15th Annual
International Pediatric Orthopaedic Symposium

2018
November 27 – December 1
Orlando, Florida

Loews Royal Pacific Hotel
Orlando, Florida

Donald Bae, MD
Course Director
ONE POWERFUL TEAM

M A G E C  |  RE LINE Small Stature

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Thank You

The Pediatric Orthopaedic Society of North America and the American Academy of Orthopaedic Surgeons gratefully acknowledge the following for their generous support of the 2018 IPOS Meeting:

**Platinum Level**
- DePuy Synthes
- OrthoPeditcians

**Gold Level**
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**Pens** – Sponsored by Stanford Children’s Health
15th Annual International Pediatric Orthopaedic Symposium

Presented by

Donald Bae, MD
Director

About POSNA
The Pediatric Orthopaedic Society of North America (POSNA) is a group of professionals comprised mostly of pediatric orthopaedic surgeons. We are board certified in orthopaedic surgery and have participated in additional training to become specialized in the care of children’s musculoskeletal health and our practice reflects this dedication.

We, as a group, strive to become the authoritative source on such care through appropriate research that will lead to the best evidence-based patient care.

About AAOS
The American Academy of Orthopaedic Surgeons Founded in 1933, the Academy is the preeminent provider of musculoskeletal education to orthopaedic surgeons and others in the world. Its continuing medical education activities include a world-renowned Annual Meeting, multiple CME courses held around the country and at the Orthopaedic Learning Center, and various medical and scientific publications and electronic media materials.

The American Association of Orthopaedic Surgeons Founded by the Academy Board of Directors in 1997, the Association engages in health policy and advocacy activities on behalf of musculoskeletal patients and the profession of orthopaedic surgery.

Learning Objectives
At the conclusion of this course, learners should be able to:

- Effectively assess children with musculoskeletal conditions requiring care
- Compare and contrast surgical and non-operative treatment options for common pediatric orthopaedic conditions
- Apply alternative treatment techniques for selected pediatric orthopaedic conditions
- Identify, manage, and prevent complications of common pediatric orthopaedic conditions and treatments
- Implement evidence-based strategies for infection control, fracture care, and management of sports-related injuries.

Accreditation
These activities have been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Academy of Orthopaedic Surgeons and the Pediatric Orthopaedic Society of North America. The American Academy of Orthopaedic Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA Credit Designation
The American Academy of Orthopaedic Surgeons designates the live activity of the Full IPOS Course for a maximum of 24.25 AMA PRA Category 1 Credits™ and a maximum of 5.5 AMA PRA Category 1 Credits™ for the One-Day Fundamentals in Pediatric Orthopaedics Review Course. Physicians should claim only the credit commensurate with the extent of their participation in these activities.

IPOS Vision
Through our inspiring international faculty, innovative programming, and vibrant interactions among all attendees, IPOS aspires to be the best pediatric orthopaedic educational event in the world.

IPOS Mission
To provide the highest quality pediatric orthopaedic education to learners and practitioners of all levels.

Explore All Areas of Pediatric Orthopaedics
Immerse yourself in this exciting and interactive four-day program, alongside hundreds of pediatric orthopaedic professionals from around the world. Discover new insights and technology, and learn how to integrate best practices and new techniques into your care of children and adolescents. From fundamental fracture care to advanced surgical reconstruction, our renown international faculty share their expertise in every subspecialty field of pediatric orthopaedics.
Language
English will be the official language of IPOS.

2018 IPOS Meeting Policies

Event Cancellation
Due to circumstances beyond our control, the Pediatric Orthopaedic Society of North America may elect to cancel IPOS. These circumstances may include but are not limited to disaster, severe weather, civil commotion or government laws or regulations. In the event of such cancellation, all IPOS registrants will be notified by email at the address noted in the POSNA database; and registration fees will be refunded in full. Other costs incurred by the registrant, such as airline or hotel penalties, are the responsibility of the registrant.

No Smoking Policy
Smoking is not permitted during any meeting or event.

Privacy Policy – Use of Personal Information
IPOS registration lists, including the registrant’s name and postal mailing address are provided to POSNA’s sponsors as a sponsor benefit.

