc FRCP (C).....	2013
Hans U. Zellweger, MD.....	1975	Richard D. Stevenson, MD.....	2014
Eugene E. Bleck, MD.....	1976	Darcy Fehlings, MD MSc FRCP (C).....	2015
Leon Greenspan, MD.....	1977	Eileen Fowler, PhD PT.....	2016
Gerald Solomons, MD.....	1978	Unni Narayanan, MBBS MSc FRCP (C).....	2017
Hyman H. Soboloff, MD.....	1979	Sarah Winter, MD.....	2018
Leonard F. Bender, MD.....	1980	Jilda Vargus-Adams, MD, MPH.....	2019
Fred P. Sage, MD.....	1981	Mauricio Delgado, MD.....	2020
Paul H. Pearson, MD.....	1982	Susan E. Sienko, PhD.....	2021
Harold B. Levy, MD.....	1983		
David H. Sutherland, MD.....	1984		





# Download the AACPD M 2019 Mobile App!



## This mobile app allows you to:

- View schedules, explore sessions, and find networking events.
- Curate your own personal schedule for easy conference attendance.
- Access location and speaker information at your fingertips.
- Post updates to sessions, keynotes, and exhibitor booths.
- Interact with a real-time feed of all event activity, that showcases which sessions are trending, most popular photos, and popular discussion topics.
- Earn points and badges for being active on the app and at the event.
- Expand your professional network and have fun!

## Features of the App:

- Agenda - view the full agenda and related information (session time, room number, speaker info, etc)
- Update - a quick way to share photos, comments, and which session you're attending
- Activity Feed - the real-time pulse of the event. See what people are saying, view photos from the event, and find trending sessions and topics.
- Users - see who's at the event, and connect with them on the app
- Exhibitors - find exhibitors and supporters, and leave comments or ratings

Find members of the AACPD M Communications Committee identified with an "App Helper" ribbon onsite or visit the Registration Desk with questions!

## Get the app!



Download the "AACPD M Events" app from the Apple App Store or Google Play Store.



Find your event app by searching for "AACPD M" or find the event icon and click to open the app. Follow the login instructions provided by your event registration to begin using the app.

As long as you have an internet connection, you can access the app through your laptop via this link:

<https://tinyurl.com/AACPD M19>



\*Download before you go! On-Site WiFi service can affect the functionality of the app.

## Purpose

The educational program of the American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) is designed to provide targeted opportunities for dissemination of information in the basic sciences, prevention, diagnosis, treatment, and technical advances as applied to persons with childhood-onset disabilities. The program provides a forum for discussion of scientific developments and clinical advances in the care of people with these conditions. By presenting forums which foster interdisciplinary communication and interchange among all allied health care professionals concerned with individuals with cerebral palsy and neurodevelopmental disorders, this program's purpose is to ensure that the qualified personnel have the skills and knowledge derived from practices that have been determined through research and experience to be successful in serving children with disabilities. The purpose is also to encourage teambuilding within organizations and institutions, encourage multicenter studies, develop information for parents, and find a consensus on the optimal care of various conditions.

## Objectives

To disseminate information on new developments in applied and translational sciences, prevention, diagnosis, treatment, and technology for individuals with cerebral palsy and other childhood onset disabilities. Specifically:

- Participants will increase awareness of new and emerging treatments for individuals with cerebral palsy and other developmental disabilities.
- Participants will be able to identify new modalities for the diagnosis of cerebral palsy and developmental disabilities.
- Participants will increase interprofessional collaboration to help coordinate and improve services across the continuum of care for individuals with cerebral palsy and developmental disabilities across the lifespan.

## Target Audience

All health care professionals, clinicians, researchers and health administrators who are concerned with the care of patients with cerebral palsy and other childhood-onset disabilities, including: developmental and other pediatricians, neurologists, physiatrists, orthopedic and neuro-surgeons, physical and occupational therapists, speech and language pathologists, orthotists, dietitians, rehabilitation engineers, kinesthologists, nurses, psychologists, special education teachers and educators. *Note: All levels of skill will be addressed.*

## AACPDM Vision

A global leader in the multidisciplinary scientific education for health professionals and researchers dedicated to the well-being of people with childhood-onset disabilities.

## AACPDM Mission

Provide multidisciplinary scientific education for health professionals and promote excellence in research and services for the benefit of people with cerebral palsy and childhood-onset disabilities.

## Online Self-Reporting System for CME / CEU / CE Credits

After the Combined AAPDM 73<sup>rd</sup> Annual and IAACD 2<sup>nd</sup> Triennial Meeting, all registrants will receive an instructional email about reporting and printing out their own continuing education certificates. The online self-reporting will be open by no later than November 2019. To verify your correct email address, please visit the registration desk before you leave the meeting. *Please note: In self-reporting, if you miss more than 15 minutes of a session/course, it is not considered full attendance, and cannot be claimed.*

## Certificate of Attendance

All attendees may claim a Certificate of Attendance. Access this form at the Registration Desk.

## ACCME Accreditation Statement

The American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

## AMA Credit Designation Statement

The American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) designates this live activity for a maximum of 38.75 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

## Physical Therapists / Physical Therapy Assistants

ProCert certification is pending. CCUs are a unit of relative value of an activity based on its evaluation against a rigorous and comprehensive set of standards representing the quality of an activity. The CCU determination is a valuation applying many factors including, but not limited to, duration of the activity. No conclusion should be drawn that CCUs correlate to time (e.g. hours).

## Occupational Therapists / Occupational Therapy Assistants

The American Academy for Cerebral Palsy and Developmental Medicine is an Approved Provider of Continuing Education by the American Occupational Therapy Association (AOTA) #6379. Occupational Therapists and Occupational Therapy Assistants will be able to claim a maximum of 3.875 AOTA CEU's. All sessions during the AAPDM 73<sup>rd</sup> Annual and IAACD 2<sup>nd</sup> Triennial Meeting are available for credit. *Note: The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.*

## Nursing Credits

The American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) is a Provider approved by the California Board of Registered Nursing, Provider # CEP 14720, for 38.75 Contact Hours.

## Orthotist Credits

This program has been approved for up to 38.75 credits through the American Board for Certification (ABC). Full participation in this program is required for the full amount of credits. Must sign-in daily at the registration desk.

## How can you benefit from membership in the American Academy for Cerebral Palsy and Developmental Medicine?

### Annual Meeting

An international forum for the dissemination and exchange of new knowledge, ideas and educational information between participants from all disciplines.

Each year, the Academy offers International Scholarships and Student Scholarships to members to assist with the cost of attending the Annual Meeting. Financial support for the creation of new international meetings that are related to cerebral palsy and developmental medicine is also available through the Development Grant.

### Advisor Support Program

The AACPDM Membership Committee launched an Advisor Support Program to match veteran AACPDM members with new members to ensure they get everything they can out of their membership. Advisor areas include networking, committee involvement, research and grants, international experience and more!

### eCourses

The AACPDM Education Committee launched AACPDM eCourses which are 3-4 week online, self-paced educational opportunities to earn continuing education credits (CEUs).

### Networking

Membership in AACPDM facilitates making contacts with medical professionals and researchers with similar interests. This diverse group of professionals is bound together by a unified interest in improving the lives of people with cerebral palsy and developmental disabilities.

### Publications

Developmental Medicine and Child Neurology (DMCN) is the official journal of the AACPDM. This peer reviewed journal is recognized internationally as the leader in the field. Fellow Members receive a FREE subscription to DMCN, or they may choose to select from a list of Clinics in Developmental Medicine series books in place of the DMCN Journal.

AACPDM creates a quarterly newsletter and periodic broadcast emails about various events and activities in the industry. Members assist in developing informational materials to keep the public informed about advances in treating cerebral palsy and other developmental disabilities.

### Research

AACPDM offers the opportunity for members to apply for a Research Planning Grant. The purpose of this grant is to provide financial support to bring together investigators from geographically disparate locations, obtain statistical consultation and develop a multi-center research study plan. The goal is to provide the forum and initial planning to develop a successful grant submission for full funding through some larger agency (e.g., NIH, UCP, NIDRR, CDC, CIHR etc). The grant should focus on an important clinical question relevant to the membership of AACPDM and the involvement of a multidisciplinary team is expected.

### Website

Members can visit the Members Only section of the AACPDM website for a wide variety of information not available to non-members including Sage Award Videos, membership contact information and other educational opportunities.

### Committees

The heart of the Academy is our committees. These committees offer networking and opportunities to explore areas of deep interest with a wide range of professionals from the membership.

- Adapted Sports and Recreation
- Advocacy
- Awards
- \* Care Pathways
- Communications
- Community Council
- Complex Care
- Education
- International Affairs
- Life Span Care
- Membership
- Nominating
- Publications
- Research
- Scientific Program

### Ticketed Sessions

Please note, **a ticket does not guarantee access to a session.** We advise individuals to arrive at least 10 minutes prior to increase the ability to attend the session. This does not apply to additionally purchased pre-conference sessions, the International Luncheon, or the Networking Dinner Celebration.

### Hours at a Glance

#### Registration - North Registration Counter

##### Monday, September 16

5:00 pm - 7:00 pm

##### Tuesday, September 17

7:00 am - 7:00 pm

##### Wednesday, September 18

7:00 am - 7:00 pm

##### Thursday, September 19

6:30 am - 6:00 pm

##### Friday, September 20

6:30 am - 6:00 pm

##### Saturday, September 21

6:45 am - 1:00 pm

### Exhibit Hall Hours - Marquis Ballroom Center and South

#### Thursday, September 19

7:00am - 8:00am	Continental Breakfast
10:15am - 10:45am	Attendee Break in Exhibit Hall
4:00pm - 4:15pm	Attendee Break in Exhibit Hall
6:30pm - 8:00pm	Wine & Cheese Poster and Exhibit Review

#### Friday, September 20

7:00am - 8:00am	Continental Breakfast
10:00am - 10:30am	Attendee Break in Exhibit Hall
3:30pm - 4:30pm	Poster Walk and Attendee Break in Exhibit Hall

### Poster Viewing - Marquis Ballroom Center and South

#### Thursday, September 19

7:00am - 8:00am	Continental Breakfast
10:15am - 10:45am	Attendee Break in Exhibit Hall
4:00pm - 4:15pm	Attendee Break in Exhibit Hall
6:30pm - 8:00pm	Wine & Cheese Poster and Exhibit Review

#### Friday, September 20

7:00am - 8:00am	Continental Breakfast
10:00am - 10:30am	Attendee Break in Exhibit Hall
3:30pm - 4:30pm	Attendee Break in Exhibit Hall

#### Saturday, September 21

7:00am - 8:00am	Continental Breakfast
10:00am - 10:30am	Attendee Break in Exhibit Hall

### Guest Attendance

AACPDM asks registered attendees to refrain from taking children, spouses, or guests to any educational sessions or functions offered at the Annual Meeting that are not included in the guest attendance registration. Please urge your guests to wear their name badges at all times.

### E-Poster

An E-Poster is an electronic version of the traditional paper poster in PowerPoint format, and is displayed on a monitor. In addition to traditional paper posters on bulletin boards, Scientific and Demonstration Poster Presenters were also required to submit their poster as an E-Poster. There will be computer kiosks throughout the Anaheim Marriott dedicated to E-Posters. They will also be posted on the AACPD website during and 2 months after the meeting. E-Posters increase exposure to the work and allow people to view the poster in the comfort of their hotel room or even at home after the meeting. Thank you to all the Poster Presenters who took on the extra work to participate in the Poster Preview and/or to submit an E-Poster!

### No Smoking

Smoking is prohibited at all Annual Meeting sessions and events.

### Attire

Attire for the educational sessions of the meeting is business casual. Please bring a jacket or sweater, as room temperatures may vary.

### Camera/Recording Policy

It is the policy of AACPD that no cameras are permitted in the meeting sessions, exhibit hall, or poster sessions. Please refrain from taking any photos in those locations. Audio or videotaping is strictly prohibited.

### FDA Disclaimer

Some medical devices or pharmaceuticals not cleared by the FDA or cleared by the FDA for a specific use only may be used "off-label" (i.e., a use not described on the product's label) if, in the judgment of the treating physician, such use is medically indicated to treat a patient's condition. "Off label" uses of a device or pharmaceutical may be described in AACPD educational programs or publications so long as the lack of FDA clearance for such uses is also disclosed. Results from scientific studies known to the author or presenter relating to the described intended use should be discussed, if so doing will not adversely affect the study or violate some other regulatory requirement. Some drugs or medical devices described or demonstrated in Academy educational materials or programs have not been cleared by the FDA or have been cleared by the FDA for specific use only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or device he or she wishes to use in practice.

### Americans with Disabilities Act

The AACPD wishes to ensure that no individual with a disability is excluded, denied services, or otherwise treated differently than other individuals because of the absence of auxiliary aides and services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act please notify AACPD at least 14 working days prior to the program to allow time to acquire the support needed.

## SESSION EVALUATIONS

We need your feedback! As a dedicated learner during the Combined AACPDM 73rd Annual and IAACD 2nd Triennial Meeting we truly value your feedback on the individual sessions, general sessions as well as the overall meeting experience. The future leadership of the AACPDM uses this information to improve on the future educational offerings and to make your experience the most productive and realistic in bringing back practical information to your practice.

Please take a moment to provide your feedback on Combined AACPDM 73rd Annual and IAACD 2nd Triennial Meeting in the following ways:

- The Annual Meeting mobile app will include access to the online survey tool to complete various session evaluations.
- Participants will be asked to provide input on the educational program of the Combined AACPDM 73rd Annual and IAACD 2nd Triennial Meeting through the online CME / CEU Claim System when claiming credit for participation.

## Insurance/Liabilities and Disclaimer

The AACPDM will not be held responsible for injuries or for loss or damage to property incurred by participants or guests at the Annual Meeting, including those participating in social and fitness events. Participants and guests are encouraged to take out insurance to cover loss incurred in the event of cancellation, medical expenses, or damage to or loss of personal effects when traveling outside of their own country. The AACPDM cannot be held liable for any hindrance or disruption of Annual Meeting proceedings arising from natural, political, social or economic events, or other unforeseen incidents beyond its control. Registration of a participant implies acceptance of this condition. The material presented at this continuing medical education activity is made available for education purposes only. The material is not intended to represent the only, nor necessarily the best, methods or procedures appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement, or opinion of the faculty that may be helpful to others who face similar situations.

## Disclosure

The presenting authors on the Free Papers and Posters are underlined. All corresponding authors were responsible for querying the co-authors regarding the disclosure of their work. The AACPDM does not view the existence of these disclosed interests or commitments as necessarily implying bias or decreasing the value of the author's participation in the course. To follow ACCME guidelines the Academy has identified the options to disclose as follows: a. Research or institutional support has been received b. Miscellaneous, non-income support (e.g., equipment or services), commercially derived honoraria, or other nonresearch related funding (e.g., paid travel) has been received c. Royalties have been received d. Stock or stock options held e. Consultant or employee f. Received nothing of value g. Did not respond or unable to contact

One or more of these letters appears by each author's name indicating their disclosure. Please see the Disclosure Index at the back of the program.



**Presidential Guest Lectureship -  
Jozef Gécz, PhD**

**Redefining Cerebral Palsy as a Genetic,  
Neurodevelopmental Spectrum Disorder**

Prof. Jozef Gécz is National Health and Medical Research Council Senior Principal Research Fellow and Channel 7 Inaugural Chair for the

Prevention of Childhood Disability at the University of Adelaide and South Australian Health and Medical Research Institute, Adelaide, Australia. Professor Gécz career spans 33 years of competitive research in genomics and molecular biology of childhood onset neurological disorders across Europe and Australia.

Professor Gécz discovered or contributed to the discovery of >200 disease genes. His pioneering research into the genetics of non-syndromic intellectual disabilities and X-chromosome linked forms in particular later expanded into childhood onset epilepsies, autisms and more recently cerebral palsies. His achievements have been recognised, among others, also by his election to the Fellowship of the Australian Academy of Science, Australian Academy of Health and Medical Sciences and the Faculty of Science of the Royal College of Pathologists of Australasia.

Professor Gécz' research is patient centric and focuses on the application of genomics for precision diagnosis of childhood onset neurodevelopmental disabilities to empower early and personalised intervention, management and treatment.



**Presidential Guest Lectureship -  
Jon R. Davids, MD**

**Rationale and Evolution of the Application of  
Quantitative Gait Analysis to the Management of  
Gait Disorders in Children with Cerebral Palsy**

Dr. Davids is a board certified Pediatric Orthopaedic Surgeon, who is the Assistant

Chief of Orthopaedics and Medical Director of the Motion Analysis Laboratory at the Shriners Hospitals for Children Northern California; and Professor and Ben Ali Chair in Pediatric Orthopaedics in the Department of Orthopaedics at the University of California Davis Medical School in Sacramento, California, USA.

Dr. Davids has published and lectured extensively at regional, national and international levels, teaching gait analysis interpretation and clinical applications for children with cerebral palsy, myelodysplasia, and limb deficiency. He is also an active member of the American Academy of Cerebral Palsy and Developmental Medicine (AAPDM), American Academy of Orthopaedic Surgeons (AAOS), American Board of Orthopaedic Surgeons (ABOS), Pediatric Orthopaedic Society of North America (POSNA) and the American Orthopaedic Association (AOA). Jon serves on the editorial board of the Journal of Pediatric Orthopaedics and Gait & Posture.



**Presidential Guest Lectureship - Audrey  
Thurm, PhD**

**Motor Milestones, Intellectual Disability  
and Autism**

Audrey Thurm, Ph.D., is Director of the Neurodevelopmental and Behavioral Phenotyping Service in the Office of the

Clinical Director, part of the National Institute of Mental Health (NIMH)'s Intramural Research Program (IRP). She has been at NIMH since 2002, serving in the extramural program until 2006, at which time she moved to the IRP to engage in research on autism spectrum disorder (ASD) and other related neurodevelopmental disorders.

Dr. Thurm's research interests focus on evaluating and improving upon diagnostic and cognitive assessment instrumentation through longitudinal studies of risk and characterization of neurodevelopmental disorders. In addition to studying the prodromal and post-diagnostic characterization of idiopathic ASD, studies also focus on phenotypic explorations of genetic disorders associated with Intellectual Disability and ASD. A goal of this research is to improve instrumentation to allow for more finely-tuned developmental assessments that distinguish various phenotype-genotype relationships and serve as useful treatment outcome measures.



**Mac Keith Press Basic Science  
Lectureship - Elaine Y. Hsiao, PhD**

**Microbiome-Nervous System Interactions in  
Health and Disease**

Dr. Elaine Y. Hsiao is a professor in the Department of Integrative Biology & Physiology, where she leads a laboratory studying

fundamental interactions between the microbiome, brain and behavior, and their applications to neurological disorders.

Dr. Hsiao's work on neuroimmune contributions to neurodevelopment and behavior led to the finding that postnatal modification of the microbiota improves gastrointestinal and behavioral symptoms in mouse models of genetic and environmental risk factors for autism. In addition, her laboratory identified select bacteria from the healthy human microbiome that promote host serotonin biosynthesis in the gut. Inspired by this interplay between the microbiota and nervous system, the Hsiao laboratory is mining the human microbiota for microbial modulators of host neuroactive molecules, investigating the impact of microbiota-immune system interactions on neurodevelopment and examining the microbiome as an interface between gene-environment interactions in neurological diseases.

Their work in these areas have led to several honors, including the Chan Zuckerberg Initiative Ben Barres Career Acceleration Award, Packard Fellowship in Science and Engineering, Alfred P. Sloan Fellowship in Neuroscience, Klingenstein-Simons Fellowship in Neuroscience, Kavli Fellow of the National Academy of Sciences, National Institutes of Health Director's Early Independence Award, Forbes' 30 Under 30 in Science and Healthcare and National Geographic's Emerging Explorer Award.



### Presidential Guest Lectureship - Leigh Hochberg, MD, PhD

#### Intracortical Brain-Computer Interfaces: Toward Restoring Communication and Mobility

Dr. Leigh Hochberg is a vascular and critical care neurologist and neuroscientist. His research focuses on the development and

testing of novel neurotechnologies to help people with paralysis and other neurologic disorders, and on understanding cortical neuronal ensemble activities in neurologic disease.

Dr. Hochberg has appointments as Neurologist, Massachusetts General Hospital, where he attends in the NeurolCU and on the Acute Stroke service; Professor of Engineering, School of Engineering and Carney Institute for Brain Science, Brown University; Director, VA RR&D Center for Neurorestoration and Neurotechnology, Providence VAMC; and Senior Lecturer on Neurology at Harvard Medical School. He also directs the Center for Neurotechnology and Neurorecovery for MGH Neurology, where he is the IDE Sponsor-Investigator and Principal Investigator of the BrainGate pilot clinical trials ([www.braingate.org](http://www.braingate.org)) that are conducted by a close collaboration of scientists and clinicians at Brown, Case Western Reserve University, MGH, Providence VAMC, and Stanford University.

Dr. Hochberg is a Fellow of the American Academy of Neurology and the American Neurological Association. Dr. Hochberg's BrainGate research, which has been published *Nature*, *Science Translational Medicine*, *Nature Medicine*, *Nature Neuroscience*, the *Journal of Neuroscience*, and others, has received support from the Rehabilitation R&D Service of the U.S. Department of Veterans Affairs, NIDCD, the NIH BRAIN Initiative/NINDS, and others.



### Presidential Guest Lectureship - Daniel Kraft, MD

#### The Future of Health & Medicine: Where Can Technology Take Us?

Dr. Daniel Kraft is a Stanford and Harvard trained physician-scientist, inventor, entrepreneur, and innovator. With over 25

years of experience in clinical practice, biomedical research and healthcare innovation, Kraft has served as Faculty Chair for Medicine at Singularity University since its inception in 2008, and is the Founder and Chair of Exponential Medicine, a program that explores convergent, rapidly developing technologies and their potential in biomedicine and healthcare.

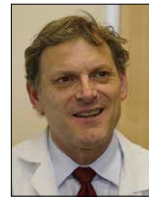
Following undergraduate degrees from Brown University and medical school at Stanford, Daniel was Board Certified in both Internal Medicine & Pediatrics after completing a Harvard residency at the Massachusetts General Hospital & Boston Children's Hospital, and fellowships in hematology, oncology and bone marrow transplantation at Stanford. He has multiple scientific publications and medical device, immunology and stem cell related patents through faculty positions with Stanford University School of Medicine and as clinical faculty for the pediatric bone marrow transplantation service at University of California San Francisco.

Dr. Kraft is a member of the Kaufman Fellows Society (Class 13) and member of the Inaugural (2015) class of the Aspen

Institute Health Innovators Fellowship. His academic research has focused on: stem cell biology and regenerative medicine, stem cell derived immunotherapies for cancer, bioengineering human T-cell differentiation, and humanized animal models. Clinical work focuses on: bone marrow / hematopoietic stem cell transplantation for malignant and non-malignant diseases in adults and children, medical devices to enable stem cell based regenerative medicine, including marrow derived stem cell harvesting, processing and delivery. He also implemented the first text-paging system at Stanford Hospital.

He is also the inventor of the MarrowMiner, an FDA approved device for the minimally invasive harvest of bone marrow, and founded RegenMed Systems, a company developing technologies to enable stem cell-based regenerative therapies. He is also the founder of IntelliMedicine, focused on data driven, precision medicine.

Dr. Kraft is an avid pilot and has served in the Massachusetts and California Air National Guard as an officer and flight surgeon with F-15 & F-16 Fighter Squadrons. He has conducted research on aerospace medicine that was published with NASA, with whom he was a finalist for astronaut selection.



### Presidential Guest Lectureship - Steven C. Cramer, MD

#### Brain Repair After Stroke

Dr. Steven C. Cramer graduated with Highest Honors from University of California, Berkeley; received his medical degree from University of Southern California; did a residency in internal

medicine at UCLA; and did a residency in neurology plus and a fellowship in cerebrovascular disease at Massachusetts General Hospital. Dr. Cramer also earned a Masters Degree in Clinical Investigation from Harvard Medical School.

His research focuses on neural repair after central nervous system injury in humans, with an emphasis on stroke and on recovery of movement. Treatments examined include robotic, stem cell, monoclonal antibody, brain stimulation, drug, and telehealth methods. A major emphasis is on translating new drugs and devices to reduce disability after stroke, and on individualizing therapy for each person's needs.

Dr. Cramer has been awarded the Stroke Rehabilitation Award from the American Heart Association and the Barbro B. Johansson Award in Stroke Recovery from the World Stroke Organization, co-edited the book *Brain Repair after Stroke*, and is the author of over 250 manuscripts.



### Presidential Guest Lectureship - Tom DiBello, CO, LO, FAAOP Director, Dept. of Clinical and Scientific Affairs Current State of the Art of Lower Limb Pediatric Orthotic Care: Translation to the Developing World

Mr. DiBello holds a Bachelors of Pharmacy

Degree from Duquesne University and certificates in Orthotics and Prosthetics from Northwestern University. He has lectured extensively on Lower Extremity Orthotics throughout the United States, Central and South America, Southeast Asia, Africa and China, has authored chapters on this subject in two textbooks

and authored two chapters in the American Academy of Orthopedic Surgeons, Atlas of Orthotics.

Mr. DiBello is a Fellow of the American Academy of Orthotists and Prosthetists and received the Academy's Distinguished Practitioner Award in 2007. In 2015 Tom was awarded the American Orthotic and Prosthetic Associations Lifetime Achievement Award. Tom is a Past President of the Academy and Past President for two successive years of the American Orthotics and Prosthetic Association.

Tom is Clinical Assistant Professor at the Baylor College of Medicine, Honorary Adjunct Faculty at Texas Women's University and Chairman of the Advisory Committee of the Baylor College of Medicine's Masters of Science Program in Orthotics and Prosthetics, and is a Director in the Department of Clinical and Scientific Affairs, Hanger Clinic.



### **Gayle G. Arnold Lectureship - Erik W. Carter, PhD**

#### **A Future of Flourishing: Supporting Successful Transitions for Young People with Disabilities**

Dr. Erik Carter is Cornelius Vanderbilt Professor of Special Education at Vanderbilt University in Nashville, Tennessee. His research and

teaching focuses on evidence-based strategies for supporting inclusion and valued roles in school, work, community, and congregational settings for children and adults with developmental disabilities. He has published widely in the areas of educational and transition services, including more than 200 articles, chapters, and books. He was received research awards from the Council for Exceptional Children, the American Association for Intellectual and Developmental Disabilities, the Association of University Centers on Disabilities, and the Division on Autism and Developmental Disabilities.



### **Presidential Guest Lectureship - Rune J. Simeonsson, PhD, MSPH**

#### **ICF-CY: Added Value for Developmental Practice?**

Rune J. Simeonsson, PhD, MSPH Professor of Education & Senior Fellow, FPG Child Development Institute, at the University of

North Carolina at Chapel Hill, USA. His academic preparation includes the disciplines of Psychology, Special Education and Public Health, converging on the study of developmental characteristics of children and youth with chronic conditions and disabilities. His teaching and research interests focus on assessment and classification of development, functioning and disability of children and the role of environments related to children's health, education and well-being. He has engaged in consultation on child development and disability with UN agencies as well as with countries in Asia, the Middle East, Latin America and Eastern and Western Europe. He served as chair of the WHO work group to develop the International Classification of Functioning, Disability and Health version for Children and Youth (ICF-CY) and served on the WHO committee to revise the diagnosis of Intellectual Developmental Disorder in ICD-11.

### **Chambers Family Lifespan Lectureship**

Moderator: Olivia Raynor, PhD

Panelists: Herlinda Rodriguez and Cathy Liu





### **Cathleen Lyle Murray Award 2019 Recipient: Judith E. Heumann**

*The Cathleen Lyle Murray Foundation Award recipient is selected on the basis of their impact on society through their humanitarian efforts to enhance the lives of persons with severe multiple disabilities. The recipient demonstrates*

*an effective and unique humanitarian approach through advocacy, legislation, clinical services, life experiences, etc., that can be shared with the AACPDM to help promote better understanding of and advancement in society of persons with disabilities.*

Judith (Judy) Heumann is a lifelong advocate for the rights of disabled people. She contracted polio in 1949 in Brooklyn, NY and began to experience discrimination at 5 years old when she was denied the right to attend school because she was a "fire hazard." Her parents played a strong role in fighting for her rights as a child. Judy determined that she, working in collaboration with other disabled people, had to play an increasing advocacy role as she and others experienced continuous discrimination because of their disabilities.

She is now an internationally recognized leader in the disability rights community and a lifelong civil rights advocate. She has been featured in numerous documentaries on the history of the Disability Rights Movement and recently her story was told on Comedy Central's Drunk History, in which she was portrayed by Ali Stroker, the first disabled woman to play on Broadway and Judy has also delivered a TED Talk. As a Senior Fellow at the Ford Foundation, she is currently working to help advance the inclusion of disability in the Foundation's work and is leading a project to advance the inclusion of disabled people in the media. She also currently serves on a number of non-profit boards of directors and is an Ambassador for Leonard Cheshire based in London.

President Obama appointed Judy as the first Special Advisor for International Disability Rights at the U.S. Department of State, where she served from 2010-2017. Mayor Fenty, District of Columbia, appointed her as the first Director for the Department on Disability Services, where she was responsible for the Developmental Disability Administration and the Rehabilitation Services Administration. From June 2002- 2006, Judy served as the World Bank's first Adviser on Disability and Development. In this position, she led the World Bank's disability work to expand the Bank's knowledge and capability to work with governments and civil society on including disability in the global conversation. From 1993 to 2001, Judy served in the Clinton Administration as the Assistant Secretary for the Office of Special Education and Rehabilitative Services in the Department of Education.

She was also responsible for the implementation of legislation at the national level for programs in special education, disability research, vocational rehabilitation and independent living, serving more than 8 million youth and adults with disabilities. 1982-1993 she cofounded the World Institute on Disability with Ed Roberts and Joan Leon. WID was the think tank run by disabled people focused on research to advance the

Independent Living Movement. 1973-1993 Served as a founding member of the Berkeley Center for Independent Living and then on it's Board of Directors. CIL Berkeley was the first Center in the United States and helped to launch the Independent Living Movement in the US and around the World.

Over the course of her life, Judy has been involved on the national and international front working with disabled people's organizations and governments in the US and around the world to advance the human rights of disabled people. She has traveled using her motorized wheelchair to countries on every continent, in urban and rural communities. She has played a role in the development and implementation of major legislation including the IDEA, Section 504, the Americans with Disability Act and the Convention on the Rights of Persons with Disabilities and the Convention on the Rights of Persons with Disabilities.

Judy graduated from Long Island University in Brooklyn, NY in 1969 and received her Master's in Public Health from the University of California at Berkeley in 1975. She has received numerous awards including being the first recipient of the Henry B. Betts Award in recognition of efforts to significantly improve the quality of life for people with disabilities and the Max Starkloff Lifetime Achievement Award from the National Council on Independent Living. She has also been awarded an Honorary Doctorate of Education from Middlebury College (May 2019), Honorary Doctorate of Humane Letters from Long Island University in Brooklyn, an Honorary Doctorate of Public Administration from the University of Illinois, Champaign, and an Honorary Doctorate of Public Service from the University of Toledo, Ohio and an Honorary Degree of Doctor of Humane Letters from Brooklyn College.

Judy's goal in life is to continue to advance the rights and empowerment of ALL disabled people around the world.



### **Lifetime Achievement Award 2019 Recipient: Barry S. Russman, MD**

*The AACPDM Lifetime Achievement Award is specifically selected by the First Vice President. The recipient of this award has, during their lifetime, made creative contributions of outstanding significance to the field of medicine*

*and for the benefit of patients with cerebral palsy and other childhood-onset disabilities.*

Dr. Russman's career has been involved with general pediatric neurology, first in CT at Newington Children's Hospital, an affiliate of UConn Medical School. He then moved to Portland OR, working at Shriners Hospital for Children and OHSU, in the department of Pediatrics and Neurology. His specialty interests have in neuromuscular disease and cerebral palsy, responsible for the MDA and cerebral palsy programs in CT and now OHSU. He has been active in the Academy of Cerebral Palsy and Developmental Medicine, being on the executive committee for 3 years and then president of the Academy in 2005.



### Duncan Wyeth Award 2019 Recipient: Kyle Pease

*This award is named after Duncan Wyeth, who has been both an outstanding athlete and advocate. The award is presented to an individual who has promoted sports and/or recreation in their area for individuals with disabilities. The recipient may be an athlete, coach, or sponsor*

A four-time IRONMAN triathlete, Kyle Pease has a career total of more than 75 races. Since 2011, he and his brother, Brent, have competed in races across the country, most recently becoming the first brother duo in history to complete the grueling IRONMAN World Championship in Kona, Hawaii. Born with Cerebral Palsy, Kyle has strived for life beyond his wheelchair. Through his work with the Kyle Pease Foundation, he's focused on creating opportunities for inclusion in sports for athletes with disabilities. A motivational speaker and greeter at Piedmont Hospital in Atlanta, Kyle graduated from Kennesaw State University with a B.S. in Sports Management.



### Mentorship Award 2019 Recipient: Garey Noritz, MD

*This award recognizes an individual who has demonstrated outstanding leadership for trainees and colleagues in the field of cerebral palsy and other developmental disabilities. The Research Committee considers the breadth and depth of the*

*nominee's contribution and impact on improving services and care, promoting professional education and research for individuals with disabilities, and the sustainability of the nominee's mentorship over time. The award recipient must be a current member of the AACPDM.*

Garey Noritz, MD is an Internist and Pediatrician at Nationwide Children's Hospital. He is section and division chief of the Complex Health Care Program, which provides a medical home to children and adults with neurodevelopmental disabilities. He is Professor of Pediatrics at The Ohio State University, and the Director of the Comprehensive Cerebral Palsy Program at Nationwide Children's Hospital.

Dr. Noritz is a graduate of the Brown University School of Medicine and of the Internal Medicine and Pediatrics residency at MetroHealth Medical Center and Case Western Reserve University. He is Board Certified in Internal Medicine, Pediatrics, Neurodevelopmental Disabilities, and Hospice and Palliative Medicine. He is active at the national level in advocating for the care of children and adults with disabilities. He is on the Executive Committee of the Council on Children with Disabilities of the American Academy of Pediatrics, and is past Chair of the Lifespan Committee of the American Academy for Cerebral Palsy and Developmental Medicine. In 2013, he was awarded "Physician of the Year" by Nationwide Children's Hospital.

Dr. Noritz's research interests include efforts to improve the early detection of young children with motor disorders, bone health in patients with disabilities, transition of children with disabilities to adult models of care, palliative medicine, and the primary care of patients with neuromuscular diseases.

Dr. Noritz is a founding member and on the Executive Committee of the Cerebral Palsy Research Network (CPRN),

which is a group of doctors, therapists and patient advocates collaborating to improve treatments and outcomes for people with CP. The network currently has 25 member sites. Dr. Noritz serves as the Principal Investigator of the CPRN's clinical registry.

Dr. Noritz was the lead author of the American Academy of Pediatrics' 2013 clinical report, "Motor Delays: Early Identification and Evaluation", which advises Pediatricians to institute screening for motor problems in early childhood. He authored the primary care section of the latest update to "Diagnosis and management of Duchenne muscular dystrophy" in *Lancet Neurology*.



### Corbett Ryan Pathways Pioneer Award 2019 Recipient: Jason Benetti

*The recipient of the award will represent excellence in the pursuit of and quality of life who also happens to live with a personal physical challenge. The recipient will have the following:*

- *Motivation and achievement in pursuing and accomplishing personal and vocational/professional goals*
- *A creative approach to their pursuit of education and participation in their vocation/profession*
- *A positive approach to life. The recipient serves as a role model to persons in their sphere of influence and demonstrates sensitivity to others and respect for self.*

Jason Benetti is a TV play-by-play announcer for ESPN and the Chicago White Sox. He joined ESPN in 2011 and has called college football and basketball for the network along with Major League Baseball, including the 2018 National League Wild Card game. His assignments for ESPN Radio include NFL and MLB games along with college football.

Benetti joined the White Sox in 2016 and just finished his third season with the team.

In addition, Benetti has called the NCAA Men's Basketball Tournament for Westwood One radio in each of the past two seasons.

He has had broadcasting jobs with Fox Sports 1, the Syracuse Chiefs (Washington Nationals Triple-A affiliate), Time Warner Cable Sports, and High Point University, among others.

Benetti graduated from Syracuse University in 2005 with bachelor's degrees in broadcast journalism, economics and psychology. He then earned his Juris Doctor at Wake Forest School of Law in 2011.

The Illinois native is a spokesperson for the Cerebral Palsy Foundation, including a new animated campaign he and CPF launched in 2018, entitled Awkward Moments.

He has taught sports broadcasting and sports interviewing as an adjunct professor at the S.I. Newhouse School of Public Communications at Syracuse University.

**Fred P. Sage Award****2019 Recipient: Jan Willem Gorter, MD, PhD, FRCP(C) on behalf of CanChild**

*The Sage Award is given to the best audio/visual submission presenting clinical, research, or educational material on CDROM, DVD or in a digital format. The award is named after Fred Sage, MD, Past President (1981) and Chairman of the A/V Committee of the AACPDM. Dr. Sage envisioned the great potential of audiovisual use in the Academy. He advocated for ways to popularize this method of teaching, and this interest eventually led to the Fred P. Sage Award for the best program submitted each year.*

**Mac Keith Press Promising Career Award Recipient  
2019 Recipient: To Be Announced**

*Mac Keith Press sponsors this award for the best Free Paper or Scientific Poster by an author who is within four years of completion of training and commencement of current career. The award recipient must be a member of the AACPDM or have an application pending. The recipient is selected by the Awards Committee on site and awarded after the Annual Meeting.*

**Gayle G. Arnold Award for Best Free Paper**

*The 2019 Gayle G. Arnold Award is selected from a set of abstracts nominated by the Awards Committee. Then the authors are invited to submit a manuscript for final judging. The award of \$2,000 is provided by the Children's Hospital in Richmond, Virginia. The editors of Developmental Medicine and Child Neurology Journal request to have first option on publication of this winning paper, as long as the authors comply with the publishing requirements of Mac Keith Press.*

**2019 Recipient: Regina Harbourne, PhD, PT**

*Efficacy of the Start-play Program for Infants with Neuromotor Disorders: Cognitive Outcomes*

**Best Scientific Poster Award Recipient****2019 Recipient: To Be Announced**

*Each year, AACPDM awards the Best Scientific Poster Award. The award recipient is selected as the highest rated poster from all committee member ratings.*

**Best Demonstration Poster Award Recipients****2019 Recipient: To Be Announced**

*The AACPDM awards the Best Demonstration Poster Award. The award recipient is selected by popular vote during the Annual Meeting.*

**Scholarships**

The American Academy for Cerebral Palsy and Developmental Medicine Scholarship Program supports the mission of the AACPDM to improve the health and general status of children and adults with cerebral palsy, developmental disorders and childhood acquired disabilities. The Academy seeks international applicants who are highly motivated, currently in clinical practice, and who are in a position which will enable them to disseminate knowledge acquired at the meeting to others in their home country once they return. Particular emphasis is placed on assisting those from areas with under supported medical systems and limited financial resources. The AACPDM also awards scholarships to students each year so that they may attend the Annual Meeting.

**International Scholarship Winners**

Nino Nana Tatishvili, MD; Georgia  
Chasanal Rathod, MD/MS; India  
Alaric J. Aroojis, MD, MS(Orth); India  
María Mercedes Perez-Roca, Sr., Physician; Uruguay  
Bhamini Krishna Rao, Sr., PhD; India  
Paula Silva De Carvalho Chagas, PhD; Brazil  
Oluwasola Julius Oke, MBBS, FMCPaed; Nigeria  
Nelleke G. Langerak, MSc, PhD; South Africa  
Lin-Ju Kang, PhD; Taiwan  
Maaiké M. Eken, PhD; South Africa  
Asis Kumar Ghosh, MPT; India  
Oksana Nazar, PhD; Ukraine  
Kirsty Stewart, DHSc; Australia  
Jennifer Lewis, BAppSc (PT); Australia  
Vahe Yavryan, MD; Armenia  
Nava Gelkop, MSc; Israel  
Snehal G. Deshpande, BSc PT; India  
Moses K. Ojo, M. Sc; Nigeria  
Tugba Gokbel; Turkey  
Aline M. Feitosa, Master; Brazil  
Ahmad Saeed Aly, Sr., MD; Egypt  
Sayak Chowdhury, MPT (Neuro), BPT; India  
Muhannad Daana, III, MD; Israel  
Mariana M. Santos, PhD.; Brazil  
Nilly Waiserberg, MScPT; Israel  
Victor O. Iki, BMR (OT), MBA; Nigeria  
Chonnanid Limsakul, MD; Thailand/Netherlands  
Ana Paula B. Gontijo, PhD; Brazil  
Priyanwada Nayani Wijayasinghe, BSc in Physiotherapy; Sri Lanka  
Song Zhang, MD; China  
Catherine Mak; Australia

**Student Scholarship Winners**

Rachel Toovey, PT, MPHTM  
 Andrea N. Burgess, B Occ Thy (Hons I)  
 Andy Vuong, PhD  
 Arielle Springer  
 Caitlin Hurd, MSc, MScPT  
 Ellen L. Armstrong, MPthy  
 Francyne Finlayson, BPhysio  
 James E. Gehringer  
 Kamaldeep K. Gill, MScOT  
 Katarina Ostojic  
 Laura AB Lins, MPH, ATC  
 Marloes Van Gorp, MSc  
 Michael P. Trevarrow, BS  
 Miranda Kneebone, PhD Candidate  
 Ricardo R. Sousa, Jr., PT  
 Suzie Noten, MSc  
 Tara L. FitzGerald, BPhys (Hons)  
 Buddhika J. Senevirathne, PT  
 Nikolas J. Koscielniak, MS, MPH, OTR/L  
 Benjamin I. Goodlich, BExSc, MPhty  
 Brandon J. Marshall  
 Julia (Shi-Peng) Xiong, BHSc  
 Marie-Eve Bolduc  
 Rebecca Molinini, DPT  
 Sonia Khurana, PhD

**OrthoPediatrics Scholarship Winners**

Nabila Khan, MBBS, D. Ortho, DNB  
 Egmar Longo, PhD  
 Sarah E. Reedman, PhD, BPhy (Hons)  
 Julia Mazzearella, DPT  
 Margaret Salzbrenner Hoopes, MSN, CPNP-AC  
 Angela Shierk, PhD, OTR

**Research Grants****2018 Research Grant Recipients**

Kristie F. Bjornson, PT, PhD, MS - Supported Mobility Across the Lifespan in Cerebral Palsy: Joint Decision Making  
 Sudarshan Dayanidhi, PT, PhD - Muscle Stem Cell Dysfunction in Muscular Contractures in Children with Cerebral Palsy  
 M. Wade Shrader, MD - Participation, Mobility, and Gait in Adults with Cerebral Palsy: Relationships with Childhood Factors  
 Ariel Schwartz, MSOT, OTR/L - Development and Feasibility Evaluation of a Socially Valid Peer Mentoring Intervention for Young Adults with Intellectual/Developmental Disabilities and Mental Health Conditions  
 Sarah H. Evans, MD - Home-based Lower Limb Robotic Rehabilitation for Children with Cerebral Palsy

**2019 Research Grant Recipients**

Jessie E. Mann, M.Sc  
 Intensive Neurorehabilitation Therapy for Children with Global Developmental Delay and Hyperkinetic Movements  
 Theresa S. Moulton, PT, DPT, PhD  
 RaceRunning for Fitness in an Elementary School Setting: Pilot Testing and Program Development  
 Maria L.V. Dizon, MD, MSCI  
 MicroRNAs in Magnesium-Mediated Neuroprotection  
 Jason J. Howard, B. Eng., MD, FRCSC  
 Use of Collagenase Clostridium Histolyticum to Decrease Muscle Fibre Bundle Stiffness in Cerebral Palsy: A Proof-of-Concept Pilot Study  
 Andrea A. Domenighetti, PhD  
 Reversal of Aged Muscle Stem Cell Dysfunction in Contractured Muscle from Cerebral Palsy

**Tuesday, September 17, 2019: 8:00am – 5:00pm**

**ORTHOPEDIC DAY**

*M. Wade Shrader, MD; Robert M. Kay, MD; Anthony Scaduto, MD; Rachel Goldstein, MD, MPH; Oussama Abousamra, MD; Carley Vuillermin, MBBS, MPH, FRACS; Eva Pontén, MD, PhD; Reid Nichols, MD; Leigh Ramos-Platt, MD; Freeman Miller, MD; Matthew Halansky, MD; Luis Moraleda Novo; Uri Givon, MD; Kenneth Illingsworth, MD; Michael B. Johnson, MD; Kristan Pierz, MD; H. Kerr Graham, MD; Elizabet Rodby Bousquet, PT, PhD; Dr. Kishore Mulpuri; Jon Davids, MD; Benjamin Shore, MD, MPH, FRCSC*

Location: Marquis Northeast

Learning Objectives:

1. Be able to describe typical pathology of dysplastic hips in children with Down Syndrome, and appropriate orthopedic management.
2. Understand the new advancements in medical care of children with SMA and the orthopedic ramifications, due to the changing natural history of SMA.
3. Be familiar with the approach to lower and upper extremity challenges in children with arthrogyrosis.
4. Describe the rationale behind growth friendly instrumentation for children with significant neuromuscular spine curves.
5. Be familiar with the importance of hip surveillance in children with CP, and learn some practical guidelines for such surveillance.

**Agenda:**

**8:00am**

**Welcome and Introduction**

*Wade Shrader, MD and Robert M. Kay, MD*

**Orthopedic Aspects of Down Syndrome**

*Cervical-Spine – Anthony Scaduto, MD*

**Hip Dysplasia and Periacetabular Osteotomies**

*Rachel Goldstein, MD, MPH*

**Lower Extremity Challenges**

*Oussama Abousamra, MD*

**Panel Discussion**

**10:00-10:15am**

**Break**

**Orthopedic Care of Children with Arthrogyrosis**

**Upper Extremity Treatment**

*Carley Vuillermin, MBBS, MPH, FRACS*

**Upper and Lower Extremity Care, UE/LE**

*Eva Pontén, MD, PhD*

**Lower Extremities**

*Reid Nichols, MD*

**Panel Discussion**

**11:30am-12:30pm**

**Lunch Break**

**Treatment of Children with Spinal Muscular Atrophy**

**Breakthroughs in Neurological Care of Children with SMA**

*Leigh Ramos-Platt, MD*

**Use of a Catheter to Deliver Nusinersen**

*Freeman Miller, MD*

**Treatment of Lower Extremity and Spine Problems in Children with SMA**

*Matthew Halansky, MD*

**Treatment of Hip Problems in Children with SMA**

*Luis Moraleda Novo*

**Panel Discussion**

**2:00-2:15**

**Break**

**Orthopedic Issues in Children with Rett Syndrome**

**Orthopedic Challenges in the Lower Extremities and Feet in Children with Rett Syndrome**

*Uri Givon, MD*

**Treatment of Spine Deformity in Children with Rett Syndrome**

*Kenneth Illingsworth, MD*

**Minimally-Invasive Growth-Friendly Management of Severe Neuromuscular Scoliosis**

*Michael B. Johnson, MD*

**Treatment of Lower Extremity and Foot Problems in Children with Rett Syndrome**

*Kristan Pierz, MD*

**Panel Discussion**

**International Perspectives on Hip Surveillance in Children with Cerebral Palsy**

*Australia – H. Kerr Graham, MD*

*Scandinavia – Elizabet Rodby Bousquet, PT, PhD*

*Canada – Dr. Kishore Mulpuri*

*USA – Jon Davids, MD*

**AACPDM and POSNA Guidelines**

*Benjamin Shore, MD, MPH, FRCSC*

**Panel Discussion**

**5:00pm**

*Adjourn*

**International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting Part I**

Michael C. Kruer, MD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Richard F. Wintle, PhD; Jan Friedman, MD, PhD; Qinghe Xin, PhD; Andres Moreno De Luca, MD; Hao Hu, PhD; Francisca Millan Zamora, MD; Peter Jin, PhD; Mark Corbett, PhD; Sara Lewis, PhD; Clare van Eyk, PhD

Location: Marquis Northwest

**8:00am**

**Welcome Address to New and Existing Members: Structure and Composition, Accomplishments, Opportunities and Challenges**

Michael Kruer, MD

**1st Session: Clinical Aspects of CP Genetics**

**8:10am**

**Dopaminergic Genetic Variation Influences Intervention Outcome in Children with Cerebral Palsy**

Hans Forssberg, MD, PhD

**8:30am**

**Report from the ICPGC Phenomics Working Group: Delphi Results Lead to Essential Data Elements**

Sara McIntyre, PhD, and Yana Wilson, MIPH

**9:00am**

**Molecular Basis of Orthopedic Conditions in CP**

Lucas Smith, PhD

**9:30am**

**Coffee and Networking Break**

**2nd Session: Worldwide Updates and Breaking Genomic Findings**

**10:00am**

**Assessing CP Etiology in Uganda**

Angelina Kakooza, MBChB, PhD

**10:20am**

**Whole Genome Sequencing Findings from Toronto, Canada**

Richard Wintle, PhD

**10:40am**

**Updates from British Columbia, Canada**

Jan Friedman, PhD

**11:00am**

**Whole Exome Sequencing Findings from New York, USA**

Jason Carmel, MD, PhD

**11:20am**

**Whole Exome-based Insights from Pennsylvania, USA**

Andres Moreno De Luca, MD

**11:40am**

**Findings from Guangzhou, China using Whole Genome Sequencing**

Hao Hu, PhD

**12:00pm**

**Lunch Break**

**3rd Session: Pathways, Models, and Mechanisms**

**1:00pm**

**Wnt Pathway Mutations in CP**

Mark Corbett, PhD

**1:20pm**

**Stress Response Pathways: Implications for Neurodevelopment and Motor Function in CP**

Sara Lewis, PhD

**1:40pm**

**Converging Pathways in CP Implicated by Complementary Genomics and Transcriptomics**

Clare van Eyk, PhD

**2:00pm**

**Biomarkers and Exosomes in CP**

Nanbert Zhong, MD, PhD

**2:30**

Coffee and Networking Break

**3:00pm**

**Mini-Symposium: Neuroimaging and CP Genetics**

Roslyn Boyd, PhD, Andres Moreno de Luca, MD, Michael Fahey, MBBS, PhD, and Alex Pagnozzi, PhD

**4:30pm**

**Panel Discussion: Gene by Environment Interactions**

Haley Smithers-Sheedy, PhD, Sara Lewis, PhD, Peter Jin, PhD, Bhooma Aravamuthan, MD, DPhil, Nadia Badawi, MD, and Changlian Zhu, MD, PhD

**Tuesday, September 17, 2019: 1:00pm - 5:00pm**

**Ultrasound Symposium: Neuromuscular Ultrasound - Hands-on Ultrasound Training Course Part I**

Katharine E. Alter, MD; Heakyung Kim, MD; David Cancel, MD

Location: Platinum 2

Learning Objectives:

1. Be proficient in the basic physics and scanning techniques of ultrasound
2. Be proficient with the basics of US imaging
3. Identify clinical applications of US for procedural guidance and in Neuromuscular medicine
4. Identify key muscles in the neck, upper/lower limbs, parotid/submandibular glands. Identify sonoacoustic properties of relevant tissues and the benefits and limitations of incorporating US into clinical practice

Wednesday, September 18, 2019: 8:00am – 12:00pm

**International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting/Neurogenetics Symposium Part II**

Michael C. Kruer, MD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Richard F. Wintle, PhD; Jan Friedman, MD, PhD; Qinghe Xin, PhD; Andres Moreno De Luca, MD; Hao Hu, PhD; Francisca Millan Zamora, MD; Peter Jin, PhD; Mark Corbett, PhD; Sara Lewis, PhD; Clare van Eyk, PhD

Location: Marquis Northwest

**8:00am**

**What Constitutes CP in the Genomic Age (i.e. what isn't CP?)!**

Bhooma Aravamuthan, MD

**8:30am**

**A Major Role for Genes that Control Developmental Neuritogenesis in CP**

Peter Jin, PhD

**9:00am**

**Cerebral Palsy Clinical Genomic Testing: Initial Results from Whole Exome Sequencing >1200 Cases**

Francisca Millan, MD

**9:30am**

**Are We There Yet? Implications of Genomics for Clinical Practice: Considerations within the International Classification of Function (ICF) Framework**

Darcy Fehlings, MD

**10:00am**

**When Should a Single Gene Form of CP be Considered?**

Ali Fatemi, MD, and Julie Cohen, MS

**1530**

**Panel discussion**

**Revisiting the Practice Parameter: What Workup Should be Performed in a Child Diagnosed with CP?**

Maryam Oskoui, MD, Sid Srivastava, MD, and Darcy Fehlings, MD

**11:00am**

**Developmental vs Degenerative Motor Disorders (cerebral palsy vs. hereditary spastic paraplegia)**

Michael Kruer MD

**11:30**

**Roll up Your Sleeves! Ways to Get Involved with Ongoing CP Genomics Research**

Yana Wilson, MIPH, and Paul Gross, BA

**12:00pm**

**Closing Remarks and Adjourn**

Michael Kruer MD

**PC1 - REHABILITATION AND USE OF MOTION ANALYSIS FOR SINGLE EVENT MULTI-LEVEL SURGERY**

Christina Bickley, PT, PhD, BOCO, C/NDT; Melissa Howard, PT, DPT, NCS; Douglas A. Barnes, MD; H Kerr Graham, MD, FRCS(Ed), FRACS; Melanie Lux, MD; Pam Thomason, B Pty, M Physio

Location: Marquis Northeast

Learning Objectives:

1. Describe SEMLS and the assessment process using Motion Analysis to determine surgical candidacy
2. Become familiar with patient interventions included in the stages of rehabilitation after SEMLS intervention
3. Understand the benefits of early postoperative mobilization for children following SEMLS and the research supporting early mobilization
4. Understand orthotic management and rationale for orthotic prescription in the post-operative period.
5. Understand which SEMLS procedures and hardware selections are candidates for an early mobilization rehabilitation program and which procedures still require a period non-weightbearing
6. Gain understanding of the pharmacological management (pain and spasm management) associated with an early mobilization rehabilitation SEMLS program
7. Become familiar with the use of Motion Analysis and the various measures used for outcome assessment

Wednesday, September 18, 2019: 10:00am - 12:00pm

**Lower Extremity Osteotomies in Pediatric Orthopaedics: Hands-On Sawbones Session**

Oussama Aousamra, MD; Haleh Badkoobehi, MD; Rachel Goldstein, MD; Professor H. Kerr Graham; Freeman Miller, MD; Robert Kay, MD; Selina Poon, MD; Benjamin Shore, MD; Vineeta Swaroop, MD; Rachel Thompson, MD

Location: Platinum 3

Learning Objectives:

1. Attendees will learn the approach to, and techniques for, VDROs in children.
2. Participants will understand the rationale and approach to performing distal femoral extension osteotomies in children with crouch gait.
3. Learners will be able to explain the importance of lever arm dysfunction in children, and how tibial osteotomies can be used to fix such dysfunction.

Wednesday, September 18, 2019: 1:00pm – 5:00pm

**Neuromuscular Ultrasound - Hands-on Ultrasound Training Course Part II**

Katharine E. Alter, MD; Heakyung Kim, MD; David Cancel, MD

Location: Platinum 2

Learning Objectives:

1. Be proficient in the basic physics and scanning techniques of ultrasound
2. Be proficient with the basics of US imaging
3. Identify clinical applications of US for procedural guidance and in Neuromuscular medicine
4. Identify key muscles in the neck, upper/lower limbs, parotid/submandibular glands. Identify sonoacoustic properties of relevant tissues and the benefits and limitations of incorporating US into clinical practice

**PC2 - PRACTICAL APPROACHES TO COMPLEX CARE: BUILDING YOUR CLINICAL AND TEACHING TOOLKIT**

*Holly Roach, OTR, ATP; Irene Cihon. Dietz, MD; Emily Goodwin, MD; Kathleen Huth, MD MMSc; Lisa Letzkus, PhD RN CPNP-AC; James Plews-Ogan, MD; Roopa Srinivasan, DNB (Pediatrics)*

Location: Platinum 4

Learning Objectives:

1. Participants will apply the ICF framework to guide and lead difficult discussions such as consideration for a tracheostomy or gastrostomy in a child with medical complexity
2. Participants will review the the AACPD M Sialorrhea Care Pathway and utilize it as a teaching tool to serve as a model for educating learners at the participant’s home institution
3. Participants will learn and practice strategies to evaluate feeding safety from a patient and family centered approach.
4. Participants will develop proactive action plans which include anticipatory guidance for sick day management
5. Participants will identify key team members and identify their unique and complementary roles in the care and evaluation of CMC in their home institutions.

**PC3 - FOURTH WORLD CP REGISTER AND SURVEILLANCE CONGRESS**

*Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Kate Himmelmann, MD, PhD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Gulam Khandaker, MBBS, MPH, PhD, FAFPHM*

Location: Marquis Northeast

Learning Objectives:

1. Current rates and trends, and an opportunity to discuss differences/similarities seen across the world and contributing factors for these differences
2. Opportunity to meet those involved in well-established registers and new and emerging registers primarily from low and middle income countries
3. Discuss barriers to maintaining registers; new data points for registers to consider; impact of CP Registers and measuring their impact

**PC4 - THE ICF IN A GLOBAL CONTEXT: TOWARDS A SYSTEMATIC ADOPTION ACROSS SETTINGS THROUGHOUT THE LIFESPAN**

*Verónica Schiariti, PhD; Jerome Bickenbach; Rune Simeonsson, PhD, MSPH; Jen Lyman, MS*

Location: Marquis Northwest

Learning Objectives:

1. Participants will apply the ICF framework to guide and lead case scenarios involving children and young adults with chronic health conditions and/or disabilities.
2. Participants will review the pediatric ICF educational e-tool and utilize it as a teaching tool to serve as a model for educating learners at the participant’s practices and institutions
3. Participants will discuss and develop strategies to incorporate the ICF to build capacity and set functional goals in different settings, promoting a functional-based approach.
4. Participants will identify key leaders and team members and identify their unique and complementary roles in the adoption, teaching, and implementation of the ICF in their communities, practices and institutions.

**PC5 - HAMMERSMITH INFANT NEUROLOGICAL EXAMINATION CLINICAL WORKSHOP**

*Nathalie Maitre, MD; Rachel Byrne, BA; Joanne M. George, PhD; Mary Ann Nelin, MD; Sai Ayers*

Location: Platinum 1

Learning Objectives:

1. Discuss the uses and limitations of the HINE
2. Utilize optimality scores and cut-off to aid in clinical practice
3. Perform the elements of the HINE at a basic level of proficiency
4. Score HINE elements with 90% reliability

**6:00 pm -6:30 pm  
Scholarship Meet and Greet**

**Wednesday, September 18, 2019: 6:30pm – 8:00pm**

**Welcome Reception at the Grand Plaza**



Photo Courtesy of Visit Anaheim and the Anaheim Marriott



Thursday, September 19, 2019: 7:00am – 8:00am

**Breakfast Seminars 1-10**

**BRK01 - ADDRESSING INEQUITIES IN HEALTH OUTCOMES FOR CHILDREN WITH CEREBRAL PALSY ACROSS THE WORLD.**

*Sue Woolfenden, MBBS MPH FRACP PhD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Kate Milner, MBBS MPH FRACP; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM*

Location: Platinum I

Learning Objectives:

1. Define what a health inequity is
2. Describe current health inequities for children with cerebral palsy in high, low and middle income countries including Australia, Canada and Bangladesh
3. Demonstrate an understanding of research to policy and practice gaps and opportunities to address the health inequities experienced by children with cerebral palsy worldwide
4. Join a collaborative global alliance formed with the specific purpose to advocate, conduct research and change practice in order to reduce inequities in health for children with cerebral palsy

**BRK02 - COGNITION IN CHILDREN WITH CEREBRAL PALSY**

*Ann I. Alriksson-Schmidt, PhD; Kristine Stadskleiv, PhD; Marit Helene Gullien*

Location: Marquis Northeast

Learning Objectives

1. Describe the importance of cognition in CP.
2. Describe why it is important that cognition is assessed in individuals with CP.
3. Describe how hospitals and user organizations can collaborate to further knowledge about cognitive functioning in children with CP to parents and kindergartens/schools.
4. Describe how a systematic program to assess cognition in this population has been implemented, and what the results are thus far.

**BRK03 - POSTURE AND MOBILITY INTERVENTION FOR INFANTS AND TODDLERS**

*Ginny Paleg, DScPT; Elisabet Rodby-Bousquet, PT, PhD*

Location: Platinum 2

Learning Objectives:

- 1: Identify posture and mobility trajectories of infants and toddlers with CP.
- 2: Design an evidence based intervention to address posture and mobility impairments and limitations.
- 3: Implement three evidence based interventions to address posture and mobility impairments and limitations.
- 4: Use three valid and reliable outcome measures for posture and mobility.

**BRK04 - ENGAGEMENT OF FATHERS: REFLECTIONS ON LESSONS LEARNED FROM PARENT GROUP INTERVENTIONS FOR CHILDREN WITH COMPLEX MULTIPLE IMPAIRMENTS**

*Tracey Smythe, MPH, PhD; David A. Achuroa, MA Anthropology in Development Studies; Rachel D. Lindoewood, BMedSci, BMBS, MSc Paediatric Neurodisability*

Location: Elite 1

Learning Objectives:

1. Understand a framework to assess effective engagement of fathers in health care
2. Identify challenges and opportunities to engage fathers in parent group interventions
3. Interpret and apply principles from international practice to their own context in order to improve the engagement of fathers
4. Recognise new avenues of engaging fathers in their interactions with children, families, and other health professionals

**BRK05 - ENVISIONING THE F-WORDS FOR CHILDREN WITH CEREBRAL PALSY OF GROSS MOTOR FUNCTION CLASSIFICATION SYSTEM LEVELS IV AND V.**

*Cindy B. Dodds, PT, PhD; Gina R. Rempel, MD, FRCPC; Holly Roach, OTR, ATP*

Location: Grand Ballroom AB

Learning Objectives:

- 1: List and describe the F-words in childhood disability and environmental factors for promoting participation in children with cerebral palsy (levels IV and V).
- 2: Understand evidence, global perspectives, and operational definitions of the F-words in the context of children with CP of GMFCS levels IV and V.
- 3: Translate F-words knowledge into practical applications across global home and community settings for children with CP of GMFCS levels IV and V.
- 4: Discuss environmental strategies for supporting F-word participation of children with CP of GMFCS levels IV and V across a variety of settings.

**BRK06 - POSTOPERATIVE URINARY RETENTION IN CHILDREN WITH CEREBRAL PALSY UNDERGOING MUSCULOSKELETAL SURGERY: PREVALENCE, RISK FACTORS AND MANAGEMENT.**

*Mohan Belthur, MD; Jon R. Davids, MD; Loren Davidson, MD*

Location: Elite 2

Learning Objectives:

- 1: Describe the pathophysiology of urinary dysfunction in children with cerebral palsy.
- 2: Describe the prevalence rate of POUR in children with CP undergoing elective orthopedic surgery.
- 3: List the patient and surgery specific risk factors associated with POUR.
- 4: Describe the management of POUR and discuss development and implementation of one management protocol for POUR.

**BRK07 - MULTI-DISCIPLINARY SCHOOL-BASED CLINICS FOR CHILDREN WITH CEREBRAL PALSY: AN INTERNATIONAL DISCUSSION**

Wade Shrader, MD; Daniel M. Weigl, MD; Laura Owens, MD; Laura M. Boyd, MSW, LSW

Location: Elite 3

Learning Objectives:

1. Identify the components of a successful multi-disciplinary orthopedic clinic in the setting of a school designed for children with special health care needs.
2. Discuss international differences in school-based models for the education of children with CP,
3. To recognize how differences in models and home-countries impact health-care delivery in the context of the school system.
4. Understand the current level of evidence supporting improved clinical outcomes and care coordination when using an integrated school-clinic model in the care of children with CP.

**BRK08 - PERIOPERATIVE ANESTHESIA/SURGICAL COLLABORATION: WORKING TOGETHER TO MAXIMIZE OUTCOMES AND ENHANCE THE PATIENT/FAMILY SURGICAL EXPERIENCE**

Francisco Valencia, MD; Peter Lichtenthal, MD; Paul Samuels, MD

Location: Orange County 2

Learning Objectives:

1. Develop a better understanding of co-morbidities and their impact on perioperative anesthetic/surgical management
2. Identify factors that can be used to decrease perioperative complications, including blood conservation
3. Promote the use of regional pain management strategies which can diminish the postoperative need for narcotics and enhance the patient and family surgical experience
4. Promote the perioperative team approach for children with special needs

**BRK09 - PROMOTING PHYSICAL ACTIVITY AND REDUCING SEDENTARY BEHAVIOUR IN INDIVIDUALS WITH CEREBRAL PALSY OVER THE LIFECOURSE THROUGH THE DEVELOPMENT OF AN AACPDM CARE PATHWAY**

Jan Willem Gorter, MD PhD; Julia (Shi-Peng) Xiong, BHSc; Patrick McPhee, PhD; Sarah E. Reedman, PhD, BPhy (Hons)

Location: Orange County 1

Learning Objectives:

1. Learn current PA promotion strategies and understand the importance of targeting PA participation and reducing sedentary behavior.
2. Understand the AACPDM Care Pathway development process.
3. Learn and discuss assessment criteria of baseline PA levels and decision-points for making PA management plans, based on empirical evidence, end-user experiences, and opinions from an international, multidisciplinary expert team.
4. Relate the Care Pathway development process to the attendees' own expertise.

**BRK10 - TELEREHABILITATION: NEW MODELS FOR INFANTS, CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY**

Francesca Tinelli, PhD; Giuseppina Sgandurra, MD, PhD; Giovanni Cioni, MD

Location: Platinum 3

Learning Objectives:

1. Describe the known literature about telerehabilitation during developmental age. Upon completion, participant will be able to know recent literature on this topic.
2. Demonstrate the efficacy of telerehabilitation also in developmental age. Upon completion, participant will be able to know new technologies useful for rehabilitation.
3. Describe CARETOY and demonstrate its efficacy. Upon completion, participant will be able to know the mechanisms of this new system.
4. Describe AVDESK and demonstrate its efficacy. Upon completion, participant will be able to know to which subjects this rehabilitation program is addressed.

Thursday, September 19, 2019: 7:00 AM - 8:00 AM

**Debate/Current Controversies**

**CC01 - ABILITIES-ORIENTED APPROACH TOWARDS DISABILITY: RESEARCH AND CLINICAL PROJECTS MODELLING A POSITIVE LANGUAGE**

Verónica Schiariti, PhD; Anne Berndt, MD, MSc, FRCSC; Hayley Lipworth, BScH, BEd

Location: Orange County 3

Learning Objectives:

- 1: To introduce research initiatives highlighting an abilities-oriented approach to disability service provision
- 2: To demonstrate the impact of creating positive clinical programs for pregnant women living with a chronic health conditions or disabilities
- 3: To describe vocational rehabilitation programs empowering individuals with disabilities to live independently
- 4: To promote collaboration between professionals working with pediatric and young adult populations facilitating successful transition to adult care

Thursday, September 19, 2019: 7:00 AM - 8:00 AM

**Focused Symposia**

**SYMP01 - BUILDING ACADEMIES IN LOW RESOURCE SETTINGS: CHALLENGES AND OPPORTUNITIES**

*Robert W. Armstrong, MD PhD; Hans Forssberg, MD; Pauline W. Samia, MPhil Paediatric Neurology; Peter L. Rosenbaum, MD CM FRCP; Bernard Dan, MD PhD*

Location: Orange County 4

Learning Objectives:

- 1: Demonstrate a good understanding of the value and contribution that IAACD can make to development of national or regional academies, particularly in low resource settings.
- 2: Identify and be able to address challenges that professionals face in setting up new academies in low resource settings.
- 3: Describe the importance of context-specific research in impacting practice and policy and the strategies for developing this capacity in low resource settings.
- 4: Identify ways in which low resource countries can contribute to the global literature on child disability.

**SYMP02 - EVIDENCE-INFORMED CARE PATHWAYS AND CLINICAL PRACTICE GUIDELINES FOR CHILDHOOD-ONSET DISABILITIES: PERSPECTIVES ON THEIR USEFULNESS FROM STAKEHOLDERS, CLINICIANS, HEALTH CARE ADMINISTRATORS, AND RESEARCH METHODOLOGISTS**

*Darcy L. Fehlings, MD; Laurie Glader, MD; Maureen O'Donnell, MD MSC FRCP; Michele Shusterman; Iona Novak, PhD*

Location: Grand Ballroom CD

Learning Objectives:

- 1: Upon completion, participant will be able to understand the definitions of Care Pathways and Clinical Practice Guideline (CPG) and find websites where they can be accessed.
- 2: Upon completion, participant will be able to highlight how Care Pathways/CPGs for Childhood Onset Disabilities(COD) can shape care and services for Childhood Onset Disabilities within the ICF Framework.
- 3: Upon completion, participant will be able to explore and discuss the potential and relevance of Care Pathways/CPG to inform care at an international level inclusive of lower-middle income countries.
- 4: Upon completion, participant will be able to discuss differing views on the usefulness of Care Pathways/CPG to enhance evidence informed care for Childhood Onset Disabilities.

**SYMP03 - SMALL COHORT INTERVENTIONS SUPPORT THE USE OF NATIONAL, MULTICENTRE, COLLABORATIVE CLINICAL ADVISORY GROUPS: THE AUSTRALIAN EXPERIENCE OF SDR, ITB AND DBS**

*Adam Scheinberg, MBBS, FRACP, FAFRM, MMED; Kirsty Stewart, PhD; Jenny Lewis, PT; Simon P. Paget, MA (Cantab), MBBS MRCPCH(UK), FAFRM, FRACP; Jordan Sheriko, BSc (Hons), MD; Lisa Copeland, MBBS, FAFRM, FRACP*

Location: Brand Ballroom GH

Learning Objectives:

- 1: Upon completion, participants will have an understanding of the current state of the evidence around paediatric ITB, SDR and DBS
- 2: Upon completion, participants will have an understanding of approaches in developing ITB, SDR and DBS collaborative clinical research groups
- 3: Upon completion, participants will have a comprehensive overview of outcome measures, representing all domains of the ICF, that can be utilised for ITB, SDR and DBS intervention
- 4: Upon completion, participants will be able to determine the benefits of collaborative research groups for specialist interventions: knowledge translation; pooling of outcome data: adverse event reporting and outcomes.

**SYMP04 - SPASTIC MUSCLE IN CEREBRAL PALSY: CONTRACTURE, BOTULINUM TOXIN A, AND FUTURE DIRECTIONS**

*Jason J. Howard, BEng, MD, FRCS; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Tandy Hastings-Ison, PhD, BAppSci(Physio); Walter Herzog, PhD*

Location: Marquis Northwest

Learning Objectives:

- 1: To understand the pathophysiology of spastic muscle contractures in CP.
- 2: To synthesize and interpret the best evidence regarding the functional outcomes of spastic muscle contractures treated with BoNT-A in children with CP.
- 3: To synthesize and interpret the pertinent animal and human studies investigating the impact of BoNT-A on skeletal muscle.
- 4: Based on the best available basic science/clinical evidence, to consider revised recommendations and changes to protocols regarding the use of BoNT-A in CP.

**SYMP05 - THE AUSTRALASIAN CEREBRAL PALSY CLINICAL TRIALS NETWORK A MODEL FOR INTERNATIONAL COLLABORATION**

*Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Iona Novak, PhD; Michael Fahey, PhD, MD; Catherine Elliott, PhD*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Understand the key components of developing a collaborative national Cerebral Palsy Clinical Trials Network and it is informed by consumer engagement.
- 2: Be informed on a translational pipeline of preclinical to clinical research.
- 3: Understand how to set up collaborative multisite national clinical trials to test current and develop new interventions to improve outcomes for children with Cerebral Palsy.
- 4: Be informed on methods to generate knowledge translation from research into clinical practice through implementation trials and development of international clinical practice guidelines.

**7:00 am - 8:00 am**

**Advisor Meet & Greet**

Location: Grand Ballroom EF

**Thursday, September 19, 2019 8:15am - 10:15am**

**OPENING GENERAL SESSION**

General Session Moderator: Mauricio R. Delgado, MD  
Location: Platinum 5-10

**Opening Address and Exchange of Gavel**

*Jilda Vargus-Adams, MD, MSc to Mauricio R. Delgado, MD*

**IAACD Update**

*Hans Forssberg, MD*

**The AACPD in Historical Perspective - From Physician Discussion Group to Multi-Discipline International Organization**

*Alfred L. Scherzer, MD, EdD, FAAP*

**Presidential Guest Lecture**

**ICF-CY: Added Value for Developmental Practice?**

*Rune Simeonsson, PhD, MSPH*

**Presidential Guest Lecture**

**Redefining Cerebral Palsy as a Genetic, Neurodevelopmental Spectrum Disorder**

*Jozef Gécz, PhD*

**10:15am - 10:45am**

**Get Up and Move - Yoga**

**#Getupandmove**

*Instructor: Jennifer Lyman*

Location: Platinum Foyer

Activity Description: Yoga postures will work on balance, strength, and flexibility. A great way to focus and refresh your mind and body and start the morning off right!

**Thursday, September 19, 2019 - 10:45am - 12:30pm**

**FREE PAPER SESSION**

**A. Genetics/Epidemiology**

**Location: Marquis Northeast**

**10:45 am - 10:52 am -**

**A1. CURRENT PHYSICIAN REFERRAL PRACTICES FOR DIAGNOSIS AND REHABILITATION FOR CHILDREN SUSPECTED OF HAVING CEREBRAL PALSY: A NATIONAL ENVIRONMENTAL SCAN**

*Zachary Boychuck, OT, PhD(c); John Andersen, MD; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Michael Shevell, MDCM, FRCPC, FCAHS; Annette Majnemer, PhD, OT*

**10:53 am - 11:00 am -**

**A2. CAN SHIFTS IN GMFCS-SPECIFIC CP-INCIDENCE MIRROR CHANGES IN PERINATAL CARE?**

*Ann I. Alriksson-Schmidt, PhD; Lena Westbom, PhD; Gunnar Hägglund, PhD; Philippe Wagner, PhD*

**11:01 am - 11:08am -**

**A3. A COMPREHENSIVE INVESTIGATION OF MAJOR CONGENITAL ANOMALIES IN CHILDREN WITH POST-NEONATALLY ACQUIRED CEREBRAL PALSY: AN INTERNATIONAL DATA LINKAGE STUDY**

*Shona Goldsmith, BPhy(Hons); Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Guro L. Andersen, PhD; Kate Himmelmann, MD, PhD; Eve Blair, PhD; Catherine S. Gibson, PhD; Heather Scott, BMgmt; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Guiomar Garcia Jalon, PhD, BSc(Hons)Physiotherapy; Ester Garne, MD*

**11:09 am - 11:16 am -**

**A4. ASSOCIATED IMPAIRMENTS INCREASED FROM PRESCHOOL AGE TO SCHOOL AGE IN A POPULATION-BASED STUDY OF CHILDREN WITH CEREBRAL PALSY**

*Magnus Pählman, MD; Kate Himmelmann, MD, PhD*

**11:30 am - 11:37 am -**

**A5. PREDICTION OF COGNITIVE AND MOTOR OUTCOME OF PRETERM INFANTS FROM DIFFUSION MR BRAIN IMAGES USING A DEEP LEARNING CONVOLUTIONAL NEURAL NETWORK (CNN) MODEL**

*Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Susmita Saha, PhD; Joanne M. George, PhD; Paul Colditz, PhD, MD; Stephen Rose, PhD; Jurgen Fripp, PhD; Kerstin Pannek, PhD*

**11:38 am - 11:45 am -**

**A6. EXPANDING THE GENETIC SPECTRUM OF CEREBRAL PALSY: TRIO WHOLE GENOME SEQUENCING OF 38 FAMILIES IDENTIFIES GENETIC CAUSES IN 18 DIFFERENT GENES**

*Kishore Mulpuri, MBBS, MS, MHSc; Madeline Couse, MS; Colleen Guimond, MSc; Patricia Birch, MSc RN; Elisa Lau, BS; Nicole S. Liang, Bachelor of Science; Gabriella A. Horvath, MD, PhD; Suvina To, MS; Clara van Karnebeek, MD, PhD; Anna Lehman, FRCPC; Jan Friedman, MD, PhD*

THURSDAY

11:46 am – 11:53 am –

**A7. GENETIC VARIATION ASSOCIATED WITH DIMINISHED DOPAMINE NEUROTRANSMISSION PREDICTS DELAY IN MOTOR DEVELOPMENT IN EXTREMELY LOW BIRTH WEIGHT INFANTS.**

*Gordon Worley, MD; Stephen Erickson, PhD; Kathryn Gustafson, PhD; Yuliya Nikolova, PhD; Daniel Belsky, PhD; Ricki Goldstein, MD; Joshua Levy, PhD; Scott McDonald, PhD; Greer Page, PhD; Allison Ashley-Koch, PhD; Michael Cotten, MD*

11:54 am – 12:01 pm –

**A8. INTRAUTERINE DRUG EXPOSURE (IUDE) AS A RISK FACTOR FOR CP**

*Jessica Purnell, BS; Nancy Batterson, OT/L, SCFES; Dennis Lewandowski, PhD; Katelyn D. Levensgood, DPT; Megan Lightfoot, Bachelor's; Kristen Benninger, MD; Mary Lauren M. Neel, MD; Julia Less, MPH; Stephanie Burkhardt, MPH; Brianna Sowers; Nathalie Maitre, MD*

12:02 pm – 12:09 pm –

**A9. ETIOLOGY OF DYSKINETIC CEREBRAL PALSY IN JAPAN AND ITS RELATIONSHIP TO FUNCTIONAL OUTCOMES**

*Yukihiko Kitai, MD; Satori Hirai, MD; Kaeko Ogura, MD; Naomi Okuyama, MD; Mika Hirotsune, MD; Satoshi Mizutani, MD; Hiroshi Arai, MD*

12:10 pm – 12:17 pm –

**A10. EPILEPSY PREVALENCE, TREATMENT AND INTRACTABILITY IN THE CEREBRAL PALSY RESEARCH NETWORK COHORT**

*Adam Ostendorf, MD; Lindsey Morgan, MD; Erin Fedak Romanowski, DO; Erika Axeen, MD; Krista Eschbach, MD; Howard P. Goodkin, MD PhD; Paul Gross, BA*

**B. Motion Analysis/Gait**

**Location: Marquis Northwest**

10:45 am – 10:52 am –

**B1. CLASSIFICATIONS OF MOTOR LEVEL IN MYELOMENINGOCELE: ARE THEY INDICATIVE OF AMBULATORY FUNCTION?**

*Susan Rethlefsen, DPT; Nicole Mueske, MS; Tishya Wren, PhD*

10:53 am – 11:00 am –

**B2. LOWER EXTREMITY STRENGTH AND CONTRACTURES AS DETERMINANTS OF WALKING ACTIVITY IN CHILDREN AND ADOLESCENTS WITH MYELOMENINGOCELE**

*Brett Lullo, MD; Nicole Mueske, MS; Carmel Diamant, BS; Alexander Van Speybroeck, MD; Deirdre Ryan, MD; Tishya Wren, PhD*

11:01 am – 11:08 am –

**B3. INDICATIONS, BENEFITS AND POTENTIAL SHORTCOMINGS OF LOWER LIMB ORTHOSES IN THE MANAGEMENT OF CHILDREN WITH HYPOTONIA: CLINICAL PRACTICE GUIDELINES**

*Phillip M. Stevens, MEd, CPQ; Thomas DiBello, CO, FAAOP*

11:09 am – 11:16 am –

**B4. STRENGTH, MOTOR COMPETENCE AND PHYSICAL ACTIVITY IN VERY PRETERM AND TERM-BORN PRESCHOOL AGE CHILDREN**

*Tara L. FitzGerald, BPhysio(Hons); Jennifer McGinley, PhD; Jeanie Cheong, MD; Lex Doyle, MD; Alicia Spittle, PhD*

11:30 am – 11:37 am –

**B5. WALKING SPEED IN CHARCOT-MARIE-TOOTH DISEASE: IMPLICATIONS OF DISEASE PROGRESSION DURING CHILDHOOD AND ADOLESCENCE**

*Sylvia Ounpuu, MSc; Tishya Wren, PhD; Kristan Pierz, MD; Gyula Acsadi, MD, PhD*

11:38 am – 11:45 am –

**B6. CHANGES AT KINEMATICS PARAMETERS AFTER SINGLE-EVENT MULTILEVEL SURGERY IN CEREBRAL PALSY: WHAT DO WE EXPECT AT SPECIFIC LOWER LIMBS JOINTS AND SEGMENTS?**

*Mauro C. de Moraes Filho, MD, MSc, PhD; Francesco Blumetti, MD, MSc, PhD; Cátia Kawamura, PT; Kamila Freitas, MD; Marcelo H. Fujino, MD; José Augusto Lopes, MSc; Daniella Neves, MD*

11:46 am – 11:53 am –

**B7. ALTERED SYNERGIES CAN PREVENT AN UNIMPAIRED WALKING PATTERN**

*Katherine M. Steele, PhD; Naser Mehrabi, PhD; Michael H. Schwartz, BS, MS, PhD*

11:54 am – 12:01 pm –

**B8. EVALUATING THE VALIDITY OF A PROMIS DEPRESSION DOMAIN IN PATIENTS WITH CEREBRAL PALSY AND IDENTIFICATION OF AT-RISK PATIENTS**

*Hiroko Matsumoto, PhD; Gerard F. Marciano, BS; Heakyung Kim, MD; David Roye, MD; Joshua Hyman, MD*

12:02 pm – 12:09 pm –

**B9. ABERRANT BETA SENSORIMOTOR CORTICAL OSCILLATIONS ARE RELATED WITH THE ALTERED GAIT KINEMATICS SEEN IN ADOLESCENTS WITH CEREBRAL PALSY**

*James F. Gehring, B.S.; Rasheda Hoffman, DPT; Sarah E. Baker, MS; Tony Wilson, PhD; Max Kurz, PhD*

12:10 pm – 12:17 pm –

**B10. RISK FACTORS FOR ACCURATE CEREBRAL PALSY GAIT EVALUATION WITH EDINBURGH VISUAL GAIT SCORE**

*Sabina Brazevic, MS; Marek Jóźwiak, MD; Anna Krzyżńska, PT; Joanna Kraśny, MD; Magdalena Ratajczyk, MD; Aleksandra Sadecka, MD*

**C. Global/ICF/Surveillance**

Location: Platinum 2

10:45 am – 10:52 am –

**C1. HOW CAN DATA FROM THE SURVEILLANCE OF CEREBRAL PALSY IN EUROPE BE USEFUL FOR SUPPORTING HEALTH POLICIES?**

*Sandra J. Hollung, MSc; Monica Lanzoni, PhD; Malika Delobel, MD; Virginie Ehlinger, MSc; Agnieszka Kinsner-Ovaskainen, MD, PhD; Kate Himmelmann, MD, PhD; Mary Jane Platt, MBBS, MPH, MD; Catherine Arnaud, MD, PhD*

10:53 am – 11:00 am –

**C2. CEREBRAL PALSY IN TERM BORN INFANTS HAS DECLINED: FINDINGS FROM THE AUSTRALIAN CEREBRAL PALSY REGISTER 1995-2012**

*Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Emma Waight, BA; Claire Galea, MEpi; B.Ed; Linda Watson; Sue Reid, PhD MClInEpi BAppSc; Michael DeLacy; Catherine S. Gibson, PhD; Heather Scott, BMgmt; Eliza Maloney; Shona Goldsmith, BPhy(Hons); Dinah S. Reddihough, MD BSc FRACP FAFRM; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Eve Blair, PhD; Kirsty Bartlett-Clark*

11:01 am – 11:08 am –

**C3. CEREBRAL PALSY AND COMORBIDITIES, A NATIONAL REGISTRY STUDY IN NORWAY**

*Sandra J. Hollung, MSc; Inger Johanne Bakken, PhD; Torstein Vik, PhD; Robert Wiik, MA; Stian Lydersen, PhD; Guro L. Andersen, PhD*

11:30 am – 11:37 am –

**C5. EARLY FUNCTIONAL MOTOR PROFILE OF INFANTS AT HIGH RISK OF CEREBRAL PALSY IN A LOW-MIDDLE INCOME COUNTRY**

*Sayak Chowdhury, MPT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Asis Kumar Ghosh, MPT, BPT; Katherine Benfer, PhD, MPH, BSpPath*

11:38 am – 11:45 am –

**C6. ACUTE AND CHRONIC PAIN IN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY: PREVALENCE, INTERFERENCE AND MANAGEMENT**

*Katarina Ostojic, Bsci MPH; Simon P. Paget, MA (Cantab), MBBS MRCPCH(UK), FAFRM, FRACP; Maria Kyriagis, MBBS, FRACP, FAFRM; Angela M. Morrow, MRCP FRACP FAFRM PhD*

11:46 am – 11:53 am –

**C7. FREQUENCY AND NATURE OF COMORBID DIAGNOSES IN CHILDREN WITH CEREBRAL PALSY: A REGISTER-BASED STUDY**

*Karen McConnell, BSc (Hons), PhD; Josephine Egbon, BSc (Hons); Oliver Perra, BSc (Hons), PhD; Claire Kerr, BSc (Hons), PhD*

11:53 am – 12:00 pm –

**C8. EPILEPSY IN CHILDREN WITH CEREBRAL PALSY ASSOCIATED WITH CONGENITAL ZIKA VIRUS INFECTION**

*Alessandra L. Carvalho, MD; Paloma Ventura, BS; Adriana Fernandes, BS; Carlos Brites, PhD; Rita Lucena, PhD*

12:01 pm – 12:08 pm –

**C9. POST-NEONATAL CEREBRAL PALSY 1995-2012: FINDINGS FROM THE AUSTRALIAN CEREBRAL PALSY REGISTER.**

*Emma Waight, BA; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Michael De Lacy; Catherine S. Gibson, PhD; Heather Scott, BMgmt; Kirsty Bartlett-Clark; Eliza Maloney; Sue Reid, PhD MClInEpi BAppSc; Dinah S. Reddihough, MD BSc FRACP FAFRM; Shona Goldsmith, BPhy(Hons); Claire Galea, MEpi; B.Ed; Eve Blair, PhD; Linda Watson*

12:09 pm – 12:16 pm –

**C10. CEREBRAL PALSY (CP) AMONGST CHILDREN BORN <37 WEEKS (1995-2012): FINDINGS FROM THE AUSTRALIAN CEREBRAL PALSY REGISTER.**

*Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Emma Waight, BA; Linda Watson; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Sue Reid, PhD MClInEpi BAppSc; Catherine S. Gibson, PhD; Claire Galea, MEpi; B.Ed; Michael DeLacy; Heather Scott, BMgmt; Kirsty Bartlett-Clark; Eliza Maloney; Dinah S. Reddihough, MD BSc FRACP FAFRM; Shona Goldsmith, BPhy(Hons); Eve Blair, PhD*

**D. Participation**

Location: Platinum 3

10:45 am – 10:52 am –

**D1. AN EXAMINATION OF THE FACTORS THAT INFLUENCE PARTICIPATION IN SOCIAL ACTIVITIES AND ACTIVITIES OF DAILY LIVING (ADLS), FOR YOUNG PEOPLE WITH CEREBRAL PALSY (CP)**

*Grace Lavelle, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Jennifer Ryan, PhD*

10:53 am – 11:00 am –

**D2. LONG-TERM FOLLOW-UP STUDY ON LEVEL OF ACTIVITY, PARTICIPATION AND SATISFACTION IN ADULTS WITH CEREBRAL PALSY AND SPASTIC DIPLEGIA**

*Maaïke M. Eken, PhD; Robert Lamberts, Prof.; Jacques du Toit, MBChB(Stell), FC Orth(SA), MScClinEpi; Nelleke Langerak, PhD*

11:01 am – 11:08 am –

**D3. DEVELOPMENT CURVES OF COMMUNICATION AND SOCIAL INTERACTIONS OF INDIVIDUALS WITH CEREBRAL PALSY**

*Marloes van Gorp, MSc; Siok Swan Tan, PhD; Jeanine M. Voorman, MD PhD; Johanna J. Geytenbeek, PhD; Heleen A. Reinders-Messelink, PhD; Marjolijn Ketelaar, PhD; Annet J. Dallmeijer, PhD; Marij E. Roebroek, PhD*

11:09 am – 11:16 am –

**D4. DEVELOPING AN INTERVENTION TO SUPPORT PARTICIPATION IN LEISURE OF CHILDREN AND YOUNG PEOPLE WITH NEURODISABILITY.**

*Jennifer McAnuff, MSc; Tim Rapley, PhD; Allan Colver, PhD; Niina Kolehmainen, PhD*

THURSDAY

11:30 am – 11:37 am –

**D5. POTENTIAL PREDICTORS FOR PARTICIPATION IN VARIOUS AREAS IN PRESCHOOL CHILDREN WITH CEREBRAL PALSY: A FOLLOW-UP STUDY**

*Chia-Ling Chen, MD, PhD; Chia-Hui Chen, MS; Chia-Ying Chung, MD; Katie P. Wu, MD; Yi-ting Hsiao, PhD; Hsieh-Ching Chen, PhD*

11:38 am – 11:45 am –

**D6. INCREASING PHYSICAL ACTIVITY IN YOUTH WITH PHYSICAL DISABILITIES VIA A SUMMER CAMP PROVIDING EXPOSURE TO ADAPTED SPORTS AND RECREATION PROGRAMS**

*Elizabeth G. Condliffe, PhD, MD; Shane Esau, M.Kin.; Leticia Janzen, MSc; Elysa F. Sandron, BS; Gregor Kuntze, PhD; Carolyn A. Emery*

11:46 am – 11:53 am –

**D7. A RANDOMIZED CONTROLLED TRIAL OF A NOVEL TASK-SPECIFIC APPROACH FOR ATTAINING TWO-WHEEL BIKE RIDING GOALS IN CHILDREN WITH CEREBRAL PALSY**

*Rachel A. Toovey, PT; Adrienne Harvey, PhD; Jennifer McGinley, PhD; Katherine Lee, PhD; Sophy T. Shih, PhD; Alicia Spittle, PhD*

11:54 am – 12:01 pm –

**D8. LET'S RIDE A BIKE! PILOT RANDOMIZED CONTROLLED TRIAL OF FUNCTIONAL ELECTRICAL STIMULATION CYCLING AND ADAPTED CYCLING IN CHILDREN WITH CEREBRAL PALSY.**

*Ellen L. Armstrong, MPT, MSc (APA), BExSc; Megan J. Kentish, B.Phdy; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Sean A. Horan, BExSc, MPhdy, PhD; Christopher Carty, PhD*

12:02 pm – 12:09 pm –

**D9. PARTICIPATION AND LIFE SATISFACTION IN YOUNG ADULTS WITH CEREBRAL PALSY**

*Nancy Lennon, MS, PT; Chris Church, MPT; Wade Shrader, MD; Faithe R. Kalisperis, DPT; Allison Wickham, BS; John Henley, PhD; Tim Niiler, PhD; Freeman Miller, MD*

12:10 pm – 12:17 pm –

**D10. INTRINSIC MOTIVATION FOR PHYSICAL ACTIVITY PARTICIPATION PREDICTS RESPONSE TO A PARTICIPATION-FOCUSED THERAPY INTERVENTION IN CHILDREN WITH CEREBRAL PALSY**

*Sarah E. Reedman, PhD, BPhdy (Hons); Jenny Ziviani, OT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Leanne Sakzewski, PhD, BOccThy*

Thursday, September 19, 2019: 10:45 AM - 12:15 PM

**Focused Symposia**

**SYMP06 - COLLABORATIVE STRATEGIES FOR IMPROVING EVIDENCE BASED PRACTICE IN DEVELOPING COUNTRIES**

*Marcia Greenberg, MS, PT; Perth Rosen, MA; Abhay Khot, MBBS, FRACS; Alaric Aroojis, MS, D'Ortho, DNB; Oleksandra Kalandyak, BS*

Location: Orange County 2

Learning Objectives:

- 1: Describe strategies implemented in developing countries to provide wheeled mobility and build local capacities to insure continued clinical service and maintenance of equipment.
- 2: Describe strategies implemented in Ukraine to teach evidence-based physical therapy practice and train local clinicians to insure sustainability.
- 3: Describe a collaborative program between Australia and India to provide training in the assessment and treatment of gait deformities in children with cerebral palsy.
- 4: Describe problems and solutions used by clinicians from various developing countries to address the needs of children with developmental disabilities and their families.

**SYMP07 - USING IMPLEMENTATION SCIENCE TO ACCELERATE THE ADOPTION OF EVIDENCE-BASED PRACTICES RELATED TO RESISTANCE TRAINING IN CEREBRAL PALSY (CP)**

*Nicole Harris, MPT, PCS, BOCO; Noelle G. Moreau, PhD, PT; Michelle Roy, BScPT; James B. Hedgecock, PT, DPT, PCS; Matthew Prowse, MD, FRCPC*

Location: Orange County 1

Learning Objectives:

- 1: Evaluate recent evidence regarding the effects of resistance training for children with CP across the ICF.
- 2: Integrate the knowledge of dosing parameters from evidence-based research with clinical expertise for practical application for patients with CP and other neuromotor diagnoses.
- 3: Evaluate the success of current resistance training programs after presentation of case studies and combined data of participants.
- 4: Identify how Implementation Science can be used to accelerate the adoption of evidence-based resistance training at a rehabilitation center or hospital.

**SYMP08 - ETIOLOGY, DIAGNOSIS AND TREATMENT OF CEREBRAL PALSY IN HIGH INCOME VS LOW/MIDDLE INCOME COUNTRIES - KNOWLEDGE ACROSS BORDERS**

*Annemieke I. Buizer, MD PhD; Shaheen Akhter, MD; Laura A. van de Pol, MD, PhD; R. Jeroen Vermeulen, MD, PhD; Nelleke G. Langerak, PhD*

Location: Grand Ballroom AB

Learning Objectives:

- 1: Discern how environmental factors, like attitudes and available equipment influence goal setting and treatment options for CP in high vs low/middle income countries.
- 2: Describe differences in etiology of CP in high and low resource settings around the world.
- 3: Describe the environmental factors in their setting, that determine possibilities and limitations for their own practice in diagnosing and treating children with CP.
- 4: Participants will have learnt from evidence and experience in other settings (differences as well as similarities), some pointers to improve their own practice for children with CP.

**SYMP09 - GLOBAL INITIATIVES IMPROVING LIFE CONDITIONS FOR CHILDREN WITH DEVELOPMENTAL DISABILITIES**

*Hans Forssberg, MD; Diane Damiano, MD; Raoul Berjemo, MD; Chiara Servili, MD; Alarcos Cieza*

Location: Orange County 3

Learning Objectives:

- 1: Understand the global situation for children with developmental disability.
- 2: Understand the UNICEF- Early detection and intervention systems approach.
- 3: Understand the WHO initiative for parent skill training.
- 4: Understand the WHO Package for Rehabilitation Intervention project.

**SYMP10 - ISSUES AND CHALLENGES IN GLOBALLY ADAPTING MEASURES OF CHILDREN'S PARTICIPATION AND ENVIRONMENT**

*Roopa Srinivasan, DNB (Pediatrics); Dana Anaby, PhD; Mary A. Khetani, ScD; Rachel Teplitsky, MSc*

Location: Elite 1

Learning Objectives:

- 1: Participants will learn about the key components of Participation and Environment Measures and their various uses in both research and clinical practice
- 2: Participants will learn how results of PEM measures can 1.be interpreted 2. inform practice across cultures at the micro (child/youth),meso (family, school, program evaluation) and macro (re-shaping policies) levels
- 3: Participants will learn the process for adapting and validating the tool in different settings
- 4: Participants will learn possible challenges of using the measures in different contexts and cultures (especially low and middle income countries) and ways to mitigate them.

**SYMP11 - ROBOTICS FOR TRAINING OF BALANCE, POSTURE, AND GAIT: EMERGING TECHNOLOGIES, POSSIBILITIES AND CHALLENGES**

*Sunil K. Agrawal, PhD; Diane Damiano, MD; Andrew Gordon, PhD; Joseph Dutkowsky, MD; Heakyung Kim, MD*

Location: Grand Ballroom CD

Learning Objectives:

- 1: Upon completion, participants will be able to get an overview of how technology can enhance rehabilitation of mobility and posture.
- 2: Upon completion, participants will be able to appreciate how motor learning needs to be integrated within robotic rehabilitation.
- 3: Upon completion, participants will be able to see examples of robotic rehabilitation and clinical evidences to improve mobility and posture.
- 4: Upon completion, participants will be able to appreciate the challenges in transitioning robotic technologies to clinic.

**SYMP12 - ADAPTIVE SPORTS PANEL: HOW CAN WE MAKE SPORTS ACCESSIBLE TO KIDS?**

*Phoebe Scott-Wyard, DO; Carolina Schaber, RN, BSN, MBA*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Describe ways to support participation in adaptive sports for children with disabilities.
- 2: List organizations and resources for adaptive sports participation that are available for children worldwide.
- 3: Describe obstacles to participation in adaptive sports and methods of overcoming them.
- 4: List the benefits of participation in adaptive sports for children with disabilities and their families.

**SYMP13 - INTERNATIONAL PERSPECTIVES ON THE IMPLEMENTATION OF HIP SURVEILLANCE FOR CHILDREN WITH CEREBRAL PALSY: PEARLS, PITFALLS AND PROCESSES.**

*Stacey D. Miller, PT; Kate L. Willoughby, BPhysio, DPhysio; Laura Yeo, M Arts, Grad Dip PT; Pam Thomason, B Phty, M Physio; Kerr Graham, MD, MD, FRCS (Ed), FRACS*

Location: Elite 2

Learning Objectives:

- 1: Upon completion, participants will be able to describe the evidence for hip surveillance in children with cerebral palsy.
- 2: Upon completion, participants will be able to describe models for the implementation of hip surveillance that have been developed in multiple countries.
- 3: Upon completion, participants will be able to list barriers and potential solutions to implementing hip surveillance within varying health systems.
- 4: Upon completion, participants will be able to identify strategies to initiate the implementation of hip surveillance in the absence of state or country wide surveillance.



**SYMP14 - EARLY INTERVENTION FOR INFANTS AND YOUNG CHILDREN AT HIGH RISK OF CEREBRAL PALSY IN LOW-MIDDLE INCOME COUNTRIES**

*Katherine Benfer, PhD, MPH, BSpPath; Cathy Morgan, PhD; Gulam M. Khandaker, PhD, FAFPHM; Asis Kumar Ghosh, MPT, BPT; Kate Milner, MBBS MPH FRACP; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad*

Location: Elite 3

Learning Objectives:

- 1: Describe early intervention studies currently underway in Low-Middle Income Countries (LMICs); including LEAP-CP (India), Getting to Know CP Early (Uganda), Centre and community-based intervention (Sri Lanka), Early Intervention Network (Afghanistan).
- 2: Identify underlying principles for early intervention based on the literature, and how these need to be adapted for low-middle income countries.
- 3: List common barriers for accessing traditional developmental care in LMIC (prevalence of medical model, stigma, physical access); from the literature, qualitative interviews, and lived experiences.
- 4: Identify a range of facilitators, barriers and opportunities for various models of intervention in LMIC (home-based individual, community-based group, and therapist lead models) including scaling-up.

**SYMP15 - UNPACKING THE BLACK BOX OF PARTICIPATION-FOCUSED INTERVENTIONS**

*Sarah E. Reedman, PhD, BPhy (Hons); Leanne Sakzewski, PhD, BOccThy; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Catherine Elliott, PhD; Keiko Shikako-Thomas, PhD; Annette Majnemer, PhD, OT*

Location: Orange County 4

Learning Objectives:

- 1: List and describe theoretical frameworks for participation for youth with disabilities.
- 2: Demonstrate knowledge of the different ways to measure participation in youth with disabilities and apply this knowledge to their own context.
- 3: Describe current evidence-based practice for strategies and intervention frameworks aimed to promote participation in youth with disabilities.
- 4: Identify programs or changes at the environmental level that may have a role in creating an inclusive society that promotes children's participation.

**SYMP16 - ASSISTIVE TECHNOLOGY INNOVATIONS FOR COMMUNICATION AND MOBILITY IN CEREBRAL PALSY**

*Alistair McEwan, BE, BComm, MEng (Res); Zachery Lerner, PhD; Leigh Hochberg, MD, PhD; James Bowen; William Richards*

Location: Grand Ballroom GH

Learning Objectives:

1. Determine the needs of mobility in cerebral palsy over the next 5 years
2. Determine the needs of communication in CP of the next 5 years
3. Further understand direct thought to speech implanted technology
4. Understand the perspectives from families and people with CP

**Thursday, September 19, 2019: 10:45 AM - 12:15 PM**

**Debate/Current Controversies**

**CC02 - DIFFERENCES IN PRACTICE PATTERNS AROUND THE WORLD FOR CEREBRAL VISUAL IMPAIRMENT: FINDING A COMMON GROUND**

*Corinna M. Bauer, Ph.D.; Linda Lawrence, MD; Karen Harpster, PhD, OTR/L; Belinda J. Deramore Denver, OT; Els Ortibus, MD, PhD*

Location: Platinum 1

Learning Objectives:

- 1: Describe some of the current controversies surrounding the evaluation, diagnosis, and care of children with Cerebral Visual Impairment around the world.
- 2: Demonstrate knowledge of care practices implemented across different parts of the world, including commonalities and differences.
- 3: Understand the current roadblocks preventing advancements in the care of children with Cerebral Visual Impairment.
- 4: Identify potential action points towards creating a common framework and language with the goal of developing a global research initiative to improve the care of children with Cerebral Visual Impairment.

**12:30 PM-1:45 PM**

**Membership Business Meeting and Boxed Lunch**

Location: Grand Ballroom EF

**2019 Membership Business Meeting Agenda**

**Thursday, September 19, 2019 12:30 pm – 1:45 pm**

12:30 pm -12:40 pm	Welcome/Farewell departing Board Members Mauricio R. Delgado, MD – President
12:40 pm -12:50 pm	Treasurer's Report Francisco G. Valencia, MD - Treasurer
12:50 pm -1:00 pm	AACPDM Updates Mauricio R. Delgado, MD – President Jilda Vargus-Adams, MD MSc- Past President
1:00 pm -1:10 pm	Community Council Update Jennifer Lyman- Chair
1:10 pm -1:45 pm	Committee Reports Mauricio R. Delgado, MD – President

Thursday, September 19, 2019: 2:00pm-4:00pm

**GENERAL SESSION**

General Session Moderators: Robert W. Armstrong, MD; Christine Imms, PhD; Francisco Valencia, MD  
Location: Platinum 5-10

**Corbett Ryan Pathways Pioneer Award Presentation**

*Jason Benetti*

**Presidential Guest Lecture**

*Rationale and Evolution of the Application of Quantitative Gait Analysis to the Management of Gait Disorders in Children with Cerebral Palsy*

*Jon R. Davids, MD*

**Mentorship Award Presentation**

*Garey Noritz, MD*

**Presidential Guest Lecture**

*Motor Milestones, Intellectual Disability and Autism*

*Audrey Thurm, PhD*

**Mac Keith Press Basic Science Lecture**

*Microbiome-Nervous System Interactions in Health and Disease*

*Elaine Y. Hsiao, PhD*

Thursday, September 19, 2019: 4:15pm-6:15pm

**Instructional Courses**

**IC01 - FACILITATORS AND BARRIERS TO ENGAGING CHILDREN AND PARENTS IN PEDIATRIC REHABILITATION**

*Lisa A. Chiarello, PT, PhD, FAPTA; Roger Ideishi, JD, OT/L, FAOTA*

Location: Grand Ballroom AB

Learning Objectives:

- 1: Communicate with children and families about their engagement in therapy sessions.
- 2: Identify intervention strategies that can be used to support engagement.
- 3: Create solutions to address barriers to engagement.
- 4: Collaborate with children and families to co-create meaningful intervention plans.

**IC02 - INCLUSION: AT EVERY AGE AND ACROSS THE COMMUNITY!**

*Rachel Byrne, BA; Peter L. Rosenbaum, MD CM FRCPC; Tracy Pickar, BA; Laurie Glader, MD*

Location: Elite 2

Learning Objectives:

- 1: Define different models of inclusion in educational settings and across the lifespan.
- 2: Identify and describe barriers to inclusion including attitudes/bias towards individuals with impairments.
- 3: Have a working knowledge of an inclusion curriculum for school age children.
- 4: Identify strategies on how to support inclusion in your setting.