Reproduction Policy
POSNA and AAOS reserve any and all rights to materials presented at IPOS, including ePosters. Reproductions of any kind, by any person or entity, without prior written permission from POSNA, are strictly prohibited. Prohibited reproductions include, but are not limited to, audiotapes, videotape, and/or still photography. Cameras or video cameras may not be used in any portion of the scientific sessions. Persons violating this policy may have their badge confiscated and be escorted from the meeting. No unapproved surveys, handouts, or literature may be distributed at the meeting.

Photography
Registration and attendance at, or participation in, IPOS activities constitutes an agreement by the registrant to allow POSNA and AAOS to capture, retain, and utilize (both now and in the future) the attendees’ image, likeness, voice, and actions, whether captured live or recorded and in any format, during IPOS, for display, exhibition, publication, or reproduction in any medium or context for any purpose, including but not limited to, POSNA and AAOS member communications, commercial or promotional purposes.

Disclaimer
The material presented at IPOS has been made available by the Pediatric Orthopaedic Society of North America for educational purposes only. The material is not intended to represent the only, nor necessarily best, method or procedure appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement or opinion of the faculty which may be helpful to others who face similar situations.

POSNA and AAOS disclaim any and all liability for injury or other damages resulting to any individual attending IPOS and for all claims which may arise out of the use of the techniques demonstrated therein by such individuals, whether these claims shall be asserted by physician or any other person.

Insurance / Liabilities
POSNA and AAOS will not be held liable for personal injuries or for loss of or damage to property incurred by participants or guests at the 2018 IPOS Meeting, including those participating in social events. Participants and guests are encouraged to take out insurance to cover losses incurred in the event of cancellation, medical expenses or damage to or loss of personal effects when traveling outside their own country.

POSNA and AAOS cannot be held liable for any hindrance or disruption of IPOS arising from natural, political, social or economic events or other unforeseen incidents beyond its control. Registration of a participant implies acceptance of this condition.
FDA Statement (United States)

Some drugs or medical devices demonstrated at IPOS may not have been cleared by the FDA or have been cleared by the FDA for specific purposes only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice. Academy policy provides that “off label” uses of a drug or medical device may be described in the Academy’s CME activities so long as the “off label” use of the drug or medical device is also specifically disclosed (i.e., it must be disclosed that the FDA has not cleared the drug or device for the described purpose). Any drug or medical device is being used “off label” if the described use is not set forth on the product’s approval label.

Disclosure

Each faculty member in this meeting has been asked to disclose if he or she has received something of value from a commercial company or institution, which relates directly or indirectly to the subject of their presentation. An indication of the participant’s disclosure appears after his or her name as well as the commercial company or institution that provided the support. POSNA and AAOS do 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 meeting.

Registration Hours

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>Tuesday, November 27</td>
<td>3:00 PM – 7:00 PM</td>
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<tr>
<td>Wednesday, November 28</td>
<td>6:30 AM – 6:00 PM</td>
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<tr>
<td>Thursday, November 29</td>
<td>6:30 AM – 4:30 PM</td>
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<tr>
<td>Friday, November 30</td>
<td>6:30 AM – 5:00 PM</td>
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<tr>
<td>Saturday, December 1</td>
<td>6:30 AM – 2:30 PM</td>
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Onsite Registration Fees

- POSNA/AAOS Member: $1,399
- Orthopaedic Resident/Post Residency Fellow/ U.S. Military*/POSNA/AAOS Emeritus: $1,199
- Nonmember: $1,999
- Delegates from Reduced Rate Countries: $1,049
- Low Income (determined by World Bank): $899
- Saturday One-Day Fundamentals in Pediatric Orthopaedics Review Course (included with full registration): $399

*For AAOS/POSNA members in active U.S. military duty only

Exhibitor Registration Hours

<table>
<thead>
<tr>
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<tbody>
<tr>
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<tr>
<td>Thursday, November 29</td>
<td>6:30 AM – 4:30 PM</td>
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<tr>
<td>Friday, November 30</td>
<td>6:30 AM – 5:00 PM</td>
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</tbody>
</table>

Speaker Ready Room Hours

<table>
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<tr>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
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<tr>
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<tr>
<td>Friday, November 30</td>
<td>6:30 AM – 5:00 PM</td>
</tr>
<tr>
<td>Saturday, December 1</td>
<td>6:30 AM – 2:30 PM</td>
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“This is one of the most well-run well-organized educational meetings with such a depth and breadth of topics in pediatric orthopedics. I always learn more and improve my practice after attending.”