**IC03 - INVITING THE LIVED EXPERIENCES AND PERSPECTIVES OF CHILDREN LIVING WITH PHYSICAL DISABILITY AND THEIR FAMILIES AS A BASIS FOR ICF APPLICATIONS IN REHABILITATION PROCESSES**

*Sheryl L. Holt, PhD; Liz Gaut, SPT; McKayla Linz, SPT*

Location: Orange County 2

Learning Objectives:

- 1: Identify clear parental perspectives and lived experiences associated with rearing a child with a disability, including participation in rehabilitation.
- 2: Identify child perspectives and lived experiences of the processes of therapies, home, school, and community participation and mobility.
- 3: Identify applications within rehabilitation processes that can empower families and children to face the challenges of living with a disability first and second hand.
- 4: Problem-solve what is missing in common rehabilitation processes that limit the ICF related assessments, interventions, and outcomes.

**IC04 - MANAGEMENT OF PAIN AND FUNCTION IN ADULTS WITH CEREBRAL PALSY**

*Joshua E. Hyman, MD; David Roye, MD; Wade Shrader, MD; Henry G. Chambers, MD; Philip Nowicki, MD*

Location: Marquis Northeast

Learning Objectives:

- 1: Participants will understand the musculoskeletal impact of aging on individuals with cerebral palsy.
- 2: Participants will learn to recognize the causes of pain and loss of function and participation in people with cerebral palsy.
- 3: Participants will understand the orthopaedic surgical procedures utilized to improve function and decrease pain in adults with cerebral palsy.
- 4: Participants will develop an appreciation for the complex issues around consent, medical management, and postoperative complications.

**IC05 - NEUROINFLAMMATION AND PERINATAL BRAIN INJURY: BASIC SCIENCE TO EMERGING THERAPIES**

*Eric M. Chin, MD; Lauren Jantzie, PhD; Shenandoah Robinson, MD; Alexander Hoon, MD, MPH*

Location: Platinum 3

Learning Objectives:

- 1: Identify roles (both beneficial and disruptive) of inflammation in early brain injury.
- 2: Describe the pro- or anti- inflammatory effects of opioids and other perinatal exposures.
- 3: Describe links between inflammatory risk factors and neurodevelopmental outcomes.
- 4: Describe the role of immunomodulatory therapies in developmental brain injury.

**IC06 - NINDS CEREBRAL PALSY COMMON DATA ELEMENTS: UPDATES, RELATIONSHIP TO THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY, AND HEALTH (ICF); APPLICATIONS FOR INTERNATIONAL RESEARCH, AND CLINICAL UTILITY.**

*Joline Brandenburg, MD; Verónica Schiariti, PhD; Carolina Mendoza-Puccini, MD; Robin Feldman, BS MBA; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD*

Location: Orange County 3

Learning Objectives:

- 1: Understand the purpose and impact of the NINDS CDEs, including the CP CDEs.
- 2: Define the relationship of the ICF framework to the current content of the CP Common Data Elements.
- 3: Describe updates in the CP CDEs.
- 4: Develop an understanding and skills in using the CP CDE in national and international research and clinical practice.

**IC07 - OPTIMIZING HEALTH AND FUNCTION IN CHILDREN WITH CEREBRAL PALSY WITH THE NEW AACPDM CARE PATHWAY FOR MAJOR MUSCULOSKELETAL SURGERY**

*Jay Berry, MD; Mohan Belthur, MD; Gina R. Rempel, MD, FRCPC*

Location: Platinum 2

Learning Objectives:

- 1: Understand how to access and navigate the new AACPDM care pathway on preparing children with CP for major musculoskeletal surgery.
- 2: Use the pathway to identify opportunities for improvement of participants' local perioperative care.
- 3: Design an implementation plan for participants to revise and improve their preoperative care processes.
- 4: Share, discuss, and collaborate with other attendees to optimize plans.

**IC08 - ORAL SENSORIMOTOR DISORDERS IN CHILDREN: FROM EVALUATION TO MANAGEMENT**

*Amber Newell, CPNP, OTR/L; Ellen Quinn, MS, CCC-SLP; Heakyung Kim, MD*

Location: Platinum 1

Learning Objectives:

- 1: To develop strategies to identify children with neuromuscular disorders at risk of swallowing dysfunction.
- 2: To understand physiological swallowing process and common swallowing difficulties leading to dysphagia.
- 3: To delineate between sensory-based oral motor difficulties versus pathological swallowing dysfunction.
- 4: To formulate appropriate treatment plan for children with oral sensorimotor dysfunction.

**IC09 - PREP: AN INNOVATIVE THERAPY INTERVENTION FOR IMPROVING PARTICIPATION OF CHILDREN AND YOUTH WITH DISABILITIES AROUND THE WORLD**

*Dana Anaby, PhD; Hazel Killeen Hughes, PhD; Melanie Burrough, MSc; Rachel Teplicky, MSc; Anat Golos, PhD; Laura Turner, MSc*

Location: Grand Ballroom CD

Learning Objectives:

- 1: Describe the rationale for environment-focused approaches to improving participation.
- 2: Understand the research evidence to support PREP, including perspectives and experiences from international research projects in Canada, Ireland, and the United Kingdom.
- 3: Demonstrate knowledge of the PREP approach by participating in an interactive activity using the PREP Intervention forms, guided by the presentation of video clips and client stories.
- 4: Identify the most common barriers for successful implementation of environmental-focused interventions in various clinical contexts and discuss ways to mitigate them.

**IC10 - ROLES OF DISTAL FEMORAL EXTENSION OSTEOTOMY AND PATELLAR TENDON ADVANCEMENT IN THE TREATMENT OF SEVERE PERSISTENT CROUCH GAIT IN ADOLESCENTS AND YOUNG ADULTS WITH CEREBRAL PALSY**

*Tom Novacheck, MD; Elizabeth Boyer, PhD; Jean L. Stout, PT, MS; Katie Walt, DPT; Libby Weber, MD*

Location: Orange County 1

Learning Objectives:

- 1: Discuss the indications for DFEO+PTA surgery for severe crouch gait in adolescents & young adults with cerebral palsy.
- 2: Describe the role of the hamstrings, rectus femoris, patella position and moment arm and insights from musculoskeletal modeling in severe crouch gait.
- 3: Explain the components of post-surgical rehabilitation.
- 4: Compare long-term case vs. control functional outcomes of DFEO+PTA surgery across the entire spectrum of the ICF domains.

**IC11 - SOONER THAN LATER: INNOVATIONS TO THE EARLY DIAGNOSIS OF CEREBRAL PALSY**

*Iona Novak, PhD; Andrea Guzzetta, MD, PhD; Michael Fahey, MBBS PhD FRACP; Anna te Velde, BAppSc (Hons); Lynda McNamara, PhD Candidate; Bernadette Gillick, PhD, MSPT, PT*

Location: Marquis Northwest

Learning Objectives:

- 1: Identify infants at high-risk for developing cerebral palsy.
- 2: Describe the neurophysiological mechanisms of adaptive neuroplasticity and use genetic algorithmic differential diagnostic decision-making.
- 3: Outline novel interventions that optimize neuroplasticity and participation.
- 4: Discuss stakeholder perspectives on research participation impact.

**IC12 - THE INTERNATIONAL CEREBRAL PALSY HEALTH PROMOTIONS GROUP: PURPOSE AND COLLABORATIVE WORK**

*Edward A. Hurvitz, MD; James J. Carollo, PhD, PE; Mark Peterson, PhD; Patrick McPhee, PhD; Deborah E. Thorpe, PT, PhD; Nelleke G. Langerak, PhD*

Location: Orange County 4

Learning Objectives:

- 1: Describe the purpose and benefits of a group like the ICPHPG for collaborative research in the field.
- 2: Explain the issues relating to health outcomes and risk of chronic disease in CP across the lifespan.
- 3: Review several of the areas of research of the ICPHPG.
- 4: Evaluate the collaborative model of the ICPHPG and how it might apply to the research of others.

**IC13 - THERAPEUTIC ACTIVATION AND INHIBITION OF MOTOR SKILLS VIA MOTOR LEARNING AND OPERANT CONDITIONING**

*Dory Wallace, MS, OTR/L; Jessie E. Mann, MS; Mary Rebekah Trucks, MS, OTR/L; Stephanie C. Deluca, PhD*

Location: Grand Ballroom GH

Learning Objectives:

- 1: Participants will be describe the history of intensive therapies.
- 2: Participants will be able to describe presentation of developmental delays and needs of children with microcephaly.
- 3: Participants will be able to demonstrate the successful use of operant conditioning techniques to simultaneously limit interfering movements and behaviors while successfully activating skills in children with hyperkinetic movement disorders.
- 4: Participants will be able to facilitate discussion of strategies to integrate these highly specific and complex techniques into clinical settings.

**IC14 - UTILIZING SOCIAL DETERMINANTS OF HEALTH FRAMEWORK-CEREBRAL PALSY**

*Margaret Salzbrenner Hoopes, MSN; Kirk Dabney, MD; Tirzah Spencer, PhD; Valerie Aptt, MSW*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Participants will articulate the definitions of social determinates of health according to the newest national healthcare research and quality agencies.
- 2: Participants will verbalize understanding of delivering equity in healthcare
- 3: Participants will understand the rationale for social determinates of health in reference to quality and equity of care, family experience, healthcare costs, and patient outcomes.
- 4: Participants will take home specific strategies that can help to implement social determinants of health data into their own clinical setting.

6:30 pm - 8:00 pm

**Wine and Cheese Poster and Exhibit Review Sponsored by Medtronic**

Location: Marquis Ballroom Center and South

Friday, September 20, 2019: 7:00 AM - 8:00 AM

Breakfast Seminars

**BRK11 - BOTULINUM NEUROTOXIN UPDATES**

Mark Gormley, MD; John Fox, DO; Kathleen M. Vonderhaar, MD

Location: Platinum 3

Learning Objectives:

- 1: Understand the biological differences in the current botulinum neurotoxin serotypes.
- 2: Describe the potency and duration of effect of botulinum neurotoxin subtypes.
- 3: Develop knowledge of botulinum toxin serotype E and other new toxins being developed and how they differ from other botulinum neurotoxin serotypes.
- 4: Describe the evolving clinical indications for botulinum neurotoxins.

**BRK12 - CREATING CAPACITY FOR ROBOTIC TECHNOLOGY USE IN PEDIATRIC REHABILITATION : A MULTI-CENTER INTERNATIONAL PERSPECTIVE**

Anna M. McCormick, MD, FRCPC (Pediatrics/Rehabilitation); Hubertus J. van Hedel, PhD PT; Deborah Gaebler-Spira, MD, FRCP; Virginia Wright, BSc (PT), MSc, PhD

Location: Orange County 2

Learning Objectives:

- 1: Define a robotic device and give 3 examples of robotic devices used in gait neurorehabilitation.
- 2: Describe the international collaboration that facilitates the application of rehabilitation technologies and emerging datasets.
- 3: Appreciate the growing experience of robotic technology in neurorehabilitation from a variety of international pediatric rehabilitation centers.
- 4: Participate in conversations regarding the potential use of robotics to enhance function, activity and participation.

**BRK13 - EXERCISE TESTING IN PEDIATRIC REHABILITATION: APPLICATION IN CHILDREN WITH WALKING PROBLEMS**

Annet J. Dallmeijer, PhD; Annemieke I. Buizer, MD PhD

Location: Grand Ballroom AB

Learning Objectives:

- 1: Describe the physiological background of clinical exercise tests in youth with developmental disability.
- 2: Interpret results of energy cost and maximal exercise tests in youth with developmental disability.
- 3: Use clinical exercise test outcomes in treatment of walking problems.
- 4: Understand the value of energy cost and fitness testing for the treatment of walking problems in youth with developmental disability.

**BRK14 - INTERPRETING HIP SURVEILLANCE X-RAYS WITH THE HIPSCREEN APP: A PRIMER FOR THE RADIOLOGY NOVICE**

Vedant A. Kulkarni, MD; Jon R. Davids, MD; Pam Thomason, B Phyt, M Physio; Lisa Wiedeman, MPT

Location: Elite 2

Learning Objectives:

- 1: Be able to use the HipScreen App to measure a hip's migration percentage.
- 2: Identify important landmarks on a hip surveillance radiograph used for quantifying hip displacement.
- 3: Recognize features of poor patient positioning on radiographs that could cause inaccuracy of the migration percentage measurement.
- 4: Understand protocols for proper positioning of children to obtain accurate hip surveillance radiographs.

**BRK15 - MUSCLE SYNERGIES: FROM NEUROSCIENCE TO THE CLINIC**

Katherine M. Steele, PhD; Meghan Munger, MPH; Andrew Georgiadis, MD; Rocio Riveros-Charry, PT

Location: Marquis Northwest

Learning Objectives:

- 1: Describe the theory of synergy-based control of movement.
- 2: Detail the process used to calculate synergies from electromyography data.
- 3: Demonstrate how synergies and other measures of motor control may be useful for diagnosis and treatment planning.
- 4: Identify limitations of using synergies to evaluate motor control and opportunities for future research.

**BRK16 - HEALTH ISSUES IN CEREBRAL PALSY WITH AGEING EPIDEMIOLOGY AND INTERVENTIONS.**

Wilma M. van der Slot, MD PhD; Jennifer Ryan, PhD

Location: Orange County 4

Learning Objectives:

- 1: Upon completion, participant will be able to describe current evidence on co-morbidities in adults with CP.
- 2: Upon completion, participant will be able to identify risk factors for co-morbidity in adults with CP.
- 3: Upon completion, participant will be able to understand chronic disease surveillance.
- 4: Upon completion, participant will have knowledge on interventions to treat clustered symptoms and to reduce chronic disease risk in adults with CP.

**BRK17 - COMMUNICATION IN CHILDREN WITH COMPLEX COMMUNICATION NEEDS: IMPLEMENTATION OF THE C-BILLT: HOW TO CROSS (LANGUAGE) BORDERS AND FACILITATE AAC.**

Johanna J. Geytenbeek, PhD; Kim J. Oostrom, PhD; Kristine Stadsleiv, PhD; Jael N. Bootsma, MSc SLP

Location: Platinum 1

Learning Objectives:

1. Understand why and how the C-BiLLT was developed.
2. Describe how spoken language comprehension in these children relates to various developmental domains.
3. Define facilitators for a successful implementation and innovation of the C-BiLLT into (clinical) practice.
4. List linguistic and/or cultural issues encountered in the translation, adaptation and validation process of the C-BiLLT.

**BRK18 - RELATIONSHIPS AND SEXUALITY: IMPORTANT ISSUES TO ADDRESS FOR QUALITY OF LIFE, IN PROVIDING TRANSITION SERVICES TO YOUNG ADULTS AND FAMILIES AFFECTED WITH CHILD-ONSET CONDITIONS**

*Susan C. Labhard, MSN*

Location: Elite 3

Learning Objectives:

- 1: To elevate understanding of the importance of friends, relationships and sexuality for emerging adults with child-onset conditions and explore a variety of resources for future reference.
- 2: Learn how to apply evidence-based practice guidelines for teaching youth with disabilities, and the people that care about them, the importance of social success in developing healthy relationships and sexuality.
- 3: Explore options to traditional sexual expression and learn that dealing with the sexual consequences of disabilities can offer unique challenges, but need not be an obstacle to sexual fulfillment.
- 4: To encourage the inclusion and attention to sexuality as a topic in health care.

**BRK19 - USING IMPLEMENTATION SCIENCE TO EMBED THE F-WORDS IN CHILDHOOD DISABILITY AT AN ORGANIZATIONAL LEVEL**

*Kim Hesketh, BKIH, MScPT; Andrea Cross, PhD; Rachel Teplicky, MSc; Peter L. Rosenbaum, MD CM FRCPC*

Location: Orange County 3

Learning Objectives:

- 1: Describe the F-words in Childhood Disability and their importance in children's rehabilitation.
- 2: Understand how Implementation Science can contribute to changing culture at an organizational and systems level.
- 3: Outline a multi-level, multi-year plan to embed the F-Words into CTN' organizational culture.
- 4: Identify barriers and facilitators to implementation and possible strategies to address the challenges.

**BRK20 - HEALTH OUTCOMES IN CEREBRAL PALSY ACROSS THE LIFESPAN: INSIGHTS FROM THE BENCH, THE CLINIC, AND LARGE POPULATION-REPRESENTATIVE COHORTS.**

*Mark Peterson, PhD; Edward A. Hurvitz, MD; Daniel G. Whitney, PhD*

Location: Grand Ballroom GH

Learning Objectives:

- 1: Develop a set of common data elements useful for clinical screening of the adult with CP that includes greater attention to aging-related chronic disease risk.
- 2: Describe the longitudinal trends of chronic cardiometabolic, psychological, and musculoskeletal morbidity in adults with CP, and risk factors that contribute to increased risk.
- 3: Discuss the need for surveillance of health risks in adults with cerebral palsy, with a priority focus on psychological, metabolic and musculoskeletal systems.
- 4: Discuss relevant pathophysiologic mechanisms linking early frailty and long-term health outcomes among persons with CP.

**Friday, September 20, 2019: 7:00 AM - 8:00 AM**

**Debate/Current Controversies**

**CC03 - A CURRENT CONTROVERSY: DOES SELECTIVE DORSAL RHIZOTOMY IMPROVE LONG-TERM FUNCTION**

*Freeman Miller, MD; Tom Novacheck, MD; Kristina Tedroff, MD, PhD*

Location: Marquis Northeast

Learning Objectives:

- 1: Upon completion, participant will be able to evaluate the long term effects of SDR when performed in early childhood in children with CP.
- 2: Upon completion, participant will be able to describe some ethical aspects of parental decision making.
- 3: Upon completion, participant will be able to describe current knowledge of the evolution of spasticity in children with CP.
- 4: Upon completion, participant will be able to describe the current evidence base evaluating long term effects of selective dorsal rhizotomy.

**Friday, September 20, 2019: 7:00 AM - 8:00 AM**

**Focused Symposia**

**SYMP17 - CROSSING THE BORDER FROM THE NICU TO HOME: WHEN SHOULD REHABILITATION BEGIN?**

*Stacey C. Dusing, PhD; Alicia Jane Spittle, PhD, MPhysio, BPhysio; Cathy Morgan, PhD, BAppSc; Gunn Kristin Oeberg, PhD*

Location: Platinum 2

Learning Objectives:

- 1: List reasons to consider starting early rehabilitation in the first months of life.
- 2: List challenges or barriers to starting early rehabilitation or transitioning services from the NICU to home.
- 3: Discuss the view of parents in understanding the need for services and navigating access.
- 4: Discuss the role of medical providers, policy makers, and health care workers in engaging families in planning early rehabilitation services.

**SYMP18 - HIP HEALTH IN CHILDREN WITH CP - IS AN OUNCE OF PREVENTION WORTH A POUND OF CURE?**

*Ginny Paleg, DScPT; Elisabet Rodby-Bousquet, PT, PhD; Wade Shrader, MD; Unni G. Narayanan, MBBS, MSc, FRCS(C); Jan Willem Gorter, MD PhD*

Location: Orange County 1

Learning Objectives:

- 1: The participant will be able to formulate rationale for postural management and surgical intervention, when discussing it with colleagues in their own setting.
- 2: The participant will be able to describe when the management and intervention for contracture and deformity should happen.
- 3: The participant will be able to describe the evidence for surgical intervention and postural management.
- 4: The participant will be able to list 5 expected outcomes of surgical and postural management.

**SYMP19 - PEARLS AND PITFALLS OF EARLY INTERVENTION FOR INFANTS WITH UNILATERAL CP**

*Ann-Christin Eliasson, PhD; Anna P. Basu, BMBCh MA FRCPC PhD; Giovanni Cioni, MD; Susan Greaves, OT, PhD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad*

Location: Grand Ballroom CD

Learning Objectives:

- 1: To learn more about the theories and interpretation of different treatment approaches.
- 2: To learn more about the possible effect of early intervention in unilateral CP.
- 3: To understand how the research can be implemented in clinical practice.
- 4: To understand the consequences for families in daily life.

**SYMP20 - THE GLOBAL EDUCATION AND TRAINING INITIATIVE OF IAACD: AN UPDATE ON THE WORK BEING DONE BY THE GLOBAL PROFESSIONAL EDUCATION COMMITTEE OF THE INTERNATIONAL ALLIANCE OF ACADEMIES OF CHILDHOOD DISABILITY**

*Arnab Seal, MD, DCH, FRCPC; Peter L. Rosenbaum, MD CM FRCPC; Jenny J. Carroll, MA, MCSP, PGC(HE); Katherine Benfer, PhD, MPH, BSpPath; Marcia Greenberg, MS, PT; Bernadette Gillick, PhD, MSPT, PT*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Know about the creation of and the goals of the IAACD as a collaborative international, interconnected group of Academies of childhood disability.
- 2: Know why the Global Professional Education Committee (GPEC) of the IAACD was formed and what has been achieved so far, including the story of a pilot training programme in Georgia
- 3: Illustrate how the current development of a 'Knowledge Hub' resource website will aggregate the resources the GPEC are obtaining and curating in order to offer people a one-stop resource
- 4: Explore how the GPEC can link and help with existing or planned collaborations . To help recognize the opportunities to be involved and influence further development of this initiative.

**Friday, September 20, 2019: 8:15am-10:00am**

**GENERAL SESSION**

General Session Moderator: Mauricio R. Delgado, MD  
Location: Platinum 5-10

**Lifetime Achievement Award Presentation**

*Barry S. Russman, MD*

**Presidential Guest Lecture**

*Intracortical Brain-Computer Interfaces: Toward Restoring Communication and Mobility*

*Leigh Hochberg, MD, PhD*

**Presidential Guest Lecture**

*The Future of Health & Medicine: Where Can Technology Take Us?*

*Daniel Kraft, MD*

**8:15am-10:15am**

**Lifespan Committee Adult Care and Aging SIG**

Location: Grand Ballroom AB

Purpose: To bring together a multidisciplinary group of health professionals and researchers with a focus on optimizing lifespan care for adults with CP and other childhood onset disabilities (CODs). This Adult Care and Aging SIG will attract researchers, clinicians and other allied healthcare providers to facilitate and foster connections for ongoing collaboration.

**10:00am - 10:30am**

**Get Up and Move**

**#Getupandmove**

*Instructor: Jennifer Lyman*

Location: Platinum Foyer

Activity Description: Yoga postures will work on balance, strength, and flexibility. A great way to focus and refresh your mind and body and start the morning off right!

**Friday, September 20, 2019 – 10:30 am – 12:15 pm**

**FREE PAPER SESSIONS**

**E. Intervention and Assessment**

**Location: Marquis Northwest**

**10:30 am – 10:37 am –**

**E1. INTENSIVE MOTOR SKILL LEARNING INTERVENTIONS HAVE A STRONG IMPACT ON THE COGNITIVE CONTROL OF CHILDREN WITH CEREBRAL PALSY**

*Rodrigo Araneda, PhD; Daniela Ebner-Karestinos, PT; Geoffroy Saussez, PT; Julie Paradis, PhD; Yannick Bleyenheuft, PhD*

**10:38 am – 10:45 am –**

**E2. EFFECTIVENESS OF CO-OP IN IMPROVING MOTOR SKILLS OF CHILDREN WITH DCD +/- ADHD**

*Jill G. Zwicker, PhD, OT; Cassandra Gunton; Zara Dureno, OT; Sara Izadi-Najafabadi, MS*

10:46 am – 10:53 am –

**E3. PLAY LIFESTYLE AND ACTIVITY ASSESSMENT IN CHILDREN WITH CEREBRAL PALSY**

*Amy Rabatin, MD; dai Sugimoto, PhD; Rebecca Zwicker, MPH; Jodie Shea, BS; Eric Nohelty, BS; Benjamin J. Shore, MD, MPH, FRCSC; Andrea Straccolini, MD*

10:54 am – 11:01 am –

**E4. THE IMPACT OF CONTEXT-BASED INTERVENTIONS ON PARTICIPATION OF CHILDREN WITH DISABILITIES: A SYSTEMATIC REVIEW**

*Paul Y. Yoo, MScA,OT; Ebele Mogo, PhD; Melanie Bergthorson, OT; Janet McCabe, PhD; Annette Majnemer, PhD; Keiko Shikako-Thomas, PhD*

11:02 am – 11:09 am –

**E5. 'PRIORITY ACCESS' - VALIDITY OF THE AGES AND STAGES QUESTIONNAIRE (3RD ED.) TO PRIORITISE CHILDREN AGED 0-5 YEARS FOR PHYSIOTHERAPY ASSESSMENT OF GROSS MOTOR DIFFICULTIES**

*Leanne M. Johnston, PhD; John Fauls, PT; Bronwyn Thompson, PT*

11:25 am – 11:32 am –

**E6. HOW MUCH CHANGE IS IMPORTANT? CALCULATING THE MINIMAL CLINICALLY IMPORTANT DIFFERENCE OF THE GMFM, PODCI, AND CPCHILD AFTER ORTHOPEDIC SURGERY IN CHILDREN WITH CEREBRAL PALSY**

*Benjamin J. Shore, MD, MPH, FRCSC; Jodie Shea, BS; Rachel Tombeno, DPT; Patricia Miller, MS; Maria Fragala-Pinkham, MS, PT, DPT; Brian Snyder, MD, PhD; Travis Matheney, MD*

11:33 am – 11:40 am –

**E7. MACHINE LEARNING ALGORITHMS FOR ACTIVITY RECOGNITION IN CHILDREN WITH CEREBRAL PALSY WHO RELY ON MOBILITY AIDS FOR AMBULATION**

*Benjamin I. Goodlich, MPT; Ellen L. Armstrong, MPT, MSc (APA), BExSc; Sean A. Horan, BExSc, MPhy, PhD; Chris Carty, PhD; Stewart G. Trost, PhD; Matthew Ahmadi, MS; Emmah Baque, PhD*

11:41 am – 11:48 am –

**E8. LOW-INTENSITY VERSUS HIGH-INTENSITY HOME-BASED TREADMILL TRAINING AND WALKING ATTAINMENT IN YOUNG CHILDREN WITH CEREBRAL PALSY**

*Katrin Mattern-Baxter, DPT; Julia Looper, PhD; Kristie F. Bjornson, PhD, PT, PCS*

11:49 am – 11:56 am –

**E9. FEASIBILITY AND ACCEPTABILITY OF A PROGRESSIVE RESISTANCE TRAINING PROGRAM FOR ADOLESCENTS WITH CEREBRAL PALSY.**

*Jennifer M. Ryan, PhD; Grace Lavelle, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Adam Shortland, PhD; Tom Korff, PhD; Wendy Levin, PT; Cherry Kilbride, PhD*

11:57 am – 12:04 pm –

**E10. THE EFFECT OF SELECTIVE DORSAL RHIZOTOMY ON SPINAL DEFORMITIES IN CHILDREN WITH CEREBRAL PALSY: A LONG TERM FOLLOW UP STUDY**

*Stacey D. Miller, PT; Jonathan Lau, MD; Maria Juricic, PT; Bejaan Jivraj, MBBS; Paul Steinbok, BSc, MBBS, FRCS(C); Firoz Miyajji, MD, FRCS(C); Kishore Mulpuri, MBBS, MS, MHSc*

**F. Tone Management  
Location: Platinum 1**

10:30 am – 10:37 am –

**F1. THE EFFECT OF INTRATHECAL BACLOFEN IN DYSKINETIC CEREBRAL PALSY: FINDINGS OF THE IDYS TRIAL**

*Laura A. Bonouvrié, MD; Jules G. Becher, MD PhD; Johan S. Vles, MD PhD; R. Jeroen Vermeulen, MD PhD; Annemieke I. Buizer, MD PhD*

10:38 am – 10:45 am –

**F2. DO SHORT-TERM FUNCTIONAL OUTCOMES OF SDR DIFFER BASED ON SURGICAL TECHNIQUE: COMPARING CONUS TO CAUDA EQUINA**

*Elizabeth A. Duffy, MPH; Alexander L. Hornung, BS; Meghan Munger, MPH; Brian Po-Jung Chen, PT, MD; Nanette Aldahondo, MD; Linda E. Krach, MD; Michael H. Schwartz, BS, MS, PhD; Tom Novacheck, MD*

10:46 am – 10:53 am –

**F3. NON-PHARMALOGICAL, NON-SURGICAL (NPNS) INTERVENTIONS IN CHILDREN WITH DYSKINETIC CEREBRAL PALSY: A SYSTEMATIC REVIEW**

*Miranda Kneebone, B Occ Thy; Kirsty Stewart, PhD; Leanne M. Johnston, PhD*

10:54 am – 11:01 am –

**F4. SARCOPENIA, BOTULINUM TOXIN A AND CEREBRAL PALSY: A SYSTEMATIC REVIEW.**

*Kerr Graham, MD, MD, FRCS (Ed), FRACS; Iqbal Multani, MD; Tandy Hastings-Ison, PhD, BAppSci(Physio); Jason J. Howard, BEng, MD, FRCSC; Walter Herzog, PhD*

11:02 am – 11:09 am –

**F5. BOTULINUM TOXIN-A FOR CHRONIC PAIN IN SPASTIC CEREBRAL PALSY: A RANDOMIZED PLACEBO-CONTROLLED DOUBLE-BLINDED TRIAL**

*Dan N. Jacobson, MD; Kristina Löwing, PhD; Kjell Kullander, MD; Britt-Marie Rydh-Berner, PT; Malin Ljung, RN; Kristina Tedroff, MD, PhD*

11:33 am – 11:40 am –

**F7. BOTULINUM TOXIN-A TREATMENT IN CHILDREN WITH SPASTIC CEREBRAL PALSY: DIFFERENTIAL EFFECTS ON GAIT KINEMATICS BASED ON AGE AND LEVEL OF SEVERITY**

*Annet J. Dallmeijer, PhD; Kim van Hutten, MSc; Marjolein van der Krogt, PhD; Annemieke I. Buizer, MD PhD*



11:41 am – 11:48 am –

**F8. RETROSPECTIVE SURVEY OF PREDICTING FACTORS FOR SPASTICITY REDUCING INJECTIONS WITH BOTULINUMNEUROTOXIN IN THE UPPER LIMBS IN CHILDREN WITH CP.**

*Jenny Hedberg-Graff, MSc; Lena K. Krumlinde-Sundholm, PhD; Nicklas Philström, BS*

11:49 am – 11:56 am –

**F9. OUTCOMES OF THE FIRST-IN-HUMAN STUDY WITH A RECOMBINANT BOTULINUM TOXIN E (RBONT-E): SAFETY AND PHARMACODYNAMIC PROFILE OF RBONT-E COMPARED WITH ABOBOTULINUMTOXINA**

*Laurent Pons, PhD; Claire Vilain, MD; Philippe Picaut, PharmD*

11:57 am – 12:04 pm –

**F10. LONG-TERM SAFETY AND EFFICACY OF OPEN-LABEL ONABOTULINUMTOXINA FOR THE TREATMENT OF LOWER LIMB SPASTICITY IN CHILDREN WITH CEREBRAL PALSY**

*Jill Meilahn, DO; Heakyung Kim, MD; Brad Racette, MD; Fatma Gul, MD; Henry G. Chambers, MD; Emily McCusker, PhD; Kayla Chen, PhD; Rozalina Dimitrova, MD, MPH*

**G. Orthopaedics**

Location: Platinum 2

10:30 am – 10:37 am

**G1. A SYSTEMATIC REVIEW OF REHABILITATION PRACTICES FOLLOWING LOWER LIMB ORTHOPAEDIC SURGERY IN CHILDREN WITH CEREBRAL PALSY**

*Claire Kerr, BSc (Hons) Physio, PhD; Clare McKeaveney, BSc, PhD*

10:38 am – 10:45 am –

**G2. ISOLATED CALF LENGTHENING SURGERY REDUCES KNEE RECURVATUM IN CHILDREN WITH SPASTIC DIPLEGIC CEREBRAL PALSY**

*Jeremy Bauer, MD; Patrick Do; Jing Feng, PhD; Michael Aiona, MD*

10:46 am – 10:53 am –

**G3. RECTUS FEMORIS TRANSFER VS. RESECTION IN CHILDREN WITH CEREBRAL PALSY WITH STIFF KNEE GAIT**

*Julieanne Sees, MD; Chris Church, MPT; Kathleen Maguire, MD; Geovanny Oleas-Santillan, MD; John Henley, PhD; Nancy Lennon, MS, PT; Freeman Miller, MD; Jose J. Salazar Torres, PhD*

10:54 am – 11:01 am –

**G4. IMPACT OF HIP DISPLACEMENT ON HEALTH RELATED QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY**

*Unni G. Narayanan, MBBS, MSc, FRCS(C); Menal Huroy, BS, (MD); Clarissa Encisa, MSc; Ashley Ferkul, BA; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Kishore Mulpuri, MBBS, MS, MHSc; Darcy L. Fehlings, MD*

11:02 am – 11:09 am –

**G5. IS OPEN REDUCTION DURING HIP RECONSTRUCTIVE SURGERY NEEDED FOR TREATMENT OF NEUROMUSCULAR HIP DYSPLASIA?**

*Brandon Marshall, BS; Jason B. Malone, DO; Gary Kiebzak, PhD*

11:25 am – 11:32 am –

**G6. PRE-OPERATIVE STAPHYLOCOCCUS AUREUS SCREENING LOWERS EARLY INFECTION RATES IN PEDIATRIC SPINAL DEFORMITY SURGERY**

*Christina Hardesty, MD; Connie Poe-Kochert, CNP; Jochen Son-Hing, MD; George Thompson, MD*

11:33 am – 11:40 am –

**G7. SCOLIOSIS AND BACK PAIN IN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY**

*Ann I. Alriksson-Schmidt, PhD; Tomasz Czuba, MS; Gunnar Hägglund, PhD*

11:41 am – 11:48 am –

**G8. THE USE OF TRANEXAMIC ACID (TXA) IN NEUROMUSCULAR HIP RECONSTRUCTION, SIGNIFICANT TRANSFUSION REDUCTION OR FAKE NEWS?**

*Laura A. Lins, MPH, ATC; Aneesh V. Samineni; Patricia Miller, MS; Colyn Watkins, MD; Travis Matheney, MD; Brian Snyder, MD, PhD; Benjamin J. Shore, MD, MPH, FRCSC*

11:49 am – 11:56 am –

**G9. THE IMPACT OF SCOLIOSIS SURGERY ON PULMONARY FUNCTION IN SPINAL MUSCULAR ATROPHY: A SYSTEMATIC REVIEW**

*Jason J. Howard, BEng, MD, FRCSC; Abduljabber Alhammoud, MD; Yahya Othman; Ron El-Hawary, MD*

11:57 am – 12:04 pm –

**G10. CLINICAL IMPROVEMENT FOLLOWING VITAMIN D3 SUPPLEMENTATION IN CHILDREN WITH CHRONIC TIC DISORDERS**

*Honghua Li, MD; Zhi-Da Xu, PhD; Bing Wang, MD; Jun-Yan Feng, MD; Han-Yu Dong, MD; Jia Feiyong, MD, PhD*

**H. Rehab Training and Dose**

Location: Platinum 3

10:30 am – 10:37 am –

**H1. EFFECTS OF A PROGRESSIVE RESISTANCE TRAINING PROGRAMME FOR ADOLESCENTS WITH CEREBRAL PALSY: A RANDOMISED CONTROLLED TRIAL.**

*Jennifer M. Ryan, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Cherry Kilbride, PhD; Tom Korff, PhD; Adam Shortland, PhD; Wendy Levin, PT; Grace Lavelle, PhD*

10:38 am – 10:45 am –

**H2. EFFECTS OF MODIFIED CONSTRAINT-INDUCED MOVEMENT THERAPY IN REAL-WORLD ARM USE IN YOUNG CHILDREN WITH UNILATERAL CEREBRAL PALSY: A SINGLE-BLIND RANDOMIZED TRIAL**

*Young Sub Hwang, MA*

FRIDAY

10:46 am – 10:53 am –

**H3. RCT OF A PARENT-ADMINISTERED SENSORIMOTOR INTERVENTION SAFELY IMPROVES UPPER EXTREMITY FUNCTION AND SOMATOSENSORY PROCESSING.**

*Nathalie Maitre, MD; Arnaud Jeanvoine, PhD; Stephanie Burkhardt, MPH; Lindsay Pietruszewski, DPT; Ashley Miller, MM, MT-BC; Mary Ann Nelin, MD; Jill C. Heathcock, MPT, PhD*

10:54 am – 11:01 am –

**H4. INTERVENTIONS TO IMPROVE BALANCE IN CHILDREN AND ADOLESCENTS WITH DOWN SYNDROME: A SYSTEMATIC REVIEW**

*Ricardo Rodrigues de Sousa, Jr., MSc Student; Lorena Costa Ferreira, PT; Andressa Campos Ferreira, PT; Carolina Paisante Vieira de Barros, PT; Ana Paula Bensemann Gontijo, PhD*

11:02 am – 11:09 am –

**H5. QUANTIFYING DOSE IN UPPER EXTREMITY PEDIATRIC NEUROREHABILITATION**

*Megan Metzler, MSc; Kathleen O'Grady, OT; Linda Fay, OT; Darcy L. Fehlings, MD; John Andersen, MD; Shannon Harvey, OT; Mia Herrero, OT; Adam Kirton, MD*

11:25 am – 11:32 am –

**H6. DEVELOPMENTAL TRAJECTORIES OF HAND-USE AMONG CHILDREN WITH SPASTIC UNILATERAL CEREBRAL PALSY - A POPULATION-BASED STUDY FROM THE NORWEGIAN CEREBRAL PALSY FOLLOW-UP PROGRAM**

*Gunvor L. Klevberg, PhD; Sonja Elkjær, MS; Manuela Zucknick, PhD; Reidun B. Jahnsen, PhD*

11:33 am – 11:40 am –

**H7. CAN MIRROR THERAPY OPEN A NEW WINDOW IN THE REHABILITATION OF CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY?**

*Mintaze Kerem Günel, PhD; Duygu Korkem, PhD; Arzu Ceylan Has, MS; Hatice Kader Karlı Oğuz, Prof.*

11:41 am – 11:48 am –

**H8. A MULTISITE BLINDED COMPARATIVE EFFICACY TRIAL OF CIMT DOSE LEVELS AND CONSTRAINT VARIATIONS FOR 2 - 8 YEAR OLDS WITH HEMIPARETIC CEREBRAL PALSY**

*Sharon L. Ramey, PhD; Stephanie C. Deluca, PhD; Richard D. Stevenson, MD; Amy Darragh, PhD; Warren Lo, MD; Mark Conaway, PhD*

11:49 am – 11:56 am –

**H9. EARLY INTENSIVE LEG TRAINING TO ENHANCE WALKING IN CHILDREN WITH PERINATAL STROKE: RESULTS OF A RANDOMIZED CONTROLLED TRIAL**

*Caitlin Hurd, MSc, MPT; Donna Livingstone, PT; Kelly Brunton, PT; Allison Smith, MSc; Ephrem Zewdie, PhD; Monica Gorassini, PhD; Adam Kirton, MD MSc FRCPC; Man-Joe Watt, MD, FRCPC; John Andersen, MD, FRCPC; Jerome Yager, PhD; Jaynie F. Yang, PhD, PT*

11:57 am – 12:04 pm –

**H10. WHAT DOSE OF UPPER LIMB FUNCTIONAL TRAINING IS NEEDED TO ACHIEVE CLINICALLY SIGNIFICANT IMPROVEMENTS? A SYSTEMATIC REVIEW INCLUDING ROC CURVE ANALYSIS**

*Iona Novak, PhD; Michelle Jackman, PhD; Claire Galea, MEd; B.Ed; Natasha A. Lannin, PhD; Leanne Sakzewski, PhD, BOccThy; Laura Miller, PhD*

Friday, September 20, 2019: 10:30 AM - 12:00 PM

**Debate/Current Controversies**

**CC04 - ADVANCEMENTS IN NEUROREHABILITATION TECHNOLOGY FOR FUNCTION, ACTIVITY AND PARTICIPATION: HYPE OR HOPE?**

*Anna M. McCormick, MD, FRCPC (Pediatrics/Rehabilitation); Elaine Biddiss, Ph.D, PEng; Adam Scheinberg, MBBS, FRACP, FAIRM, MMED; Eduardo Rocon, Ph.D, PEng; Hana Alazem, BSc PT, MD, FRCPC (C); Alistair McEwan, BE, BComm, MEng (Res)*

Location: Grand Ballroom CD

Learning Objectives:

- 1: Describe why technology advancement is important in rehabilitation.
- 2: Describe what makes technology development meaningful and impactful in pediatric rehabilitation.
- 3: List 5 examples of newly developed high tech devices utilized in pediatric rehabilitation.
- 4: List possible impacts of technology development on function, activity and participation.

**CC05 - WE NEED TO TALK ABOUT BOTULINUM TOXIN**

*Kerr Graham, MD, MD, FRCS (Ed), FRACS; Tandy Hastings-Ison, PhD; Anja Van Campenhout, MD, PhD*

Location: Orange County 1

Learning Objectives:

- 1: Understand the current evidence for the efficacy of BoNT-A therapy in ambulant children with CP, in the ICF domains: body structure and function.
- 2: Understand the current evidence for the efficacy of BoNT-A therapy in ambulant children with CP, in the ICF domains: activities and participation.
- 3: Understand current evidence for the safety and adverse events profile of BoNT-A therapy for an ambulant child, GMFCS I-III, with CP.
- 4: Understand the risks of BoNT-A therapy to the injected muscle, including the risks of weakness, long-term muscle atrophy and fibrosis.

FRIDAY

Friday, September 20, 2019: 10:30 AM - 12:00 PM

**Focused Symposia**

**SYMP21 - CEREBRAL PALSY IN LATINO AMERICA: WHAT WE KNOW AND WHAT WE DON'T KNOW**

*Verónica Schiariti, PhD; Roselyn Valerin, MD; JORGE Carranza-del Río, MD; Fabiola Barron, MS; Maria Jose Martinez Caceres, MD; Hugo Galvez Quiñonez, MD*

Location: Orange County 3

Learning Objectives:

- 1: To learn an epidemiological scope of CP in pediatric populations in Latino America.
- 2: To review common tools used to collect information on functioning and disability of children.
- 3: To identify gaps in health data collection related with CP across Latin-American countries.
- 4: To propose feasible strategies to harmonize data collection regarding prevalence and incidence of CP in Latino America.

**SYMP22 - TRANSFORMING OUTCOMES IN CEREBRAL PALSY THROUGH GLOBAL CLINICAL PARTNERSHIPS**

*Samanmali P. Sumanasena, MD; Brian Hoare, OT; PhD; James Rice, MBBS; Nimisha Muttiah, PhD*

Location: Elite 2

Learning Objectives:

- 1: Plan and carry out collaborative projects with global partners.
- 2: Identify and overcome challenges to carrying out transformation in practices.
- 3: Culturally adopt interventions for children with communication difficulties.
- 4: Undertake training programs across the borders.

**SYMP23 - DEVELOPING A CLINICAL PRACTICE GUIDELINE REGARDING FUNCTIONAL THERAPY IN CEREBRAL PALSY: UTILISING THE GRADE AND AGREE II FRAMEWORK**

*Iona Novak, PhD; Leanne Sakzewski, PhD, BOccThy; Michelle Jackman, PhD; Cathy Morgan, PhD, BAppSc; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad*

Location: Grand Ballroom AB

Learning Objectives:

- 1: Understand the key components of developing high-quality, reliable Clinical Practice Guidelines, based on recommendations from the World Health Organisation.
- 2: Understand the key components of developing high-quality, reliable Clinical Practice Guidelines, based on Grading of Recommendations Assessment, Development and Evaluation (GRADE) framework.
- 3: Upon completion, participants will be able to experience applying GRADE to assess the quality of evidence relating to functional therapy.
- 4: Upon completion, participants will be able to experience applying GRADE to formulate recommendations relating to functional therapy.

**SYMP24 - HOME-BASED ASSESSMENT AND REHABILITATION OF THE UPPER LIMB IN CHILDREN WITH UNILATERAL CEREBRAL PALSY**

*Giuseppina Sgandurra, MD, PhD; Giovanni Cioni, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad*

Location: Orange County 2

Learning Objectives:

- 1: Describe the different technological approaches to deliver at home assessment and rehabilitation of upper limb in children with Unilateral Cerebral Palsy.
- 2: Define the main platforms available for delivering at home rehabilitation of upper limb in children with Unilateral Cerebral Plays.
- 3: Demonstrate the use of wearable sensors for assessing and evaluating asymmetries in children with typical and atypical development.
- 4: Plan new evidence-based studies on upper limb rehabilitation.

**SYMP25 - THE SWINGS AND ROUNDABOUTS OF REGISTERS AND SURVEILLANCE PROGRAMS FOR CHILDHOOD DISABILITY RESEARCH**

*Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Paul Gross, BA; Sue Reid, PhD MClInEpi BAppSc; Lena Westbom, PhD; Shona Goldsmith, BPhy(Hons)*

Location: Orange County 4

Learning Objectives:

- 1: List examples of some of the many and varied ways that register/surveillance data can be used in childhood disability research.
- 2: Describe some of the ways that registers can be used to improve quality of care.
- 3: List examples of different register/surveillance programs from Europe, the United States of America and Australia.
- 4: Describe some of the challenges in developing and maintaining a register/surveillance program.

**SYMP26 - INNOVATIONS IN IMPLEMENTATION OF THE GENERAL MOVEMENTS ASSESSMENT**

*Colleen Peyton, DPT; Alicia Spittle, PhD; Andrea Guzzetta, MD, PhD*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Understand the neurophysiological bases of spontaneous motility and why it is a powerful biomarker of CNS function.
- 2: Discuss the state of the art on the use of GMs to predict long-term outcomes in young infants.
- 3: Discuss current research and future perspectives surrounding automatization of GMs.
- 4: Describe translational strategies for implementation of GMs research into clinical practice.

**SYMP27 - GAIT ANALYSIS WITHOUT A GAIT LAB: USING TECHNOLOGY TO ENHANCE OBSERVATIONAL GAIT ASSESSMENT IN RESOURCE-CHALLENGED ENVIRONMENTS**

Vedant A. Kulkarni, MD; Jon R. Davids, MD; Abhay Khot, MBBS, FRACS; Alaric Aroojis, MS, D'Ortho, DNB

Location: Grand Ballroom GH

Learning Objectives:

- 1: Understand the phases and sub-phases of the normal gait cycle in the sagittal and coronal planes.
- 2: Identify the most common gait deviations seen in children with unilateral and bilateral cerebral palsy.
- 3: Understand the principles of accurate mobile device video acquisition and analysis of those videos using the Edinburgh Visual Gait Score.
- 4: Understand methods of improving assessment of gait and functional outcome in resource-challenged environments using low-cost and emerging technology.

**12:15pm - 1:15pm**

**Non CME Luncheon Options**

**International Networking Luncheon**

Location: Marquis Northeast

**IPSEN Presentation Theatre:**

*Dysport® (abobotulinumtoxinA) in the Treatment of Lower Limb Spasticity in Pediatric Patients 2 Years of Age and Older*

Presenter: Mark E. Gormley, MD

Location: Grand Ballroom EF

**12:30pm-1:30pm**

**NMES Network Luncheon**

**Friday, September 20, 2019: 1:30pm-3:30pm**

**GENERAL SESSION**

General Session Moderators: Giovanni Cioni, MD, PhD; Maria del Consuelo Ibarra-Rodriguez, MD; Veronica Schiariti, MD, MHS, PhD

Location: Platinum 5-10

**Duncan Wyeth Award Presentation**

*Kyle Pease*

**Presidential Guest Lecture**

**Brain Repair After Stroke**

*Steven Cramer, MD*

**Cathleen Lyle Murray Award Presentation and Lecture**

*Judith E. Heumann*

**Presidential Guest Lecture**

**Current State of the Art of Lower Limb Pediatric Orthotic Care: Translation to the Developing World**

*Thomas DiBello, CO, FAAOP*

**Gayle G. Arnold Lecture**

**A Future of Flourishing: Supporting Successful Transitions for Young People with Disabilities**

*Erik Carter, PhD*

**1:30pm-3:30pm**

**AACPDM Complex Care Committee – Complex Care SIG**

Location: Grand Ballroom AB

Purpose: To promote advancement of clinical care, education, research, and advocacy for children with medical complexity. Available to all clinical and research professionals who focus on the care of children with medical complexity.

**3:30pm-4:30pm**

**Poster Walk in the Exhibit Hall**

Location: Marquis Ballroom Center and South

**3:40pm-3:55pm**

**Get Up and Move - Latin Cardio Dance**

**#Getupandmove**

Location: Platinum Registration Foyer

Take a quick energizing break by moving to upbeat dance music. All are welcome. No experience (or even ability) necessary!

**Friday, September 20, 2019: 4:30pm-6:30pm**

**Instructional Courses**

**IC15 - COMPREHENSIVE MULTIDISCIPLINARY MANAGEMENT OF SPINA BIFIDA**

*Vineeta T. Swaroop, MD; Luciano Dias, MD; Elizabeth Yerkes, MD; Robin Bowman, MD*

Location: Platinum 2

Learning Objectives:

- 1: Describe a successful model for multidisciplinary care of spina bifida patients, including who should be involved, team evaluation, collaborative decision making.
- 2: Define neurosurgical manifestations of spina bifida and understand treatment approaches.
- 3: Define urological manifestations of spina bifida and understand treatment approaches.
- 4: Define orthopaedic manifestations of spina bifida and understand treatment approaches.

**IC16 - EARLY DIAGNOSIS OF CEREBRAL PALSY (CP): TRANSLATING THE 2017 INTERNATIONAL GUIDELINES INTO CLINICAL PRACTICE**

*Rachel Byrne, BA; Nathalie Maitre, MD; Andrea Duncan, MD*

Location: Grand Ballroom AB

Learning Objectives:

- 1: Identify discrete components of the guidelines.
- 2: Describe current processes for diagnosis and intervention of CP in your setting.
- 3: Identify strengths, weaknesses, opportunities, and threats (SWOT) to implementing the guidelines in your program.
- 4: Develop a process flow to adapt guidelines to your own setting.

**IC17 - EVALUATION AND MANAGEMENT OF PAIN IN PEOPLE WITH CEREBRAL PALSY**

*Hiroko Matsumoto, PhD; Heakyung Kim, MD; Daniel F. Linhares, MD; Joshua Hyman, MD*

Location: Grand Ballroom GH

Learning Objectives:

- 1: Discuss the current state of pain assessment in verbal and non-verbal patients, and describe ongoing research in improving pain evaluation.
- 2: Understand causes of pain and associated symptoms.
- 3: Discuss current modalities of operative, non-operative & pharmacologic management of pain for pediatric and adult patients with CP.
- 4: Discuss successful and unsuccessful management of pain.

**IC18 - WORKSHOP ON TRANSITION PLANNING FOR YOUTH WITH NEURODEVELOPMENTAL DISABILITIES**

*Veronica M. Meneses, MD, MSHS; Cory E. Nourie, MSS, MLSP; Yanin Rivera, MD; Carrie Sewell-Roberts, MSW*

Location: Orange County 2

Learning Objectives:

- 1: Understand the core elements and foundational principles of the transition, as expounded by expert health professionals and associated organizations in the USA and Mexico, and within the ICF-CY framework.
- 2: Recognize the biopsychosocial dimensions of transition and the role of multiple disciplines, including clinicians, social workers, administrators, therapists, educators, recreational specialists, lawyers/advocates, in facilitating the transitional plan of care.
- 3: Identify barriers to successful transition and how these vary based on clinical context, youth and family characteristics and regional/country differences.
- 4: Develop a standardized template for the transitional process that incorporates the core elements, foundational principles, and the ICF-CY that can be applied to diverse cases.

**IC19 - HIP HEALTH IN CEREBRAL PALSY: EVIDENCE-INFORMED MANAGEMENT OF HIP DISPLACEMENT FROM SURVEILLANCE TO SURGERY AND BEYOND**

*Kate L. Willoughby, BPhysio, DPhysio; Pam Thomason, B Pty, M Physio; Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Abhay Khot, MBBS, FRACS; Erich Rutz, MD; Kerr Graham, MD, MD, FRCS (Ed), FRACS*

Location: Orange County 3

Learning Objectives:

- 1: describe the epidemiology of hip displacement and its relation to gross motor function.
- 2: be familiar with the evidence for hip surveillance and clinical guidelines to support its implementation.
- 3: evaluate the evidence for interventions for hip displacement and understand their rationale and timing in the context of the child and family and in relation to severity of motor disorder.
- 4: understand and evaluate hip morphology at skeletal maturity in youth with CP using the MCPHCS.

**IC20 - MANAGEMENT OF DIFFICULT CLINICAL PRESENTATIONS OF HYPERTONIA AND COMPLEX MOVEMENT DISORDERS IN CHILDREN WITH DISABILITIES**

*Mark Gormley, MD; Tim Feyma, MD; Peter D. Kim, MD*

Location: Marquis Northwest

Learning Objectives:

- 1: Be able to better understand difficult hypertonic and complex movement disorders and possible treatment options, including the importance of a team approach in patient management.
- 2: Understand when a deep brain stimulator can be useful in managing severe dystonic and dyskinesic conditions.
- 3: Be able understand which patients may be successfully treated with a ventral-dorsal rhizotomy or a selective dorsal rhizotomy.
- 4: Understand when intrathecal baclofen, phenol neurolysis, and botulinum toxin injections may be useful in treating hypertonic conditions.

**IC21 - MUSCULOSKELETAL ADAPTATIONS TO SPASTICITY - IMPLICATIONS FOR CLINICIANS**

*N. Susan Stott, MBChB PhD FRACS; Jane Valentine, FRACP; Sian Williams, PhD; Richard L. Lieber, PhD*

Location: Grand Ballroom CD

Learning Objectives:

- 1: Define the features of early declining musculoskeletal health in adults with CP and the effect on chronic disease risk.
- 2: Understand the growth of muscle in typically developing children and children with cerebral palsy at a biologic and biomechanical level.
- 3: Critique evidence around long-term use of onabotulinum toxin A injections and effect on muscle structure / function in both animal and human studies.
- 4: Develop an integrated approach to maintaining muscle health through spasticity reduction and therapy interventions.

**IC22 - NEURO-ORTHOAEDIC JOURNAL CLUB: TOP 10 ARTICLES IN THE LAST YEAR RELATING TO THE ORTHOAEDIC MANAGEMENT OF CHILDREN WITH NEUROMUSCULAR DISORDERS**

*Amanda T. Whitaker, MD; Jon R. Davids, MD; Benjamin J. Shore, MD, MPH, FRCSC*

Location: Platinum 1

Learning Objectives:

- 1: Introduction to a standardized format for the critical analysis of scientific articles from the medical literature.
- 2: Be familiar with the most significant recent advances in the orthopaedic management of children with neuromuscular disorders.
- 3: Incorporate new techniques and technologies into clinical practice.
- 4: Appreciate current research trends in this area and be inspired to make a contribution to the body of knowledge!

**IC23 - ORTHOPAEDIC SURGERY FOR THE UPPER AND LOWER LIMB IN CHILDREN WITH CEREBRAL PALSY**

*Robert M. Kay, MD; Nina Lightdale-Miric, MD*

Location: Orange County 4

Learning Objectives:

- 1: Accurately identify the most common upper and lower extremity problems in children with CP.
- 2: Identify common pitfalls in surgery to the upper and lower extremity
- 3: Define one or more ways to avoid common treatment errors.
- 4: Gain perspective on the complexity of surgical planning for children with CP.

**IC24 - SURGEON AND PT PARTNERSHIPS IN THE CARE OF YOUTH WITH CEREBRAL PALSY**

*Nancy Lennon, MS, PT; Wade Shrader, MD; Faithe R. Kalisperis, DPT; Freeman Miller, MD*

Location: Elite 3

Learning Objectives:

- 1: Describe the natural progression of musculoskeletal deformities in youth with spastic CP.
- 2: Identify indications and surgical methods to address hip subluxation in youth with CP.
- 3: Engage in treatment planning for gait dysfunction alongside pediatric orthopedic surgeons.
- 4: Adopt clinical practices to support positive musculoskeletal outcomes for youth with CP.

**IC25 - LONG-TERM EFFECTS OF SELECTIVE DORSAL RHIZOTOMY (SDR) FOR INDIVIDUALS WITH CEREBRAL PALSY IN DEVELOPED (USA) AND DEVELOPING (SOUTH AFRICA) COUNTRIES**

*Tom Novacheck, MD; Nelleke G. Langerak, PhD; Robert P. Lamberts, PhD, FECSS; Marcie Ward, MD*

Location: Platinum 3

Learning Objectives:

- 1: To understand what SDR entails: aim, selection criteria, surgical technique, and additional care and treatment needed pre-and post-surgery.
- 2: To get insight in the long-term outcomes of SDR in a developed country (Gillette, USA).
- 3: To get insight in the long-term outcomes of SDR in a developing country (Cape Town, South Africa).
- 4: Understand how management and long-term function might be affected if a child who was a candidate for SDR lived in a developed as opposed to a developing country.

**IC26 - TRANSLATING YOUR PRESCRIPTION INTO AN ORTHOTIC INTERVENTION: INSIGHTS INTO THE INTERPRETATION, DESIGN, FABRICATION, FITTING, AND FITTING OF LOWER LIMB ORTHOSES**

*Tom V. DiBello, CO, FAAOP; Phillip M. Stevens, MEd, CPO; Sally A. DiBello, MPO, CPO*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Upon Completion, attendees will have a more complete understanding of the process associated with the design, fabrication and fitting of a lower limb orthosis (AFO).

- 2: Upon Completion, attendees will make more informed decisions related to the bio-mechanical capabilities of an AFO.
- 3: Upon completion, attendees will write more complete prescriptions for orthotic devices including and appreciation of the limitations of the devices.
- 4: Upon Completion, attendees will more effectively communicate their goals and expectations to the orthotists on their team.

**IC27 - TREATMENT WITH INTRATHECAL BACLOFEN IN DYSKINETIC CEREBRAL PALSY: EVIDENCE, INDICATIONS AND EVALUATION**

*Laura A. Bonouvrié, MD; Annemieke I. Buizer, MD PhD; R. Jeroen Vermeulen, MD PhD; Jules G. Becher, MD PhD*

Location: Elite 2

Learning Objectives:

- 1: Use the knowledge about the current evidence on the effect ITB in cerebral palsy in clinical practice.
- 2: Describe the indications for ITB in dyskinetic cerebral palsy.
- 3: Evaluate the effect of ITB in an individual patient in clinical practice.
- 4: Put the different possibilities of dosing into practice to provide the optimal effect of treatment for the individual patient.

**IC28 - FEEDING, EATING AND SWALLOWING TEAM (FEAST) BOOT CAMP: A SKILLS LAB ADDRESSING KNOWLEDGE GAPS IN ORAL AND ENTERAL FEEDING FOR CHILDREN WITH CEREBRAL PALSY**

*Gina R. Rempel, MD, FRCPC; Marianne E. Gellert-Jones, MA, CCC/SLP; Heidi H. Kecskemethy, MS Ed, RDN, CSP, CBDT; James Plews-Ogan, MD; Jodi Wolff, MS, RDN, LD*

Location: Orange County 1

Learning Objectives:

- 1: Integrate nutritional assessments and oral feeding strategies into clinical assessment and practice for children with CP.
- 2: Decide on appropriate assessment and family readiness in approaching the topic of enteral nutrition with families.
- 3: Appreciate the challenges involved in the care of gastrostomy and jejunostomy tubes.
- 4: Describe the advantages of different food choices in enteral nutrition.

**Friday, September 20, 2019: 7:00 pm-12:00am**

**Networking Dinner and Celebration**

Location: City Grove of Anaheim



Saturday, September 21, 2019: 7:00 AM - 8:00 AM

**Breakfast Seminars**

**BRK21 - A CROSS-CULTURAL EXAMINATION OF STRESS AND PROMOTING COUPLE RELATIONSHIP HEALTH FOR CAREGIVERS OF CHILDREN WITH DEVELOPMENTAL DISABILITIES**

*Carrie Sewell-Roberts, MSW; Tetsuo Sato, PhD; Carol Shrader, BA; Wade Shrader, MD*

Location: Grand Ballroom AB

Learning Objectives:

- 1: To understand the body of evidence surrounding caregiver stress and its effect on couple relationships from a cross-cultural perspective.
- 2: To understand from a first-person perspective how stress can affect a caregiver's ability to cope and maintain healthy relationships.
- 3: To appreciate why mitigating caregiver stress and promoting parent relationship health is important for achieving best outcomes for children with developmental disabilities.
- 4: To identify evidence-based tools for assessing caregiver stress and intervention strategies to reduce psychosocial risk and promote relationship health.

**BRK22 - CHARACTERIZING DEVELOPMENTAL STAGES IN INDIVIDUALS WITH CEREBRAL PALSY: FROM MOBILITY TO SOCIAL INTERACTIONS**

*Marloes van Gorp, MSc; Marij E. Roebroek, PhD; Jan Willem Gorter, MD PhD; Annet J. Dallmeijer, PhD*

Location: Platinum 3

Learning Objectives:

- 1: Be able to understand the stages and timing of development of capacity of mobility and capability of mobility and self-care in individuals with CP.
- 2: Understand the stages and timing of development of performance of communication, mobility, daily activities and social interactions of individuals with CP.
- 3: Understand differences in development of activity and participation for individuals with CP with or without intellectual disability and different levels of gross motor functioning.
- 4: Be able to differentiate development of several domains and qualifiers of activity and participation.

**BRK23 - USING WEARABLE SENSORS TO MEASURE INFANT LIMB MOVEMENTS AND PREDICT NEURODEVELOPMENTAL OUTCOMES: CURRENT EVIDENCE, OPPORTUNITIES, AND CHALLENGES.**

*Beth A. Smith, PT, PhD; Rujuta B. Wilson, MD*

Location: Orange County 1

Learning Objectives:

- 1: List 2 validated wearable sensor metrics of infant limb movement.
- 2: Describe 1 wearable sensor metric that could be created and how it could be validated.
- 3: Identify 1 potential opportunity for clinical use of wearable sensor measurement of infant limb movement.
- 4: Identify 1 challenge and potential solution for use of wearable sensor measurement of infant limb movement.

**BRK24 - HOW TO ENGAGE PATIENTS IN RESEARCH AND GARNER PATIENT-REPORTED OUTCOMES USING THE CPRN COMMUNITY REGISTRY.**

*Paul Gross, BA; Mary E. Gannotti, PhD*

Location: Grand Ballroom D

Learning Objectives:

- 1: 'Upon completion, participant will be able to articulate the patient populations accessible through the CPRN Community Registry'.
- 2: 'Upon completion, participant will be able to describe how to propose a concept and develop a study for use with the CPRN Community Registry'.
- 3: 'Upon completion, participant will be able to understand how individuals with CP and their caregivers can be engaged in research discussions to help shape hypotheses and recruit community investigators'.
- 4: 'Upon completion, participant will be able to describe how the CPRN Community Registry will be used to gather longitudinal information on outcomes for adults with CP'.

**BRK25 - RECENT PRACTICE CHANGING PUBLICATIONS FOR THE PEDIATRIC COMPLEX CARE PROVIDER**

*Kristie Malik, MD*

Location: Grand Ballroom C

Learning Objectives:

- 1: Discuss current topics and advances in the care of children with medical complexity.
- 2: Understand the multidisciplinary implication for each recent development.
- 3: Integrate new findings into daily practice.
- 4: Discuss commonalities and variations in care internationally.

**BRK26 - RESULTS AND IMPACT OF A SCREENING TO IDENTIFY INFANTS AT RISK FOR CORTICAL VISUAL IMPAIRMENT**

*Christine Roman, PhD; Hillary S. Thomas, M. Ed.*

Location: Orange County 4

Learning Objectives:

- 1: To consider the early signs of CVI in infants.
- 2: To consider the use of a 5-point protocol used to identify the presence of early signs of potential signs of CVI
- 3: To recognize the rationale for early identification of infants with CVI
- 4: To increase awareness of the services and supports used to facilitate improvements in functional vision in infants and children with CVI

**BRK27 - SUPPORTING MENTAL HEALTH IN CHILDREN AND YOUTH WITH DISABILITIES.**

*Mats Granlund, PhD; Christine Imms, PhD; Rob Brooks, PhD; Ai-Wen Hwang, PhD*

Location: Orange County 2

Learning Objectives:

- 1: Demonstrate state of the art knowledge in how mental problems can be assessed in children and adolescents with disability.
- 2: Discuss definitions of the constructs mental health, mental health problems and participation.
- 3: Analyze methodology for assessing longitudinal trajectories of mental health.
- 4: Demonstrate knowledge about possible interventions for strengthening mental health in children and adolescents with disabilities.

**BRK28 - LOWER LIMB ORTHOTIC MANAGEMENT IN CEREBRAL PALSY - AN INTERACTIVE DISCUSSION.**

*Tom V. DiBello, CO, FAAOP*

Location: Marquis Northwest

Learning Objectives:

- 1: Be exposed to the evidence surrounding the use of lower limb orthoses in Cerebral Palsy.
- 2: Be exposed to varying opinions and positions of other attendees regarding the use of this modality in this population.
- 3: Leave with a heightened awareness of other perspectives and views on this topic.
- 4: Be better informed as to the most effective designs for use in this population.

**Saturday, September 21, 2019: 7:00 AM - 8:00 AM**

**Debate/Current Controversies**

**CC06 - BRAIN CIRCUITRY IN CEREBRAL PALSY: DOES WIRING INFLUENCE FIRING?**

*Bernadette Gillick, PhD, MSPT, PT; Kathleen Friel, PhD; Adam Kirton, MD MSc FRCPC; Andrew Gordon, PhD*

Location: Platinum 2

Learning Objectives:

- 1: Analyze the current evidence on the characterization of circuitry in pediatric unilateral cerebral palsy.
- 2: Debate the merits and limitations of current techniques of assessment.
- 3: Evaluate the influence of corticospinal tract connectivity and other bioindicators on response to intensive therapies for children with UCP.
- 4: Discuss challenges of developing, researching and implementing precise early interventions to optimize function and reduce impairment.

**Saturday, September 21, 2019: 7:00 AM - 8:00 AM**

**Focused Symposia**

**SYMP28 - DANCE, DANCE, DANCE- UNIVERSAL LANGUAGE OF EXPRESSION AND MOVEMENT**

*Bernard Dan, MD PhD; Tara Egan, DPT; Deborah J. Gaebler-Spira, MD; Dido Green, PhD, MSc; Min Shen, MD; Citlali López-Ortiz, PhD, MA*

Location: Platinum 1

Learning Objectives:

- 1: Discuss influences of the local cultural and sociodemographic environments on the implementation of dance programs for rehabilitation.
- 2: Identify the attributes of western classical ballet training that may be harnessed for enhanced functional outcomes in movement rehabilitation.
- 3: Discuss the evidence based benefits of dance programs from the ICF perspective with emphasis on activities and participation outcomes using the ICF paradigm.
- 4: Identify various logistical elements for implementing sustainable dance programs in international sites for children with CP, autism, and intellectual disability.

**SYMP29 - IMPACT OF CONGENITAL INFECTIONS INCLUDING ZIKA VIRUS ON NEURODEVELOPMENTAL OUTCOMES AND FAMILIES: WHAT ARE WE MEASURING?**

*Verónica Schiariti, PhD; Melissa Gladstone, PhD; Egmar Longo, PhD; Antonio Rizzoli Córdoba, MD MSc PhD*

Location: Grand Ballroom H

Learning Objectives:

- 1: To review the epidemiology of Zika/TORCH infections and reported neurodevelopmental outcomes – literature review of recent evidence
- 2: To apply the ICF as a guiding framework to address needs of pediatric populations affected by congenital infections in studies in LMIC settings
- 3: To describe what areas of functioning and disability are relevant to parents and caregivers of children affected by congenital infections – ongoing studies in Brazil and Mexico
- 4: To share lessons learned on ICF-based initiatives for children with CP – due to ZIKV and other aetiologies – modelling interdisciplinary collaboration across different fields (developmental pediatrics, epidemiology, global health)



**SYMP30 - KNOWINGLY OR UNKNOWINGLY COMPLICIT? STIGMATISING HEALTH-CARE PRACTICES RELATED TO FAMILIES AND CHILDREN WITH DISABILITIES.**

*Bridget E. O'Connor, BAppSci (Physio); Peter L. Rosenbaum, MD CM FRCPC; Tracey Smythe, MPH, PhD; Virginia Wright, BSc (PT), MSc, PhD*

Location: Orange County 3

Learning Objectives:

- 1: Define terms and frameworks used that relate to stigmatising practice.
- 2: Critique the parent-child-professional relationship, relationships among professionals, and discipline-specific practices to which stigmatising attitudes and behaviours contribute.
- 3: Identify individualised approaches to support each person in their situation with ways of addressing 'status reducing' health practices
- 4: Be able to bring a new awareness of stigmatising practice into their day-to-day interactions with children, families, and other health professionals.

**SYMP31 - PRENATAL CLOSURE FOR SPINA BIFIDA: A MULTIDISCIPLINARY EXAMINATION OF THE PROS AND CONS**

*Vineeta T. Swaroop, MD; Robin Bowman, MD; Elizabeth Yerkes, MD*

Location: Grand Ballroom G

Learning Objectives:

- 1: Understand the factors essential to evaluating a patient's candidacy for prenatal closure of spina bifida.
- 2: Define the expected outcomes of prenatal closure from a neurosurgical perspective.
- 3: Define the expected outcomes of prenatal closure from a urological perspective.
- 4: Define the expected outcomes of prenatal closure from an orthopaedic surgical perspective.

**SYMP32 - SEVERE NEUROLOGICAL IMPAIRMENT - THE CHALLENGES OF DEFINITION, HEALTHCARE PLANNING AND END OF LIFE CARE**

*Denise McDonald, MD; John Allen, MD; Julie Hauer, MD*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Recognise children with severe neurological impairment as a distinct group.
- 2: Understand the need for a consensus definition to identify the population, to inform need and improve medical decision making.
- 3: Understand the current challenges to optimal care for this group, particularly in relation to QoL and end of life experience.
- 4: Appreciate the common themes central to the definition of SNI, which will inform participants in identifying this cohort within their own clinical practice.

Saturday, September 21, 2019: 8:15am-9:45am

**Focused Symposia**

**SYMP34 - FROM MOTION TO COGNITION: WHAT ARE THE BEST INGREDIENTS FOR EARLY INTERVENTION TO OPTIMIZE THE TRANSITION TO SCHOOL ENTRY FOR INFANTS WITH NEUROMOTOR DYSFUNCTION?**

*Regina T. Harbourne, PhD, PT; Stacey C. Dusing, PhD; Cathy Morgan, PhD, BAppSc; Andrea Guzzetta, MD; Michele A. Lobo, PT, PhD*

Location: Grand Ballroom AB

Learning Objectives:

- 1: Describe existing evidence supporting (or not supporting) early intervention for infants with neuromotor dysfunction.
- 2: Define three constructs of learning that encompass both motor learning and cognition.
- 3: List 5 key ingredients of approaches to early intervention in infancy with neuromotor dysfunction which are supported by evidence.
- 4: Create a scenario using 2 key ingredients that would advance learning to use within an intervention session for an infant with neuromotor dysfunction.

**SYMP35 - STAYING OUT OF TROUBLE IN HIP AND SPINE SURGERY IN NON-AMBULATORY CHILDREN WITH CEREBRAL PALSY: A COMPARISON OF INTERNATIONAL PERIOPERATIVE MEDICAL MANAGEMENT STRATEGIES AND SURGICAL INTERVENTIONS.**

*Benjamin J. Shore, MD, MPH, FRCSC; Wade Shrader, MD; Jay Berry, MD; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Laurie Glader, MD*

Location: Orange County 2

Learning Objectives:

- 1: Demonstrate an evidenced based understanding of the epidemiology and natural history of hip displacement and spinal deformity in non-ambulant children with CP.
- 2: Understand the prevalence of medical co-morbidities in non-ambulant children with CP, and apply strategies to optimize health, outcomes and the patient/family experience through surgery.
- 3: Demonstrate strategies to address pain, movement disorder and tone management before, during and after surgery, for non-ambulant children with CP.
- 4: Describe an evidenced based understanding of the risks, benefits and outcomes of orthopaedic surgery for hip displacement and correction of spinal deformity.

**SYMP36 - INTEGRATED MANAGEMENT USING BOTULINUM TOXIN-A FOR HYPERTONIA IN CHILDREN WITH CEREBRAL PALSY**

*Nigar Dursun, MD; JORGE Carranza-del Río, MD; Martin Bonikowski, MD; Ana Carolina de Campos, PhD, PT*

Location: Orange County 3

Learning Objectives:

- 1: To understand the level of evidence for the use of BoNT-A in children with CP.
- 2: To delineate the complexity of the process with highly variable treatment response among patients, and the importance of optimal BoNT-A treatment strategy.
- 3: To develop skills and knowledge in making clinical decisions on who and how to treat and follow-up.
- 4: To discuss safety issues.

**SYMP37 - LIFELONG MANAGEMENT FOR CHILDREN WITH CEREBRAL PALSY**

*Min Shen, MD; Xiaojie Li, MD; Bing Liang, MD; Yong Liu, NA; Guorong Wei, DPT*

Location: Grand Ballroom G

Learning Objectives

- 1: Know how to combine the education and medical rehabilitation together in China.
- 2: Learn the growth process of Chinese CP sufferer.
- 3: Know the obtain of the CP children(4-10Y ) from the program of Shanghai CP Ballet Camp.
- 4: Learn how to motivate the children activity with CP.

**SYMP38 - OPTIMIZATION OF OUTCOMES FOLLOWING SINGLE EVENT MULTI-LEVEL SURGERY (SEMLS): INTERNATIONAL PERSPECTIVES ON A TEAM APPROACH TO IMPROVE GAIT IN CHILDREN WITH CEREBRAL PALSY**

*Vedant A. Kulkarni, MD; Jon R. Davids, MD; Pam Thomason, B Phty, M Physio; Alaric Aroojis, MS, D'Ortho, DNB; Kerr Graham, MD, MD, FRCS (Ed), FRACS*

Location: Grand Ballroom D

Learning Objectives

- 1: Define the unique challenges and priorities of the four phases of recovery after Single Event Multi-level Surgery (SEMLS) – inpatient, early post-operative, early rehabilitation, and late rehabilitation.
- 2: Understand the principles of effective multi-modal post-operative pain management and physical therapy following SEMLS.
- 3: Tailor a child's post-operative casting and orthotics based on gait optimization goals.
- 4: Identify strategies to create a "SEMLS Team" for effective post-operative rehabilitation in a diverse set of practice environments.

**SYMP39 - SUPPORTING PARENTS OF INFANTS IDENTIFIED AS AT RISK OF CEREBRAL PALSY THROUGH PARENTING AND MINDFULNESS-BASED APPROACHES**

*Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Koa Whittingham, PhD; Catherine K. Mak, PhD*

Location: Orange County 4

Learning Objectives:

- 1: Understand the current need to support parents of children with disability and to understand how parenting impacts on child development.
- 2: Understand how Mindfulness-based practices and Acceptance and Commitment Therapy (ACT) may be beneficial to parents and how simple ACT strategies can be adopted by all clinicians.
- 3: Recognise possible challenges clinicians may experience in supporting parents.
- 4: Recognise and take opportunities to support parents and the connection between parents and children in a manner that promotes parental resilience.

**SYMP40 - SURGICAL DECISION MAKING IN LIFE LIMITING ILLNESSES: MEDICAL, SURGICAL, ETHICAL, AND PALLIATIVE PERSPECTIVES**

*Garey Noritz, MD; Lisa Humphrey, MD; Prashant S. Malhotra, MD; Amanda T. Whitaker, MD*

Location: Grand Ballroom C

Learning Objectives:

- 1: Recognize areas of uncertainty in regards to surgical decision making for children with severe neurologic impairment.
- 2: Construct an ethical analysis of a surgical decision using the "Four Topics" model.
- 3: Partner with a family in shared decision making when proposing surgical procedures for children with severe neurological impairment.
- 4: Distinguish the concept of surgical "futility" from "poor prognosis" or "poor quality of life".

**SYMP41 - VISION IMPAIRMENT AND VISUAL ABILITY IN CHILDREN WITH CEREBRAL PALSY: A MULTIDISCIPLINARY PERSPECTIVE**

*Karen Harpster, PhD, OTR/L; Belinda J. Deramore Denver, OT; Corinna M. Bauer, Ph.D.; Andrea Guzzetta, MD, PhD; Michele Shusterman; Lindsay Hillier, M.Ed.*

Location: Grand Ballroom JK

Learning Objectives:

- 1: Reflect on how vision is broader than impairment at the eye level of the body function and structure domain of the ICF
- 2: Understand the importance and impact of impairments (vision, cognitive and motor) on the functioning of a child with cerebral palsy
- 3: Consider currently available interventions, and intervention gaps, including early intervention, environmental modification and the importance of the parent and family
- 4: Consider priorities and approaches for future optimization of visual functioning in children with cerebral palsy.

**SYMP42 - CULTURAL VARIATIONS IN THE IMPLEMENTATION OF PEDIATRIC CONSTRAINT-INDUCED THERAPY IN DEVELOPING COUNTRIES**

*Stephanie C. Deluca, PhD; Patty Coker-Bolt, PhD, OTR/L, FAOTA; Sharon L. Ramey, PhD; Angela Shierk, OTR, PhD; Heather Roberts, PhD, OT*

Location: Grand Ballroom H

Learning Objectives:

- 1: To learn challenges to implementing P-CIMT in developing countries.
- 2: To learn adaptations used in Ethiopia & Vietnam to implement P-CIMT.
- 3: To learn adaptations used in Mexico to implement P-CIMT.
- 4: To learn common adaptations to P-CIMT in multiple developing countries.

**Saturday, September 21, 2019 – 8:15 am – 10:00 am**

**Free Paper Sessions**

**I. Imaging**

Location: Marquis Northwest

**8:15 am – 8:22 am –**

**11. STRUCTURAL BRAIN MRI AT TERM-EQUIVALENT AGE (TEA) IS ASSOCIATED WITH HAMMERSMITH INFANT NEUROLOGICAL EXAM (HINE) AND GENERAL MOVEMENT ASSESSMENT IN VERY PRETERM INFANTS**

*Karen Harpster, PhD, OTR/L; Stephanie Merhar, MD, MS; VenkaSitaPriyanka Illapani, MS; Beth Kline-Fath, PhD; Nehal Parikh, DO*

**8:23 am – 8:30 am –**

**12. CLINICAL CORRELATES OF IMPAIRED WHITE MATTER TRACTS IN CHILDREN WITH SPASTIC BILATERAL CEREBRAL PALSY**

*Andy Vuong, MS; Eileen G. Fowler, PT, PhD; Joyce H. Matsumoto, MD; Loretta A. Staudt, MS, PT; Marcia Greenberg, MS, PT; Hajime Yokota, MD, PhD; Shantanu Joshi, PhD*

**8:31 am – 8:38 am –**

**13. BRAIN CONNECTIONS ASSOCIATED WITH CO-OP FOR CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER**

*Jill G. Zwicker, PhD, OT; Sara Izadi-Najafabadi, MS*

**8:39 am – 8:46 am –**

**14. FIXEL-BASED MORPHOMETRY REVEALS ASSOCIATIONS BETWEEN BRAIN MICRO- AND MACROSTRUCTURE OF PRETERM INFANTS AT TERM AND NEURODEVELOPMENTAL OUTCOMES AT 2 YEARS**

*Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Kerstin Pannek, PhD; Joanne M. George, PhD; Paul Colditz, PhD, MD; Stephen Rose, PhD; Jurgen Fripp, PhD*

**8:47 am – 8:54 am –**

**15. SPONTANEOUS SOMATOSENSORY CORTICAL ACTIVITY IS DIMINISHED IN ADOLESCENTS WITH CEREBRAL PALSY**

*Michael P. Trevarrow, BS; James E. Gehring, B.S.; Tony Wilson, PhD; Max Kurz, PhD*

**9:10 am – 9:17 am –**

**16. MAGNETIC RESONANCE ELASTOGRAPHY OF THE BRAIN IN CHILDREN WITH CEREBRAL PALSY: BRAIN STIFFNESS RELATIONSHIPS WITH FUNCTIONAL BALANCE REACTIONS**

*Curtis L. Johnson, PhD; Grace McIlvain, BS; James B. Tracy, MS; Charlotte A. Chaze, MS; Gabrielle M. Villermaux; Henry G. Wright, DPT; Freeman Miller, MD; Jeremy R. Crenshaw, PhD*

**9:18 am – 9:25 am –**

**17. PROFILE OF CHILDREN WITH CEREBRAL PALSY AND A NORMAL MAGNETIC RESONANCE IMAGING STUDY**

*Arielle Springer; Sasha Dyck Holzinger, RN; John Andersen, MD, FRCPC; David Buckley, M.B., Ch.B. Sheffield, F.R.A.C.P., FRCPC; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Louise Koclas, MD; Nicole Pigeon, MD; Esias Van Rensburg, MD; Ellen Wood, MD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Michael Shevell, MDCM*

**9:26 am – 9:34 am –**

**18. UNDERSTANDING THE IMPACT OF BILATERAL BRAIN INJURY IN CHILDREN WITH CEREBRAL PALSY**

*Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Alex M. Pagnozzi, PhD; Jurgen Fripp, PhD; Stephen Rose, PhD*

**9:35 am – 9:42 am –**

**19. PREDICTING MOTOR AND COGNITIVE OUTCOMES FROM MRIS OF CHILDREN WITH ACQUIRED BRAIN INJURY**

*Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Alex M. Pagnozzi, PhD; Jurgen Fripp, PhD; Stephen Rose, PhD*

**9:43 am – 9:50 am –**

**110. CORTICAL OSCILLATIONS THAT UNDERLIE VISUAL SELECTIVE ATTENTION ARE UNCHARACTERISTIC IN ADOLESCENTS WITH CEREBRAL PALSY**

*Rashelle Hoffman, DPT; Tony Wilson, PhD; Max Kurz, PhD*

**J. Transitions/Adult Care**

Location: Platinum 1

**8:15 am – 8:22 am**

**J1. ARE MOTOR DIFFICULTIES IN CHILDREN WITH CHD TRANSIENT?**

*Marie-Eve Bolduc, MSc, OT; Eliane Dionne, OT; Annette Majnemer, PhD, OT; Marie Brossard-Racine, OT, PhD*

**8:23 am – 8:30 am –**

**J2. CEREBELLAR DIFFERENCES WITH REHABILITATION IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER**

*Kamaldeep K. Gill, OT; Donna Lang, PhD; Dan Goldowitz, PhD; Jill G. Zwicker, PhD, OT*

**8:31 am – 8:38 am –**

**J3. INCREASING SYNCHRONY OF MATERNAL/INFANT CORTICAL RESPONSES AS MOTHERS INCREASE SENSORY SCAFFOLDING DURING INTERACTIONS**

*Mary Lauren M. Neel, MD; Krystal Hay, DPT; Melissa Moore-Clingenpeel, MA, MS; Ashley Miller, MM, MT-BC; Lelia Emery, MMT, MT-BC; Kaleigh Hague, MT-BC; Nathalie Maitre, MD*

8:39 am – 8:46 am –

**J4. A STATE-OF-SCIENCE ON ADULTS WITH CEREBRAL PALSY AS A BASE FOR DEVELOPING AN ICF CORE SET**

*Suzie Noten, MSc; Joyce Benner, MSc; Chonnanid Limsakul, MD; Wilma M. van der Slot, MD PhD; Henk J. Stam, MD PhD; Melissa Selb, MSc; Rita van den Berg-Emons, PhD; Marij E. Roebroek, PhD*

8:47 am – 8:54 am –

**J5. DEVELOPMENTAL TRAJECTORIES OF CAPABILITY IN MOBILITY AND IN SELF-CARE OF CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY; A COLLABORATIVE INTERNATIONAL STUDY**

*Jan Willem Gorter, MD PhD; Dirk-Wouter Smits, PhD; Corinne Riddell, PhD; Jeanine M. Voorman, MD PhD; Peter L. Rosenbaum, MD CM FRCPC; Robert Palisano, ScD; Stephen Walter, PhD; Steven Hanna, PhD; Leontien van Wely, PhD; Marjolijn Ketelaar, PhD*

9:10 am – 9:17 am –

**J6. OUTCOMES OF AMBULATORY FUNCTION IN ADULTS WITH CEREBRAL PALSY: EVALUATING CHANGE FROM ADOLESCENCE**

*Nancy Lennon, MS, PT; Chris Church, MPT; Wade Shrader, MD; William Robinson, BS; Jose J. Salazar Torres, PhD; Daveda Taylor, DPT; Tim Niiler, PhD; Freeman Miller, MD*

9:18 am – 9:25 am –

**J7. BONE MINERAL DENSITY IN AMBULANT ADULTS WITH CEREBRAL PALSY: IMPLICATIONS FOR HEALTHY AGING**

*Nelleke G. Langerak, PhD; Thulfieq Behardien, BSc; Maaïke M. Eken, PhD; Berendina E. Veerbeek, MSc; Anthony G. Fieggen, MD, FCS; Jacques du Toit, MBChB(Stell), FC Orth(SA), MScClinEpi; Robert P. Lamberts, PhD, FECSS*

9:26 am – 9:33 am –

**J8. CHANGES IN WALKING ABILITY BETWEEN CHILDHOOD AND ADULTHOOD IN CEREBRAL PALSY: A SYSTEMATIC REVIEW WITH META-ANALYSIS**

*Hsiu-Ching Chiu, PhD; Louise Ada, PhD; Chieh-feng Chen, PhD*

9:34 am – 9:41 am –

**J9. MUSCULOSKELETAL DISORDERS AMONG OLDER ADULTS WITH AND WITHOUT CEREBRAL PALSY: A COMPARISON OF REHABILITATION SERVICE USE AND COMORBIDITIES USING NATIONAL MEDICARE CLAIMS DATA**

*Deborah E. Thorpe, PT, PhD; Mary E. Gannotti, PhD; Chin-Hua Wang, PhD; Janet Freburger, PT, PhD*

9:42 am – 9:49 am –

**J10. LONG-TERM OUTCOMES OF 30-YEAR SURVIVORS OF PEDIATRIC ONSET SPINAL CORD INJURIES**

*Lawrence C. Vogel, MD; Kathleen M. Chlan, BA; Jessica Cwik, BA; Sue Mukherjee, MD; Kathy Zebracki, PhD*

**K. Early Development**

Location: Platinum 2

8:15 am – 8:22 am –

**K1. EFFICACY OF THE START-PLAY PROGRAM FOR INFANTS WITH NEUROMOTOR DISORDERS: MOTOR OUTCOMES**

*Michele A. Lobo, PT, PhD; Regina T. Harbourne, PhD, PT; Stacey C. Dusing, PhD; Sarah W. McCoy, PhD; Andrea B. Cunha, PhD; Iryna Babik, PhD; Lin-Ya Hsu, PhD; Natalie A. Koziol, PhD; James A. Bovaird, PhD; Emily C. Marcinowski, PhD; Hui-Ju Chang, Ph.D.; Mihee An, PhD; Susan Sheridan, PhD; Sandra Willett, PT, PCS, MS*

8:23 am – 8:30 am –

**K2. DEVELOPMENT OF NORMAL AND ABERRANT FIDGETY MOVEMENTS IN PRETERM AND TERM BORN INFANTS: OPTIMISING TIMING OF PRECHTL'S GENERAL MOVEMENTS ASSESSMENT**

*Alicia Spittle, PhD; Amanda K. Kwong, BPhysio (Hons); Lex Doyle, MD; Katherine Lee, PhD; Christa Einspieler, PhD; Joy Olsen, PhD, BOT; Abbey Eeles, PhD, BOT; Jeanie Cheong, MD*

8:31 am – 8:38 am –

**K3. COMMUNITY-BASED EARLY DETECTION PROGRAM FOR INFANTS AT HIGH RISK OF CEREBRAL PALSY IN A LOW-MIDDLE INCOME COUNTRY**

*Asis Kumar Ghosh, MPT, BPT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Iona Novak, PhD; Cathy Morgan, PhD, BAppSc; Robert Ware, PhD; Katherine Benfer, PhD, MPH, BSpPath*

8:39 am – 8:46 am –

**K4. MEASURING EARLY PROBLEM-SOLVING IN CHILDREN WITH MOTOR IMPAIRMENTS: EVALUATING RESPONSIVENESS OVER TIME USING A MODIFICATION OF THE EARLY PROBLEM SOLVING INDICATOR**

*Rebecca M. Molinini, DPT; Ketaki Inamdar, MPT; Emily C. Marcinowski, PhD; Stacey C. Dusing, PhD; Natalie A. Koziol, PhD; Michele A. Lobo, PT, PhD; Regina T. Harbourne, PhD, PT; Sarah W. McCoy, PhD; James A. Bovaird, PhD*

8:47 am – 8:54 am –

**K5. SUPPORTING PLAY, EXPLORATION AND EARLY DEVELOPMENT INTERVENTION (SPEEDI) FOR PRETERM INFANTS: A FEASIBILITY STUDY IN AN AUSTRALIAN CONTEXT**

*Erancynne Finlayson, BA; Stacey C. Dusing, PhD; Joy Olsen, PhD, BOT; Andrea Guzzetta, MD, PhD; Amanda K. Kwong, BPhysio (Hons); Alicia Spittle, PhD*

9:10 am – 9:17 am –

**K6. EARLY INTERVENTION SERVICE INTENSITY AND CHANGE IN CHILDREN'S SOCIAL-EMOTIONAL AND COGNITIVE FUNCTIONAL CAPABILITIES**

*Beth M. McManus, PhD; Mary A. Khetani, ScD; Zachary Richardson, MA, PhD(c); Beth Scully, BS; Jodi Litfin, PhD; Natalie Murphy, MPH; Brianna Rigau, OTR/L*

9:18 am – 9:25 am –

**K7. EARLY MOTOR BEHAVIOR, NEURODEVELOPMENTAL OUTCOME, AND FUNCTIONAL BRAIN CONNECTIVITY IN PRETERM INFANTS**

*Colleen Peyton, DPT; Christa Einspieler, PhD; Lars Adde, PT, Ph.D.; Toril Fjortoft, PT, PhD; Michael Schreiber, MD; Alexander Drobyshvsky, PhD; Jeremy Marks, MD, PhD*

9:26 am – 9:33 am –

**K8. EFFECT OF NEONATAL THERAPY INTERVENTION ON NEUROBEHAVIOR, NEUROMOTOR OR COGNITIVE DEVELOPMENT OF PRETERM INFANTS**

*Sonia Khurana, PhD; Stacey C. Dusing, PhD; Audrey E. Kane, PhD, OTR/L; Shaaron Brown, DPT; Talicia Tarver, MLIS*

9:34 am – 9:41 am –

**K9. A COMBINATION OF INFANT MOTOR ASSESSMENTS PREDICTS NEURODEVELOPMENTAL OUTCOMES IN PRETERM INFANTS**

*Colleen Peyton, DPT; Christa Einspieler, PhD; Toril Fjortoft, PT, Ph.D.; Lars Adde, P.T., Ph.D.; Michael Schreiber, MD; Michael E. Msall, MD*

9:42 am – 9:49 am –

**K10. PREDICTION OF PRESCHOOL COGNITIVE ABILITIES USING THE BAYLEY SCALES OF INFANT TODDLER DEVELOPMENT (3RD EDITION) IN MEDICALLY COMPLEX CHILDREN**

*Raye-Ann deRegnier, MD; Lynn Boswell, MS, PT; Annamarie Russow, MsEd; Mary Kay Santella, PT; Marie Weissbourd, PhD*

**L. Sensory and Pain  
Location: Platinum 3**

8:15 am – 8:22 am –

**L1. EFFICACY OF THE START-PLAY PROGRAM FOR INFANTS WITH NEUROMOTOR DISORDERS: COGNITIVE OUTCOMES**

*Regina T. Harbourne, PhD, PT; Stacey C. Dusing, PhD; Michele Lobo, PhD, PT; Sarah W. McCoy, PhD; Natalie A. Koziol, PhD; Lin-Ya Hsu, PhD; Sandra Willett, PT, PCS, MS; Emily C. Marcinowski, PhD; Iryna Babik, PhD; Andrea B. Cunha, PhD; Mihee An, PhD; Hui-Ju Chang, Ph.D.; James A. Bovaird, PhD; Susan Sheridan, PhD*

8:23 am – 8:30 am –

**L2. COMPARING PAIN, FATIGUE, DEPRESSIVE SYMPTOMS AND SLEEP DISTURBANCE BETWEEN YOUNG ADULTS WITH CEREBRAL PALSY AND A REFERENCE POPULATION**

*Marloes van Gorp, MSc; Leontien van Wely, PhD; Annet J. Dallmeijer, PhD; Vincent de Groot, MD PhD; Caroline B. Terwee, PhD; Gerard Flens, MSc; Henk J. Stam, MD PhD; Wilma M. van der Slot, MD PhD; Marij E. Roebroek, PhD*

8:31 am – 8:38 am –

**L3. PAIN IN ADULTS WITH CEREBRAL PALSY: A WORLD WIDE STUDY WITH INDIVIDUAL PARTICIPANT DATA.**

*Wilma M. van der Slot, MD PhD; Joyce Benner, MSc; Laura K. Brunton, PT, PhD; Joyce Engel, Prof; Philippe Gallien, MD; Sander Hilberink, PhD; Grethe Månnum, PhD MD; Prue E. Morgan, BAppSc (PT), MAppSc (PT), PhD; Arve Opheim, PhD; Inmaculada Riquelme, PhD; Elisabet Rodby-Bousquet, PT, PhD; Tülay Tarsuslu Şimşek, PT MD; Deborah E. Thorpe, PT, PhD; Rita van den Berg-Emons, PhD; Laura Voglte, PhD; Marij E. Roebroek, PhD*

8:39 am – 8:46 am –

**L4. RELATIONSHIP BETWEEN SELF-CARE AND MANUAL ABILITY IN CHILDREN WITH CEREBRAL PALSY (CP) AGED 1.5 TO 12 YEARS WITH CEREBRAL PALSY: A LONGITUDINAL STUDY.**

*Andrea N. Burgess, OT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Mark Chatfield, BA, MS Statistics; Jenny Ziviani, OT; Robert Ware, PhD; Leanne Sakzewski, PhD, BOccThy*

8:47 am – 8:54 am –

**L5. DETERMINANTS OF SEVERE VISUAL IMPAIRMENT IN CHILDREN WITH CEREBRAL PALSY. A SCPE NETWORK POPULATION-BASED REGISTER STUDY**

*Javier de la Cruz, MD; Elodie Sellier, MD, PhD; Veronka Horber, MD; Inge Franki, PT, PhD; Carmen R. Pallás, MD, PhD; Kate Himmelmann, MD, PhD; Els Ortibus, MD, PhD*

9:10 am – 9:17 am –

**L6. ASSOCIATIONS OF PAIN, SLEEP DISORDERS, FATIGUE, AND COMORBID NEURODEVELOPMENTAL CONDITIONS WITH DEPRESSIVE DISORDERS AMONG PRIVATELY-INSURED ADULTS WITH CEREBRAL PALSY**

*Daniel Whitney, PhD; Seth Warschausky, PhD; Daniel Whibley, PhD; Anna Kratz, PhD; Susan Murphy, PhD; Edward A. Hurvitz, MD; Mark Peterson, PhD*

9:18 am – 9:25 am –

**L7. ENABLING VISIONS AND GROWING EXPECTATIONS (ENVISAGE): COMPREHENSIBILITY AND USABILITY OF A SERIES OF WORKSHOPS FOR PARENTS OF CHILDREN WITH A NEURODISABILITY**

*Laura Miller, PhD; Grace Nickson, Bachelor Occ Therapy (Hons); Christine Imms, PhD; Peter L. Rosenbaum, MD CM FRCPC; Jenny Ziviani, OT; Rachel E. Martens; Vicki Cavalieros; Andrea Cross, PhD*

9:26 am – 9:33 am –

**L8. NEURODEVELOPMENT OF INFANTS BORN WITH COMPLEX CONGENITAL HEART DEFECT: MOTOR AND COGNITIVE DELAYS ARE COMMON UNDER 6 MONTHS OF AGE**

*Tanya Tripathi, PhD; Thais Cabral, PhD; Gardenia Barbosa, PhD; Tondi M. Harrison, PhD, RN, FAAN; Janet Simsic, MD; Jill C. Heathcock, MPT, PhD*

9:34 am – 9:41 am –

**L9. QUANTITATIVE MEASURES OF NUTRITIVE SUCKING CORRELATE WITH MICROSTRUCTURAL ABNORMALITIES IN THE SENSORIMOTOR TRACTS OF NEONATES**

*Christos Papadellis, PhD; Eleonora Tamilia, PhD; Marianna S. Parker, MBBS; Maria Rocchi, MSc; Fabrizio Taffoni, PhD; Anne Hansen, MD; P Ellen Grant, MD*

9:42 am – 9:49 am –

**L10. PAIN INTERFERENCE IN AMBULATORY YOUNG ADULTS WITH CEREBRAL PALSY**

*Wade Shrader, MD; Nancy Lennon, MS, PT; Chris Church, MPT; Allison Wickham, BS; Tim Niiler, PhD; Freeman Miller, MD*

9:30 am - 3:30 pm

**AACPDM Community Forum**

Location: Grand Ballroom EF

10:00am - 10:30am

**Get Up and Move - Adaptive Basketball Competition #Getupandmove**

Location: Grand Ballroom F

Come try your basketball skills against the clock or just try a really great sport opportunity! No experience (or even ability) necessary!

Saturday, September 21, 2019: 10:30am-12:00pm

**GENERAL SESSION**

General Session Moderator: Mauricio R. Delgado, MD  
Location: Platinum 5-10

**Gayle G. Arnold Promising Career Award Presentation**

**CPF Update**

*Rachel Byrne*

**EACD Update**

*Giovanni Cioni, MD, PhD*

**AusACPDM Update**

*Christine Imms, PhD*

**AMexPCTND Update**

*Alberto Moreno, MD*

**Lifeshots Award Winner**

**Chambers Family Lifespan Lecture - Parents Panel**

***A Conversation with Parents about Cultural Sensitivity in Healthcare***

*Moderator: Olivia Raynor, PhD*

*Panelists: Herlinda Rodriguez and Cathy Liu*

**2020 Annual Meeting Introduction**

*Susan Sienko, PhD*

Saturday, September 21 1:30pm-3:30pm

**Instructional Courses**

**IC29 - A MULTIDISCIPLINARY APPROACH TO BEST OUTCOMES IN EPILEPSY SURGERY**

*Nathan S. Rosenberg, MD; Adam Ostendorf, MD; Jonathan Pindrik, MD*

Location: Grand Ballroom H

Learning Objectives:

- 1: List clinical characteristics of patients who may benefit from epilepsy surgery.
- 2: Describe common neuropsychological outcomes after epilepsy surgery.
- 3: List the most common neurosurgical procedures used in epilepsy surgery.
- 4: Describe the options that are available for rehabilitation after epilepsy surgery.

**IC30 - ASSESSMENT AND TREATMENT OF ADULT PATIENTS WITH CEREBRAL PALSY AND COMORBID DEPRESSION**

*David Roye, MD; Hiroko Matsumoto, PhD; Daniel F. Linhares, MD; Jan L. Moskowitz, MSW*

Location: Orange County 2

Learning Objectives:

- 1: How to properly assess patients for depression and utilize validated screening tools. Review the prevalence of depression in the adult population with CP and potential risk factors.
- 2: Understand different types of therapeutic approaches for mental health and the role of health care providers, other than psychiatrists, in the treatment for depression.
- 3: Review the prevalence of different psychotropic medications being used for adult patients with CP.
- 4: Understand the difference between multiple antidepressant medications and how to use their individual properties to more precisely target the depressive symptoms of each individual patient.

**IC31 - GLOBAL IMPLEMENTATION OF THE INTERNATIONAL DYSPHAGIA DIET STANDARDISATION INITIATIVE FRAMEWORK: THE "HOW TO" FOR IMPROVING SAFETY AT MEALTIMES FOR CHILDREN AND ADULTS WITH DEVELOPMENTAL CONDITIONS**

*Janice Duivesteyn, BSR OT/PT, MRSc; Danielle Rae, BE., MOT*

Location: Grand Ballroom D

Learning Objectives:

- 1: To articulate how IDDSI offers a common language to improve safety and can also facilitate research to benefit those with dysphagia
- 2: To describe the rationale and process behind the development of the IDDSI framework
- 3: To demonstrate skill in using the IDDSI testing methods
- 4: To discuss how implementation might be initiated and supported in different practice settings using the many freely available IDDSI resources.

**IC32 - VISION PROBLEMS IN CHILDREN WITH CEREBRAL PALSY: PRACTICAL STRATEGIES FOR SCREENING/ IDENTIFICATION, REFERRAL, DIAGNOSIS AND TREATMENT**

*Sharon S. Lehman, MD; Linda Lawrence, MD*

Location: Grand Ballroom C

Learning Objectives:

- 1: Describe current recommendations for vision screening and special considerations for children with cerebral palsy.
- 2: Identify characteristics and risk factors for cortical/ cerebral visual impairment in children with cerebral palsy in order to refer those who warrant an evaluation by the ophthalmologist.
- 3: List current treatment of strabismus and amblyopia in children with cerebral palsy.
- 4: Describe the steps necessary for a child to obtain vision services.

**IC33 - FIXING THE FEMURS, FIBRES AND FEET: IMPACT ON FITNESS, FUNCTION, FRIENDSHIPS AND THE FUTURE**

*Pam Thomason, B Phty, M Physio; Kate L. Willoughby, BPhysio, DPhysio; Erich Rutz, MD; Abhay Khot, MBBS, FRACS; Kerr Graham, MD, MD, FRCS (Ed), FRACS*

Location: Platinum 3

Learning Objectives:

- 1: Understand musculoskeletal outcomes in children and adolescents within the ICF framework and how this may impact future management.
- 2: Understand the importance of the “f words” to inform our practice and influence our management decisions.
- 3: Understand the orthopaedic management of lower limb deformities in order to achieve stability of gait correction post surgery.
- 4: Recognise positive and negative predictors of musculoskeletal health at skeletal maturity and its impact on the “f-words”.

**IC34 - LEARNING HEALTH SYSTEMS FOR CEREBRAL PALSY: GENERATING USABLE DATA AND MEANINGFUL KNOWLEDGE**

*Nikolas J. Koscielniak, MS, MPH, OTR/L; Carole A. Tucker, PT, PhD*

Location: Grand Ballroom JK

Learning Objectives:

- 1: To understand concepts and components of LHS and be able to effectively communicate LHS importance to clinical staff and administration.
- 2: To become familiar with the application of LHS in support of clinical decision-making in individuals with CP.
- 3: To understand the role of clinical documentation for LHS and key strategies to collect meaningful data in large-scale health systems.
- 4: To develop skills and knowledge of implementation science for LHS through applied activities.

**IC35 - THE YEAR’S TOP 10 ARTICLES ON DEVELOPMENTAL DISABILITIES**

*Nancy A. Murphy, MD; Richard Adams, MD*

Location: Platinum 2

Learning Objectives:

- 1: Summarize the major conclusions of each of the ten articles presented.
- 2: Identify areas in which additional research is needed.
- 3: Evaluate the utility of each of the articles for their own clinical practice.
- 4: Be inspired by the presentations to seek articles on their own.

**IC36 - MULTI-FACETTED MEALTIME MANAGEMENT FOR CHILDREN WITH CEREBRAL PALSY: THE ART AND SCIENCE OF SUPPORTING ORAL FEEDING**

*Gina R. Rempel, MD, FRCPC; Cindy B. Dodds, PT, PhD; Diane Sellers, PhD; Maria C. Ibarra, MD*

Location: Orange County 3

Learning Objectives:

- 1: Identify points of controversy in the literature regarding approaches for managing eating and drinking for children with cerebral palsy.
- 2: Appreciate a broad and global perspective of eating and drinking in children with cerebral palsy.
- 3: Recognize and value international strategies used to support eating and drinking in children with cerebral palsy.
- 4: Consider quality of life and supportive care models to mitigate risk and optimize mealtime participation for children with cerebral palsy.

**IC37 - NEONATAL BRACHIAL PLEXUS PALSY: UPDATES ON TREATMENT, PROGNOSIS AND OUTCOMES.**

*Sue Mukherjee, MD; Robert Rinaldi, MD; Virginia S. Nelson, MD, MPH; Lynda Yang, MD; Mary Catherine Spires, MD*

Location: Marquis Northwest

Learning Objective

- 1: Describe risk factors for NBPP and prognostic indicators
- 2: Describe tests used to support prognostic and surgical decision making in NBPP, and surgical options
- 3: Understand the role of rehab methods, splints and taping to support function and recovery in NBPP
- 4: List outcomes of interest and discuss outcomes measurement in NBPP

**IC38 - NEUROCOGNITION IN SPINA BIFIDA**

Marie Peny-Dahlstrand, PhD; Timothy J. Brei, MD; Andrew Zabel, Ph.D.; Barbro Lindquist, PhD

Location: Orange County 4

This instructional course aims to give the participants a possibility to increase their knowledge about the cognitive profile in persons with SB and to discuss methods to enable people with SB to reach more independence and participation in their daily lives.

Learning Objectives:

- 1: Describe the cognitive profile in persons with SB.
- 2: Understand how executive dysfunction can influence activity performance, self-management and participation in people with SB.
- 3: Understand self-management theory and describe self-management measures in SB.
- 4: Describe methods to enable people with SB to reach more independence and participation in their daily lives.

**IC39 - PREPARING CHILDREN FOR SUCCESSFUL COMMUNITY PARTICIPATION**

Lisa A. Chiarello, PT, PhD, FAPTA; Robert J. Palisano, PT, ScD, FAPTA

Location: Platinum 1

Learning Objectives:

- 1: Collaborate with families, children, and community leaders to identify participation goals and evaluate child and family outcomes.
- 2: Assess child, family, and community strengths and what needs to occur to achieve participation goals.
- 3: Identify intervention strategies that can be used in outpatient pediatric rehabilitation to support children's community participation goals.
- 4: Identify solutions to barriers to supporting community participation in outpatient pediatric rehabilitation.

**IC40 - VISUAL FUNCTION CLASSIFICATION SYSTEM FOR CHILDREN WITH CEREBRAL PALSY**

Andrea Guzzetta, PhD; Daniela Ricci, PhD; Francesca Tinelli, PhD

Location: Grand Ballroom AB

Learning Objectives:

- 1: Describe different visual behaviours of children with cerebral palsy.
- 2: Be able to use a new validate instrument for the classification of visual function in children with cerebral palsy.
- 3: Be able to spread and to teach to colleagues and parents this new visual classification system.
- 4: Be able to speak a "common Language" about visual disorderes in children with cerebral palsy.

**IC41 - COLLEGE IS POSSIBLE: PLANNING AND LIVED EXPERIENCE**

Cory Ellen Nourie, MSS, MLSP; Jennifer LeComte, DO; Benjamin W. Shrader, BA; Mason Shrader, BA; Carol Shrader, BA

Location: Grand Ballroom G

Learning Objectives:

1. To identify the variety of post-secondary educational opportunities available.
2. To describe strategies for college preparation including seeking academic and non-academic accommodations.
3. To list strategies for self-management and utilization of health care while in college
4. To discuss real-life perspectives on navigating the college process, from a parent and students' perspectives.



## Scientific Posters

Thursday, September 19, 2019: 6:30 PM - 8:00 PM

**T-A-SP01 - PREVALENCE OF ABNORMAL MOVEMENT AND POSTURAL PATTERNS IN HEALTHY LOW RISK INFANTS FROM BELGIUM, INDIA, NORWAY, AND THE UNITED STATES**

*Raye-Ann deRegnier, MD; Lynn Boswell, MS, PT; Toril Fjortoft, PT, PhD; Lars Adde, PT, PhD; Aurelie Pascal, PT; Niranjan Thomas, MD; Annamarie Russow, MsEd.; Christine Van den Broeck, PT, PhD; Mary Weck, PT; Ragnhild Stoen, MD, PhD*

**T-A-SP02 - DIFFERENCES BETWEEN ADULTS AND CHILDREN IN CEREBRAL PALSY PREVALENCE, SUBTYPES AND ASSOCIATED IMPAIRMENTS. A POPULATION-BASED STUDY**

*Ulrica Jonsson, MD; Kate Himmelmann, MD, PhD; Meta Nyström-Eek, PhD*

**T-A-SP03 - ADOLESCENTS WITH CEREBRAL PALSY THAT HAVE BDNF VAL66MET POLYMORPHISM DISPLAY SUPPRESSED SOMATOSENSORY CORTICAL OSCILLATIONS**

*Hannah R. Bergwell, BS, BA; Mike Trevarrow, BS; Shelley D Smith, PhD; Jennifer N. Sanmann, PhD; Tony W. Wilson, PhD; Max Kurz, PhD*

**T-A-SP04 - ALTERED GENE EXPRESSION AND DNA METHYLATION PROFILES IN SKELETAL MUSCLE FROM INDIVIDUALS WITH SPASTIC CP**

*Karyn Robinson, MS; Erin Crowgey, PhD; Adam Marsh, PhD; Stephanie Lee, MS; Robert Akins, PhD*

**T-A-SP05 - TESTING NEW UK STANDARDS FOR PUBLIC INVOLVEMENT IN RESEARCH: THE EXPERIENCE OF THE NORTHERN IRELAND CEREBRAL PALSY REGISTER**

*Claire Kerr, BSc (Hons) Physio, PhD; Karen McConnell, BSc (Hons) Physiotherapy, PhD; Helen Savage; Oliver Perra, BSc (Hons) Psychology, PhD*

**T-A-SP06 - EPIDEMIOLOGY OF EYE DISEASES AMONG CHILDREN WITH DISABILITY IN RURAL BANGLADESH: FINDINGS FROM THE SHAHJADPUR CHILDREN'S COHORT**

*Mohammad Muhit, PhD; Tasneem Karim, MBBS, MPH; Israt Jahan, MPH; Mahmudul Hassan Al Imam, MPH; Manik Chandra Das, MBBS; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM*

**T-A-SP07 - QUANTITATIVE STRUCTURAL AND DIFFUSION MRI MEASURES FOR AUTOMATED CLINICAL REPORTING IN EARLY PRETERM AND TERM-EQUIVALENT MRI.**

*Miles L. Seidel, BSE; Kerstin Pannek, PhD; Joanne M. George, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Jurgen Fripp, PhD*

**T-A-SP08 - A NEW RADIOGRAPHIC MEASUREMENT FOR QUANTITATIVE ASSESSMENT OF FOREFOOT SPLAY IN CHILDREN WITH PERSISTENT IDIOPATHIC TOE WALKING**

*Jon R. Davids, MD; Donald Kephart, MD; Janet Phan, MS; Arash Calafi, MD; Sean Brown, MA; S. Reed Laing, BA; Anita Bagley, PhD, MPH; Vedant A. Kulkarni, MD*

**T-A-SP09 - RELATIONSHIP BETWEEN NEONATAL MRI, CLINICAL ASSESSMENT SCORES AND NEURODEVELOPMENTAL OUTCOMES AT 2 YEARS CORRECTED AGE IN VERY PRETERM BORN INFANTS**

*Joanne M. George, PhD; Robert Ware, PhD; Mark Chatfield, BA, Master of Science Statistics; Simona Fiori, PhD; Jurgen Fripp, PhD; Kerstin Pannek, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech)*

**T-A-SP10 - BILATERAL CONNECTIVITY IN CHILDREN WITH UNILATERAL BRAIN INJURY: IMPLICATIONS FOR UPPER-EXTREMITY FUNCTION**

*Claudio L. Ferre, PhD; Chin Karen, MA; Andrew Gordon, PhD; Kathleen Friel, PhD*

**T-A-SP11 - SKELETAL AGE ASSESSMENT USING THE CALCANEAL APOPHYSIS IN CHILDREN WITH CEREBRAL PALSY**

*Donald Kephart, MD; Vedant A. Kulkarni, MD; S. Reed Laing, BA; Vincent Tang, BS; Anita Bagley, PhD, MPH; Jon R. Davids, MD*

**T-A-SP12 - VALIDATING AUTOMATIC SEGMENTATION OF SELECTED DEEP GRAY MATTER AND WHITE MATTER STRUCTURES IN MRI OF PRETERM INFANTS AT EARLY AND TERM-EQUIVALENT AGE.**

*Miles L. Seidel, BSE; Kerstin Pannek, PhD; Joanne M. George, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Jurgen Fripp, PhD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech)*

**T-A-SP13 - THE EFFECT OF LOW BACK PAIN ON QUALITY OF LIFE IN DISABLED CHILDREN MOTHERS'**

*İrem KURT, MSc; Müberra Tanrıverdi, PhD; Ömer Ötegen, MSc*

**T-A-SP14 - DEFINING END STAGE GASTROINTESTINAL FAILURE IN PATIENTS WITH NEUROLOGIC IMPAIRMENT**

*Garey Noritz, MD; Taylor Jersak, MD; Dmitry Tumin, PhD; David Fosselman, MD; Marissa Testa, MS, RDN, CSP, LD; Lisa Humphrey, MD*

**T-A-SP15 - ELEVATED CENTRAL ADIPOSITY IN CHILDREN WITH CEREBRAL PALSY IS NOT RELATED TO GROSS MOTOR FUNCTION**

*Joel Licea, MS; Chuan Zhang, MA; Freeman Miller, MD; Christopher M. Modlesky, PhD*

**T-A-SP16 - NUTRITIONAL STATUS OF CHILDREN WITH CEREBRAL PALSY IN REMOTE SUMBA ISLAND OF INDONESIA: A COMMUNITY-BASED KEY INFORMANTS STUDY**

*Israt Jahan, MPH; Mohammad Muhit, PhD; Denny Hardianto, MS; Tasneem Karim, MBBS, MPH; Mahmudul Hassan Al Imam, MPH; Manik Chandra Das, MBBS; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM*

**T-B-SP01 - THE OBSERVATIONAL GAIT SCALE IS HIGHLY ASSOCIATED WITH THE GROSS MOTOR FUNCTION CLASSIFICATION SYSTEM IN CHILDREN WITH CEREBRAL PALSY**

*Karina A. Zapata, PT, DPT, PhD; Mauricio Delgado, MD; Chan-Hee Jo, PhD; Charter Rushing, DScPT*

**T-B-SP02 - KINEMATIC ANALYSIS OF TRUNK MOVEMENTS DURING REACHING IN PRETERM, VERY-LOW- BIRTH WEIGHT AND FULL-TERM INFANTS**

*Yuko Nomura, PT; Haruhiko Sato, PhD; Mari Ooka, PhD; Manabu Kemmochi, PhD*

**T-B-SP03 - VARIATION IN GAIT PHENOTYPES AT THE ANKLE IN YOUTH WITH CHARCOT-MARIE-TOOTH TYPE 1**

*Sylvia Qunpuu, MSc; Tishya Wren, PhD; Gyula Acsadi, MD, PhD; Kristan Pierz, MD*

**T-B-SP04 - INTER AND INTRA OBSERVER RELIABILITY OF EDINBURGH VISUAL GAIT SCORE IN AMBULANT CHILDREN WITH CEREBRAL PALSY**

*Nabila Khan, MD; Soubhik Kumar Saha, MBBS; Abhay Gahukamble, MD; Thomas Palocaren, MD*

**T-B-SP05 - A PORTABLE INSTRUMENTED SHOE USING A RECURRENT NEURAL NETWORK CLASSIFIER TO MEASURE GAIT SEGMENTATION IN CHILDREN WITH UNILATERAL SPASTIC CEREBRAL PALSY, A VALIDATION STUDY**

*Maxime Robert, PhD; Antonio Prado, MSc; Xiya Cao, MSc; Joseph Dutkowsky, MD; Andrew Gordon, PhD; Sunil Agrawal, PhD*

**T-B-SP06 - COMPARISON OF CLINICAL PARAMETERS AND 3D GAIT KINEMATICS OF PELVIS, HIP AND KNEE IN CROUCH GAIT IN CEREBRAL PALSY**

*Chasana Rathod, MD; Manasi Raut, MPT; Prasanna Naik, PT; Taral Nagda, MD*

**T-B-SP07 - CAN KINEMATIC AND KINETIC GAIT INDICATORS PREDICT OUTCOMES FOLLOWING SURGICAL HAMSTRING LENGTHENING?**

*Micah Garcia, MS; James McCarthy, MD; Jason Long, PhD*

**T-B-SP08 - EXTRACELLULAR MATRIX IN MUSCLE FROM CHILDREN WITH CEREBRAL PALSY SHOWS DYSREGULATION OF MATRIX COMPONENTS**

*Richard L. Lieber, PhD; Raji Pichika, PhD; Lucas Smith, PhD; Hank Chambers, MD*

**T-B-SP09 - EVALUATION OF DIAPHRAGM NEUROMUSCULAR TRANSMISSION AND FATIGUE IN A MOUSE MODEL OF CEREBRAL PALSY**

*Joline Brandenburg, MD; Matthew Fogarty, DVM, PhD; Gary C. Sieck, PhD, PhD*

**T-B-SP10 - TREADMILL EXERCISE AMELIORATES FOCAL CEREBRAL ISCHEMIA/REPERFUSION-INDUCED NEUROLOGICAL DEFICIT BY PROMOTING DENDRITIC MODIFICATION AND SYNAPTIC PLASTICITY VIA UPREGULATING CAVEOLIN-1/VEGF SIGNALING PATHWAYS**

*Qingfeng Xie, MS*

**T-B-SP12 - ATYPICAL POPULATIONS OF MUSCLE SATELLITE CELLS ARE ASSOCIATED WITH SPASTIC CEREBRAL PALSY**

*Stephanie K. Lee, MS; Kirk Dabney, MD; Julie Sees, DO; Freeman Miller, MD; Wade Shrader, MD; Robert Akins, PhD*

**T-B-SP13 - BIOFEEDBACK ASSISTED RELAXATION TRAINING FOR THE MANAGEMENT OF CHRONIC PAIN IN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY**

*Katarina Ostojic, Bsci MPH; Angela M. Morrow, MRCPI, FRACP, FAFRM, PhD; Simon P. Paget, MA (Cantab), MBBS, MRCPCH(UK), FAFRM, FRACP*

**T-B-SP14 - PAIN IN YOUNG CHILDREN WITH SPINA BIFIDA**

*Ann I. Alriksson-Schmidt, PhD; Katherine Ong, MA, PhD; Matthew R. Reeder, MPH; Judy Thibadeau, RN, MN; Kimberly Newsome, RN; Marcia Feldkamp, PA, MSPH, PhD*

**T-B-SP15 - EVALUATING PAIN IN PEDIATRIC AND ADULT PATIENTS WITH CEREBRAL PALSY USING PATIENT REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS)**

*Hiroko Matsumoto, PhD; Matthew Simhon, BS; David Roye, MD; Heakyung Kim, MD; Joshua Hyman, MD*

**T-B-SP16 - PREVALENCE OF PAIN, AND PAIN INTERFERENCE IN 5-10 YEAR OLD CHILDREN WITH CEREBRAL PALSY**

*Kristina Tedroff, MD, PhD; Mirja Gyllensvärd, MD; Kristina Löwing, PhD*

**T-C-SP01 - IMPACT OF HIP SURVEILLANCE ON SURGICAL PRACTICE: WHAT MAKES A DIFFERENCE?**

*Stacey D. Miller, PT; Maureen O'Donnell, MD MSC FRCP; Kishore Mulpuri, MBBS, MS, MHS*

**T-C-SP02 - SEDENTARY BEHAVIOUR PEAKS AT 4-5 YEARS OF AGE IN A LONGITUDINAL, POPULATION-BASED STUDY OF CHILDREN WITH CEREBRAL PALSY FOLLOWED BETWEEN 1.5 AND 12 YEARS**

*Sarah E. Reedman, PhD, BPhy (Hons); Emily Johnson, BPhy (Hons); Leanne Sakzewski, PhD, BOccThy; Sjaan Gomersall, PhD, BPhysio (Hons); Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Stewart G. Trost, PhD*

**T-C-SP03 - STRATEGIES FOR ENGAGING PARENTS AS PARTNERS IN CEREBRAL PALSY RESEARCH: A QUALITATIVE STUDY**

*Margaret Wallen, PhD; Katie Headrick, BA; Belinda J. Deramore Denver, OT; Marelle Thornton, AO; Amy R. Hogan, BApsych; Gabrielle Drake, PhD M Soc Pol BSW*

**T-C-SP04 - TRAINING OF FIRST RESPONDER HEALTH CARE PROFESSIONALS IN TRANS-DISCIPLINARY CARE FOR CEREBRAL PALSY- IMPACT ON KNOWLEDGE AND ATTITUDE**

*Meenakshi Girish, MD; Senthil Amudhan, MD; Asha Nayak, Master of Physiotherapy(MPT); Shashikala Gopalswamy, MD; Maria Lewin, DCH, DNB( Pediatrics); Gayathri Devi Chinnappa, MD Pediatrics*

**T-C-SP05 - CAREGIVER'S AWARENESS OF FUNCTIONAL DIFFICULTIES FACED BY CHILDREN WITH CEREBRAL PALSY IN SRI LANKA**

*Shanika N. Nanayakkara, BS; Sumudu P. Walpola, BS; Nishamini Elapatha, BS; Dinesh Gunathilake, BS; Rasanga Dewara Handige, BS*

**T-C-SP06 - CHARACTERISTICS AND TREATMENT OF CHILDREN WITH CEREBRAL PALSY IN A STATE IN NORTHERN OF MEXICO: A 8 YEARS EXPERIENCE**

*Dayna Gama, MS; Elsa M. Perez, MD; Juan C. Peña, MD*

**T-C-SP07 - REPORT FROM THE CEREBRAL PALSY RESEARCH NETWORK- 2019***Garey Noritz, MD; Paul Gross, BA; Jacob Kean, PhD***T-C-SP08 - INVESTIGATING PEDIATRICIANS: KNOWLEDGE AND LEARNING NEEDS RELATED TO CEREBRAL PALSY***Stacey D. Miller, PT; Ip Angie, FRCPC; Kishore Mulpuri, MBBS, MS, MHS; Maureen O'Donnell, MD MSC FRCPC***T-C-SP09 - THE IMPLEMENTATION OF A HEALTH SURVEILLANCE CLINIC FOR CHILDREN WITH DOWN SYNDROME***Niamh C. Lagan, MD; Fiona Mc Grane, MSC; Dean Huggard, MD; Joanne Balfe, MD; Eleanor Molloy, PhD***T-C-SP10 - EFFECTIVENESS OF VIDEO-BASED TRAINING ON MOBILE APP MEASUREMENT OF MIGRATION PERCENTAGE: IS COMMUNITY-BASED HIP SURVEILLANCE FEASIBLE?***Nina Cung, BA, BS; Vedant A. Kulkarni, MD; Anita Bagley, PhD, MPH; Jon R. Davids, MD***T-C-SP11 - TRANSITIONING CHILDREN FROM NICU VENTILATORS TO HOME VENTILATORS VIA A PEDIATRIC LONG TERM ACUTE CARE UNIT: A NEW PATHWAY FROM NICU TO HOME***Kilby Mann, MD; Christine Hartling, MS; Ric Dean, BA; Jennifer Brinton, MD; Nancy A. Murphy, MD***T-C-SP12 - DESIGNING AND IMPLEMENTING SHARED PLANS OF CARE FOR CHILDREN WITH MEDICAL COMPLEXITY IN ONE COMPLEX CARE PROGRAM***Natalie J. Tedford, MD; Mary L. Ehlenbach, MD***T-C-SP13 - INVESTIGATING THE FEASIBILITY OF QUANTITATIVE SENSORY TESTING TO PROFILE SENSORY GAIN/LOSS IN RELATION TO PAIN OUTCOMES FOLLOWING INTRATHECAL BACLOFEN IMPLANT SURGERY IN CEREBRAL PALSY***Chantel Barney, PhD; Alyssa M. Merbler, MA; Donald Simone, PhD; David Walk, MD; Frank Symons, PhD***T-C-SP14 - EVALUATING AN OBSERVATIONAL CODING SYSTEM DERIVED FROM THE PAIN AND DISCOMFORT SCALE TO ASSESS SPASTICITY-RELATED PAIN IN CEREBRAL PALSY***Alyssa M. Merbler, MA; Chantel Barney, PhD; Kristin Frenn, MPH; Frank Symons, PhD***T-C-SP15 - A PRELIMINARY COMPARISON OF SUBJECTIVE HEAT PAIN PERCEPTION IN FEMALES WITH CEREBRAL PALSY WITH AND WITHOUT HISTORY OF SELECTIVE DORSAL RHIZOTOMY AND TYPICALLY DEVELOPING CONTROLS***Lisa Lykken, BS; Kristin Frenn, MPH; Frank Symons, PhD; Chantel Barney, PhD***T-C-SP16 - DESCRIBING CHANGES IN SUBJECTIVE BODILY PAIN INTENSITY IN PEOPLE WITH CEREBRAL PALSY: A SYSTEMATIC REVIEW***Heather M. Shearer, MSc; Pierre Côté, PhD; Sheilah Hogg-Johnson, PhD; Patricia McKeever, PhD; Darcy L. Fehlings, MD***T-D-SP01 - EVALUATION OF A MAGIC CAMP FOR CHILDREN WITH SPASTIC HEMIPLEGIC CEREBRAL PALSY***Hon Yuen, PhD; Gavin Jenkins, PhD***T-D-SP02 - CONTENT VALIDITY AND FEASIBILITY OF ACTIVEYOU 1 A NEW WEB-BASED INSTRUMENT FOR MAPPING ACTIVITY PREFERENCES IN CHILDREN AND ADOLESCENTS WITH DISABILITIES***Lars Kristian Dalen, MS; Tor Erik H. Nyquist, MSc; Astrid Nyquist, PhD***T-D-SP03 - INVESTIGATING THE IMPACT OF ADAPTED BIKES OR TRIKES ON THE QUALITY OF LIFE OF CHILDREN AND YOUTH WITH NEUROMOTOR DISABILITIES***Tracy Ferguson, BS; Natasha Hanson, PhD***T-D-SP04 - THE IMPACT OF PARTICIPATION-BASED INTERVENTIONS ON BODY FUNCTIONS AMONG YOUTH WITH PHYSICAL DISABILITIES***Dana Anaby, PhD; Jan Willem Gorter, MD PhD; Mindy F. Levin, PhD; Lisa Avery, MSc; Rachel Tepticky, MSc; Isabelle Cormier, BA; Laura Turner, MSc; Janice Coulter; Julia E. Hanes, BS***T-D-SP05 - DAILY LIVING TRANSACTIONS. HOW CHILDREN WITH CEREBRAL PALSY WHO ARE NON-AMBULANT AND THEIR CARERS WORK TOGETHER TO COMPLETE DAILY ROUTINES***Robyn Heesh; Susan Greaves, PhD; Loretta Sheppard, DClSci; Christine Imms, PhD***T-D-SP06 - PHYSICAL AND ENVIRONMENTAL BARRIERS TO MOBILITY AND PARTICIPATION IN CHILDREN WITH MEDICAL COMPLEXITY***Laura E. Black, MD; Carolyn C. Foster, MD; Sara Shaunfield, PhD; Patricia H. Zavos, MPH; Deborah Gaebler-Spira, MD, FRCPC***T-D-SP07 - ADAPTED SPORT AND RECREATION SUMMER CAMP; PERSPECTIVES OF PARENTS REGARDING IMPACT ON PSYCHOSOCIAL OUTCOMES AND PHYSICAL ACTIVITY PARTICIPATION***Elysa F. Sandron, BS; Carolyn A. Emery; Meghan H. McDonough, PhD; Elizabeth G. Condliffe, PhD, MD; Laura K. Brunton, PT, PhD; David Legg, PhD***T-D-SP08 - EVALUATING PARTICIPATION IN CHILDREN WITH CEREBRAL PALSY: USING A WINDOW OF THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH***Mintaze Kerem Günel, PhD; Ayşe Numanoğlu Akbaş, PhD; Özge Çankaya, MSc; Kübra Seyhan, MSc; Cemil Özal, PhD; Sefa Üneş, MSc; Merve Tunçdemir, MSc; Hilal Özcebe, PhD; Umut Ece Arslan, PhD***T-D-SP09 - PARENTS' PERCEPTIONS OF ENVIRONMENTAL SUPPORTS AND RESOURCES FOR PARTICIPATION OF CHILDREN WITH CEREBRAL PALSY***Cheryl L. Kerfeld, PhD; Erin Wentz, PT, PhD, PCS; Nancy Cicirello, PhD; Alyssa Fiss, PT, PhD; Kristie F. Bjornson, PhD, PT, PCS***T-D-SP10 - A PARENTAL PERSPECTIVE ON TRANSITION FROM NICU TO EARLY INTERVENTION***Thubi H. Kolobe, PhD; Elizabeth A. Koldoff, PhD; Barbara J. Holtzclaw, PhD*

**T-D-SP11 - APPLICATION OF PRINCIPLES OF IMPLEMENTATION SCIENCE DECREASES AGE AT CEREBRAL PALSY DIAGNOSIS BELOW 12 MONTHS IN A MULTICENTER CLINICAL NETWORK**

*Nathalie Maitre, MD; Rachel Byrne, BA; Andrea Duncan, MD; Joanna Burton, MD; Sai Iyer, MD; Betsy Ostrander, MD*

**T-D-SP12 - IDIOPATHIC TOE WALKING, WHAT IS THE STATE OF THE KNOWLEDGE - A SCOPING REVIEW**

*Sian A. Williams, PhD; Nichola Wilson, PhD; Amanda Bunn, MBChB, BHSCT; N. Susan Stott, MBChB PhD FRACS*

**T-D-SP13 - THE FUNCTIONAL COMMUNICATION CLASSIFICATION SYSTEM: EXTENDED RELIABILITY AND VALIDITY FOR CHILDREN WITH CEREBRAL PALSY AGED 2 TO 4 YEARS.**

*Katy D. Caynes, BA; Tanya A. Rose, PhD; Debbie A. Burmester, BA; Robert Ware, PhD; Leanne M. Johnston, PhD*

**T-D-SP14 - VISUOMOTOR INTEGRATION NETWORK CONNECTIVITY IN INDIVIDUALS WITH PERIVENTRICULAR LEUKOMALACIA**

*Corinna M. Bauer, PhD; Christos Papadelis, PhD*

**T-D-SP15 - "I WOULD LIKE FOR MY CHILD TO BE HAPPY WITH HIS LIFE": PARENTAL EXPERIENCES FOR THEIR CHILDREN WITH CONGENITAL ZIKA SYNDROME**

*Klayton Galante Sousa, PhD; Pedro Farias, MS; Egmar Longo, PhD; Mercês Silva, PhD; Ana Severo, PhD; Silvana Pereira, PhD*

**T-D-SP16 - IT'S WORSE THAN IT LOOKS**

*Lauro Machado Neto, MD; Guilherme Auler Brodt, MSc; Eduardo Pflug Comparsi, MD*

**T-E-SP01 - HIGH PREVALENCE OF ABNORMAL GENERAL MOVEMENTS IN HOSPITALIZED VERY LOW BIRTHWEIGHT INFANTS**

*Lisa Letzkus, PhD; Santina Zanelli, MD; Corrie J. Alonzo, M.D.; Elizabeth Connaughton, DPT; Nancy Kelly, DPT; Joseph Michel, BS*

**T-E-SP02 - LOSING A DIAGNOSIS OF CEREBRAL PALSY: COMPARISON OF CHARACTERISTICS AT AGE 2 BETWEEN EVENTUAL CONFIRMED AND NON-CONFIRMED CEREBRAL PALSY AT AGE 5**

*Anjellica Chen, MD; Sasha Dyck Holzinger, RN; John Andersen, MD; David Buckley, MB, ChB Sheffield, FRACP Australia, FRCPC; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Louise Koclas, MD; Nicole Pigeon, MD; Esias Van Rensburg, MD; Ellen Wood, MD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Michael Shevell, MDCM, FRCPC, FCAHS*

**T-E-SP03 - VALIDATION OF AN INSTRUMENT FOR DEVELOPMENTAL PROBLEMS SCREENING IN CHILDREN UNDER FIVE YEARS IN URUGUAY**

*Maria Mercedes Perez-Roca, PhD; Anabella Santoro Ferrero, PhD; Gustavo Giachetto Larraz, PhD; Franklin Fernando Massa Mandagaran, Stat*

**T-E-SP04 - DEVELOPMENTAL CHARACTERISTICS OF NONMICROCEPHALIC INFANTS BORN TO MOTHERS WITH CONFIRMED OR SUSPECTED ZIKA DIAGNOSIS: A RETROSPECTIVE ANALYSIS IN ST. LUCIA, WEST INDIES**

*Keisha T. Lindsay, PhD, CCC-SLP, TSSLD; Kim F. Gardner, MD, MsPH*

**T-E-SP05 - THE BEST COMBINATION OF DIAGNOSTIC TESTS FOR CEREBRAL PALSY IN HIGH RISK INFANTS: A CASE CONTROL STUDY**

*Cathy Morgan, PhD, BAppSc; Andrea Guzzetta, MD; Domenico Romeo, PhD; Olena Chorna, MM, CCRP; Claire Galea, MEpi; B.Ed Mathematics; Sabrina Del Secco; Iona Novak, PhD*

**T-E-SP06 - FAMILY-CENTERED CARE IN EARLY INTERVENTION (EI): ASSOCIATIONS WITH CHILD CHARACTERISTICS AND EI SERVICE USE INTENSITY**

*Beth M. McManus, PhD; Zachary Richardson, MA, PhD(c); Margaret Schenkman, PhD; Natalie Murphy, MPH; Elaine Morrato, DrPH*

**T-E-SP07 - INCREASING EARLY INTERVENTION REFERRALS THROUGH PEDIATRIC RESIDENT EDUCATION**

*Carl W. Dowden, MD; Laura J. Hobart-Porter, DO, FAAPMR*

**T-E-SP08 - COMPARING PARENT AND PROVIDER PRIORITIES IN DISCUSSIONS OF EARLY DETECTION AND INTERVENTION FOR INFANTS WITH AND AT RISK OF CEREBRAL PALSY**

*Rachel Byrne, BA; Tracy Pickar, BA; Mary-Lauren Neel, MD; Andrea Duncan, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Nathalie Maitre, MD*

**T-E-SP09 - IT SHOULD HAVE BEEN GIVEN SOONER, AND WE SHOULDN'T HAVE TO FIGHT FOR IT: UNDERSTANDING THE FAMILY EXPERIENCE OF THE DIAGNOSIS OF CEREBRAL PALSY**

*Sian A. Williams, PhD; N. Susan Stott, PhD; Nichola Wilson, PhD; Alexandra Sorhage, PGDIPHI; Malcolm Battin, FRACP; Amy R. Hogan, BAPsych; Anna Mackey, PhD*

**T-E-SP10 - FAMILY CENTERED, EARLY INTERVENTION APPROACH: SRI LANKAN PROFESSIONALS PERSPECTIVE**

*Yvonne Weerasinghe, BS; Samanmali P. Sumanasena, MD*

**T-E-SP11 - COACHES FIDELITY IN DELIVERING A NOVEL COACHING INTERVENTION FOR PARENTS OF CHILDREN WITH SUSPECTED DEVELOPMENTAL DELAY**

*Tatiana Ogourtsova, PhD; Annette Majnemer, PhD, OT; Brown Amelie, Social Worker, Couple and Family Therapist and Psychotherapist; Maureen O'Donnell, MD MSc FRCPC*

**T-E-SP12 - UPPER EXTREMITY ASYMMETRY DETECTION IN INFANTS: A COMPARISON OF THE HAND ASSESSMENT FOR INFANTS AND HAMMERSMITH INFANT NEUROLOGICAL EXAMINATION**

*Mary Ann Nelin, MD; Lindsay Pietruszewski, DPT; Stephanie Burkhardt, MPH; Nancy Batterson, OT/L, SCFES; Katelyn D. Levengood, DPT; Julia Less, MPH; Dennis Lewandowski, PhD; Brianna Sowers; Nathalie Maitre, MD*

**T-E-SP13 - EXPLORATORY LEARNING TO ENCOURAGE SELECTIVE LEG MOVEMENT IN INFANTS BORN FULL-TERM AND VERY PRETERM**

*Jeong-Ah Kim, MS; Barbara Sargent, PT, PhD; Linda Fetters, PT, PhD*

**T-E-SP14 - REACHING, GROSS MOTOR, FINE MOTOR, AND COGNITIVE FUNCTIONING IN INFANTS WITH CEREBRAL PALSY GMFCS III-V LEVELS**

*Gardenia O. Barbosa, PhD; Thais Cabral, PhD; Tanya Tripathi, PhD; Jill C. Heathcock, MPT, PhD*

**T-E-SP15 - LACK OF SPONTANEOUS REACH AND GRASP IN INFANTS 8 - 24 MONTHS WITH HEMIPARETIC CEREBRAL PALSY RESULTS IN CLEAR ASYMMETRY**

*Thais Cabral, PhD; Tanya Tripathi, PhD; Gardenia Barbosa, PhD; Meredith Schram, BA; Amy Darragh, PhD; Sharon Ramey, PhD; Stephanie C. Deluca, PhD; Jill C. Heathcock, MPT, PhD*

**T-E-SP16 - REACHING FREQUENCY INCREASES WITH AGE YET PRELIMINARY EVIDENCE SUGGESTS SHORTER, LESS EFFICIENT MOVEMENTS FOR INFANTS WITH NEONATAL STROKE AND CP IN THE FIRST 6 MONTHS OF LIFE.**

*Julia Mazzarella, DPT; Thais Cabral, PhD; Jill C. Heathcock, MPT, PhD; Mike McNally, PhD; Ajit Chaudhari, PhD*

**T-F-SP01 - THE IMMEDIATE EFFECTS OF ELECTRO-ACUPUNCTURE ON GASTROCNEMIUS MUSCLE TONE OF CHILDREN WITH SPASTIC CEREBRAL PALSY**

*Jia Feiyong, M.D., PhD; Wang Lili, MS; Shan Ling, MS; Du Lin, MS; Zhang Yu, MD, PhD*

**T-F-SP02 - BOTULINUM TOXIN AND CASTING MAY DELAY OR PREVENT SURGERY IN SPASTIC HEMIPLEGIC CEREBRAL PALSY**

*Stephen T. Gates, MD; Robert Wimberly, MD; Anthony Riccio, MD; Mauricio Delgado, MD; Chan-Hee Jo, PhD*

**T-F-SP03 - ASSESSING CORRELATION BETWEEN OPENING PRESSURE VALUES DURING INTRATHECAL BACLOFEN TEST DOSE WITH POST-PROCEDURE COMPLICATIONS**

*Sara Cartwright, MD; Douglas G. Kinnett, MD, MD; Marina Ma, MD; Julie Estenfelder, BSN*

**T-F-SP04 - IMPACT OF INTRATHECAL BACLOFEN ON GROWTH IN CHILDREN WITH SPASTICITY**

*Amy L. Kaye, PhD*

**T-F-SP05 - INTRATHECAL BACLOFEN THERAPY IN CHILDREN: IMPACT ON QUALITY OF LIFE AND CAREGIVER BURDEN**

*Kirsty Stewart, PhD; Jenny Lewis, PT; Gavin Hutana, BA, MBBS*

**T-F-SP06 - IMPACT OF OCCUPATIONAL THERAPY ON SELF-CARE FOLLOWING SELECTIVE DORSAL RHIZOTOMY**

*Heather Forst, OTR/L; Kathleen M. Vonderhaar, MD; Tonye Sylvanus, MD; Nanette Aldahondo, MD; Angela Sinner, DO*

**T-F-SP07 - LONG-TERM IMPROVEMENT ON GMFCS LEVEL OF PATIENTS WITH CEREBRAL PALSY TREATED BY AN INTEGRATED APPROACH OF REPEATED BOTULINUM TOXIN-A INJECTIONS**

*Nigar Dursun, MD; Merve Akyuz, MD; Tugba Gokbel, MD; Melike Akarsu, MSc; Cagla Karacan, PhD; Erbil Dursun, MD*

**T-F-SP08 - GROSS MOTOR FUNCTION LEVELS IN BILATERAL SPASTIC CEREBRAL PALSY FROM 4 TO 25 YEARS OF AGE WITH AND WITHOUT EARLY SELECTIVE DORSAL RHIZOTOMY - A POPULATION BASED STUDY**

*Annika Lundkvist Josenby, PhD; Ann I. Alriksson-Schmidt, PhD; Lena Westbom, PhD*

**T-F-SP09 - ABOBOTULINUMTOXINA, ONABOTULINUMTOXINA AND INCOBOTULINUMTOXINA NEUROTOXIN CONTENT AND ACTIVITY: POTENTIAL IMPLICATIONS FOR DURATION OF EFFICACY IN PEDIATRIC PATIENTS**

*Keith Foster, PhD; Malgorzata Field, MSc; Andrew Splevins, PhD; Marcel Van Der Schans, PhD; Jan Langenberg, PhD; Daan Noort, PhD; Philippe Picaut, PharmD*

**T-F-SP10 - A RANDOMIZED CONTROLLED STUDY OF VIRTUAL REALITY FOR PAIN MANAGEMENT DURING BOTULINUM TOXIN INJECTIONS FOR SPASTICITY MANAGEMENT**

*Kristin Frenn, MPH; Lisa Lykken, BS; Elana Abelson, BA; Andrina MacDonald; Dalberg Todd, Do; Shannon Wier, BA; Elizabeth Jensen, BA; Frank Symons, PhD; Chantel Barney, PhD*

**T-F-SP11 - COMPARISON OF FREQUENCY OF SURGERIES AND BOTULINUM TOXIN INJECTIONS IN CHILDREN WITH CEREBRAL PALSY BETWEEN TWO COUNTRIES**

*Ira E. Jeglinsky, PhD; Reidun Jahnsen, PhD; Ann I. Alriksson-Schmidt, PhD; Gunvor L. Klevberg, PhD; Sonja Elkjær, MS; Matti Ahonen, MD, PhD*

**T-F-SP12 - NATIONAL COLLABORATION FOR SELECTIVE DORSAL RHIZOTOMY (SDR) OUTCOMES IN AUSTRALIA**

*Jenny Lewis, PT; Simon P. Paget, MA (Cantab), MBBS, MRCPCH(UK), FAFRM, FRACP; Natasha Bear, MSc; Felicity Baker, PT; Olivia Lee, MBBS, FRACP; Kim McLennan, MBBS, FRACP, FAFRM; Emma Richardson, MBBS; Adam Scheinberg, MBBS, FRACP, FAFRM, MMED; Nadine Smith, PT; Pam Thomason, B Pty, M Physio; Andrew Tidemann, MBBS, FRACP; Meredith Wynter, PT; Adam Fowler, MBBS, FRACP*

**T-F-SP13 - ACTIVE AND PASSIVE GOAL ACHIEVEMENT AFTER SINGLE-EVENT MULTILEVEL CHEMONEUROLYSIS IN ADULTS WITH CEREBRAL PALSY**

*Sangjee Lee, MS; Amber Newell, CPNP, OTR/L; Heakyung Kim, MD*

**T-F-SP14 - SELECTIVE MOTOR FASCICULOTOMY AS AN ADJUNCT IN THE MANAGEMENT OF CEREBRAL PALSY CHILDREN WITH LOWER LIMB SPASTICITY**

*Aniruddh K. Purohit, Sr., MD; Pavan Kumar Rathna, MD*

**T-F-SP15 - A PILOT STUDY OF GABAPENTIN FOR MANAGING PAIN IN CHILDREN WITH DYSTONIC CEREBRAL PALSY**

*Adrienne Harvey, PhD; Kirsty Stewart, PhD; Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Mary-Clare Waugh, MBBS, FRACP, FAFRM; Lisa Copeland, MBBS, FAFRM, FRACP; Megan Thorley, OT; James Rice, MBBS; Felicity Baker, PT*

**T-F-SP16 - CLINICAL CHARACTERISTICS OF CHILDREN WITH CORTICAL VISUAL IMPAIRMENT: A DESCRIPTIVE STUDY FROM SRI LANKA**

*Samanmali P. Sumanasena, MD; Dilini V. Vipulaguna, MD; Thilini Madushika, BSc Physiotherapy; Antony Jacintha, MBBS*

**T-G-SP01 - THE DISEASE AND ECONOMIC BURDEN ATTRIBUTABLE TO ADULTS WITH CEREBRAL PALSY: A COHORT STUDY OF PRIVATELY-INSURED BENEFICIARIES**

*Daniel Whitney, PhD; Edward A. Hurvitz, MD; Mark Peterson, PhD*

**T-G-SP02 - PRELIMINARY RESULTS OF PATIENT-REPORTED OUTCOME MEASURES AMONG ADULTS WITH CEREBRAL PALSY FOLLOWING LATERAL COLUMN LENGTHENING AND MEDIAL COLUMN SLIDING OSTEOTOMY FOR PES PLANOVALGUS DONE IN CHILDHOOD**

*Christopher Constantino, MD; Karen Kruger, PhD; Joseph Krzak, PhD; Adam Graf, MS; Ann Flanagan, PT, PCS; Haluk Altıok, MD; Peter Smith, MD; Gerald Harris, PhD*

**T-G-SP03 - RELATIONSHIPS BETWEEN MUSCLE STRENGTH AND FUNCTIONAL MOBILITY IN ADULTS WITH CP; IMPLICATIONS FOR STRENGTH TRAINING PROGRAMS**

*Maaïke M. Eken, PhD; Nelleke Langerak, PhD; Susanne Koschnick, MSc; Jacques du Toit, MBChB(Stell), FC Orth(SA), MScClinEpi; Robert Lamberts, Prof.*

**T-G-SP04 - A PILOT STUDY OF A MINDFULNESS BASED STRESS REDUCTION PROGRAM (MBSR) DELIVERED TO A GROUP OF ADULTS WITH CEREBRAL PALSY (CP) VIA VIDEO CONFERENCING**

*Helene Høye; Marianne Løvstad, PhD; Jeanette F. Hartveit; Reidun B. Jahnsen, PhD; Sørli Hilde; Tornås Sveinung, PhD; Grethe Månnum, PhD, MD*

**T-G-SP05 - CONCERNS AND EXPECTATIONS OF ADOLESCENTS WITH PHYSICAL DISABILITIES REGARDING ADOLESCENCE AND TRANSITION TO ADULTHOOD**

*Marina B. Brandao, PhD; Kátia P. Bueno, PhD; Ana Paula M. Silverio, OT; Fernanda I. Antunes; Priscilla P. Figueiredo, MSc; Aline M. Feitosa, OT,PT; Marisa C. Mancini, PhD*

**T-G-SP06 - DEVELOPING AN ICF CORE SET FOR ADULTS WITH CEREBRAL PALSY: WHICH AREAS OF FUNCTIONING DO THESE ADULTS CONSIDER IMPORTANT?**

*Suzie Noten, MSc; Lorenzo Troenosemito, BSc; Melissa Selb, MSc; Vincent de Groot, MD PhD; Manin Konijnenbelt, Drs; Daniëlle M. Driessen, MD; Agnies M. Van Eeghen, MD, PhD; Henk J. Stam, MD PhD; Rita Van Den Berg-Emons, PhD; Sander R. Hilberink, PhD; Marij E. Roebroek, PhD*

**T-G-SP07 - DEVELOPING AN ICF CORE SET FOR ADULTS WITH CEREBRAL PALSY: AN INTERNATIONAL EXPERT SURVEY**

*Chonnanid Limsakul, MD; Suzie Noten, MSc; Wilma M. Van Der Slot, MD PhD; Henk J. Stam, MD PhD; Melissa Selb, MSc; Marij E. Roebroek, PhD*

**T-G-SP08 - PREVALENCE OF MUSCULOSKELETAL DISORDERS AND UTILIZATION OF REHABILITATION SERVICES IN ADULTS WITH CEREBRAL PALSY: ANALYSIS OF NATIONAL MEDICARE CLAIMS DATA**

*Deborah E. Thorpe, PT, PhD; Mary E. Gannotti, PhD; Chin-Hua Wang, PhD; Janet Freburger, PT, PhD*

**T-G-SP09 - SOCIOEMOTIONAL SUPPORT AND ADJUSTMENT DURING TRANSITION FOR YOUTH WITH SPINAL CORD INJURY**

*Kyle Deane, PhD; Lara Anderson, BS; Eric Peist, MA; Kathy Zebracki, PhD*

**T-G-SP10 - TESTING NOVEL MEASURES OF COMMUNITY INTEGRATION IN ADULTS WITH CEREBRAL PALSY IN THE UNITED STATES AND AUSTRALIA.**

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**T-G-SP11 - SPINAL DEFORMITIES AND PAIN DURING AGING IN ADULTS WITH CEREBRAL PALSY AND SPASTIC DIPLEGIA; A LONG-TERM FOLLOW-UP STUDY**

*Robert P. Lamberts, PhD, FCCSS; Maaïke Eken, PhD; Jacques du Toit, MBChB(Stell), FC Orth(SA), MScClinEpi; Elsabe Botha, BSc (Radiology); Richard de Villiers, MMed (Rad.D); Nelleke Langerak, PhD*

**T-G-SP12 - RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND PHYSICAL FITNESS OF CHILDREN WITH CEREBRAL PALSY**

*MinHwa Suk, PhD; InKyeong Park, MA; JeongYi Kwon, MD*

**T-G-SP13 - RANGE OF MOTION OF CHILDREN WITH CONGENITAL ZIKA, IPESQ COHORT**

*Renan A. Silva, Jr., MD; Gabriela Gama, PhD; Agda Santos, MD; Patricia Juliana da Silva, PT; Jousilene Tavares, PhD; Thalles Amorim, PT; Adriana Melo, PhD; Melania Maria Ramos Amorim, PhD*

**T-G-SP14 - MUSCLE TONE OF CHILDREN WITH CONGENITAL ZIKA- IPESQ COHORT**

*Gabriela Gama, PhD; Janiele Tavares, PT; Thalles Amorim, PT; Emanuela Barros, PT; Agda Santos, MD; Layane Carvalho, PhD; Jousilene Tavares, PhD; Adriana Melo, PhD*

**T-G-SP15 - PAIN REPORTED BY PEOPLE WITH CEREBRAL PALSY AND FAMILIES: ESPACE, A NATIONAL SURVEY ON MOTOR REHABILITATION IN FRANCE**

*Javier de la Cruz, MD; Gwenaël Cornec, MS; Gaëlle Drownowski; Julia Boivin; Audrey Fontaine; Isabelle Desguerre, MD, PhD; Vincent Gautheron; Yann Le Lay, PT; Philippe Toullet, PT; Anne-Catherine Guenier; Eric Berard, MD; Maria Bodoria; Sylvain Brochard, MD*

**T-G-SP16 - IS THERE A RELATION BETWEEN SENSORY PROCESSING AND GAIT VARIABLES IN CHILDREN WITH CEREBRAL PALSY?**

*Mariana Santos, PhD; Carolina Corsi, PT; Ana Carolina de Campos, PhD; Nelci Adriana Cicuto Ferreira Rocha, PhD*

**T-H-SP01 - ELECTRONIC PARTICIPATION-FOCUSED CARE PLANNING SUPPORT FOR FAMILIES OF YOUNG CHILDREN RECEIVING REHABILITATION THERAPIES: A PILOT STUDY**

*Mary A. Khetani, ScD; Vera C. Kaelin, MSc; Jessica M. Jarvis, PhD; Dana Anaby, PhD; Rachel Teplicky, MSc*

**T-H-SP02 - INNOVATIVE MULTIDISCIPLINARY INTENSIVE THERAPY PROGRAM RESULTS IN A STRONG IMPACT IN THE LIVES OF CHILDREN WITH NEUROMOTOR DISORDERS**

*Aimee Wilson, PT, C/NDT, HPCS; Kirsten Woyte, OTR/L, NTMCTC; James B. Hedgecock, PT, DPT, PCS*

**T-H-SP03 - ASSISTIVE AND REHABILITATIVE EFFECTS OF THE PLAYSKIN LIFT™ EXOSKELETAL GARMENT IN CHILDREN WITH ARTHROGRYPOSIS**

*Andrea B. Cunha, PhD; Iryna Babik, PhD; Michele A. Lobo, PT, PhD*

**T-H-SP04 - UNMET RESPITE CARE NEEDS FOR CHILDREN WITH MEDICAL TECHNOLOGY DEPENDENCE (MTD)**

*Sarah A. Sobotka, MD, MSCP; Emma Lynch, MPH; Michael T. Quinn, PhD; Michael E. Msall, MD*

**T-H-SP05 - COGNITIVE STRATEGY USE IN CHILDREN WITH UNILATERAL CEREBRAL PALSY**

*Kelsey D. Jamieson, OT; Christine Chapparo, PhD*

**T-H-SP06 - INVESTIGATION ON THE COMPREHENSIVE REHABILITATION OF CHILDREN WITH CEREBRAL PALSY AGED 3-6 IN CHINA BASED ON ICF-CY**

*Yongli Wang, PhD; Jing Song, Master student; Qin Wan, PhD; Zhaoming Huang, PhD*

**T-H-SP07 - PERCEPTION OF ADOLESCENTS WITH CEREBRAL PALSY OF THE EFFECTS OF VIDEO GAME THERAPY IN THEIR FUNCTIONALITY**

*Paula S. Chagas, PhD; Elisa J. Valenzuela; Claudia C. Mármora, PhD; Amanda Paula; Lais T. Carvalho; Maria Paula S. Ribeiro; Renata M. Rosa; Carolyne Drummond; Jaqueline S. Frônio, PhD*

**T-H-SP08 - IDENTIFYING KEY BARRIERS AND FACILITATORS TO USE THE SEGMENTAL ASSESSMENT OF TRUNK CONTROL IN OUTPATIENT PEDIATRIC REHABILITATION**

*Rachel L. Bican, PT, DPT; Danielle M. Bellows, PT, DHSc, PCS; Catie Christensen, PT, DPT, PCS; Abigail Kremer, PT, DPT; Jill C. Heathcock, MPT, PhD*

**T-H-SP09 - CONSTRUCTION OF COMPREHENSIVE REHABILITATION MODEL FOR CHILDREN WITH CEREBRAL PALSY AGED 3-6 IN CHINA BASED ON ICF-CY**

*Lu Hongyun, PhD; Yongli Wang, PhD; Jing Song; Huang Zhaoming, PhD; Liu Qiaoyun, MA*

**T-H-SP10 - VISUOMOTOR ANKLE FORCE TRAINING IN INDIVIDUALS WITH SPASTIC CEREBRAL PALSY COMPARED TO THEIR TYPICALLY DEVELOPED PEERS**

*Shari O'Brien, BESS(CEP)(Hons1); Lee Barber, PhD, MPT, BAppSci; Glen Lichtwark, PhD, MPT, BAppSci; Timothy Carroll, BSc (Hons 1), PhD (Neuroscience) (Qld)*

**T-H-SP11 - EFFECT OF ROBOT-ASSISTED GAIT TRAINING IN CHILDREN WITH CEREBRAL PALSY**

*Shin-Seung Yang, MD; Sehi Kweon, MS; Lihua Jin, MS; Min Kyun Sohn, MS*

**T-H-SP12 - ARE YOU BEING SERVED? PHYSICAL THERAPY INTERVENTION OUTSIDE THE HEALTH SYSTEM FOR CHILDREN WITH MOTOR DISABILITIES**

*Nilly Waiserberg, MSc; Paula Feder-Bubis, PhD*

**T-H-SP13 - EFFICACY OF INTENSIVE THERAPY PROGRAM USING THERASUIT METHOD FOR PEDIATRIC REHABILITATION PATIENTS COMPARED TO CONVENTIONAL IN-PATIENT NDT THERAPY**

*Jiyeon Hong, MD; Seong Min Chun, MD; Yeaun Kim, MPT; Hana Kim, MPT; Sujin Doo, MPT; Ji Soo Choi, MD; Jung-Hee Doo, MPT*

**T-H-SP14 - SHORT TERM EFFECTIVENESS OF HOME-BASED TELE-MONITORED UPPER LIMB CHILDREN ACTION OBSERVATION TRAINING (TELE-UPCAT) RCT IN UNILATERAL CEREBRAL PALSY**

*Giuseppina Sgandurra, MD, PhD; Elena Beani, PT, PhD; Valentina Menici, PT; Silvia Perazza, MD, PhD; Elisa Sicola, PT; Adriano Ferrari, MD; Giovanni Cioni, MD*

**T-H-SP15 - BEYOND THE EYE: CORTICAL DIFFERENCES IN PRIMARY VISUAL PROCESSING IN CHILDREN WITH CEREBRAL PALSY**

*Jacy R. VerMaas, MA; James E. Gehringer, B.S.; Rashelle Hoffman, DPT; Michael P. Trevarrow, BS; Tony Wilson, PhD; Max Kurz, PhD*

**T-H-SP16 - BASELINE CHARACTERISTICS OF INDIVIDUALS WITH CORTICAL VISUAL IMPAIRMENT OF PEDIATRIC ONSET: AN INITIAL ANALYSIS OF RESULTS OF A LONGITUDINAL STUDY**

*Andres Jimenez Gomez, FAAP; Kristen Fisher, DO; Veeral Shah, MD PhD*

**T-I-SP01 - RELATIONSHIP OF ADHD-SYMPTOMS AND MOTOR SKILLS IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER**

*Kamaldeep K. Gill, OT; Anisha Jethnani, MOT; Jasmine Yu, MOT; Jill G. Zwicker, PhD, OT*

**T-I-SP02 - A MANAGEMENT PROTOCOL FOR HIP MIGRATION AND CONTRALATERAL CONTAINED HIP IN NON-AMBULATORY CHILDREN WITH SPASTIC CEREBRAL PALSY. A PROSPECTIVE CASE SERIES STUDY**

*Ahmad S. Aly, Sr., MD; Kariem Tarek, MSc*

**T-I-SP03 - INTRAOPERATIVE HIP ARTHROGRAM CHANGES SURGICAL DECISION-MAKING DURING HIP RECONSTRUCTION PROCEDURES IN CHILDREN WITH CEREBRAL PALSY**

*Colyn Watkins, MD; Laura A. Lins, MPH, ATC; Kemble Wang, MD; Travis Matheney, MD; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Brian Snyder, MD, PhD; Benjamin J. Shore, MD, MPH, FRCSC*

**T-I-SP04 - EFFECTIVENESS OF THE PONSETI METHOD IN TREATING FOOT DEFORMITIES IN CHILDREN WITH ARTHROGRYPOSIS**

*Jose J. Salazar Torres, PhD; Chris Church, MPT; Nancy Lennon, MS, PT; John Henley, PhD; Daveda Taylor, DPT; Maureen Donohoe, PT, DPT, PCS; Louise Reid Nichols, MD*

**T-I-SP05 - SPLIT ANTERIOR TIBIALIS TENDON TRANSFER TO THE PERONEUS BREVIS OR TERTIUS FOR TREATMENT OF VARUS FOOT DEFORMITIES IN CHILDREN WITH STATIC ENCEPHALOPATHY**

*Brett Lullo MD, Alexander Nazareth MD, Susan A. Rethlefsen PT, DPT, Kenneth D. Illingworth MD, Oussama Abousamra MD, Robert M. Kay MD*

**T-I-SP06 - SURGICAL OUTCOMES AFTER SINGLE EVENT MULTILEVEL SURGERY IN CEREBRAL PALSY PATIENTS WITH MID-STANCE KNEE HYPEREXTENSION**

*Ki Hyuk Sung, PhD; Chin Youb Chung, MD, PhD; Soon-Sun Kwon, PhD; Moon Seok Park, MD, PhD*

**T-I-SP07 - THE EFFECT OF FLEXIBLE THORACOLUMBAR BRACE ON SPINAL ALIGNMENT IN SUBJECTS WITH SCOLIOSIS IN CEREBRAL PALSY**

*Joon Young Jang, MD; Yulhyun Park, MD; Seungeun Lee, PT, BSc; Ju Seok Ryu, MD*

**T-I-SP08 - THE EFFECT OF FLEXIBLE THORACOLUMBAR BRACE ON SPINAL ALIGNMENT IN PATIENTS WITH NEUROMUSCULAR SCOLIOSIS**

*Ju Seok Ryu, MD, PhD; Areum Shin, Gyeonggi-Do; Yulhyun Park, MD; Joon Young Jang, MD*

**T-I-SP09 - NEURAXIAL ANESTHESIA FOR HIP SURGERY IN CHILDREN WITH CEREBRAL PALSY WITH PRE-EXISTING INTRA-THECAL BACLOFEN PUMPS: INDWELLING EPIDURAL CATHETER AND A NOVEL PUMP-DELIVERED SPINAL ANESTHETIC METHOD ARE EFFECTIVE**

*Donald Kephart, MD; Vedant A. Kulkarni, MD; Madeleine Ball, BS; Alisha Othieno, BA; Sundeep Tumber, DO; Jon R. Davids, MD*

**T-I-SP10 - FLEXIBLE INTRAMEDULLARY NAILS ARE AN EFFECTIVE TREATMENT FOR FEMORAL SHAFT FRACTURES IN CHILDREN WITH NON-AMBULATORY NEUROMUSCULAR DISORDERS BUT CARRY INCREASED RISK OF EARLY REVISION SURGERY AND ANGULAR DEFORMITIES**

*Robert M. Kay, MD; Ali Siddiqui, BS; Kenneth D. Illingworth, MD; Oussama Abousamra, MD; Erin Meisel, MD*

**T-I-SP11 - PRE-OPERATIVE NUTRITION ASSESSMENTS DO NOT IMPROVE OUTCOMES IN CEREBRAL PALSY PATIENTS UNDERGOING VARUS DEROTATIONAL OSTEOTOMY**

*Robert M. Kay, MD; Kyle K. Obana, BA; Bensen B. Fan, MD; Rachel Y. Goldstein, MD; Lindsay M. Andras, MD*

**T-I-SP12 - POST-OPERATIVE IMMOBILIZATION FOLLOWING HIP RECONSTRUCTION IN CHILDREN WITH CEREBRAL PALSY: PRACTICE PATTERNS AND ASSOCIATED COMPLICATIONS FROM A PROSPECTIVE MULTI-CENTER INTERNATIONAL COHORT STUDY**

*Vedant A. Kulkarni, MD; Jon R. Davids, MD; Unni G. Narayanan, MBBS, MSc, FRCS(C); Ashley Ferkul, BA; S. Reed Laing, BA; Anita Bagley, PhD, MPH*

**T-I-SP13 - COMPLICATIONS FOLLOWING SPINAL FUSION FOR SCOLIOSIS IN CHILDREN WITH CEREBRAL PALSY**

*Annabel Dekker, MBChB; Haemish Crawford, MBChB, FRACS; John Ferguson, MBChB, FRACS; Antony Field, MBChB, FRACS; Michael Barnes, MBChB, FRACS; N. Susan Stott, MBChB, PhD, FRACS*

**T-I-SP14 - LONG TERM RESULTS OF MULTI-LEVEL SURGERY FOR FLEXED KNEE GAIT IN SPASTIC DIPLEGIA: THE CRITICAL IMPORTANCE OF PRIOR SURGERY**

*Pam Thomason, B.Phyt, M.Physio; Julie Tavernier, BS; Morgan Sangeux, PhD; Kerr Graham, MD, MD, FRCS (Ed), FRACS*

**T-I-SP15 - TITLE: A DESCRIPTIVE STUDY OF SURGICAL INTERVENTIONS FOR CEREBRAL PALSY PATIENTS IN THE CEREBRAL PALSY RESEARCH NETWORK REGISTRY**

*Jeffrey R. Leonard, MD; Garey Noritz, MD; Robert J. Bollo, MD; Brandon G. Rocque, MD; Samuel R. Browd, MD, PhD; Jeffrey S. Raskin, MD; Paul Gross, BA*

**T-I-SP16 - CONTRALATERAL DIFFERENCES IN DISTAL FEMUR BONE DENSITY: COMPARING CHILDREN WITH AND WITHOUT CP**

*Heidi H. Kecskemethy, MS, Ed, RDN, CSP, CBDT; Luke Lawrence, BS; H. Theodore Harcke, Jr., MD; Steven Bachrach, MD*

**T-I-SP17 - CAN RECTUS FEMORIS MODELLING BE USEFUL IN PREDICTING OUTCOMES OF DISTAL RECTUS FEMORIS TRANSFER IN CHILDREN WITH CEREBRAL PALSY? A CASE SERIES**

*Tishya Wren, PhD; Kyle Chadwick, MS; Susan Rethlefsen, DPT; Nicole Mueske, MS; Robert M. Kay, MD*

**T-I-SP18 - BONE DENSITY AND HARDWARE FAILURE IN PEDIATRICS**

*Amanda T. Whitaker, MD; Mallory Rowan, BS; Garey Noritz, MD; Althea Perez, BA*

**T-P-SP01 - DEVELOPMENT OF A NEW MEASURE OF BALANCE CONFIDENCE FOR YOUTH WITH CEREBRAL PALSY: THE FEELINGS ABOUT BALANCE - CEREBRAL PALSY QUESTIONNAIRE**

*Megan M. Towns, MSc; Kelly Arbour-Nicitopoulos, PhD; Sally Lindsay, PhD; Virginia Wright, BSc (PT), MSc, PhD*

**T-P-SP02 - THE AUTHENTICITY OF USING VISUAL DATA TO REPRESENT THE EMOTIONAL WELL-BEING OF CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY.**

*Dawn M. Pickering, MSc, MCSP, PGCME*

**T-P-SP03 - COMPARISON OF PATIENT-REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS) SCORES FOR CHILDREN WITH CEREBRAL PALSY TO A TYPICALLY DEVELOPING COHORT: EFFECT OF AGE AND GMFCS**

*Madeleine Ball, BS; Vedant A. Kulkarni, MD; Nancy Abarca, MPH; Donald Kephart, MD; Laura Lewallen, MD; Anita Bagley, PhD, MPH; Jon R. Davids, MD*

**T-P-SP04 - THE NATURAL HISTORY OF UPPER EXTREMITY FUNCTION IN HEMIPLEGIC CEREBRAL PALSY AS DETERMINED BY THE SHUEE**

*David E. Westberry, MD; Laura Peace, OTR/L; Heidi Simon, OTR/L; Linda Wack, RN; Lisa V. Wagner, DHSc OT; Ashley Carpenter, BS*

**T-P-SP05 - RESPONSIVENESS AND MINIMAL CLINICALLY IMPORTANT DIFFERENCE OF THE CHALLENGE FOR CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY**

*Ricardo Rodrigues de Sousa, Jr., MSc Student; Ana Paula Bensemann Gontijo, PhD; Amanda Riani Martins Silva, PT Student; Marisa C. Mancini, PhD*



**T-P-SP06 - EFFECT OF STRUCTURED NEONATAL PHYSICAL THERAPY (SNP) INTERVENTION ON NEUROBEHAVIOR AND QUALITY OF GENERAL MOVEMENTS IN MODERATE TO LATE PRETERM (MLP) INFANTS**

*Sonia Khurana, PhD; Bhamini K. Rao, PhD; Senthil K. D, PhD; Leslie E. Lewis, MBBS, DCH, DNB; Asha Kamath, PhD; Stacey C. Dusing, PhD*

**T-P-SP07 - ESTABLISHED INDICATIONS, BENEFITS AND SHORTCOMINGS OF LOWER LIMB ORTHOSES IN THE MANAGEMENT OF CHILDREN WITH CEREBRAL PALSY: CLINICAL PRACTICE GUIDELINES**

*Phillip M. Stevens, MEd, CPQ; Sally A. DiBello, MPO, CPO*

**T-P-SP08 - PARENT-REPORTED MOTOR FUNCTION USING PEDI-CAT IS RELATED TO GMFM AND GMFCS FOR CHILDREN WITH CEREBRAL PALSY**

*Kimberley S. Scott, DPT; Jessica Lewis, PT, DPT; Jill C. Heathcock, MPT, PhD*

**T-P-SP09 - BIMANUAL PERFORMANCE OF 8 TO 12 YEAR OLD CHILDREN WITH BILATERAL CEREBRAL PALSY**

*Andrea N. Burgess, OT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Jenny Ziviani, OT; Mark Chatfield, BA, MS; Robert Ware, PhD; Leanne Sakzewski, PhD, BOccThy*

**T-P-SP10 - FEASIBILITY, VALIDITY, AND RELIABILITY OF A NOVEL MEANS-END PROBLEM SOLVING ASSESSMENT TOOL (MEPSAT)**

*Andrea B. Cunha, PhD; Iryna Babik, PhD; Natalie A. Koziol, PhD; Jayden Nord, PhD; Lin-Ya Hsu, PhD; Regina T. Harbourne, PhD, PT; James A. Bovaird, PhD; Stacey C. Dusing, PhD; Sarah W. McCoy, PhD; Michele A. Lobo, PT, PhD*

**T-P-SP11 - POSTURAL STEADINESS, BALANCE REACTIONS, AND PHYSICAL ACTIVITY IN SCHOOL-AGE CHILDREN WITH AND WITHOUT CEREBRAL PALSY**

*Jeremy R. Crenshaw, PhD; James B. Tracy, MS; Drew Petersen, MS; Jamie Pigman, PhD; Benjamin Conner, MS; Henry G. Wright, DPT; Freeman Miller, MD; Christopher M. Modlesky, PhD; Curtis L. Johnson, PhD*

**T-P-SP13 - COMPARING QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY VERSUS CHILDREN WITH CEREBRAL PALSY AND AUTISM SPECTRUM DISORDER**

*Courtney Gilbert, MD; JenFu Cheng, MD; Claire Marchetta, MPH*

**T-P-SP14 - FOOT PRESSURE ANALYSIS TO ASSESS SEVERE EQUINOPLANOVALGUS FOOT DEFORMITY CORRECTION USING THE CALCANEAL-CUBOID-CUNEIFORM OSTEOTOMY**

*Tasos Karakostas, MPT, PhD; Vineeta T. Swaroop, MD; Luciano Dias, MD*

**T-P-SP15 - VALIDATION OF THE JAPANESE VERSION OF THE CAREGIVER PRIORITIES AND CHILD HEALTH INDEX OF LIFE WITH DISABILITIES (CPCHILD)**

*Yoko Matsumoto, PhD; Mariko Yagi, PhD; Kazuhiro Haginoya, MD, PhD; Mika Hirotsune, MD; Mio Nishimura, MD; Yukihiro Kitai, MD; Ryo Tanabe, MD; Koichi Maruyama, MD; Hiroshi Arai, MD; Yoko Kawasaki, MD*

**T-P-SP16 - MOTOR DEVELOPMENT OUTCOMES IN PEDIATRIC PATIENTS WITH SOLID TUMORS AFTER CHEMOTHERAPY**

*Xuan Zhou, MS*

**T-P-SP17 - ASSESSMENT OF AUDIO-VISUAL AND SOCIO-EMOTIONAL PROCESSING AND THE USE OF ADAPTIVE COMMUNICATIVE EQUIPMENT IN CHILDREN WITH SEVERELY INVOLVED CEREBRAL PALSY AND SCOLIOSIS**

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**T-P-SP18 - MEASURING PHYSICAL ACTIVITY DURING FUNCTIONAL TASKS IN AMBULATORY YOUTH WITH CEREBRAL PALSY**

*Margaret F. O'Neil, PT, PhD, MPH; Maayn Daagan, BS, DPT; Janell Mensinger, PhD; Steven G. Chopski, PhD; Christine Wojciechowicz, BS; Katie Feehan, MPH; Renee Turchi, MD, MPH*

**T-P-SP19 - THE QUALITY OF SLEEP IN CHILDREN WITH CEREBRAL PALSY**

*Boyoung Hong, MD; Hyehoon Choi, MD; Joon Sung Kim, MD; Seong Hoon Lim, MD*

**T-P-SP20 - ACCURACY AND REPEATABILITY OF USING SMARTPHONE-BASED SENSORS FOR ORTHOTIC TUNING**

*Katherine M. Steele, PhD; Brandon Nguyen, BS; Darrin Howell, BS; Nick A. Baicoianu, MS*

**T-P-SP21 - STEERING TOWARDS COLLABORATIVE ASSESSMENT: A QUALITATIVE STUDY OF PARENTS' EXPERIENCES OF EVIDENCE-BASED ASSESSMENT FOR THEIR CHILD WITH CEREBRAL PALSY.**

*Bridget F. O'Connor, BAppSci (Physio); Claire Kerr, BSc (Hons) Physio, PhD; Nora Shields, PhD; Brooke Adair, B.Physio, PhD; Christine Imms, PhD*

**T-P-SP22 - INFLUENCING FACTORS ASSOCIATED WITH SPOKEN LANGUAGE COMPREHENSION IN CHILDREN WITH CP A SYSTEMATIC REVIEW**

*Emma Vaillant, MA; Johanna J. Geytenbeek, PhD; Elise P. Jansma, MSc; Kim J. Oostrom, PhD; R. Jeroen Vermeulen, MD PhD; Annemieke I. Buizer, MD PhD*

**T-P-SP23 - LIMITATIONS OF THE BENEFIT OF CORTICOSTEROID IN DUCHENNE MUSCULAR DYSTROPHY: AN EFFECTIVENESS TRIAL**

*Michael D. Sussman, MD; Cole R. Hilton, BS; Susan Sienko, PhD; Camila B. De Mattos, MD; Charles D'Amato*

**T-P-SP24 - IDENTIFICATION OF COMMON BIMANUAL PERFORMANCE GOALS OF CHILDREN PARTICIPATING IN CONSTRAINT INDUCED MOVEMENT THERAPY IN A GROUP SETTING**

*Angela Shierk, OTR, PhD; Heather Roberts, PhD, OT; Nancy J. Clegg, PhD; Deborah A. Baldwin, BS; Linsley Smith, RN; Mauricio Delgado, MD*

**T-P-SP25 - A MATHEMATICAL MODEL TO ENHANCE SPEED OF COMMUNICATION AND OPTIMIZE THE DESIGN OF AUGMENTATIVE AND ALTERNATIVE COMMUNICATION DEVICES IN CHILDREN WITH DYSKINETIC CEREBRAL PALSY**

*Matteo Bertuccio, PhD; Terence D. Sanger, MD, PhD*

**T-P-SP26 - AN EXPLORATION OF THE SHARED EXPERIENCES AND PERSONAL IMPACT OF A PROGRESSIVE RESISTANCE TRAINING PROGRAMME, FOR YOUNG PEOPLE WITH CEREBRAL PALSY: A QUALITATIVE ANALYSIS**

*Grace Lavelle, PhD; Cherry Kilbride, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Tom Korff, PhD; Adam Shortland, PhD; Wendy Levin, PT; Jennifer Ryan, PhD*

**T-P-SP27 - NON-AMBULATORY CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY; DIFFERENT EXERCISE EFFECTS FROM STATIC VERSUS DYNAMIC STANDING**

*Åsa Tornberg, PhD; Katarina Lauruschkus, PhD*

**T-P-SP28 - NON-AMBULATORY CHILDREN WITH CEREBRAL PALSY; EFFECTS ON PASSIVE RANGE OF MOTION AND SPASTICITY IN THE HIP AFTER FOUR MONTH OF STATIC COMPARED TO DYNAMIC STANDING EXERCISE**

*Katarina Lauruschkus, PhD; Åsa Tornberg, PhD*

**T-P-SP29 - INFLUENCE OF VIRTUAL ENVIRONMENT COMPLEXITY ON MOTOR LEARNING IN TYPICALLY DEVELOPING CHILDREN AND CHILDREN WITH CEREBRAL PALSY**

*Danielle E. Levac, PhD; Morgan Taylor; Brennan Payne, PhD; Nathan Ward, PhD*

**T-P-SP30 - EFFECTS OF A COGNITIVE DUAL TASK ON POSTURAL CONTROL DURING SIT-TO-STAND MOVEMENT IN CHILDREN WITH CEREBRAL PALSY**

*Camila R. Gâmbaro Lima, N/A, MPT; Silvia Leticia Pavão, DPT; Ana Carolina de Campos, PhD; Nelci Adriana Cicuto Ferreira Rocha, PhD*

**T-P-SP31 - POWERED MOBILITY INTERVENTIONS FOR YOUNG CHILDREN AGED <5 YEARS: A SYSTEMATIC MIXED METHODS REVIEW AND ECONOMIC MODEL OF EFFECTIVENESS AND COST-EFFECTIVENESS.**

*Jennifer McAnuff, MSc; Niina Kolehmainen, PhD; Louise Tanner, PhD; Fiona Beyer, BS; Dawn Craig, PhD; Jane Noyes, PhD; Dor Wilson, MSc; Lorna Tuersley, PhD; Aimee Grayston, BA; Rhiannon Tudor Edwards, PhD; Nathan Bray, PhD*

**T-P-SP32 - TRANSCRANIAL MAGNETIC STIMULATION: ASSESSMENTS OF CORTICAL EXCITABILITY IN INFANTS WITH PERINATAL STROKE**

*Jesse Kowalski, DPT; Samuel Nemanich, PhD, MSCI; Tanjila Nawshin, MBBS; Mo Chen, PhD; Colleen Peyton, DPT; Marie Hickey, MD; Raghavendra Rao, MD; Michael Georgieff, MD; Bernadette Gillick, PhD, MSPT, PT*

**T-P-SP33 - MODELING PERSPECTIVE AND MEDIA FOR SEQUENCE ACTION IMITATION OF CHILDREN WITH AUTISM SPECTRUM DISORDER**

*Sixia Mo, MS*

**T-P-SP34 - INCREASED INSIGHT INTO CHILDREN WITH DYSKINETIC CEREBRAL PALSY BY SYSTEMATIC MOVEMENT DISORDER EVALUATION INCLUDING EMG ASSESSMENT**

*Jakob Lorentzen, PhD; Alfred Peter Born, Dr MD, PhD; Christian Svane, MSCI; Christian Forman, MSCI; Bjarne Laursen, PhD; Annika Reynberg Langkilde, Dr MD, PhD; Peter Uldall, Dr MD, PhD; Christina Engel Hoei-Hansen, Dr MD, PhD*

**T-P-SP35 - BACKYARD SWING TO IMPROVE TRUNK CONTROL AND GAIT SPEED IN CHILDREN WITH CEREBRAL PALSY: A PILOT STUDY**

*John P. Phillips, MD; Buddhika Senevirathne, PT; Priyanwada Wijesinghe, PT; Apsara Premathilake, PT; Thilini Kaushalya, PT; Mohomad Farshan, PT; Jagath Munasinghe, MBBS; Gemunu Hewawitharana, MBBS*

**T-P-SP36 - A RANDOMIZED CONTROLLED TRIAL OF HOME-BASED EXERCISE ON MOTOR DEVELOPMENT IN CHILDREN TREATED FOR CONGENITAL HEART DISEASE WITH CATHETERIZATION**

*Qing Du, PhD; Xuan Zhou, MS*

**T-P-SP37 - ADAPTATION OF SCALES IN FUNCTIONAL EVALUATION OF CHILDREN WITH BRACHIAL PLEXUS PALSY**

*Müberra Tanriverdi, PhD; Zeynep Hosbay, PhD; Safiye Ozkan, PhD; Atakan Aydın, MD*

**T-P-SP38 - FEASIBILITY OF A HOME-BASED ACTION OBSERVATION TRAINING FOR CHILDREN WITH UNILATERAL CEREBRAL PALSY: AN EXPLORATIVE STUDY**

*Elena Beani, PT, PhD; Valentina Menici, PT; Adriano Ferrari, MD; Francesca Cecchi, Eng, PhD; Irene Mannari, Eng; Giovanni Cioni, MD; Giuseppina Sgandurra, MD, PhD*

**T-P-SP39 - MAXIMUM MUSCLE MITOCHONDRIAL RESPIRATION RATE IN FUNCTIONALLY AMBULATORY CHILDREN IS NOT HIGHER THAN IN MINIMALLY- AMBULATORY CHILDREN WITH CEREBRAL PALSY**

*Sudarshan Dayanidhi, PhD; Alexia Rudofski, BS; Craig Finlayson, MD; Jill Larson, MD; Vineeta T. Swaroop, MD; Richard L. Lieber, PhD*

**T-P-SP40 - EMG CHANGES RELATED TO MUSCULAR FATIGUE AFTER AN INTENSE MOTOR TASK IN CHILDREN WITH CEREBRAL PALSY**

*Jean L. Stout, PT, MS; Mathieu Biemann, MSc; Tom Novacheck, MD; Désirée Maltais, PhD; Laurent Bouyer, PhD*

**T-P-SP41 - EEG AS A MEASURE OF MOTOR PERFORMANCE IN INFANTS WITH CEREBRAL PALSY**

*Thubi H. Kolobe, PhD; Andrew H. Fagg, PhD; David P. Miller, PhD; Lei Ding, PhD*

**T-P-SP42 - ATTITUDES OF PARENTS OF ADOLESCENTS WITH CEREBRAL PALSY TOWARDS INTENSIVE MODELS OF PHYSICAL THERAPY**

*Theresa Sukal-Moulton, DPT, PhD; Paige Golden; Angela Guerino; Natalie Kahn; Alexandra Manning*

**T-P-SP43 - INTERNATIONAL DELPHI RECOMMENDATIONS FOR A PEDIATRIC LOWER LIMB NEUROLOGICAL TEST PROTOCOL**

*Ramona L. Clark, PT; Emmah Baque, PhD; Andrea Bialocerkowski, PhD*

## Clinical Observations or Single Case Study Poster

Friday, September 20, 2019: 3:30 PM - 4:30 PM

**F-F-CS09 - OVERGROUND GAIT TRAINING FOR AN INFANT WITH DOWN SYNDROME***Ginny Paleg, DScPT***F-F-CS10 - EFFECT OF YOGA ON METABOLIC PARAMETERS OF A YOUNG ADOLESCENT WITH CEREBRAL PALSY: A SINGLE-SUBJECT DESIGN***Elizabeth M. Williamson, PhD; Kristine Drane, BS; Michaela B. Lupu, BS***F-F-CS11 - IMPLICATIONS OF TIME AND GROWTH ON GAIT FUNCTION IN A CHILD WITH CP GMFCS LEVEL I***Sylvia Ounpuu, MSc; Kristan Pierz, MD***F-F-CS12 - DIFFERENCES IN JOINT LEVEL IMPAIRMENTS AND ASSOCIATED GAIT FUNCTION BETWEEN A MOTHER AND DAUGHTER WITH CHARCOT-MARIE-TOOTH DISEASE***Sylvia Ounpuu, MSc; Gyula Acsadi, MD, PhD; Kristan Pierz, MD***F-F-CS13 - BILATERAL VISUAL FIELD MAPS IN A PATIENT WITH LEFT EYE MICROPHthalmIA AND CONGENITAL BRAIN STROKE INVOLVING THE LEFT GENICULOSTRIATE PATHWAY: A CASE STUDY***Francesca Tinelli, PhD; Akshatha Bhat, PhD; Laura Biagi, DHS; Giovanni Cioni, MD; Maria Concetta Morrone, MSc; Jan Kurzawski, PhD; Giovanni Anobile, PhD***F-F-CS14 - SYMMETRICAL CENTRAL TEGMENTUM TRACT HYPERINTENSITY AND CEREBRAL PALSY: THE CASE OF TWO PRETERM TWINS***Francesca Tinelli, PhD; Giovanni Cioni, MD; Raffaello Canapicchi, MD; Rosa Pasquariello, MD***F-F-CS15 - NEUROMUSCULAR SHOULDER INSTABILITY AND PAINFUL DISLOCATION: IS IT TIME FOR A SHOULDER SURVEILLANCE PROGRAM***Francisco Valencia, MD***F-F-CS16 - SCHOOL-BASED TELE-PHYSIATRY ASSISTANCE FOR REHABILITATIVE AND THERAPEUTIC SERVICES (STARS) FOR CHILDREN WITH SPECIAL HEALTH CARE NEEDS LIVING IN RURAL AND UNDERSERVED COMMUNITIES***Loren Davidson, MD; Armando Valerio, PT, DPT; James Marcin, MD, MPH***F-G-CS01 - CASE STUDY ON THE USE OF INTENSIVE PEDIATRIC NEUROREHABILITATION IN THE TREATMENT OF KERNICTERUS***Jessie E. Mann, MS; Dory Wallace, MS, OTR/L; Stephanie C. Deluca, PhD***F-G-CS02 - NEUROMUSCULAR ELECTRICAL STIMULATION FOR MOVEMENT DISORDER: A CASE STUDY***Megan Metzler, MSc; Adam Kirton, MD***F-G-CS03 - DYSKINETIC CEREBRAL PALSY AND ALLAN-HERNDON-DUDLEY SYNDROME-A DIFFERENTIAL DIAGNOSIS SHOULD BE THINK ABOUT***Mei Hou, MD; Guangjin Luo, MD; Dianrong Sun, MD; Aiyun Yuan, PhD***F-G-CS04 - CONTRALATERAL FINDINGS IN GAIT ANALYSIS OF PATIENTS WITH HEMIPLEGIC CEREBRAL PALSY***Rachel Randall, MD; Amanda T. Whitaker, MD; Jessica Lewis, PT, DPT; Mallory Rowan, BS; Carl D. Gelfius, MD; Jeffrey R. Leonard, MD; Hemang Trivedi, MS***F-G-CS05 - CLINICAL RESEARCH ON THE ACUPUNCTURE OF THE BACK-SHU AND FRONT-MU POINTS FOR TREATMENT OF CEREBRAL PALSY***Zhen Huan Liu, PhD; Bingxiang Ma, PhD***F-G-CS06 - A DE NOVO MUTATION IN TTN GENE IN A PATIENT WITH CONGENITAL MYOPATHY: A CASE REPORT***Joon Young Jang, MD; Yulhyun Park, MD; Dae-Hyun Jang, MD; Ja-Hyun Jang, MD; Ju Seok Ryu, MD***F-G-CS07 - EARLY INTERVENTION FOR CHILDREN IN HIGH RISK OF CEREBRAL PALSY - KNOWLEDGE-BASED GOOD PRACTICE***Britta Andersen, BA; Line Zacho Greve, BA***F-G-CS08 - HE COMPARISON BETWEEN ABNORMAL BRAIN MRI AND NORMAL BRAIN MRI WITH ANTI-N-METHYL-D-ASPARTATE RECEPTOR ENCEPHALITIS IN CHILDREN***Jian Yang, MD; Xiaodai CUI, PhD***F-G-CS09 - CP-SCHOOL: A PROGRAM FOR STRENGTHENING PARTICIPATION AND EMPOWERMENT AMONG SCHOOL AGED CHILDREN WITH CEREBRAL PALSY - REHABILITATION INSPIRED BY THE F-WORDS IN CHILDHOOD DISABILITY***Kristian Sørensen, MS; Siri Johnsen, MS; Mette Modahl, BA; Marie Læssøe Martin, BA; Bjørn Lerdal, MS; Ida E. Vestrheim, MS***F-G-CS11 - AN EXPLORATION OF THE COMBINATION OF MEDICINE WITH SPORTS IN THE REHABILITATION OF CHILDREN WITH CEREBRAL PALSY***Bing Liang, BA; Yong Liu, NA; Hao Ma, BA***F-G-CS12 - THE IMPORTANCE OF CONTINUOUS TRAINING IN THE TREATMENT OF CEREBRAL PALSY: ONE REPORT OF REHABILITATION AFTER 29 YEARS OF TRAINING FOR A CHILD WITH ATHETOSIS CEREBRAL PALSY.***Hao Ma, BA; Bing Liang, BA***F-G-CS13 - METACHROMATIC LEUKODYSTROPHY: CHARACTERIZATION OF TWO (P.LEU433VAL, P.GLY449ARG) ARYLSULFATASE A MUTATIONS***Yangyang Wang, MD***F-G-CS14 - A CASE OF CONGENITAL GLYCOSYLATION DISORDER CAUSED BY SLC35A1 GENE MUTATION AND LITERATURE REVIEW***Xiangshu Wen, MD*

**F-G-CS15 - INNOVATIVE PHYSICAL THERAPY INTERVENTIONS FOR A CHILD WITH SPINAL MUSCULAR ATROPHY***Jessica M. Trenkle, DPT***F-G-CS16 - NEUROMUSCULAR ELECTRICAL STIMULATION FOLLOWING ORTHOPEDIC SURGERY IN AN INDIVIDUAL WITH CEREBRAL PALSY***Kelly R. Greve, PT, DPT, PhD, ABPTS Board Certified Clinical Specialist in Pediatrics; Caroline T. Colvin, DPT; ABPTS Board Certified Clinical Specialist in Pediatrics***F-H-CS01 - NEUROMUSCULAR ELECTRICAL STIMULATION DURING SERIAL CASTING IN AN INDIVIDUAL WITH CEREBRAL PALSY***Kelly R. Greve, PT, DPT, PhD, ABPTS Board Certified Clinical Specialist in Pediatrics; Caroline T. Colvin, DPT; ABPTS Board Certified Clinical Specialist in Pediatrics***F-H-CS02 - ITB AND GAIN OF FUNCTION-BUT THE CHALLENGE IN PATIENT SELECTION CONTINUES***Colleen M. Lenz, MSN, RN, CPNP; Janice M. Laux, PT, PCS, DOMP, MS; Heather McLean, MPT, CBIS; Kara Towles, DPT***F-H-CS03 - THE CASE OF JOHN: SUICIDAL IDEATION IN AN ADOLESCENT WITH CEREBRAL PALSY***Eric Peist, MA; Kyle Deane, PhD; Kathy Zebracki, PhD***F-H-CS04 - LOWER EXTREMITY PAIN IN A CHILD WITH CEREBRAL PALSY SEVEN YEARS AFTER SELECTIVE DORSAL RHIZOTOMY***Matthew Severson, MD; Sherilyn Driscoll, MD***F-H-CS05 - DOING THROUGH SEEING: USING VIDEO SELF-MODELLING TO IMPROVE OCCUPATIONAL PERFORMANCE***Nicole J. McGrath, BA; Dawn Forbes, MCSP***F-H-CS06 - USE OF PEDBOTHOME IN A PATIENT WITH HEMIPARETIC CEREBRAL PALSY***Staci Kovelman, DPT; Justine L. Belschner, DPT; Catherine Coley, DPT, PCS***F-H-CS07 - REPORT ON SEVERE SUBDURAL EFFUSION AFTER ARACHNOID CYSTECTOMY IN INFANTS***Yang Xingkui, BA***F-H-CS08 - A SIGNIFICANT REPORT ON THE RAPID DIAGNOSIS AND REHABILITATION OF 18-TRISOMY SYNDROME***Liu Liwei, MD; Xia Kaide, PhD Candidate***F-H-CS09 - CASE REPORT OF RESTRICTIVE INDUCTION THERAPY FOR BRACHIAL PLEXUS INJURY***De Wu, PhD; Jiulai Tang, MD; Zhenzhen Cui, BA; Le Liu, BA; Pengcheng Cui, BA***F-H-CS10 - STUDY ON THE TEMPERAMENT CHARACTERISTICS OF CHILDREN OVER 1-YEAR-OLD WITH GENERALIZED DEVELOPMENTAL DELAY***Wang C. Xin, MD; Zhao Weiyan, DO; Jia Feiyong, MD, PhD***F-H-CS11 - USE OF AN AQUATIC INTERVENTION TO PROMOTE CARDIOVASCULAR EXERCISE AND EXAMINE RELATED OUTCOMES IN A YOUNG ADULT WITH AMYOPLASIA ARTHROGRYPOSIS MULTIPLEX CONGENITAL: A CASE STUDY***Caitlin Keller, DPT; Anna Fogner, DPT; Amy Hunter, DPT; Cindy B. Dodds, PT, PhD***F-H-CS12 - NEUROLEPTIC MALIGNANT SYNDROME IN SYMPTOMATIC DUCHENNE MUSCULAR DYSTROPHY CARRIER***Sangjee Lee, MS; Soyeon Jang, MD***F-H-CS13 - "WE DON'T KNOW!"; EMBRACING THE NEW NORM WHEN WORKING WITH CHILDREN WITH SPINAL MUSCULAR ATROPHY AND THEIR FAMILIES IN REHABILITATION***Kara L. Reid, OTRRegNB; A. Monique Taillon, BSc, MD, FRCPC***F-H-CS14 - BARRIERS TO INTRATHECAL BACLOFEN THERAPY IN PATIENTS WITH GOVERNMENT INSURANCE IN A TRI-STATE AREA***Karen R. Romer, RN; Leslie Rhodes, DNP, PPCNP-BC; William Warner, Jr., MD; David Spence, MD***F-H-CS15 - WHEN PICKY EATING LEADS TO MUSCLE WEAKNESS: SCURVY INDUCED MYOPATHY IN AN AUTISTIC CHILD WITH HISTORY OF ACUTE FLACCID MYELITIS***Afua Asante, MD; Louis Dizon, MD; Renat Sukhov, MD***F-H-CS16 - MOTOR EVOLUTION AND RESPONSE TO A PROTOCOL OF INTENSIVE PHYSIOTHERAPEUTIC CARE OF THE FIRST CASE OF CONGENITAL ZIKA PUBLISHED IN THE WORLD, IPESQ COHORT***Renan A. Silva, Jr., MD; Thamyras de Sales Regis, PT; Gabriela Gama, PhD; Maria Conceição Matias, PT; Emanuela Barros, PT; Adriana Melo, PhD; Jousilene Tavares, PhD; Melania Maria Ramos Amorim, PhD***F-I-CS01 - ALEXANDER DISEASE MIMICKING CEREBRAL PALSY : A CASE REPORT***Joohyun Kee, BA*

## Demonstration Poster

Friday, September 20, 2019: 3:30 PM - 4:30 PM

**F-I-DP02 - USE OF VIRTUAL REALITY GOGGLES IN TREATMENT OF AMPLIFIED MUSCULOSKELETAL PAIN SYNDROME***Jill Meilahn, DQ; Nicole Mack, BS, CCLS, CTRS***F-I-DP03 - PAIN EXPERIENCES AMONG AGING ADULTS WITH CEREBRAL PALSY: LEVERAGING THE CEREBRAL PALSY RESEARCH NETWORK COMMUNITY REGISTRY FOR PATIENT REPORTED OUTCOMES***Mary E. Gannotti, PhD; Paul Gross, BA; Susan Horn, PhD; Deborah E. Thorpe, PT, PhD; Edward A. Hurvitz, MD; Garey Noritz, MD***F-I-DP04 - SPEEDI2 - EFFICACY OF A MOTOR AND COGNITIVE INTERVENTION FOR INFANTS BORN PRETERM: A PROTOCOL***Stacey C. Dusing, PhD; Jennifer Burnsed, MD; Richard D. Stevenson, MD; Karen D. Hendricks-Muñoz, MD, MPH; Amy Harper, MD; Leroy Thacker, PhD***F-I-DP05 - INTERDISCIPLINARY MODEL OF CARE FOR REFUGEES AND NEW IMMIGRANTS***Carolyn Chowne, RN, BScN, MScN; Kim Magnus, BSc. MOT***F-I-DP06 - PILOT TRIAL COMPARING THE EFFECT OF MODIFIED CONSTRAINT-INDUCED MOVEMENT THERAPY (MCIMT) AND HAND-ARM BIMANUAL INTENSIVE THERAPY (HABIT) IN CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY.***Xiaojie Li, MD; Yuqiong Liang, MD; Lin Zhu, OT, Bachelor***F-I-DP08 - IMPORTANCE OF STAKEHOLDER INVOLVEMENT IN THE CREATION OF DIGITAL PLATFORMS FOR PEOPLE WITH CP AND THEIR FAMILIES***Tracy Pickar, BA; Rachel Byrne, BA; Peter L. Rosenbaum, MD CM FRCPC***F-I-DP09 - DOES FUNCTION IMPROVE AFTER HIP SURGERY IN CHILDREN WITH CEREBRAL PALSY?***Holly Roach, OTR, ATP; Elissa Curtis, OTR, ATP; Charter Rushing, DScPT; Robert Wimberly, MD; Karina A. Zapata, PT, DPT, PhD***F-I-DP10 - VIDEO GAIT ANALYSIS - A PRACTICAL OPTION IN PEDIATRIC REHABILITATION***Marilyn Wright, MSc; Donna Twose, BS; Jan Willem Gorter, MD PhD***F-I-DP11 - REQUIRED HEALTH AND EDUCATIONAL SUPPORT FOR CHILDREN WITH CEREBRAL PALSY***Joohee Cho, PhD; Yujin Seo; Chin Youb Chung, MD, PhD; Moon Seok Park, MD, PhD***F-I-DP12 - UTILIZING CHANGE MANAGEMENT STRATEGIES TO DESIGN AND IMPLEMENT AN INNOVATIVE SERVICE DELIVERY MODEL FOR OCCUPATIONAL THERAPY AND PHYSIOTHERAPY SERVICES***Kim Hesketh, BKiH, MScPT; Mary Riggin Springstead, M.Cl.Sc., CCC-SLP, Reg. CASLPO***F-I-DP13 - DEVELOPING AN EVIDENCE-INFORMED CARE PATHWAY FOR PROMOTING PHYSICAL ACTIVITY AND REDUCING SEDENTARY BEHAVIOUR IN INDIVIDUALS WITH CEREBRAL PALSY***Julia (Shi-Peng) Xiong, BHSc; Patrick McPhee, PhD; Jan Willem Gorter, MD PhD***F-I-DP14 - CULTURAL ANTHROPOLOGY: INSIGHT INTO SOCIETY'S VIEWS OF CHILDHOOD ONSET DISABILITIES***Wade Shrader, MD; Mason Shrader, BA***F-I-DP15 - DEVELOPING A SERVICE PROTOCOL FOR LEARNING TO USE THE EYE-GAZE ASSISTIVE TECHNOLOGY IN CHILDREN AND YOUTH WITH SEVERE DISABILITIES AND COMPLEX COMMUNICATION NEEDS***Ai-Wen Hwang, PhD; Yu-Hsin Hsieh; Lin-Ju Kang, PhD; Hsin-Yi Kwok; Fu-Shiuan Lee, MD; Mats Granlund, PhD; Helena Hemmingsson, PhD; Yu-Wei Hsu, MS***F-I-DP16 - LET'S PLAY: CREATING A UNIVERSAL PLAY-BASED FUNCTIONAL INDICATOR FOR PEDIATRIC POPULATIONS***Verónica Schiariti, PhD***F-I-DP17 - HISTORY OF THE AACPDM - REMARKABLE LADIES IN LEADERSHIP ROLES IN THE EARLY YEARS OF THE ACADEMY***Verónica Schiariti, PhD***F-I-DP18 - CHRONIC PAIN IN INDIVIDUALS WITH CEREBRAL PALSY: A MULTIMODAL APPROACH TO UNDERSTANDING A COMPLEX PROBLEM***Eric M. Chin, MD; Alexander Hoon, MD, MPH; Shenandoah Robinson, MD; Colleen Lenz, MSN, RN, CPNP***F-I-DP19 - MAKING THE CONNECTION: USE OF TELEPHONE INTAKE TO TAILOR INTRODUCTORY CARE TO MULTIDISCIPLINARY CEREBRAL PALSY CLINIC***Margaret Salzbrenner Hoopes, MSN; Abigail Helms, MMS; Keri DiAlessandro, PA-C; Lennon Olszewsky, MSN; Nancy Lennon, MS, PT***F-I-DP20 - DEVELOPMENT OF A SOCIAL DETERMINATES OF HEALTH STANDARDIZED SCREENING TOOL IN A PEDIATRIC HEALTHCARE SYSTEM: OPPORTUNITIES AND LESSONS LEARNED WITHIN A CEREBRAL PALSY CLINIC***Margaret Salzbrenner Hoopes, MSN; Tirzah Spencer, PhD; Kirk Dabney, MD***F-I-DP21 - TECHNOLOGY ENABLING CHILDREN (TEC) CENTRE - A CANADIAN INITIATIVE***Hana Alazem, BSc PT, MD, FRCPC (C); Anna M. McCormick, MD, FRCPC (Pediatrics/Rehabilitation); Darcy L. Fehlings, MD; Corrie Dixon, BS; Patricia Longmuir, PhD; leanne ward, MD; Carolyn Hunt, MD; Sarah Zaidi, BS***F-I-DP22 - THE EFFECT OF VITAMIN D3 COMBINED WITH THE EARLY START DENVER MODEL ON AUTISM SPECTRUM DISORDER IN TODDLERS***Jia Feiyong, MD, PhD; Jun-Yan Feng, MD; Honghua Li, MD; Shan Ling, MS*

**F-P-DP01 - SITTING POSTURAL CONTROL INTERVENTIONS FOR CHILDREN WITH OR AT RISK FOR CEREBRAL PALSY (CP): PROTOCOL FOR A SYSTEMATIC REVIEW**

*Ketaki Inamdar, MPT; Stacey C. Dusing, PhD; Rebecca M. Molinini, DPT; Siva Tejaa Panibatla, MPT*

**F-P-DP02 - THE STATUS QUO AND PERSPECTIVES OF CHILD CEREBRAL PALSY TREATED BY TRADITIONAL CHINESE MEDICINE IN MAINLAND CHINA**

*Hujie Song, MS*

**F-P-DP03 - TRANSFORMING THE LIVES OF CHILDREN WITH CEREBRAL PALSY USING 3-DIMENSIONAL PRINTING AND OCCUPATIONAL THERAPY**

*Dennis Chen, MS,OT/L; Lien Hoang, MA, OTR/L; Kelly Cuthane, MOTR/L*

**F-P-DP04 - A NEW QUALITY REGISTRY AND FOLLOW-UP PROGRAMME FOR ADULTS WITH MYELOMENINGOCELE IN SWEDEN**

*Ulrica Jonsson, MD; Lena Westbom, PhD*

**F-P-DP05 - ENHANCING THE LIVES OF CHILDREN LIVING WITH CP IN VIETNAM THROUGH EVIDENCE BASED PRACTICE GUIDELINES - A MULTI-NATIONAL COLLABORATION**

*Prue Golland, MPH, B.App.Sc.(Physiotherapy); Patty Coker-Bolt, PhD, OTR/L, FAOTA; Johan Baudewijns, BSc PT, BScPE*

**F-P-DP06 - DEVELOPMENT OF A MOBILE APPLICATION OF THE "PICTURE MY PARTICIPATION-CHINESE VERSION" (PMP-C APP) FOR CHILDREN WITH DISABILITIES IN TAIWAN**

*Lin-Ju Kang, PhD; Pei-Yi Lin; Ai-Wen Hwang, PhD; Ya-Lan Chiu, PhD student; Wen-Hsu Sung, PhD; Christine Imms, PhD; Mats Granlund, PhD*

**F-P-DP07 - REHABILITATION WITH A COMBINATION OF SCALP ACUPUNCTURE AND EXERCISE THERAPY IN SPASTIC CEREBRAL PALSY**

*Jing Gao, PhD; Luna He, MD*

**F-P-DP08 - MOVEMENT & MINDFULNESS: HOW A RESTORATIVE YOGA PROGRAM IS ENGAGING YOUTH WITH CEREBRAL PALSY**

*Corrie Dixon, BS*

**F-P-DP09 - CEREBRAL PALSY CAMP: PSYCHOSOCIAL AND QUALITY OF LIFE OUTCOMES**

*Shelby P. Cerza, MA; Robert Wimberly, MD; Jennifer Rodgers, MA; Claire Shivers, BS; Jonathan VanPelt, MHA, BS; Mauricio Delgado, MD*

**F-P-DP10 - AN ONLINE ADVOCACY TOOLKIT TO PROMOTE EVIDENCE BASED TEACHING FOR CHILDREN STRUGGLING TO READ IN ONTARIO**

*Nicola J. Jones-Stokreef, FRCPC*

**F-P-DP11 - A TRANSFORMATIVE PRACTICE PROJECT OF AN ITALIAN NETWORK: A SHARED CLINICAL MODEL FOR THE EARLY DETECTION OF INFANTS AT RISK FOR CP**

*Olena Chorna, MM, CCRP; Andrea Guzzetta, MD, PhD*

**F-P-DP12 - DEVELOPMENT OF ICF-BASED CARE PATHWAYS FOR CHILDREN WITH CHILDHOOD-ONSET DISABILITIES IN URUGUAY**

*Verónica Schiariti, PhD; Maria Mercedes Perez-Roca, PhD; Claudia Romero, PhD*

**F-P-DP13 - HIP WATCH IN ORANGE COUNTY; SURVEYING THE HIPS OF CHILDREN WITH CEREBRAL PALSY**

*Melinda Winterswyk, PT, DPT, PCS; Julia c. Jarrin, MPT, PCS, ATP, SMS; Brian Apin, PT, DPT; Kristen Higbee, BS, PT; Dawn Wolfe, PT, PCS; Vedant A. Kulkarni, MD*

**F-P-DP14 - REST ASSURED: AN INNOVATIVE COLLABORATION TO PROVIDE SLEEP SAFETY FOR CHILDREN WITH NEURODEVELOPMENTAL DISABILITIES**

*Emily Kivlehan, MD; Deborah Gaebler-Spira, MD, FRCP; Sheila Krahl, DPT; Beverley Tann, RN, BSN; Bruce Ankenman, PhD*

**F-P-DP15 - JAPAN HAS STRUGGLED FOR MEDICALLY COMPLEX CHILDREN AT HOME FOR YEARS WITH POOR WOK FORCE. BUT RECENTLY , JAPAN PEDIATRIC SOCIETY HAS STARTED ITS TRAINING COURSES FOR PEDIATRICIANS AS OPTIONAL REQUIREMENT TO RENEW THEIR BOARD LICENSE**

*Hakuyo Ebara, MD; Kiyokuni Miura, MD*

**F-P-DP16 - WHEELCHAIR SERVICE DELIVERY IN LOW-RESOURCE SETTINGS: A UGANDAN PERSPECTIVE**

*Susan Murr, DPT*

**F-P-DP17 - MAKING SENSE OF THE EVIDENCE: A IRISH FRAMEWORK TO SUPPORT UPPER LIMB MOTOR MANAGEMENT AND THE PARTICIPATION OF CHILDREN WITH CEREBRAL PALSY USING A COLLABORATIVE APPROACH**

*Denise McDonald, MD; Margaret McGrath, BSc (Hons) OT; Adrienne Carolan Gillan, BSc (Hons) OT; Evelyn Bergin, BSc (Hons) OT*

**F-P-DP18 - RECOGNITION OF CHRONIC PAIN IN PEOPLE WITH CEREBRAL PALSY: IT'S HOW YOU ASK!**

*Colleen M. Lenz, MSN, RN, CPNP; Eric M. Chin, MD; Alexander Hoon, MD, MPH; Shenandoah Robinson, MD*

**F-P-DP19 - DEVELOPMENT OF A SRI LANKAN CEREBRAL PALSY REGISTER: A STUDY PROTOCOL**

*Samanmali P. Sumanasena, MD; Thilini Madushika, BSc Physiotherapy; Gopi Kitnasamy, BSc; Saraji Wijesekara, MBBS, MD (PAEDIATRICS), DCH, MRCPCH (UK); Jayatri Jagoda, MBBS, MD; Neil Thalagala, MBBS, MD, MSc. Public Health; Nimisha Muttiah, PhD; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD*

**F-P-DP20 - 3D AT: USING THREE DIMENSIONAL PRINTED ASSISTIVE TECHNOLOGY TO IMPROVE OCCUPATIONAL PERFORMANCE OF STUDENTS IN SPECIAL EDUCATION**

*Sandra Masayko, MEd, OTR/L, ATP; Laura Slotkoff, MS, OTR/L; Marcia Leinweber, MA, ATP*

**F-P-DP21 - THE CPPAIN-PROJECT: EXPLORING THE PAIN BURDEN IN YOUNG PEOPLE WITH CEREBRAL PALSY**

*Randi Dovland Andersen, PhD; Chantel Barney, PhD; Jordan Sheriko, BSc (Hons), MD; Sindre K. Brufnot, BA; Guro L. Andersen, PhD; Kjersti Ramstad, PhD; Christine Chambers, PhD; Reidun B. Jahnsen, PhD*

**F-P-DP22 - DISCOVERING METHODS TO INCREASED EARLY INTERVENTION REFERRALS***Carl W. Dowden, MD; Laura J. Hobart-Porter, DO, FAAPMR***F-P-DP23 - IMPLEMENTING AN ABDUCTED STANDING PROGRAM IN A PEDIATRIC RESIDENTIAL PROGRAM***Jolynn Pickens, DPT; Derenda Gibbs, BS***F-P-DP24 - REDUCING THE TIME REQUIRED TO OBTAIN PEDIATRIC CUSTOM WHEELCHAIRS FOR CHILDREN ENROLLED IN THE CALIFORNIA CHILDREN'S SERVICES (CCS) MEDICAL THERAPY PROGRAM (MTP) IN SAN DIEGO COUNTY***Judith P. Garces, PT; Neil Goyal, MSPT; Kristen Dimou, MSPT; Maria Celeste Graham, PT***F-P-DP25 - FOUNDATION OF EDUCATION AND CULTURE OF SPORT CLUB INTERNATIONAL AND THEIR SOCIAL PROJECTS: A MATCH OF COMMITMENT WITH SOCIAL RESPONSIBILITY, ACCESSIBILITY AND SOCIAL INCLUSION, A COMMITMENT WITH AN EQUALITY SOCIETY***Elida dos Santos, BS***F-P-DP26 - EMPOWERING PRIMARY CARE PROVIDERS THROUGH DEVELOPMENT OF A CEREBRAL PALSY HEALTHPATHWAY***Heather Burnett, MD***F-P-DP27 - A NOVEL SURGICAL TECHNIQUE IN RHIZOTOMY AND THE ROLE OF INTRAOPERATIVE NEUROPHYSIOLOGY***Bo Xiao, MD***F-P-DP28 - A SYSTEMATIC APPROACH FOR CLINICAL ANALYSIS OF STANDING AND PRE-GAIT POSTURES IN CHILDREN WITH CEREBRAL PALSY: A PILOT TOOL***Julie H. Perfect, PT, DPT, PCS; Mary Weck, PT***F-P-DP29 - EFFECT OF EARLY INTERVENTION OF CURCUMIN ON HIPPOCAMPAL NEURONS AND ASTROCYTES IN AUTISTIC MODEL RATS***Zhimei Jiang, PhD; Dandan Huang, MS***F-P-DP30 - NEDERLANDS CP REGISTER FOR CHILDREN WITH CEREBRAL PALSY: AN INNOVATIVE MODEL FOR PERSONALIZED CARE WITH PATIENT PARTICIPATION***Janneke Hazelhoff, MS; Annet J. Dallmeijer, PhD; Joop Beelen, MA; Annemieke I. Buizer, MD PhD***F-P-DP31 - RECLAIM-DCP: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY OF DEUTETRABENAZINE FOR THE TREATMENT OF DYSKINESIA IN CEREBRAL PALSY IN CHILDREN AND ADOLESCENTS***Daniel Claassen, MD; Jonathan Mink, MD, PhD; Mered Parnes, MD; Heather Riordan, MD; Mark Gordon, MD; Hadas Barkay, PhD; Maria Wieman, MPH; Juha Savola, MD, PhD; Roberta Battini, MD, PhD; Joseph Jankovic, MD; Leon Dure, MD***F-P-DP32 - THE GMFM APP+: IMPROVEMENTS TO SCORING OF THE GROSS MOTOR FUNCTION MEASURE***Dayle McCauley, MS; Jan Willem Gorter, MD PhD; Peter L. Rosenbaum, MD CM FRCPC; Dianne Russell, PhD; Marilyn Wright, MSc; Lisa Avery, MSc; Sonya Strohm, MS***F-P-DP33 - THE EFFECT OF INJURY TIMING ON LOWER EXTREMITY WEAKNESS AND ABNORMAL JOINT TORQUE COUPLING PATTERNS IN CHILDREN WITH HEMIPARESIS***Vatsala Goyal, MS; Theresa Sukal-Moulton, DPT, PhD; Julius Dewald, PT, PhD***F-P-DP34 - COMMUNITY ENGAGEMENT WITH SCREENING AND EVALUATION OF CHILDREN WITH SPECIAL NEEDS IN A PROVINCE IN CHINA: A TRANSDISCIPLINARY APPROACH***Eunice Y. Shen, DPT, PhD***F-P-DP35 - "GO BABY GO ISRAEL"- MODIFIED TOY CARS FOR EARLY MOBILITY AND PARTICIPATIO***Stephanie Libzon, MscPT; Mikael Nudelman; Nilly Waiserberg, MscPT***F-P-DP36 - PHYSICAL THERAPIST AND ENGINEERING STUDENT WORKING TOGETHER TO IMPROVE THE QUALITY OF LIFE OF PEOPLE WITH DISABILITIES - 4TH YEAR UNDERGRADUATE COURSE***Stephanie Libzon, MscPT; Jason Friedman; Yoram Reich; Jacob Fainguelernt; Nilly Waiserberg, MscPT***F-P-DP37 - SOME CLINICIANS, ROBOTIC ENGINEERS, GAMES DEVELOPERS AND ENTREPRENEURS WALKED IN A BAR AND INVENTED A 2ND WAVE THERAPY GAMING THERAPY ECOSYSTEM THAT ENABLES REMOTE MONITORING AND MOTIVATION OF PATIENTS.***Chris F. McGowan***F-P-DP38 - ADOPTING THE ICF MODEL AS A GUIDING FRAMEWORK FOR SERVICE DELIVERY ACROSS THE TELETON CENTERS IN MEXICO***Juan Carlos J. Fosado, MSc; Abi Natzelli R. Segovia, MD; Verónica Schiariti, PhD***F-P-DP39 - BRAIN-COMPUTER OR EYE-GAZE INTERFACES: TECHNICAL CHALLENGES AND PROMISE***Seth Warschausky, PhD; Marco Garcia, BS; Petra Karlsson, PhD; Jane E. Huggins, PhD***F-P-DP40 - PICTURES CAN TALK: EMPOWERING YOUTH WITH ARTHROGRYPOSIS USING PARTICIPATORY ACTION RESEARCH***Noemi Dahan-Oliel, PhD; Jessica Collins, MSc OT; Emily Lecker, MSc, OT; Dominique Angers-Trottier, MSS SW; Qi Yue He***F-P-DP41 - EFFICIENT COLLABORATIVE CARE MODEL FOR TONE MANAGEMENT IN RURAL EASTERN CANADA***Nicole Desaulniers, BS; Rankyn Campbell, MA***G-I-DP07 - THE INFLUENCE OF ICF AND ICF CORE SETS IN SELECTING THE NINDS CEREBRAL PALSY COMMON DATA ELEMENTS OUTCOME MEASURES.***Robin Feldman, BS MBA; Joline Brandenburg, MD; Verónica Schiariti, PhD; Carolina Mendoza-Puccini, MD; Kristen Joseph, MA; Joy Esterlitz, MS*

## Scientific Posters

Friday, September 20, 2019: 3:30 PM - 4:30 PM

**F-A-SP01 - HOW DIFFERENT ARE AMBULATORY PATIENTS WITH EARLY-ONSET HEREDITARY SPASTIC PARAPARESIS AND SPASTIC, DIPLEGIC CEREBRAL PALSY?***Robert Wimberly, MD; Sebastian Maenza, MD; Mauricio Delgado, MD; Anthony Anderson, MSc; Linsley Smith, RN; Anthony Riccio, MD; Kirsten Tulchin-Francis, PhD***F-A-SP02 - CHOP: CENTER VARIABILITY IN BASELINE PRESENTATION AND MANAGEMENT***Maria Juricic, PT; Emily Schaeffer, PhD; Stacey D. Miller, PT; Benjamin J. Shore, MD, MPH, FRCSC; Unni G. Narayanan, MBBS, MSc, FRCS(C); Kishore Mulpuri, MBBS, MS, MHS***F-A-SP03 - CEREBRAL PALSY-RELATED MORTALITY TRENDS AND DISPARITIES IN THE UNITED STATES, 1968-2016***Laura A. Lins, MPH, ATC; Patrick L. Remington, MD, MPH; Maureen S. Durkin, PhD, DrPH***F-A-SP04 - ATAXIC-HYPOTONIC CEREBRAL PALSY IN A CEREBRAL PALSY REGISTRY: INSIGHTS INTO A DISTINCT SUBTYPE***Michael Shevell, MDCM; Jake P. Levy, MDCM; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; John Andersen, MD, FRCPC; Pamela Ng, MSc; David Buckley, MB, ChB Sheffield, FRACP, FRCPC; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Louise Koclas, MD; Nicole Pigeon, MD; Esias Van Rensburg, MD; Ellen Wood, MD***F-A-SP05 - THE PREVALENCE AND RISK FACTORS FOR FOOT PRESSURE ULCERS IN AMBULATORY PATIENTS WITH SPINA BIFIDA***Melissa Bent, MD; Susan Rethlefsen, DPT; Nicole Mueske, MS; Tishya Wren, PhD; Rajan Murgai, BS***F-A-SP06 - CLINICAL AND GENETIC ANALYSIS OF 91 PATIENTS WITH CHILDHOOD ONSET SPASTIC PARAPLEGIA***Kazuhiro Haginoya, MD, PhD; Yusuke Takezawa, MD, PhD; Atsuo Kikuchi, PhD, MD; Takehiko Inui, MD; Yukimune Okubo, MD; Ryo Sato, PhD; Noriko Togashi, MD; Takuya Miyabayashi, MD; Moriei Shibuya, MD; Kazuhiro Iwama, MD, PhD; Hiroto Saito, MD, PhD; Naomichi Matsumoto, PhD, MD; Shigeo Kure, MD, PhD***F-A-SP07 - A SYSTEMATIC REVIEW OF INSTRUMENTED DEVICES REPORTED TO MEASURE MUSCLE MECHANICAL PROPERTIES IN CHILDREN WITH DEVELOPMENTAL DISORDERS***Leanne M. Johnston, PhD; Miran Goo, PT; Francois Hug, PhD; Kylie Tucker, PhD***F-A-SP08 - ACTIVECHILD: IMPROVING LONG-TERM HEALTH AND FUNCTIONING BY INCREASING UNDER5S' PHYSICAL ACTIVITY AND MOVEMENT***Niina Kolehmainen, PhD; Anna Hollis, MSc; Jemma Bell, BSc; Jennifer McAnuff, MSc; Tim Rapley, PhD***F-A-SP09 - DIFFERENCES IN RESPONSES TO ENGLISH AND KOREAN VERSIONS OF THE CAREGIVER PRIORITIES & CHILD HEALTH INDEX OF LIFE WITH DISABILITIES (CPCHILD)***Moon Seok Park, MD, PhD; Ki Hyuk Sung, PhD; Soon-Sun Kwon, PhD; Gyeong Hee Cho, PhD; Chin Youb Chung, MD, PhD; Clarissa Encisa, MPH; Huroy Menal, Bsc; Unni G. Narayanan, MBBS, MSc, FRCS(C)***F-A-SP10 - IMPROVING EPILEPSY CONTROL AMONG CHILDREN WITH CEREBRAL PALSY IN RURAL BANGLADESH***Tasneem Karim, MBBS, MPH; Manik Chandra Das, MBBS; Mohammad Muhit, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM; Shekeeb S. Mohammad, MBBS, FRACP, PhD***F-A-SP11 - PREVALENCE OF AUTISM SPECTRUM DISORDERS: SCHOOL-AGED STUDY IN WENZHOU, CHINA***Bingwu Xiang, MSc; Xiang Chen, PhD***F-A-SP12 - A REPORT ON CHARACTERISTICS OF CEREBRAL PALSY FROM HENAN CEREBRAL PALSY REGISTER AND REHABILITATION MANAGEMENT SYSTEM***Dengna Zhu, MD; Changlian Zhu, MD; Junying Yuan, MD; Yiwen Wang, MD***F-A-SP13 - ARE THE DOMAINS OF THE CPQOL ADEQUATE FOR EXPLORING QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY ASSOCIATED WITH INTELLECTUAL DISABILITIES IN SPAIN?***Marta Badia, PhD; Begoña Orgaz, PhD; Inmaculada Riquelme, PhD; María Gómez-Vela, PhD***F-A-SP14 - A NEW MODEL OF DIAGNOSIS OF CEREBRAL PALSY A CASE SERIES***Anna Te Velde, BAppSc (Hons); Cathy Morgan, PhD, BAppSc; Prue Golland, MPH, B.App.Sc.(Physiotherapy); Jane Berry, BAppSc (OT); Johanna Korkalainen, BAppSc (SpPath); Robyn McMurdo, BSW; Ronda Shehata, BAppSc (SpPath); Claire Galea, MEd; B.Ed Mathematics; Esther M. Tantsis, FRACP, MBBS, BMedSci, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Iona Novak, PhD***F-A-SP15 - QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY***Boyoung Hong, MD; Hyecheon Choi, MD; Joon Sung Kim, MD; Seong Hoon Lim, MD***F-A-SP16 - HIP DISPLACEMENT IN CHILDREN WITH CEREBRAL PALSY ASSOCIATED WITH CONGENITAL ZIKA VIRUS INFECTION***Alessandra L. Carvalho, MD; Adriana Fernandes, BS; Paloma Ventura, BS; Carlos Brites, PhD; Rita Lucena, PhD***F-B-SP01 - TRANSCULTURAL ADAPTATION AND VALIDATION FOR USE IN BRAZIL OF THE PARTICIPATION AND ENVIRONMENT MEASURE CHILDREN AND YOUTH (PEM-CY)***Elida Rayane V. Galvão, MSc; Egmar Longo, PhD; Ana Carolina de Campos, PhD; Priscila B. Lopes, N/A, MS; Thais Massetti, PhD; Alyne Oliveira, PhD; Ana Paula M. Cazeiro, PhD*



**F-B-SP02 - NEPAL CEREBRAL PALSY REGISTER (NCPR): TOWARDS DEVELOPING A PLATFORM FOR NATIONAL CEREBRAL PALSY (CP) REGISTER AND POPULATION- BASED SURVEILLANCE OF CHILDREN WITH CP IN NEPAL**

*Mohammad Muhit, PhD; Israt Jahan, MPH; Mahmudul Hassan Al Imam, MPH; Tasneem Karim, MBBS, MPH; Ratul Ghose, MBBS; Manik Chandra Das, MBBS; Amir Banjara Chhetri, MS; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM*

**F-B-SP03 - FAMILY CENTERED CARE IN A CHILD DEVELOPMENT CENTER IN INDIA: IMPLICATIONS FOR LOW AND MIDDLE INCOME COUNTRIES**

*Roopa Srinivasan, DNB (Pediatrics); Vibha Krishnamurthy, MD*

**F-B-SP04 - ASSESSMENT OF INFANTS USING THE ALBERTA INFANT MOTOR SCALE IN CHINA**

*Qing Du, PhD; Xuan Zhou, MS*

**F-B-SP05 - HETEROTOPIC BONE FORMATION PREVENTING INTRATHECAL BACLOFEN PUMP REFILLS: A CASE REPORT**

*Stephen Nichols, MD; Shenandoah Robinson, MD; Jennifer M. Roth, MS, BSN, CPNP*

**F-B-SP06 - THE IMPACT OF CEREBRAL PALSY ON GRADES AND EDUCATION**

*Johan Jarl, PhD*

**F-B-SP07 - CORE VALUES OF ADAPTED PHYSICAL ACTIVITY FOR PERSONS WITH DISABILITIES EXPRESSED BY SPORT PEDAGOGUES AT SIX REHABILITATION CENTERS IN NORWAY**

*Tor Erik H. Nyquist, MSc; Lars Kristian Dalen, MS; Astrid Nyquist, PhD*

**F-B-SP08 - VALIDITY AND USEFULNESS OF THE ECOLOGICAL ASSESSMENT OF PARTICIPATION**

*Lisa Chiarello, PT, PhD, FAPTA; Robert Palisano, ScD; Nea Vänskä, MSc, PT; Salla Sipari, PhD*

**F-B-SP09 - PERCEPTIONS OF CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY ABOUT INVOLVEMENT IN RESEARCH AS RESEARCH PARTNERS: QUALITATIVE RESEARCH**

*Margaret Wallen, PhD; Cayleigh Street, BA; Christine Imms, PhD; Natasha M. Garrity; Gabrielle Drake, PhD M Soc Pol BSW*

**F-B-SP10 - PHYSICAL ACTIVITY LEVEL AND AEROBIC DEMAND DURING ACTIVE VIDEO GAME PLAY IN AMBULATORY YOUTH WITH CEREBRAL PALSY**

*Margaret F. O'Neil, PT, PhD, MPH; Nancy Lennon, MS, PT; Maria Fragala-Pinkham, MS, PT, DPT; Corey Landis, MS; Andrew Finnegan, MA; Yichuan Liu, PhD; Arun Ramakrishnan, PhD; Hasan Ayaz, PhD; Paul Diefenbach, PhD; Patricia Shewokis, PhD*

**F-B-SP11 - LOW- VERSUS HIGH-TECH EVALUATIONS OF VISUAL ABILITIES IN CHILDREN WITH CEREBRAL VISUAL IMPAIRMENT**

*Corinna M. Bauer, PhD; Linda Lawrence, MD; Emma S. Bailin, BS; Christopher Bennett, PhD; Peter Bex, PhD; Lotfi B. Merabet, PhD*

**F-B-SP12 - STEPWATCH ACTIVITY MONITOR AND ACTIGRAPH USE IN WHEELCHAIR ATHLETES**

*Kirsten Tulchin-Francis, PhD; Wilshaw Stevens, Jr, BS; Robert Wimberly, MD; Fernanda Harlett, MBA*

**F-B-SP13 - USING WEARABLE TECHNOLOGY TO DESCRIBE IMPACT OF DISABILITY AMONG PEDIATRIC POPULATIONS**

*Catherine R. Hoyt, OT; Sarah Sherman, BS; Shelby Brown, BS; Ryland Miller, BS; Andrew N. Van, BS; Nico U. Dosenbach, MD, PhD*

**F-B-SP14 - FUNCTIONAL CONNECTIVITY IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER, WITH AND WITHOUT CO-OCCURRING ATTENTION DEFICIT HYPERACTIVITY DISORDER: AN EXPLORATORY STUDY**

*Shie Rinat, OT; Jill G. Zwicker, PhD, OT*

**F-B-SP15 - CHILDREN WITH UNILATERAL CEREBRAL PALSY AFTER PERINATAL STROKE COMMONLY SHOW PRESENCE OF FIDGETY MOVEMENTS IN SOME BODY PARTS**

*Aurelie Pascal, PT; Lars Adde, PT, PhD; Ragnhild Stoen, MD, PhD; Toril Fjortoft, PT, PhD; Gunnar Nauelaers, MD, PhD; Paul Govaert, MD, PhD; Els Ortibus, MD, PhD; Christine Van den Broeck, PT, PhD*

**F-B-SP16 - INFLUENCE OF A DUAL-TASK ON PREFRONTAL CORTICAL ACTIVATION IN CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY**

*Swati M. Surkar, PhD; Rashelle Hoffman, DPT; Regina T. Harbourne, PhD, PT; Max Kurz, PhD*

**F-C-SP01 - COMMUNICATION AND EATING DATA COLLECTED BY CEREBRAL PALSY REGISTRIES**

*Mary Jo C. Hidecker, PhD; Jenny Nybonn, BA; Kate Himmelmann, MD, PhD; Peter L. Rosenbaum, MD CM FRCPC*

**F-C-SP02 - PATIENT ENGAGEMENT IN THE DEVELOPMENT OF A COACHING INTERVENTION: STRATEGIES AND PERCEIVED BENEFITS**

*Tatiana Ognoursova, PhD; Maureen O'Donnell, MD MSC FRCPC; Bahar Kasaii, PhD; Annette Majnemer, PhD, OT*

**F-C-SP03 - EFFECTS OF VIDEO GAME THERAPY ON THE FUNCTIONALITY OF ADOLESCENTS WITH CEREBRAL PALSY - SINGLE SUBJECT DESIGN**

*Paula S. Chagas, PhD; Elisa J. Valenzuela, Master Student; Yannca F. Silva; Matheus H. Bogo; Renata M. Rosa; Carolyne Drumond, Master Student; Samara Silva; Rânia P. Castro; Kennea Ayupe, PhD; Jaqueline S. Frônio, PhD*

**F-C-SP04 - MOTOR IMAGERY AND ITS LINK WITH GROSS MOTOR SKILL PERFORMANCE IN CHILDREN WITH CEREBRAL PALSY**

*Alicia J. Hilderley, PhD; Margot J. Taylor, PhD; Darcy L. Fehlings, MD; Joyce L. Chen, PhD; Virginia Wright, BSc (PT), MSc, PhD*

**F-C-SP05 - TRAINING PROVIDERS IN NIGHTTIME POSTURAL CARE INTERVENTION: A RANDOMIZED CONTROL TRIAL**

*Jennifer Hutson, MS, QTR/L*

**F-C-SP06 - NOSSA CASA, LET'S TALK ABOUT CEREBRAL PALSY: USING SOCIAL MEDIA AS A TOOL FOR KNOWLEDGE TRANSLATION**

*Beatriz Vieira, MS; Marina Airoldi, MS*

**F-C-SP07 - NUTRITIONAL STATUS OF CHILDREN WITH CEREBRAL PALSY: FINDINGS FROM HOSPITAL-BASED SURVEILLANCE IN VIETNAM**

*Tasneem Karim, MBBS, MPH; Israt Jahan, MPH; Rachael Dossetor, BSc, BA; Nguyen Giang; Nguyen Van Anh; Trinh Dung; Cao Chau; Nguyen Van Thuong; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Nguyen Van Bang; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM; Elizabeth Elliott*

**F-C-SP08 - EFFECTIVENESS OF THREE MEDICATIONS TO REDUCE DROOLING IN YOUNG PEOPLE WITH DEVELOPMENTAL DISABILITY**

*Sue Reid, PhD MCLinEpi BAppSc; Angela Guzys, BSci(Nursing); Dinah S. Reddihough, MD BSc FRACP FAFRM*

**F-C-SP09 - FAT-FREE SOFT TISSUE DEFICIT IN CHILDREN WITH CP IS MORE PRONOUNCED IN THE APPENDICULAR THAN IN THE NON-APPENDICULAR REGIONS**

*Chuan Zhang, MA; Freeman Miller, MD; Gavin Colquitt, EdD; Christopher M. Modlesky, PhD*

**F-C-SP10 - COMBINING THE TEST OF MOTOR PERFORMANCE WITH THE HAMMERSMITH INFANT NEUROLOGICAL EXAMINATION AS A SUCCESSFUL SECONDARY APPROACH TO EARLY DETECTION OF CEREBRAL PALSY**

*Lindsay Pietruszewski, DPT; Nancy Batterson, OT/L, SCFES; Mary Ann Nelin, MD; Dennis Lewandowski, PhD; Stephanie Burkhardt, MPH; Nathalie Maitre, MD*

**F-C-SP11 - HEALTHY PARENT CARERS PROGRAMME: FEASIBILITY RANDOMISED CONTROLLED TRIAL OF A PEER-LED, GROUP-BASED INTERVENTION TO IMPROVE THE HEALTH AND WELLBEING OF PARENT CARERS OF DISABLED CHILDREN**

*Christopher Morris, MSc DPhil; Gretchen Bjornstad, DPhil; Aleksandra Borek, PhD; Kath Wilkinson, MSc; Beth Cuffe-Fuller, BSc; Mary Fredlund; Annabel McDonald; Jenny Lloyd, PhD; Obioha Ukoumunne, PhD; Stuart Logan, MBChB, MSc (Epidemiology), MSc (Politics), MRCP FRCPC*

**F-C-SP12 - INTEGRATIVE EMR AND THERAPY SESSION-BASED PATTERN ANALYSIS TO IDENTIFY SUBGROUPS OF CHILDREN WITH CEREBRAL PALSY FOR HIGH RESOLUTION COMPARATIVE EFFECTIVENESS RESEARCH**

*Alexis Mitelpunkt, MD, BSc; Kelly R. Greve, PT, DPT, PhD, ABPTS Board Certified Clinical Specialist in Pediatrics; Jason Long, PhD; Jessica L. Hobart; Jilda Vargus-Adams, MD MSc; Bruce J. Aronow, PhD; Amy F. Bailes, PT PhD*

**F-C-SP13 - COMPETENCY-BASED TRAINING PROGRAM FOR PEDIATRIC RESIDENTS AT ALEXANDRIA UNIVERSITY CHILDREN'S HOSPITAL (AUCH) ON CEREBRAL PALSY**

*Tarek E. Omar, MD; Mahmoud T. Ahmed, MS*

**F-C-SP14 - INVOLVING CHILDREN IN THE CULTURAL AND LINGUISTIC ADAPTATION PROCESS OF A LANGUAGE COMPREHENSION ASSESSMENT INSTRUMENT**

*Jael N. Bootsma, MSc SLP; Jan Willem Gorter, MD PhD; Olaf Kraus de Camargo, PhD; Johanna J. Geytenbeek, PhD; Kim J. Oostrom, PhD; Dayle McCauley, MS; Sarah N. Hopmans, MS; Fiona Campbell, MSc; Tom Chau, PhD; Danijela Grahovac, MSc; Michelle Phoenix, PhD; BJ Cunningham, PhD; Marilyn K. Kertoy, PhD*

**F-C-SP15 - A PROSPECTIVE, MULTI-CENTER INITIATIVE TO REDUCE INTRATHECAL BACLOFEN PUMP SURGICAL SITE INFECTION: A CEREBRAL PALSY RESEARCH NETWORK QUALITY IMPROVEMENT PROJECT**

*Robert J. Bollo, MD; Amy F. Bailes, PT, PhD; Brandon G. Rocque, MD; Jeffrey S. Raskin, MD; Paul Gross, BA*

**F-C-SP16 - TREATING ADDUCTOR HYPERTONIA WITH BOTULINUM TOXIN A IN CHILDREN WITH CEREBRAL PALSY: IMPROVEMENT IN OBSERVATIONAL GAIT SCALE**

*Tugba Gokbel, MD; Melike Akarsu, MSc; Merve Akyuz, MD; Nigar Dursun, MD; Erbil Dursun, MD*

**F-D-SP01 - DEEP BRAIN STIMULATION IN DYT6 DYSTONIA: CLINICAL OUTCOME AND PREDICTIVE FACTORS**

*Annika Danielsson, MD; Kristina Tedroff, MD, PhD*

**F-D-SP02 - PRACTICE VARIATION IN TREATMENT OF SPASTICITY IN CHILDREN WITH SPASTIC DIPLEGIC CP IN NORTH AMERICA**

*Paul Gross, BA; Kristie F. Bjornson, PhD, PT, PCS; Darcy L. Fehlings, MD; Jacob Kean, PhD; Shenandoah Robinson, MD; Joline Brandenburg, MD*

**F-D-SP03 - A RANDOMIZED CONTROLLED TRIAL IN PATIENTS WITH CEREBRAL PALSY TREATED BY BOTULINUM TOXIN-A FOR SPASTIC PRONATION DEFORMITY: HOME EXERCISE PROGRAM VERSUS COMBINED TREATMENT WITH TWISTER AND HOME EXERCISE PROGRAM**

*Merve Akyuz, MD; Melike Akarsu, MSc; Cagla Karacan, PhD; Erbil Dursun, MD; Tugba Gokbel, MD; Nigar Dursun, MD*

**F-D-SP04 - RISK FACTORS FOR POSTOPERATIVE URINARY RETENTION AFTER ELECTIVE PEDIATRIC ORTHOPEDIC SURGERY: INCREASED RISK IN CHILDREN WITH CEREBRAL PALSY**

*Mohan V. Belthur, MD; Thomas Sitzman, MD, MPH; M'Hamed Temkit, PhD; Jessica D. Burns, MD*

**F-D-SP05 - EFFICACY OF BIOMECHANICAL ORTHOPEDIC INSOLES FOR LOWER EXTREMITY FUNCTION OF SPASTIC CEREBRAL PALSY CHILDREN WITH TIBIAL MEDIAL TORSION**

*Pang Wei, MD; Lu Shuqing, Master of Medicine; Li Xin, BS; Fan Yanping, MS*

**F-D-SP06 - UNCERTAINTY ABOUT UNCERTAINTY:  $\pm 5^\circ$  MIGHT NOT MEAN WHAT YOU THINK**

*Elizabeth Boyer, PhD; Andrew Georgiadis, MD; Tom Novacheck, MD; Michael H. Schwartz, BS, MS, PhD*

**F-D-SP07 - UNILATERAL HIP RECONSTRUCTION SURGERY FOR CHILDREN WITH CP**

*Maria Juricic, PT; Stacey D. Miller, PT; Mariana Gutierrez Salazar, MS; Nandy E. Fajardo, PT; Lise Leveille, MD, MHSc; Kishore Mulpuri, MBBS, MS, MHSc*

**F-D-SP08 - COMPARISON OF THE RESULTS OF TWO DIFFERENT APPROACHES AT RECTUS FEMORIS REGARDING THE EFFECTS AT PELVIS AND KNEE RANGE OF MOTION IN PATIENTS WITH CEREBRAL PALSY**

*Mauro C. de Moraes Filho, MD, MSc, PhD; Marcelo H. Fujino, MD; Cátia Kawamura, PT; André Lima, MD; Francesco Blumetti, MD, MSc, PhD; José Augusto Lopes, MSc; Daniella Neves, MD*

**F-D-SP09 - IMPACT OF BLOOD RECOVERY ON TRANSFUSION RATES IN CHILDREN UNDERGOING LOWER EXTREMITY ORTHOPEDIC PROCEDURES**

*Francisco Valencia, MD; Mariam Astarabadi, MS; Esteban J. Lopez, BA; Peter Lichtenthal, MD*

**F-D-SP10 - COMPARATIVE STUDY OF PRONATOR TERES REROUTING WITH FLEXOR CARPI ULNARIS TO EXTENSOR CARPI RADIALIS BREVIS TENDON TRANSFERRING VS CONVENTIONAL REHABILITATION PROGRAM IN CEREBRAL PALSY**

*Sivaporn Vongpipatana, MD; Tulyapruet Tawonsawatruk, PhD.; Monratta Panuwannakorn, MD; Suwimol Prusmetikul, MD; Amprai Surit, OT*

**F-D-SP11 - WHAT IS THE EVIDENCE FOR NON-OPERATIVE MANAGEMENT OF SCOLIOSIS IN PATIENTS WITH CEREBRAL PALSY?**

*Annabel Dekker, MBChB; N. Susan Stott, MBChB PhD FRACS; Jimmy Chong, MbChB*

**F-D-SP12 - POSITIONING AFTER HIP CONTAINMENT SURGERY: ARE HIP ABDUCTION SPLINTS EFFECTIVE IN MAINTAINING HIP POSITION?**

*Daphne O'Young, BSc.(OT); Sonja Magnuson, BMR-OT, MSc-Rehab Sc; Kishore Mulpuri, MBBS, MS, MHSc; Jill G. Zwicker, PhD, OT*

**F-D-SP14 - CHALLENGES PRIMARY CARE PROVIDERS FACE WHEN CARING FOR CHILDREN WITH MEDICAL COMPLEXITY**

*Todd Savolt, BS; Timothy R. Smith, MD; Emily Goodwin, MD; Michael Kennedy, MD*

**F-D-SP15 - A SYSTEMATIC REVIEW OF RESPIRATORY INTERVENTIONS FOR CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY**

*Katherine M. Langdon, FRACP; Amanda M. Blackmore, PhD; Noola Gibson, PhD; Monica S. Cooper, FRACP; Lisa Moshovis, BSc(speech and hearing science); Andrew Wilson, PhD*

**F-D-SP16 - PARTICIPATORY PROFILES OF CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY: WITH AND WITHOUT MENTAL HEALTH ISSUES**

*Dido Green, PhD; Karina Trejo, BSc; Lilly Augustine, PhD; Mats Granlund, PhD; Eva Bjork*

**F-E-SP01 - EFFECTS AND FEASIBILITY OF AN INDIVIDUALIZED INTENSIVE GOAL TRAINING PROGRAM FOR ADOLESCENTS WITH CEREBRAL PALSY**

*Marina B. Brandao, PhD; Aline M. Feitosa, OT,PT; Ana Paula M. Silverio, OT; Andrew Gordon, PhD; Marisa C. Mancini, PhD*

**F-E-SP02 - CONSISTENCY OF PROBLEM IDENTIFICATION AMONG PHYSICAL THERAPISTS WITHIN A CLINICAL MOTION LABORATORY**

*Jean L. Stout, PT, MS; Andrew Georgiadis, MD; Tom Novacheck, MD*

**F-E-SP03 - INFLUENCE OF REGIONAL LEAN MASS ON LOWER-EXTREMITY STRENGTH IN YOUTH WITH SPASTIC CEREBRAL PALSY**

*Leticia Janzen, MSc; Elizabeth G. Condliffe, PhD, MD; Clodagh M. Toomey, PT, PhD; Gregor Kuntze, PhD; Shane Esau, MKin.; Laura K. Brunton, PT, PhD; Carolyn A. Emery*

**F-E-SP04 - INTENSIVE THERAPIES FOR CHILDREN WITH QUADRIPARETIC CEREBRAL PALSY**

*Dory Wallace, MS, OTR/L; Mary Rebekah Trucks, MS, OTR/L; Sharon L. Ramey, PhD; Stephanie C. Deluca, PhD*

**F-E-SP05 - USING INTENSIVE PEDIATRIC NEUROREHABILITATION IN THE TREATMENT FOR CHILDREN WITH MICROCEPHALY SECONDARY TO CASK MUTATION**

*Jessie E. Mann, MS; Dory Wallace, MS, OTR/L; Stephanie C. Deluca, PhD; Konark Mukherjee, MBBS, PhD*

**F-E-SP06 - EFFECTS OF A PHYSIOTHERAPY INTENSIVE PROTOCOL IN CHILDREN WITH CONGENITAL ZIKA- A PILOT STUDY, IPESQ COHORT**

*Gabriela Gama, PhD; Renan A. Silva, Jr., MD; Maria Conceição Matias, PT; Kamila Costa, PT; Thamyris Regis, PT; Janiele Tavares, PT; Paula Assunção, PhD; Jousilene Tavares, PhD; Adriana Melo, PhD*

**F-E-SP07 - THERAPEUTIC EFFECT OF CHILDREN'S CRAWLING-TRAINING-ROBOT ON REHABILITATION OF CHILDREN WITH SPASTIC CEREBRAL PALSY**

*Yue Zhang, BS*

**F-E-SP08 - FUNCTIONAL ELECTRICAL STIMULATION-ASSISTED HAND THERAPY VIDEO GAMES FOR CHILDREN WITH HEMIPLEGIA: AN EXPLORATORY TRIAL**

*Michael J. Fu, PhD; Ryan Suder, PhD, OTR/L, BCP; Anna Curby, MS, OTR/L; Jayme Knutson, PhD*

**F-E-SP09 - EFFECT OF VOLUME OF PHYSICAL THERAPY (PT) SERVICE ON GROSS MOTOR FUNCTION CLASSIFICATION SYSTEM (GMFCS) EXPANDED AND REVISED LEVEL IN CLIENTS WITH CEREBRAL PALSY (CP)**

*Rachele A. Shaw, MPT; Maria Celeste Graham, PT; Neil Goyal, MSPT; Judith P. Garces, PT; Kristen Dimou, MSPT; Garrett D. McLaugh, MPH*

**F-E-SP10 - ASSESSING THE RELATIONSHIP BETWEEN ENGAGEMENT AND CLINICAL OUTCOMES AT AN INTENSIVE UPPER EXTREMITY REHABILITATION DAY CAMP FOR CHILDREN WITH UNILATERAL SPASTIC CEREBRAL PALSY**

*Karen Chin, MA; Kathleen Friel, PhD; Christine Imms, PhD; Andrew Gordon, PhD*

**F-E-SP11 - FEASIBILITY OF A MATERNAL-DRIVEN MULTIMODAL NEONATAL REHABILITATION PROGRAM IN HOSPITALIZED VERY PRETERM INFANTS**

*Lisa Letzkus, PhD; Santina Zanelli, MD; Corrie J. Alonzo, M.D.; Elizabeth Connaughton, DPT; Nancy Kelly, DPT; Joseph Michel, BS*

**F-E-SP12 - DEVELOPMENT OF ADAPTIVE BEHAVIOR IN INFANTS AND TODDLERS WITH NEUROMOTOR DELAY**

*Lin-Ya Hsu, PhD; Sarah W. McCoy, PhD; Michelle Paulson, BS; Stacey C. Dusing, PhD; Michele A. Lobo, PT, PhD; Regina T. Harbourne, PhD, PT*

**F-E-SP13 - THE AWARENESS AND USE OF DIAGNOSTIC TOOLS FOR EARLY DIAGNOSIS OF CEREBRAL PALSY IN NEW ZEALAND**

*Sian A. Williams, PhD; Anna Mackey, PhD; Malcolm Battin, FRACP; Nichola Wilson, PhD; Alexandra Sorhage, PGDIPHI; Alicia Spittle, PhD; N. Susan Stott, PhD*

**F-E-SP14 - POTENTIAL PREDICTORS FOR HEALTH-RELATED QUALITY OF LIFE IN PRESCHOOL CHILDREN WITH CEREBRAL PALSY: A FOLLOW-UP STUDY**

*Chia-Ling Chen, MD, PhD; Chia-Hui Chen, MS; Hsieh-Ching Chen, PhD*

**F-E-SP15 - THE RELEVANCE OF ENVIRONMENTAL FACTORS FOR WALKING ONSET AND SENSORY PROCESSING OF TODDLERS BORN PRETERM**

*Mariana Santos, PhD; Carolina Corsi, PT; Ana Carolina de Campos, PhD; Nelci Adriana Cicuto Ferreira Rocha, PhD*

**F-E-SP16 - MOTOR OUTCOME AFTER EARLY SURGERY FOR INFANTS LESS THAN 12 MONTHS OF AGE WITH CONGENITAL HEART DEFECTS: A SYSTEMATIC REVIEW**

*Turki Aljuhani, MA; Sinai Zyblewski, M.D; Dorothea Jenkins, M.D; Heather Shaw Bonilha, Ph.D., CCC-SLP; Patty Coker-Bolt, PhD, OTR/L, FAOTA*

**F-F-SP01 - THE RELATIONSHIP BETWEEN VERY EARLY BRAIN MICROSTRUCTURE AT 32 AND 40 WEEKS POSTMENSTRUAL AGE AND 12-MONTH MOTOR OUTCOME IN VERY PRETERM BORN INFANTS: A DIFFUSION MRI STUDY**

*Joanne M. George, PhD; Kerstin Pannek, PhD; Jurgen Fripp, PhD; Mark Chatfield, BA, MS; Robert Ware, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech)*

**F-F-SP02 - FAT MASS MEASUREMENT BY DEXA: HOW DOES IT COMPARE TO ANTHROPOMETRIC MEASURES IN ADULTS WITH CEREBRAL PALSY?**

*Emily Kivlehan, MD; Deborah Gaebler-Spira, MD, FRCP; Nicole Wysocki, MD; Christina Marciniak, MD*

**F-F-SP03 - PROXIMITY OF TMS AND FMRI MARKERS OF CONTRALESIONAL MOTOR CORTEX MAY RELATE TO CLINICAL FUNCTION IN HEMIPARETIC CHILDREN WITH PERINATAL STROKE.**

*Hsing-Ching Kuo, PhD MSc; Alicia Hilderley, PhD PKin; Helen Carlson, PhD; Adam Kirton, MD MSc FRCP*

**F-F-SP04 - EFFECT OF POSITIONING ERROR ON THE HILGENREINER EPIPHYSEAL ANGLE COMPARED TO THE FEMORAL NECK-SHAFT ANGLE IN CHILDREN WITH CEREBRAL PALSY**

*Kishore Mulpuri, MBBS, MS, MHS; Emily Sullivan; Carly Jones, BAsc; Stacey D. Miller, PT; Kyoung Min Lee, MD, PhD; Moon Seok Park, MD, Ph.D.; David R. Wilson, PhD; Agnes d'Entremont, PhD, PEng*

**F-F-SP05 - THE DISTRIBUTION OF NEUROIMAGING PATTERNS IN CHILDREN WITH CEREBRAL PALSY - SUBTYPES AND ASSOCIATED IMPAIRMENTS**

*Kate Himmelmann, MD, PhD; Veronka Horber, MD; Elodie Sellier, MD, PhD; Javier de la Cruz, MD; Ingeborg Krägeloh-Mann, Prof. Dr. Med.*

**F-F-SP06 - TRABECULAR BONE SCORE IS LOWER IN THE LUMBAR SPINE OF CHILDREN WITH CEREBRAL PALSY THAN IN TYPICALLY DEVELOPING CHILDREN**

*Suzanne Vogler, MS; Chuan Zhang, MA; Freeman Miller, MD; Christopher M. Modlesky, PhD*

**F-F-SP07 - STABILITY OF FUNCTIONAL MOBILITY MORE THAN 25 YEARS AFTER SELECTIVE DORSAL RHIZOTOMY**

*Robert P. Lamberts, PhD, FCCSS; Berendina E. Veerbeek, MSc; A. Graham Fieggen, MD, FCS Neurosurgery; Nelleke G. Langerak, PhD*

**F-F-SP08 - CHARACTERISTICS OF PAIN IN CHILDREN DYSKINETIC CEREBRAL PALSY: A CROSS-SECTIONAL STUDY**

*Clare T. McKinnon, BAppSc (PT, Hons); Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Prue E. Morgan, BAppSc (PT), MAppSc (PT), PhD; Adrienne Harvey, PhD*

**Premier****Ipsen Biopharmaceuticals**

Ipsen Biopharmaceuticals, Inc. is the U.S. affiliate of Ipsen (Euronext: IPN; ADR: IPSEY), a global biopharmaceutical group focused on innovation and specialty care. The company is dedicated to providing hope for patients whose lives are challenged by difficult-to-treat diseases, focusing its resources, investments and energy on discovering, developing and commercializing new therapeutic options in oncology, neurosciences and rare diseases. For more information on Ipsen in North America, please visit [www.ipsenus.com](http://www.ipsenus.com).

**Platinum****Allergan**

Allergan plc (NYSE: AGN), is a bold, global pharmaceutical company focused on developing, manufacturing and commercializing branded pharmaceuticals, devices and biologic products for patients around the world. For more information, visit Allergan's website at [www.Allergan.com](http://www.Allergan.com).

**Medtronic**

Patients are at the center of everything we do--and we believe medical technology can play an even greater role in improving people's lives. Join us in our commitment to take healthcare further, together. Be inspired at [medtronic.com](http://medtronic.com).

**OrthoPediatics**

Founded in 2006, OrthoPediatics is an orthopedic company focused exclusively on advancing the field of pediatric orthopedics. As such it has developed the most comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatics currently markets 29 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This offering spans trauma and deformity, scoliosis, and sports medicine/other procedures. OrthoPediatics' global sales organization is focused exclusively on pediatric orthopedics and distributes its products in the United States and 41 countries outside the United States.

**Silver****Children's Hospital Foundation**

Children's Hospital Foundation is dedicated to funding and advocating for pediatric initiatives that improve the status of health care and the quality of life for children in our region. The Foundation provides support for the programs and initiatives of Children's Hospital of Richmond at VCU and the children it serves each year, as well as other pediatric health care programs in the community.

**Mac Keith Press**

Mac Keith Press provides information to advance treatment and care of children with disability. Primarily for a health-oriented audience of therapists, doctors, nurses and health workers, MKP's publications are also of interest to psychologists, special teachers and others involved in the care of children with disabilities.

**Bronze****Cerebral Palsy Foundation**

The Cerebral Palsy Foundation is a catalyst for creating new possibilities in the world of disabilities.

We are transforming lives for people with disabilities by collaborating with many of the world's most innovative thinkers to create novel insights and develop breakthrough interventions which can be implemented today.

**Rady Children's Hospital-San Diego**

Rady Children's Hospital-San Diego is a nonprofit, 524-bed pediatric-care facility dedicated to excellence in care, research and teaching:

-We are the only hospital in the San Diego area dedicated exclusively to pediatric healthcare and the region's only designated pediatric trauma center.

-In affiliation with the University of California, San Diego School of Medicine, we are the region's teaching hospital for the next generation of pediatric physicians.

-We are a major pediatric clinical research center, working in collaboration with world-renowned institutions, including UC San Diego and St. Jude Children's Research Hospital.

**Merz Neurosciences**

Merz North America is a specialty healthcare company dedicated to developing and marketing innovative quality products for physicians and patients across the United States through Aesthetics and Neurosciences. <http://www.xeomin.com/healthcare-professionals/>

**Holland Bloorview Kids Rehabilitation Hospital**

Holland Bloorview Kids Rehabilitation Hospital is Canada's largest children's rehabilitation hospital. We pioneer treatments, technologies, therapies and programs that give children with disabilities the tools to participate fully in life.

Holland Bloorview is a global leader that serves about 7,000 children yearly. Holland Bloorview is a global worldclass teaching hospital affiliated with the University of Toronto, training future health-care specialists in the field of childhood disability. We are also home to the Bloorview Research Institute, allowing us to integrate leading research and teaching with front-line care to improve quality of life.

We see children with cerebral palsy, acquired brain injury, muscular dystrophy, amputation, epilepsy, spina bifida, arthritis, cleft-lip and palate, autism, and other developmental disabilities. A small number of our clients have complex chronic diseases that require round-the-clock medical care.

### **Gillette Children's Specialty Healthcare**

Gillette Children's Specialty Healthcare, located in St. Paul, Minnesota, cares for patients who have some of the most complex, rare and traumatic conditions in pediatric medicine.

Unlike other children's hospitals, we don't often talk about cures at Gillette because many of the conditions we treat are permanent and require lifelong care. But we know that with innovative medical and surgical intervention, proven therapies and assistive technology, and the support of compassionate health care professionals, children who have these conditions can thrive and live happy, healthy, productive lives.

Children who have disabilities and complex medical needs—and their families—have been at the center of our mission for more than 120 years. Learn more about how we've built on our long history to set the standard of care for some of the most challenging childhood conditions.

[www.Gillettechildrens.org](http://www.Gillettechildrens.org)

### **Weinberg Family Cerebral Palsy Center**

The Weinberg Family Cerebral Palsy Center is the first program dedicated to transitional care for cerebral palsy (CP) on the East Coast. It provides integrated, coordinated, and multidisciplinary health care that includes pediatric, transitional, and adult care.

Through education, research, and advocacy, our growing network of cerebral palsy experts aim to expand knowledge of CP and access to care across the life span. We collaborate with our patients and their families to help people with CP of all ages to manage their symptoms and reach their full potential – building a bridge for lifetime care, together.

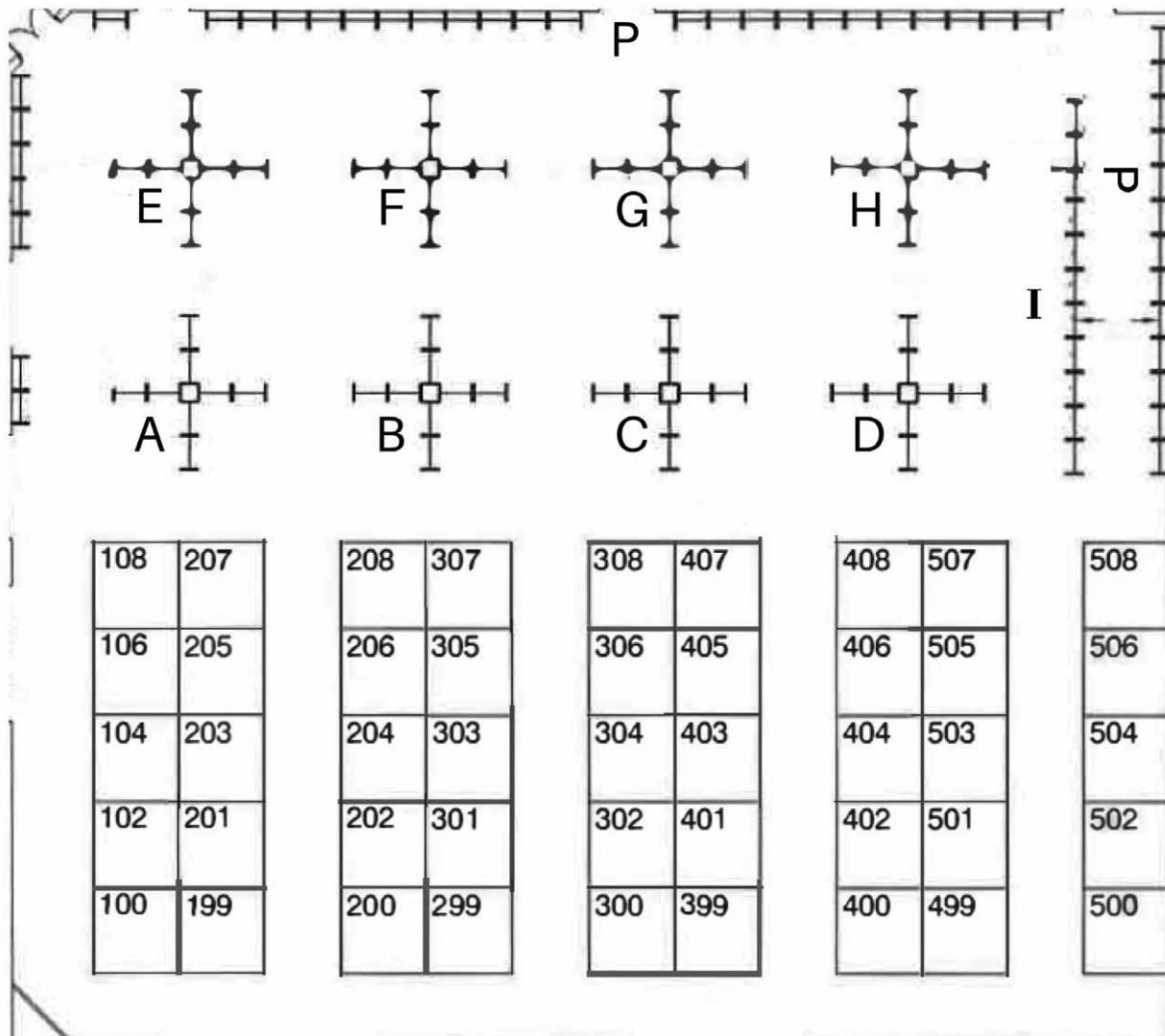
### **Essential**

#### **Cathleen Lyle Murray Foundation**

#### **Pathways.org**

#### **Chambers Family Lifespan Lectureship**

#### **University Orthopedic Specialists**



Exhibitors

**Booth 100**

**St. Andrew's Children's Clinic**

Forty years ago, seven cerebral palsy children and their mothers gathered in a home in Nogales, Sonora. St. Andrew's Children's Clinic was born. Now, the volunteer professional health care staff numbers 45-50; the staff sees approximately 225-250 children the first Thursday of each month, except July, at the St. Andrew's Children's Clinic housed in St. Andrew's Episcopal Church in Nogales, Arizona.

<http://www.standrewsclinic.org/home.html>

**Booth 102**

**Wiley**

Wiley, a global company, helps people and organizations develop the skills and knowledge they need to succeed. Our online scientific, technical, medical, and scholarly journals, combined with our digital learning, assessment and certification solutions help universities, societies, businesses, governments, and individuals increase the academic and professional impact of their work.

[www.wiley.com](http://www.wiley.com)

**Booth 104****CP Now Foundation**

CP NOW is a US based cerebral palsy nonprofit. We are focused on optimizing the lifelong health, wellness and inclusion of people with cerebral palsy and their families.

We will accomplish this by:

1. Creating educational resources,
2. Hosting wellness campaigns/activities
3. Funding promising research focused on addressing the diversity of symptoms and conditions related to having cerebral palsy.

<https://cpnowfoundation.org/>

**Booth 106****CPRN**

The Cerebral Palsy Research Network (CPRN) is a group of clinician researchers and patient advocates collaborating to improve treatments and outcomes for people with cerebral palsy. The network combines the expertise of clinicians committed to treating CP with innovative data collection techniques from clinical and community settings that accelerate the planning and execution of high-quality clinical trials and quality improvement initiatives. The network enables the implementation of improved standards of care and continuous monitoring of outcomes in order to create a large-scale learning health system for cerebral palsy.

<https://cprn.org/>

**Booth 108****Cerebral Palsy Foundation**

The Cerebral Palsy Foundation is a catalyst for creating new possibilities in the world of disabilities.

We are transforming lives for people with disabilities by collaborating with many of the world's most innovative thinkers to create novel insights and develop breakthrough interventions which can be implemented today.

<https://www.yourcpf.org/>

**Booth 199****Cascade Dafo**

Cascade Dafo, creator of the original DAFO® (Dynamic Ankle Foot Orthosis), is the industry's leading manufacturer of pediatric lower-extremity braces. The patient-focused company creates innovative products unmatched in quality, fit, and function—backed with a full (90-Day) warranty and exceptional customer support. Visit [cascadedrafo.com](http://cascadedrafo.com) or call 800.848.7332.

<https://cascadedrafo.com/>

**Booth 200/202****Convoid**

Convoid R82 is part of ETAC, a world-leading developer of ergonomic mobility aids for people at all stages of life – from small children to the elderly. We offer state-of-the-art products for numerous care situations, that aim to enhance activity regardless of physical circumstances. Our heart lies in the solutions that optimize quality of life for the individual, their family and caregivers. Etac – Creating Possibilities.

To learn more about Convoid R82 products, visit HYPERLINK “<http://www.convoid-R82.com>” [www.convoid-R82.com](http://www.convoid-R82.com) or call 844 US MOBILITY (844.876.6245)

[www.convoid.com](http://www.convoid.com)

**Booth 201****Trexo Robotics**

Trexo Robotics develops pediatric wearable robotics to assist children in walking, in order to help build endurance and provide a form of exercise. The Trexo device is available for clinical and home use.

<https://trexorobotics.com/>

**Booth 203****Cleveland Clinic Foundation**

Cleveland Clinic Children's is consistently ranked as one of the best hospitals in the United States. The Children's Hospital for Rehabilitation is home to the nationally-renowned Center for Autism.

<https://my.clevelandclinic.org/>

**Booth 204****AMTI**

AMTI's industry-leading force platforms are trusted by clinicians and researchers worldwide. Our innovative OPTIMA system revolutionizes multi-axis force measurement technology, producing the most accurate force platforms on the market. Our smart platform technology and simple digital integration ensure the most accurate output in a convenient package.

[www.amti.biz](http://www.amti.biz)

**Booth 205****APDM**

APDM offers solutions for quantifying human movement by combining Opal sensors with sophisticated algorithms. Mobility Lab generates spatiotemporal gait and balance outcome measures and Moveo Explorer adds the ability to collect full body kinematic data including joint angles. Motion Studio software for access to precisely synchronized raw inertial data is complimentary.

<https://www.apdm.com/>



**Booth 206****Boston Orthotics and Prosthetics**

Our mission today, as it was when we were formed almost 50 years ago, is to become the trusted partner of prestigious children's hospitals and pediatric specialty clinics in the development and delivery of pediatric orthotic and prosthetic services.

Our continuous collaboration with the world's leading pediatric clinicians and orthotists/prosthetists fuels our innovation and keeps us at the forefront of the development and delivery on non-surgical orthotic and prosthetic treatments. We believe parents are seeking the most advanced care and best possible outcomes for their child. We want them to insist on Boston Orthotics & Prosthetics for that care either through our products or our clinics.

<https://www.bostonoandp.com/>

**Booth 207****Gillette Children's Specialty Healthcare**

Gillette Children's Specialty Healthcare, located in St. Paul, Minnesota, cares for patients who have some of the most complex, rare and traumatic conditions in pediatric medicine.

**Booth 208****Surestep**

At Surestep, enriching and transforming lives through compassionate care and innovation is at the core of everything we do. It's our mission. Though it's easy to stay focused on this mission considering the rewarding work we do, we understand that we can only make an impact with the dedication of our employees. Passion drives us to serve children who need developmental assistance. Joy is what we feel when we witness the results of our hard work. That same joy and passion to change lives also applies to our team members. We strive to provide our employees with a safe, inclusive, and socially responsible workplace that encourages personal growth and success.

We know you have plenty of choices when it comes to the orthotic devices you choose to use. At Surestep, we believe our system of treatment is not only unique, but effective. Our core product, the patented Surestep SMO, revolutionized orthotic management for children with pronation or low muscle tone (hypotonia) worldwide. In addition to our SMO system, we also offer a comprehensive selection of devices to assist children with a wide range of mobility challenges. Each Surestep product is custom-made to achieve the ultimate in fit, function and comfort.

<http://surestep.net/>

**Booth 299****Pathways.org**

Pathways.org, a non-for-profit educational organization, provides FREE tools on line trusted resources so that every parent is fully empowered to support their child's development, and take advantage of their child's HYPERLINK "<https://pathways.org/glossary/neuroplasticity/>" neuroplasticity at the earliest age. We believe knowing baby's milestones along with games and activities to encourage development will help children reach their full potential. Our materials are created under the direction of the Pathways.org Medical Roundtable and in collaboration with outside experts. Pathways.org will be providing a 2, 4, 6 month *typical/atypical motor development* teaching course available free.

[www.pathways.org](http://www.pathways.org)

**Booth 300/302****Saol Therapeutics**

Saol Therapeutics (pronounced "Sail") is a privately-held, specialty biotech pharmaceutical company with operations in both Roswell, GA and Dublin, Ireland. Saol, focused on neuroscience (spasticity) and rare disease, is committed to providing and advancing therapeutic options for patients and the physicians treating these populations. For more information, visit [www.saolrx.com](http://www.saolrx.com).

**Booth 301****Kennedy Krieger Institute**

Located in the Baltimore/Washington region, Kennedy Krieger Institute is internationally recognized for improving the lives of 20,000 children and young adults with disorders and injuries of the brain, spinal cord, and musculoskeletal system each year, through inpatient and outpatient clinics; home and community services; and school-based programs.

<https://www.kennedykrieger.org/>

**Booth 303****American Association for Pediatric Ophthalmology and Strabismus (AAPOS)**

AAPOS is the American Association for Pediatric Ophthalmology and Strabismus. The organization's goals are to advance the quality of children's eye care, support the training of pediatric ophthalmology, and advance the care of adults with strabismus.

<https://aapos.org/home>

**Booth 304****Merz Neurosciences**

Merz North America is a specialty healthcare company dedicated to developing and marketing innovative quality products for physicians and patients across the United States through Aesthetics and Neurosciences.

<http://www.xeomin.com/healthcare-professionals/>

**Booth 305****PRC-Salttillo**

For over 50 years, PRC-Salttillo has led the industry in providing AAC solutions with advanced communication technology via speech-generating devices. Our company is also a pioneer in language vocabulary development, giving children and adults with communication challenges the ability to participate in life. Families, clinicians and special educators select PRC and Salttillo augmentative and alternative communication (AAC) devices as part of a communication strategy to assist a wide range of individuals with communication disabilities. Employee-owned since 2004, we are fully committed to the idea of empowering communication for all.

<https://www.prc-salttillo.com/>

**Booth 306****PTC Therapeutics**

At PTC, we dedicate ourselves to using groundbreaking science as we research rare diseases. We believe that by shifting our perspective, using the newest technologies available, we can find innovative ways to treat these diseases and create shared moments between patients and their families. Coupled with our patient-centric approach to treatment, we create an environment that resembles more of a family get-together than a typical doctor-patient relationship. In doing all of this, we can change lives around the world.

<https://www.ptcbio.com/>

**Booth 307****Easy Walking**

Easy-Walking Inc, makers of the Upn'Go and Upn'Free partial weight bearing body-support, dynamic rehab tool for gait-development. Used in clinics and at home. Toddler-adult.

[www.easy-walking.com](http://www.easy-walking.com)

**Booth 308****Cook Children's Health Care System**

Cook Children's Comprehensive Cerebral Palsy and Movement Disorders Program.

<https://www.cookchildrens.org>

**Booth 399****Galileo Therapy/Stim Designs**

Galileo is a universal neuromuscular training tool improving muscle fitness, enhancing performance, and optimizing motor relearning under the principle of high repetition in minutes.

<https://stimdesigns.com>

**Booth 400****Piramal**

With nearly 20 years in the healthcare industry, Piramal Critical Care, (PCC) is committed to delivering critical care solutions to patients and healthcare providers worldwide. PCC is leading the way in intrathecal medicine with offerings for pain and spasticity management while representing a culture built on collaboration, innovation, and service.

<https://www.piramalcriticalcare.com/>

**Booth 401****Canine Companions for Independence**

Canine Companions for Independence is a non-profit organization that enhances the lives of people with disabilities by providing highly trained assistance dogs at no charge to the recipient.

[www.cci.org](http://www.cci.org)

**Booth 402/404****Allergan, Inc**

Allergan plc (NYSE: AGN), is a bold, global pharmaceutical company focused on developing, manufacturing and commercializing branded pharmaceuticals, devices and biologic products for patients around the world. For more information, visit Allergan's website at [www.Allergan.com](http://www.Allergan.com).

[www.allergan.com](http://www.allergan.com)

**Booth 403****Neofect USA**

Neofect has developed innovative smart rehabilitation solutions to help patients with neurological and musculoskeletal conditions improve hand and arm function. The Rapael Smart Glove, Smart Board, and Smart Pegboard are biofeedback devices that provide intensive repetitions needed for neuroplasticity in a gamified and motivating way.

[www.neofect.com](http://www.neofect.com)

**Booth 405****Phoenix Children's Hospital**

Phoenix Children's Hospital is Arizona's only children's hospital recognized by US News & World Report's Best Children's Hospitals, ranking in all 10 specialties in 2018-19 and the fastest growing Children's Hospital in the country. Phoenix Children's freestanding children's hospital with a level 1 trauma center and comprehensive subspecialty care.

<https://www.phoenixchildrens.org/>

**Booth 406/408****Ipsen Biopharmaceuticals, Inc**

Ipsen Biopharmaceuticals, Inc. is the U.S. affiliate of Ipsen (Euronext: IPN; ADR: IPSEY), a global biopharmaceutical group focused on innovation and specialty care. The company is dedicated to providing hope for patients whose lives are challenged by difficult-to-treat diseases, focusing its resources, investments and energy on discovering, developing and commercializing new therapeutic options in oncology, neurosciences and rare diseases. For more information on Ipsen in North America, please visit [www.ipsenus.com](http://www.ipsenus.com).

[www.ipsenus.com](http://www.ipsenus.com)

**Booth 407****Nemours/Alfred I. duPont Hospital for Children  
Wilmington, DE/USA**

Ranked nationally for pediatric orthopedics by U.S. News & World Report, the Cerebral Palsy Program at duPont Hospital for Children brings together specialists in orthopedics, neurology, neurosurgery and rehabilitation to help each child reach their full potential.

<https://www.nemours.org/orthopediccenter>

**Booth 499/501****Medtronic**

Patients are at the center of everything we do--and we believe medical technology can play an even greater role in improving people's lives. Join us in our commitment to take healthcare further, together. Be inspired at [medtronic.com](http://medtronic.com).

[www.medtronic.com](http://www.medtronic.com)

**Booth 500/502****Tyromotion GmbH**

"TYROTHERAPY – GET BETTER. EVERY DAY."

Tyromotion GmbH is one of the world-wide leading manufacturers and distributors of robotic assisted and computer aided therapy units with the goal to sustainably improve patients' independence and quality of life.

To accomplish this mission, we provide a complete solution that enables physicians and therapists to put their patients at the heart of rehabilitation and to work together on their goals. By using powerful novel technologies such as robotics, sensor technology, virtual reality and gamification, patients are guided through the rehabilitation process more intensively and motivationally.

Connected by our intelligent therapy software TyroS®, Tyromotion's products AMADEO® (finger-hand rehabilitation), PABLO® (hand-arm rehabilitation), TYMO® (trunk control), DIEGO® (arm-shoulder rehabilitation) and MYRO (multisensory therapy system) build a comprehensive therapy concept for the complete upper extremity during all phases of rehabilitation. With our product OMEGO® (all phases of gait rehabilitation), as well as extensions of our products TYMO® (balance training and postural control) and PABLO® (gait analysis), we also provide various therapeutic options for the lower extremity. Coupled with numerous assessments and bio feedback, Tyromotion products facilitate several forms of rehabilitation for children and adults with various indications.

The company with headquarters in Graz has additional branch establishments in Germany, Switzerland and the USA and a global network of distribution partners.

[www.tyromotion.com](http://www.tyromotion.com)

**Booth 503****Rifton**

For four decades Rifton has partnered with therapists to design and manufacture the most durable and adjustable rehab products available for people with disabilities.

<https://www.rifton.com/>

**Booth 504****National Seating & Mobility**

THE RIGHT CHAIR.

We build one-of-a-kind mobility devices designed specifically for your body and your needs. Your chair is comfortable, safe and works completely in sync with you. In fact, you may forget where you end and the chair begins. Ours is the ultimate custom-made. The chair you deserve.

<https://www.nsm-seating.com/>

**Booth 505****Mediknox**

Mediknox works with the most advanced medical devices, and simplify professional medical technology for home use. This technology is clinically proven and FDA cleared medical devices, and currently carried, used and sold by medical professionals, including those within this field.

<https://mediknox.com/>

**Booth 506/508****Orthopediatrics**

Medical Device Manufacturer of Pediatric Orthopedics.

Founded in 2006, OrthoPediatics is an orthopedic company focused exclusively on advancing the field of pediatric orthopedics. As such it has developed the most comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatics currently markets 29 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This offering spans trauma and deformity, scoliosis, and sports medicine/other procedures. OrthoPediatics' global sales organization is focused exclusively on pediatric orthopedics and distributes its products in the United States and 41 countries outside the United States.

[www.orthopediatrics.com](http://www.orthopediatrics.com)

**Booth 507****Mobility Research – LiteGait Products**

Products, Education, and Rehabilitation Solutions

Mobility Research is a company of rehabilitation professionals dedicated to the transfer of the latest technology and research knowledge to the rehabilitation arena. We are a team of clinicians, researchers, educators, and engineers working to provide products, education, and rehabilitation solutions for pediatric and adult populations with motor control related disabilities. We have been providing innovative solutions to the Physical Rehabilitation community for over 20 years.

We are the makers LiteGait® family of products, used in treating spinal cord injury, amputation, stroke, chronic pain, head injury, orthopedic problems, cerebral palsy, balance issues, multiple sclerosis, and arthritis.

<https://www.litegait.com/>

A = Consultant/Advisory Board

B = Employment

C = Other Research Support includes receipt of drugs, supplies, equipment or other in-kind support

D = Ownership Interest includes stock, stock options, patent or other intellectual property

E = Research Grant includes principal investigator, collaborator or consultant and pending grants as well as grants already received

F = Speaker/Honoraria includes speakers bureau, symposia, and expert witness

G = Other Financial or Material Support

H = Other Research Support

I = Royalties

J = Stock Shareholder (excluding mutual funds)

K = Stockholder/Ownership Interest (excluding diversified mutual funds)

L = Nothing to Disclose

### Breakfast Seminar

BRK01 Woolfenden, S (L), Oskoui, M (L), Milner, K (L), Khandaker, G (L)

BRK02 Aliksson-Schmidt, A (L), Stadskleiv, K (L), Gullien, M (L)

BRK03 Paleg, G (Prime Engineering: A), Rodby-Bousquet, E (L)

BRK04 Smythe, T (L), Achuroa, D (L), Lindoewood, R (L)

BRK05 Dodds, C (L), Rempel, G (Nestle Health Sciences: F), Roach, H (L)

BRK06 Belthur, M (L), Davids, J (OrthoPediatrics: A), Davidson, L (L)

BRK07 Shrader, W (Orthopediatrics: A), Weigl, D (L), Owens, L (L), Boyd, L (L)

BRK08 Valencia, F (L), Lichtenthal, P (L), samuels, p (L)

BRK09 Gorter, J (L), Xiong, J (L), McPhee, P (L), Reedman, S (L)

BRK10 Tinelli, F (L), Sgandurra, G (L), Cioni, G (L)

BRK11 Gormley, M (Allergan: E)

Ipsen: A, E, F), Fox, J (L), Vonderhaar, K (L)

BRK12 McCormick, A (L), van Hedel, H (Hocoma: I, my partner or my spouse do not have a financial relationship with the company, but the company supports the network (ARTIC) that I will present), Gaebler-Spira, D (Rehabtek: A), Wright, V (L)

BRK13 Dallmeijer, A (L), Buizer, A (L)

BRK14 Kulkarni, V (L), Davids, J (OrthoPediatrics: A), Thomason, P (L), Wiedeman, L (L)

BRK15 Steele, K (L), Munger, M (L), Georgiadis, A (L), Riveros-Charry, R (L)

BRK16 van der Slot, W (L), Ryan, J (L)

BRK17 Geytenbeek, J (L), Oostrom, K (L), Stadskleiv, K (L), Bootsma, J (L)

BRK18 Labhard, S (L)

BRK19 Hesketh, K (L), Cross, A (L), Teplicky, R (L), Rosenbaum, P (L)

BRK20 Peterson, M (L), Hurvitz, E (L), Whitney, D (L)

BRK21 Sewell-Roberts, C (L), Sato, T (L), Shrader, C (L), Shrader, W (Orthopediatrics: A)

BRK22 van Gorp, M (Pain Fighting Fund, Erasmus MC University Medical Center: E)

Rijndam Rehabilitation: E), Roebroek, M (L), Gorter, J (L), Dallmeijer, A (L)

BRK23 Smith, B (L), Wilson, R (L)

BRK24 Gross, P (L), Gannotti, M (L)

BRK25 Malik, K (L)

BRK26 Roman, C (L), Thomas, H (L)

BRK27 Granlund, M (L), Imms, C (L), Brooks, R (L), Hwang, A (L)

BRK28 DiBello, T (Hanger Clinic: B)

### Debate/Current Controversies

CC01 Schiariti, V (L), Berndl, A (L), Lipworth, H (L)

CC02 Bauer, C (L), Lawrence, L (L), Harpster, K (L), Deramore Denver, B (L), Ortibus, E (L)

CC03 Miller, F (L), Novacheck, T (L), Tedroff, K (L)

CC04 McCormick, A (L), Biddiss, E (L), Scheinberg, A (L), Rocon, E (L), Alazem, H (L), McEwan, A (L)

CC05 Graham, K (NHMRC-CRE in Cerebral Palsy: E

Orthopediatrics: A), Hastings-Ison, T (L), Van Campenhout, A (L)

CC06 Gillick, B (L), Friel, K (L), Kirton, A (L), Gordon, A (L)

### Focused Symposia

SYMP01 Armstrong, R (L), Forssberg, H (L), Samia, P (L), Rosenbaum, P (L), Dan, B (L)

SYMP02 Fehlings, D (L), Glader, L (L), O'Donnell, M (L), Shusterman, M (Merz Pharma: G, I am the President of CP NOW and Merz has given grant funds to CP NOW), Novak, I (L)

SYMP03 Scheinberg, A (L), Stewart, K (L), Lewis, J (L), Paget, S (L), Sheriko, J (L), Copeland, L (L)

SYMP04 Howard, J (L), Graham, K (NHMRC-CRE in Cerebral Palsy: E

Orthopediatrics: A), Hastings-Ison, T (L), Herzog, W (L)

SYMP05 Boyd, R (L), Novak, I (L), Fahey, M (L), Elliott, C (L)

SYMP06 Greenberg, M (L), Rosen, P (L), Khot, A (L), Aroojis, A (L), Kalandyak, O (L)

SYMP07 Harris, N (L), Moreau, N (L), Roy, M (L), Hedgecock, J (L), Prowse, M (L)

SYMP08 Buizer, A (L), van de Pol, L (L), Vermeulen, R (L), Langerak, N (L), Akhter, S

SYMP09 Forssberg, H (L), Damiano, D (L), Berjemo, R (L), Servili, C (L), Cieza, A (L)

- SYMP10 Srinivasan, R (L), Anaby, D (L), Khetani, M (CanChild Centre for Childhood Disability Research: I), Teplicky, R (L)
- SYMP11 Agrawal, S (L), Damiano, D (L), Gordon, A (L), Dutkowsky, J (L), Kim, H (Allergan: Advisory Board member; Dysport: research grant, advisory board member)
- SYMP12 Scott-Wyand, P (L), Schaber, C (L)
- SYMP13 Miller, S (L), Willoughby, K (L), Yeo, L (L), Thomason, P (L), Graham, K (NHMRC-CRE in Cerebral Palsy: E Orthopediatrics: A)
- SYMP14 Benfer, K (Nutricia: A), Ghosh, A (L), Morgan, C (L), Khandaker, G, Boyd, R (L)
- SYMP15 Reedman, S (L), Sakzewski, L (L), Boyd, R (L), Elliott, C (L), Shikako-Thomas, K (L), Majnemer, A (L)
- SYMP17 Dusing, S (L), Spittle, A (L), Morgan, C (L), Oeberg, G (L)
- SYMP18 Paleg, G (Prime Engineering: A), Rodby-Bousquet, E (L), Shrader, W (Orthopediatrics: A)
- Petal with Pete: E
- POSNA: E), Narayanan, U (L), Gorter, J (L)
- SYMP19 Eliasson, A (L), Basu, A (Ipsen: G, Educational grant), Cioni, G (L), Greaves, S (Handfast AB: F), Boyd, R (L)
- SYMP20 Seal, A (L), Rosenbaum, P (L), Carroll, J (L), Benfer, K (Nutricia: A), Greenberg, M (L), Gillick, B (L)
- SYMP21 Schiariti, V (L), Valerin, R (L), Carranza-del Río, J (Ipsen: E), Barron, F (L), Martinez Caceres, M (L), Galvez Quiñonez, H (L)
- SYMP22 Sumanasena, S (L), Hoare, B (L), Rice, J (L), Muttiah, N (L)
- SYMP23 Novak, I (L), Sakzewski, L (L), Jackman, m (L), Morgan, C (L), Boyd, R (L)
- SYMP24 Sgandurra, G (L), Cioni, G (L), Boyd, R (L)
- SYMP25 Smithers-Sheedy, H (L), Gross, P (L), Reid, S (L), Westbom, L (L), Goldsmith, S (L)
- SYMP26 Peyton, C (General Movements Trust: F), Spittle, A (L), Guzzetta, A (L)
- SYMP27 Kulkarni, V (L), Davids, J (OrthoPediatrics: A), Khot, A (L), Aroojis, A (L)
- SYMP28 Dan, B (L), Egan, T (L), Gaebler-Spira, d (Rehabtek: A Rehabtek: A), Green, D (L), Shen, M (L), López-Ortiz, C (L)
- SYMP29 Schiariti, V (L), Gladstone, M (L), Longo, E (L), Rizzoli Córdoba, A (L)
- SYMP30 O'Connor, B (L), Rosenbaum, P (L), Smythe, T (L), Wright, V (L)
- SYMP31 Swaroop, V (L), Bowman, R (L), Yerkes, E (L)
- SYMP32 McDonald, D (L), Allen, J (L), Hauer, j (L)
- SYMP34 Harbourne, R (L), Dusing, S (L), Morgan, C (L), Guzzetta, A (L), Lobo, M (L)
- SYMP35 Shore, B (L), Shrader, W (Orthopediatrics: A), Berry, J (L), Graham, K (NHMRC-CRE in Cerebral Palsy: E Orthopediatrics: A), Antolovich, G (L), Glader, L (L)
- SYMP36 Dursun, N (Allergan: A, E Ipsen: A, E Merz: E), Carranza-del Río, J (Ipsen: E), Bonikowski, M (Allergan: A, E Ipsen: A, E)
- SYMP37 Shen, M (L), li, x (L), Liang, b (L), Liu, y (L), Wei, G (L)
- SYMP38 Kulkarni, V (L), Davids, J (OrthoPediatrics: A), Thomason, P (L), Aroojis, A (L), Graham, K (NHMRC-CRE in Cerebral Palsy: E Orthopediatrics: A)
- SYMP39 Boyd, R (L), Whittingham, K (L), Mak, C (L)
- SYMP40 Noritz, G (L), Humphrey, L (L), Malhotra, P (L), Whitaker, A (L)
- SYMP41 Harpster, K (L), Deramore Denver, B (L), Bauer, C (L), Guzzetta, A (L), Shusterman, M (Merz USA: G, I am the ED of CP NOW and the organization receives grant funds from Merz), Hillier, L (L)
- SYMP42 Deluca, S (L), Coker-Bolt, P (L), Ramey, S (L), Shierk, A (Ipsen: A), Roberts, H (L)
- Instructional Course**
- IC01 Chiarello, L (L), Ideishi, R (L)
- IC02 Byrne, R (L), Rosenbaum, P (L), Pickar, T (L), Glader, L (L)
- IC03 Holt, S (L), Gaut, L (L), Linz, M (L)
- IC04 Hyman, J (Orthopaedic Surgery Research Foundation: E Orthopediatrics: A POSNA: E), Roye, D (L), Shrader, W (Orthopediatrics: A), Chambers, H (Orthopediatrics: A), Nowicki, P (Orthopediatrics: A)
- IC05 Chin, E (L), Jantzie, L (L), Robinson, S (L), Hoon, A (L)
- IC06 Brandenburg, J (L), Schiariti, V (L), Mendoza-Puccini, C (L), Feldman, R (L), McIntyre, S (L)
- IC07 Berry, J (L), Belthur, M (L), Rempel, G (Nestle Health Sciences: F)
- IC08 Newell, A (L), Quinn, E (L), Kim, H (Allergan: Advisory Board member; Dysport: research grant, advisory board member)
- IC09 Anaby, D (L), Killeen Hughes, H (L), Burrough, M (L), Teplicky, R (L), Golos, A (L), Turner, L (L)
- IC10 Novacheck, T (L), Boyer, E (Gillette Children's Foundation: E), Stout, J (L), Walt, K (L), Weber, L (L)
- IC11 Novak, I (L), Guzzetta, A (L), Fahey, M (L), te Velde, A (L), McNamara, L (L), Gillick, B (L)
- IC12 Hurvitz, E (L), Peterson, M (L), McPhee, P (L), Thorpe, D (L), Langerak, N (L), Heyn, P (L), Carollo, J
- IC13 Wallace, D (L), Mann, j (L), Trucks, M (L), Deluca, S (L)
- IC14 Salzbrenner Hoopes, M (L), Dabney, K (L), Spencer, T (L), Aptt, V (L)
- IC15 Swaroop, V (L), Dias, L (L), Yerkes, E (L), Bowman, R (L)
- IC16 Byrne, R (L), Maitre, N (L), Duncan, A (L)
- IC17 Matsumoto, H (AAPDM (A) CSF, CCSSG, A POSNA Setting Scoliosis Straight Foundation C)

SRS: E), Kim, H (Allergan: Advisory Board member; Dysport: research grant, advisory board member), Linhares, D (L), Hyman, J (AACPD (A), AAP (A), Children of China Pediatric Foundation (A), MiracleFeet (A), POSNA (E), Setting Scoliosis Straight Foundation (C), SICOT (A)

IC18 Meneses, V (L), Nourie, C (L), Rivera, Y (L), Sewell-Roberts, C (L)

IC19 Willoughby, K (L), Thomason, P (L), Antolovich, G (L), Khot, A (L), Rutz, E (L), Graham, K (NHMRC-CRE in Cerebral Palsy: E), Orthopediatrics: A)

IC20 Gormley, M (Allergan: E

Ipsen: A, E, F), Feyma, T (L), Kim, P (L)

IC21 Stott, N (L), Valentine, J (L), Williams, S (L), Lieber, R (L)

IC22 Whitaker, A (L), Davids, J (OrthoPediatrics: A), Shore, B (L)

IC23 Kay, R (Johnson & Johnson: J, Medtronic: J, Pfizer: J, Zimmer-Biomet: J), Lightdale-Miric, N (L)

IC24 Lennon, N (L), Shrader, W (Orthopediatrics: A), Kalisperis, F (L), Miller, F (L)

IC25 Novacheck, T (L), Langerak, N (L), Lamberts, R (L), Ward, M (L)

IC26 DiBello, T (Hanger Clinic: B), Stevens, P (Hanger Clinic: B, J), DiBello, S (L)

IC27 Bonouvrié, L (L), Buizer, A (L), Vermeulen, R (Ipsen: A Medtronic: F), Becher, J (L)

IC28 Rempel, G (Nestle Health Sciences: F), Gellert-Jones, M (L), Kecskemethy, H (L), Plews-Ogan, J (L), Wolff, J (L)

IC29 Rosenberg, N (L), Ostendorf, A (L), Pindrik, J (L)

IC30 Roye, D (Broadwater: G, Cerebral Palsy Foundation: A, OSRF: E), Matsumoto, H (AACPD (A), CSF: C, CSSG: A, POSNA: E, Setting Scoliosis Straight Foundation: C

SRS: E), Linhares, D (L), Moskowitz, J (L)

IC31 Duivestijn, J (Apetito: G, Sponsor of IDDSI, Basic American Foods: G, Sponsor of IDDSI, Becton Dickinson (BD): G, Sponsor of IDDSI, Bevolution Group: G, Sponsor of IDDSI, Burlodge: G, Sponsor of IDDSI, Campbells: G, Sponsor of IDDSI, CMI: G, Sponsor of IDDSI, Complete Purchasing: G, Sponsor of IDDSI, Dr Oetker Professional: G, Sponsor of IDDSI, Food Care: G, Sponsor of IDDSI, Gordon Food Service: G, Sponsor of IDDSI, Hormel: G, Sponsor of IDDSI, Hydra +: G, Sponsor of IDDSI, Leahy IFP: G, Sponsor of IDDSI, Lyons Magnus: G, Sponsor of IDDSI

MapleLeaf Food Service: G, Sponsor of IDDSI, McCain: G, Sponsor of IDDSI

Medtrition: G, Sponsor of IDDSI, Modus: G, Sponsor of IDDSI, Nestle Health Science: F, G, Sponsor of IDDSI, Olymel: G, Sponsor of IDDSI, Parapharma Tech: G, Sponsor of IDDSI, Precise: G, Sponsor of IDDSI, Shalit Foods: G, Sponsor of IDDSI

Simply Thick: G, Sponsor of IDDSI, SPC Provital: G, Sponsor of IDDSI, Sysco: G, Sponsor of IDDSI, Thick it: G, Sponsor of IDDSI), Rae, D (L)

IC32 Lehman, S (L), Lawrence, L (L)

IC33 Thomason, P (L), Willoughby, K (L), Rutz, E (L), Khot, A (L), Graham, K (NHMRC-CRE in Cerebral Palsy: E

Orthopediatrics: A)

IC34 Koscielniak, N (L), Tucker, C (L)

IC35 Murphy, N (L), Adams, R (L)

IC36 Rempel, G (Nestle Health Sciences: F), Dodds, C (L), Sellers, D (Nutricia Advanced Medical NutritionUK: E, F), Ibarra, M (L)

IC37 Mukherjee, S (L), Rinaldi, R (L), Nelson, V (L), Yang, L (L), spires, M (L)

IC38 Peny-Dahlstrand, M (L), Brei, T (L), Lindquist, B (L), Zabel, A (L)

IC39 Chiarello, L (L), Palisano, R (L)

IC40 Guzzetta, A (L), Ricci, D (L), Tinelli, F (L)

IC41 Nourie, C (L), LeComte, J (L), Shrader, B (L), Shrader, M (L), Shrader, C (L)

### Scientific Presentation

A1 Boychuck, Z (L), Andersen, J (L), Fehlings, D (L), Kirton, A (L), Oskoui, M (L), Shevell, M (L), Majnemer, A (L)

A2 Alriksson-Schmidt, A (L), Westbom, L (L), Häggglund, G (L), Wagner, P (L)

A3 Goldsmith, S (L), McIntyre, S (L), Smithers-Sheedy, H (L), Andersen, G (L), Himmelmann, K (L), Blair, E (L), Gibson, C (L), Scott, H (L), Badawi, N (L), Garcia Jalon, G (L), Garne, E (L)

A4 Pählman, M (L), Himmelmann, K (L)

A5 Boyd, R (L), Saha, s (L), George, J (L), Colditz, P (L), Rose, S (L), Fripp, J (L), Pannek, K (L)

A6 Couse, M (L), Guimond, C (L), Mulpuri, K (Allargan: C, E

Dupey Synthes (J&J): C, E

IPSEN: A, C, E

Pega Medical: I), Birch, P (L), Lau, E (L), Liang, N (L), Horvath, G (L), To, S (L), van Karnebeek, C (L), Lehman, A (L), Friedman, J (L)

A7 Worley, G (L), Erickson, S (L), Gustafson, K (L), Nikolova, Y (L), Belsky, D (L), Goldstein, R (L), Levy, J (L), McDonald, S (L), Page, G (L), Ashley-Koch, A (L), Cotten, M (L)

A8 Purnell, J (L), Batterson, N (L), Lewandowski, D (L), Levengood, K (L), Lightfoot, M (L), Benninger, K (L), Neel, M (L), Less, J (L), Burkhardt, S (L), Sowers, B (L), Maitre, N (L)

A9 Kitai, Y (L), Hirai, S (L), Ogura, K (L), Okuyama, N (L), Hirotsune, M (L), Mizutani, S (L), Arai, H (L)

B1 Rethlefsen, S (L), Mueske, N (L), Wren, T (L)

B2 Lullo, B (L), Mueske, N (L), Diamant, c (L), Van Speybroeck, A (L), Ryan, D (L), Wren, T (L)

B3 Stevens, P (Hanger Clinic: B, J), DiBello, T (Hanger Clinic: B)

B4 FitzGerald, T (L), McGinley, J (L), Cheong, J (L), Doyle, L (L), Spittle, A (L)

B5 Wren, T (L), Pierz, K (L), Acsadi, G (L), Ounpuu, S (L)

B6 de Morais Filho, M (Orthopediatrics: A), Blumetti, F (L), Kawamura, C (L), Freitas, K (L), Fujino, M (L), Lopes, J (L), Neves, D (L)

- B7 Steele, K (L), Mehrabi, N (L), Schwartz, M (L)
- B8 Matsumoto, H (AACPDM: A, CSF: C, CSSG: A, POSNA: E, Setting Scoliosis Straight Foundation: C, SRS: E), Marciano, G (L), Kim, H (Allergan: Advisory Board member; Dysport: research grant, advisory board member), Roye, D (Broadwater: G Cerebral Palsy Foundation: A, OSRF: E), Hyman, J (AACPDM: A AAP: A, Children of China Pediatric Foundation: A, MiracleFeet: A, POSNA: E Setting Scoliosis Straight Foundation: C, SICOT: A)
- B9 Gehringer, J (L), Hoffman, R (L), Baker, S (L), Wilson, T (L), Kurz, M (L)
- C1 Hollung, S (L), Lanzoni, M (L), Delobel, M (L), Ehlinger, V (L), Kinsner-Ovaskainen, A (L), Himmelmann, K (L), Platt, M (L), Arnaud, C (L)
- C2 McIntyre, S (L), Smithers-Sheedy, H (L), Waight, E (L), Galea, C (L), Watson, L (L), Reid, S (L), DeLacy, M (L), Gibson, C (L), Scott, H (L), Maloney, E (L), Goldsmith, S (L), Reddihough, D (L), Badawi, N (L), Blair, E (L), Bartlett-clark, K (L)
- C3 Hollung, S (L), Bakken, I (L), Vik, T (L), Wiik, R (L), Lydersen, S (L), Andersen, G (L)
- C5 Chowdhury, S (L), Boyd, R (L), ghosh, A (L), Benfer, K (Nutricia: A)
- C6 Ostojic, K (L), Paget, S (L), Kyriagis, M (L), Morrow, A (L)
- C7 Egbon, J (L), McConnell, K (L), Perra, O (L), Kerr, C (Leckey: C, In-kind support from commercial company on academic-industry research grant funded by Medical Research Council (UK))
- C8 Carvalho, A (L), Ventura, P (L), Fernandes, A (L), Brites, C (L), Lucena, R (L)
- C9 Waight, E (L), Smithers-Sheedy, H (L), McIntyre, S (L), Badawi, N (L), De Lacy, M (L), Gibson, C (L), Scott, H (L), Bartlett-clark, K (L), Maloney, E (L), Reid, S (L), Reddihough, D (L), Goldsmith, S (L), Galea, C (L), Blair, E (L), Watson, L (L)
- D1 Lavelle, G (L), Noorkoiv, M (L), Theis, N (L), Ryan, J (L)
- D2 Reedman, S (L), Ziviani, J (L), Boyd, R (L), Sakzewski, L (L)
- D3 van Gorp, M (Pain Fighting Fund, Erasmus MC University Medical Center: E Rijndam Rehabilitation: E), Tan, S (L), Voorman, J (L), Geytenbeek, J (L), Reinders-Messelink, H (L), Ketelaar, M (L), Dallmeijer, A (L), Roebroek, M (L)
- D4 McAnuff, J (L), Rapley, T (L), Colver, A (L), Kolehmainen, N (L)
- D5 Chen, C (L), Chen, C (L), Chung, C (L), Wu, K (L), Hsiao, Y (L), Chen, H (L)
- D6 Condliffe, E (Movotec A/S: C, Movotec A/S has provided me with a portable spasticity assessment device for unrestricted use.), Esau, S (L), Janzen, L (L), Sandron, E (L), Kuntze, G (L), Emery, C (L)
- D7 Toovey, R (L), Harvey, A (L), McGinley, J (L), Lee, K (L), Shih, S (L), Spittle, A (L)
- D8 Armstrong, E (L), Kentish, M (L), Boyd, R (L), Horan, S (L), Carty, C (L)
- D9 Lennon, N (L), Church, C (L), Shrader, W (Orthopediatrics: A), Kalisperis, F (L), Wickham, A (L), Henley, J (L), Niiler, T (L), Miller, F (L)
- E1 Araneda, R (L), Ebner-Karestinos, D (L), Saussez, G (L), Paradis, J (L), Bleyenheuft, Y (L)
- E2 Zwicker, J (BC Children's Hospital Research Institute: E, Canadian Association of Occupational Therapists: F, Canadian Institutes of Health Research: E, Cincinnati Children's Hospital: F, Kids Brain Health Network: F, Medtronic: C, Michael Smith Foundation for Health Research: E, Pearson Education: F, Physiotherapy Association of British Columbia: F, Sunny Hill Health Centre for Children: E, University of Sydney: F, Waterloo Foundation: E), Gunton, C (L), Dureno, Z (L), Izadi-Najafabadi, S (L)
- E3 Rabatin, A (L), Sugimoto, d (L), Zwicker, R (L), Shea, J (L), Nohelty, E (L), Shore, B (L), Stracciolini, A (L)
- E4 Yoo, P (L)
- E5 Fauls, J (L), Thompson, B (L), Johnston, L (L)
- E6 Shea, J (L), Tombeno, R (L), Miller, P (L), Fragala-Pinkham, M (L), Snyder, B (L), Matheney, T (L), Shore, B (L)
- E7 Goodlich, B (L), Armstrong, E (L), Horan, S (L), Carty, C (L), Trost, S (L), Ahmadi, M (L), Baque, E (L)
- E8 Mattern-Baxter, K (L), Looper, J (L), Bjornson, K (L)
- E9 Ryan, J (L), Lavelle, G (L), Noorkoiv, M (L), Theis, N (L), Shortland, A (L), Korff, T (L), Levin, W (L), Kilbride, C (L)
- F1 Bonouvrié, L (L), Becher, J (L), Vles, J (L), Vermeulen, R (Ipsen: A Medtronic: F), Buizer, A (L)
- F2 Duffy, E (L), Hornung, A (L), Munger, M (L), Chen, B (L), Aldahondo, n (L), Krach, L (L), Schwartz, M (L), Novacheck, T (L)
- F3 Kneebone, M (L), Stewart, K (L), Johnston, L (L)
- F4 Graham, K (NHMRC-CRE in Cerebral Palsy: E Orthopediatrics: A), Multani, I (L), Hastings-Ison, T (L), Howard, J (L), Herzog, W (L)
- F5 Jacobson, D (L), Löwing, K (L), Kullander, K (L), Rydh-Berner, B (L), Ljung, M (L), Tedroff, K (L)
- F7 Dallmeijer, A (L), van Hutten, K (L), van der Krogt, M (L), Buizer, A (L)
- F8 Hedberg-Graff, J (L), Krumlinde-Sundholm, L (L), Philström, N (L)
- F9 Pons, L (Ipsen: B), Vilain, C (Ipsen: B), Picaut, P (Ipsen: B)
- G1 Kerr, C (Leckey: C, In-kind support from commercial company on academic-industry research grant funded by Medical Research Council (UK)), McKeaveney, C (L)
- G2 Bauer, J (L), Do, p (L), Feng, J (L), Aiona, M (L)
- G3 Church, C (L), Maguire, K (L), Oleas-Santillan, G (L), Henley, J (L), Lennon, N (L), Miller, F (L), Salazar Torres, J (L), Julianne, S (L)
- G4 Narayanan, U (L), Huroy, M (L), Encisa, C (L), Ferkul, A (L), Graham, K (NHMRC-CRE in Cerebral Palsy: E

- Orthopediatrics: A), Mulpuri, K (Allergan: C, E, Dupey Synthes (J&J): C, E, IPSEN: A, C, E, Pega Medical: I), Fehlings, D (L)
- G5 Marshall, B (L), Malone, J (L), Kiebzak, G (L)
- G6 Hardesty, C (Medtronic: A)
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- G7 Alriksson-Schmidt, A (L), Czuba, T (L), Hägglund, G (L)
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- G9 Alhammoud, A (L), Othman, Y (L), El-Hawary, R (Apifix Ltd.: A Depuy Synthes Spine: A, E, Joint Solutions: E, Medtronic Canada: A, E, Wishbone: A, I), Howard, J (L)
- H1 Ryan, J (L), Noorkoiv, M (L), Theis, N (L), Kilbride, C (L), Korff, T (L), Shortland, A (L), Levin, W (L), Lavelle, G (L)
- H2 Hwang, Y (L)
- H3 Maitre, N (L), Jeanvoine, A (L), Burkhardt, S (L), Pietruszewski, L (L), Miller, A (L), Nelin, M (L), Heathcock, J (L)
- H4 Rodrigues de Sousa, R (L), Costa Ferreira, L (L), Campos Ferreira, A (L), Paisante Vieira de Barros, C (L), Bensemam Gontijo, A (L)
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- H6 Klevberg, G (L), Elkjær, S (L), Zucknick, M (L), Jahnsen, R (L)
- H7 Korkem, D (L), Kerem Günel, M (L), Has, A (L), Karlı Oğuz, H (L)
- H8 Ramey, S (L), Deluca, S (L), Stevenson, R (L), Darragh, A (L), Lo, W (L), Conaway, M (L)
- H9 Hurd, C (L), Livingstone, D (L), Brunton, K (L), Smith, A (L), Zewdie, E (L), Gorassini, M (L), Kirton, A (L), Watt, M (L), Andersen, J (Allergan: F)
- IPSEN Canada: A), Yager, J (L), Yang, J (L)
- I1 Trevarrow, M (L), Gehringer, J (L), Wilson, T (L), Kurz, M (L)
- I2 Vuong, A (L), Fowler, E (L), Matsumoto, J (L), Staudt, L (L), Greenberg, M (L), Yokota, H (L), Joshi, S (L)
- I3 Izadi-Najafabadi, S (L), Zwicker, J (BC Children's Hospital Research Institute: E
- Canadian Association of Occupational Therapists: F, Canadian Institutes of Health Research: E, Cincinnati Children's Hospital: F, Kids Brain Health Network: F
- Medtronic: C, Michael Smith Foundation for Health Research: E, Pearson Education: F
- Physiotherapy Association of British Columbia: F, Sunny Hill Health Centre for Children: E, University of Sydney: F, Waterloo Foundation: E)
- I4 Pannek, K (L), George, J (L), Boyd, R (L), Colditz, P (L), Rose, S (L), Fripp, J (L)
- I5 Harpster, K (L), Merhar, S (L), Illapani, V (L), Kline-Fath, B (L), Parikh, N (L)
- I6 Johnson, C (L), McIlvain, G (L), Tracy, J (L), Chaze, C (L), Villiermaux, G (L), Wright, H (L), Miller, F (L), Crenshaw, J (L)
- I7 Springer, A (L), Dyck Holzinger, S (L), Andersen, J (Allergan: F)
- IPSEN Canada: A), Buckley, D (L), Fehlings, D (L), Kirton, A (L), Koclas, L (L), Pigeon, N (L), Van Rensburg, E (L), Wood, E (L), Oskoui, M (L), Shevell, M (L)
- I8 Pagnozzi, A (L), Fripp, J (L), Boyd, R (L), Rose, S (L)
- I9 Pagnozzi, A (L), Fripp, J (L), Boyd, R (L), Rose, S (L)
- J1 Bolduc, M (L), Dionne, E (L), Majnemer, A (L), Brossard-Racine, M (L)
- J2 Gill, K (University of British Columbia: G), Lang, D (L), Goldowitz, D (L), Zwicker, J (BC Children's Hospital Research Institute: E, Canadian Association of Occupational Therapists: F, Canadian Institutes of Health Research: E, Cincinnati Children's Hospital: F, Kids Brain Health Network: F, Medtronic: C, Michael Smith Foundation for Health Research: E, Pearson Education: F, Physiotherapy Association of British Columbia: F, Sunny Hill Health Centre for Children: E, University of Sydney: F
- Waterloo Foundation: E)
- J3 Neel, M (L), Hay, K (L), Moore-Clingenpeel, M (L), Miller, A (L), Emery, L (L), Hague, K (L), Maitre, N (L)
- J4 Noten, S (L), Benner, J (L), Limsakul, C (Faculty of Medicine, Prince of Songkla University, Thailand: B), van der Slot, W (L), Stam, H (L), Selb, M (L), van den Berg-Emons, R (L), Roebroek, M (L)
- J5 Gorter, J (L), Smits, D (L), Riddell, C (L), Voorman, J (L), Rosenbaum, P (L), Palisano, R (L), Walter, S (L), Hanna, S (L), van Wely, L (L), Ketelaar, M (L)
- J6 Lennon, N (L), Church, C (L), Shrader, W (Orthopediatrics: A), Robinson, W (L), Salazar Torres, J (L), Taylor, D (L), Niiler, T (L), Miller, F (L)
- J7 Langerak, N (L), Behardien, T (L), Eken, M (L), Veerbeek, B (L), Fieggen, A (L), du Toit, J (L), Lamberts, R (L)
- J8 Chiu, H (L), Ada, L (L), Chen, C (L)
- J9 Gannotti, M (L), Thorpe, D (L), Wang, C (L), Freburger, J (L)
- K1 Peyton, C (General Movements Trust: F), Einspieler, C (General Movements Trust: F), Fjortoft, T (L), Adde, L (L), Schreiber, M (L), Msall, M (L)
- K2 Spittle, A (L), Kwong, A (L), Doyle, L (L), Lee, K (L), Einspieler, C (General Movements Trust: F), Olsen, J (L), Eeles, A (L), Cheong, J (L)
- K3 Ghosh, A (L), Boyd, R (L), Novak, I (L), Morgan, C (L), Ware, R (L), Benfer, K (Nutricia: A)
- K4 Molinini, R (L), Inamdar, K (L), Marcinowski, E (L), Dusing, S (L), Koziol, N (L), Lobo, M (L), Harbourne, R (L), McCoy, S (L), Bovaird, J (L)
- K5 Finlayson, F (L), Dusing, S (L), Olsen, J (L), Guzzetta, A (L), Kwong, A (L), Spittle, A (L)
- K6 McManus, B (L), Khetani, M (CanChild Centre for Childhood Disability Research: I), Richardson, Z (L), Scully, B (L), Litfin, J (L), Murphy, N (L), Rigau, B (L)
- K7 Peyton, C (General Movements Trust: F), Einspieler, C (General Movements Trust: F), Adde, L (L), Fjortoft, T (L), Schreiber, M (L), Drobyshesky, A (L), Marks, J (L)



K8 Khurana, S (L), Dusing, S (L), Kane, A (L), Brown, S (L), Tarver, T (L)

K9 Lobo, M (L), Harbourne, R (L), Dusing, S (L), McCoy, S (L), Cunha, A (L), Babik, I (L), Hsu, L (L), Koziol, N (L), Bovaird, J (L), Marcinowski, E (L), Chang, H (L), An, M (L), Sheridan, S (L), Willett, S (L)

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L3 van der Slot, W (L), Benner, J (L), Brunton, L (L), engel, J (L), Gallien, P (L), Hilberink, S (L), Månnum, G (L), Morgan, P (L), Opheim, A (L), Riquelme, I (L), Rodby-Bousquet, E (L), Tarsuslu Şimşek, T (L), Thorpe, D (L), van den Berg-Emons, R (L), Voglte, L (L), Roebroek, M (L)

L4 Burgess, A (L), Boyd, R (L), Chatfield, M (L), Ziviani, J (L), Ware, R (L), Sakzewski, L (L)

L5 de la Cruz, J (L), Sellier, E (L), Horber, V (L), Franki, I (L), Pallás, c (L), Himmelmann, K (L), Ortibus, E (L)

L6 Harbourne, R (L), Dusing, S (L), Lobo, M (L), McCoy, S (L), Koziol, N (L), Hsu, L (L), Willett, S (L), Marcinowski, E (L), Babik, I (L), Cunha, A (L), An, M (L), Chang, H (L), Bovaird, J (L), Sheridan, S (L)

L7 Miller, L (L), Nickson, G (L), Imms, C (L), Rosenbaum, P (L), Ziviani, J (L), Martens, R (L), Cavalieros, V (L), Cross, A (L)

L8 Tripathi, T (L), Cabral, T (L), Barbosa, G (L), Harrison, T (L), Simsic, J (L), Heathcock, J (L)

L9 Papadelis, C (L), tamilia, e (L), Parker, M (L), Rocchi, M (L), Taffoni, F (L), Hansen, A (L), Grant, P (L)

A10 Ostendorf, A (L), Morgan, L (L), Fedak Romanowski, E (L), Axeen, E (L), Eschbach, K (L), Goodkin, H (L), Gross, P (L)

B10 Brazevic, S (L), Jóźwiak, M (L), Krzyżańska, A (L), Kraśny, J (L), Ratajczyk, M (L), Sadecka, A (L)

C10 Smithers-Sheedy, H (L), McIntyre, S (L), Waight, E (L), Watson, L (L), Badawi, N (L), Reid, S (L), Gibson, c (L), Galea, C (L), DeLacy, M (L), Scott, H (L), Bartlett-clark, K (L), Maloney, E (L), Reddihough, D (L), Goldsmith, S (L), Blair, E (L)

D10 Eken, M (L), Lamberts, R (L), du Toit, J (L), Langerak, N (L)

E10 Miller, S (L), Lau, J (L), Juricic, M (L), Jivraj, B (L), Steinbok, P (L), Miyajji, F (L), Mulpuri, K (Allargan: C, E, Dupey Synthes (J&J): C, E, IPSEN: A, C, E, Pega Medical: I)

F10 Meilahn, J (Allergan plc: E), Kim, H (Allergan: Advisory Board member; Dysport: research grant, advisory board member), Racette, B (Allergan plc: E), Gul, F (Allergan plc: E), Chambers, H (Orthopediatrics: A), McCusker, E (Allergan plc: B, D), Chen, K (Allergan plc: B, D), Dimitrova, R (Allergan plc: B, D)

G10 Li, H (L), Xu, Z (L), Wang, B (L), Feng, J (L), Dong, H (L), feiyong, j (L)

H10 Jackman, m (L), Novak, I (L), Galea, C (L), Lannin, N (L), Sakzewski, L (L), Miller, L (L)

I10 Hoffman, R (L), Wilson, T (L), Kurz, M (L)

J10 Vogel, L (L), Chlan, K (L), Cwik, J (L), Mukherjee, S (L), Zebracki, K (L)

K10 deRegnier, R (L), Boswell, L (L), Russow, A (L), Santella, M (L), Weissbourd, M (L)

L10 Shrader, W (Orthopediatrics: A), Lennon, N (L), Church, C (L), Wickham, A (L), Niiler, T (L), Miller, F (L)

### UltraSound Symposium

Alter E (ASIM, NANA, Johns Hopkins University, OSU/Wexler School of Medicine: F); Kim H (Allergan, Dysport: A) Cancel D

### Orthopedic Day

Shrader M (Orthopediatrics: A) Kay R (Johnson & Johnson: J, Medtronic: J, Pfizer: J, Zimmer-Biomet: J), Lightdale-Miric, N (L) Scaduto A Goldstein R Abousamra O Vuillermin C Ponten E Nichols R Ramos-Platt L Miller F Halansky M Moraleda L Givon U Skaggs D Johnson M Pierz K (L) Graham H (NHMRC-CRE in Cerebral Palsy: E

Orthopediatrics: A), Rodby Bousquet E (L) Mulpuri K Davids J Shore B (L)

### International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting/Neurogenetics Symposium

Kruer M (L) McIntyre S (L) Wintle R Friedman J (L) Xin Q Moreno De Luca A Hu H Millan Zamora F Jin P Corbett M Lewis S van Eyk C

### Lower Extremity Osteotomies in Pediatric Orthopedics

Abousamra O Badkoobehi H Goldstein R Graham H (NHMRC-CRE in Cerebral Palsy: E, Orthopediatrics: A), Miller F Kay R (Johnson & Johnson: J, Medtronic: J, Pfizer: J, Zimmer-Biomet: J), Lightdale-Miric, N (L) Poon S Shore B Swaroop V Thompson R (L)

### PC1

Bickley C Howard M (L) Barnes D Graham H (NHMRC-CRE in Cerebral Palsy: E

Orthopediatrics: A), Lux M Thomason P (L)

### PC2

Roach H (L) Cihon I Goodwin E Huth K (L) Letzkus L Plews-Ogan J Srinivasan R

### PC3

McIntyre S (L) Himmelman K (L) Oskoui M (L) Khandaker G (L)

### PC4

Schiariti V (L) Bickenbach J (L) Simeonsson R Lyman J

### PC5

Maitre N (L) Byrne R (L) George J (L) Nelin M (L) Ayers S

**General Sessions**

Bickenbach J (L) Simeonsson R Gez J Davids J  
(Orthopediatrics: A) Thurm A (L) Hsiao A (A) Hochberg L Kraft  
D Cramer S (Abbvie, Constant Therapeutics, MicroTransponder,  
Neuroolutions, Regenera, SanBio, Stemedica, TRCare, and Fujifilm  
Toyoma Chemical Co.: A) Heumann J DiBello T Carter E (L)

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- Fox, John, BRK11  
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 Gaut, Liz, IC03  
 Gécz, Jozef, GS  
 Gehringer, James E., B9, I1  
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 Givon, Uri, ORTHO  
 Glader, Laurie, IC02, SYMP02, SYMP35  
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- Gustafson, Kathryn, A7  
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 Harpster, Karen, CC02, I5, SYMP41  
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 Heyn, Patricia C., IC12  
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Ibarra, Maria C., IC36  
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 Jin, Peter, ICPGC  
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 Johnston, Leanne M., E5, F3  
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Kakooza, Angelina, ICPGC  
 Kalandyak, Oleksandra, SYMP06  
 Kalisperis, Faithe R., D9, IC24  
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 Khandaker, Gulam, BRK01  
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 Kruer, Michael C., ICPGC  
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 Scaduto, Anthony A., ORTHO  
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 Scheinberg, Adam, CC04, SYMP03  
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 Schiariti, Verónica, CC01, IC06, PC4,

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Unmasking Potential



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