–2016 IPOS Attendee
The next-generation MESA® 2 screws are top-loading, low-profile, and feature Zero-Torque Technology®. The streamlined instrumentation is designed for efficiency and faster insertion. This system is poised to address the most difficult correction maneuvers for complex spinal pathologies.
15th Annual International Pediatric Orthopaedic Symposium

2018 IPOS Faculty
Stephen Albanese, MD*
Lindsay Andras, MD
Jill Ariagno, MSN, RN*
Alexandre Arkader, MD
Donald Baee, MD*
Laurel Blakemore, MD
Michael Busch, MD
Michelle Caird, MD
Pablo Castañeda, MD*
Henry (Hank) Chambers, MD
Jon Davids, MD*
Mark Erickson, MD, MMM
John (Jack) Flynn, MD*
Steven Frick, MD
Theodore Ganley, MD*
Michael Glotzbecker, MD
Charles Goldfarb, MD
Martin Herman, MD*
Jose Herrera Soto, MD
John Herzenberg, MD
Christine Ho, MD
Lori Karol, MD
Robert Kay, MD
Mininder Kocher, MD, MPH
Scott Kozin, MD
A. Noelle Larson, MD
William Mackenzie, MD*
James McCarthy, MD, MHCM
Amy McIntosh, MD
Todd Milbrandt, MD*
Vincent Mosca, MD
Peter Newton, MD
Kenneth Noonan, MD*
Tom Novacheck, MD
Dror Paley, MD, FRCSC
Jonathan Phillips, MD
Wudbhav (Woody) Sankar, MD
Jeffrey Sawyer, MD
Jonathan Schoenecker, MD, PhD*
Richard Schwend, MD
Suken Shah, MD*
Susan Scherl, MD
Kevin Shea, MD
Benjamin Shore, MD, MPH, FRCSC*
Ernest Sink, MD*
David Skaggs, MD, MMM
Brian Smith, MD
David Spiegel, MD
Paul Sponseller, MD
Anne Stuedemann, CPNP
Daniel Sucato, MD, MS
Vishwas Talwalker, MD
Bryan Tompkins, MD*
Michael Vitale, MD, MPH*
Peter Waters, MD
Jennifer Weiss, MD
Ira Zaltz, MD

International Faculty
Haemish Crawford, MD
Alain Dimeglio, MD
Deborah Eastwood, FRCS
David Farrington, MD
David Little, MBBS, FRACS, PhD
James Hoi Po Hui, FRCSE
Kishore Mulpuri, MD
Christof Radler, MD
Matthew Varghese, MS
Thomas Wirth, MD, PhD
Muharrem Yazici, MD

Instructors
Nicholas Fletcher, MD
Derek Kelly, MD
Javier Masquijo, MD
Gerad Montgomery MSN, FNP-C
L. Reid Nichols, MD
Coleen Sabatini, MD
Jessica Staschak MSN, CRNP, CPNP-PC

*2018 IPOS Advisory Board

posna.org orthokids.org posnacademy.org ipos.posna.org
## Schedule At a Glance

### Tuesday, November 27

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>3:00 PM - 7:00 PM</td>
<td>Registration North</td>
</tr>
<tr>
<td><strong>Resident Scholarship Recipient Case Presentations</strong></td>
<td>4:00 PM - 5:15 PM</td>
<td>Pacifica 1-3</td>
</tr>
<tr>
<td><strong>Career Planning and Professional Development for Residents and Fellows</strong></td>
<td>5:15 PM - 6:30 PM</td>
<td>Pacifica 1-3</td>
</tr>
<tr>
<td><strong>Pre-Course: Adolescent Idiopathic Scoliosis: Workup, Preop Planning and Tips for Success</strong> (non-CME)</td>
<td>6:45 PM - 8:00 PM</td>
<td>Pacifica 8-10</td>
</tr>
<tr>
<td><strong>Pre-Course: Villains and Heroes: Don’t Let your Implant Be Two-Face</strong> (sponsored by OrthoPediatrics) (non-CME)</td>
<td>6:45 PM - 8:00 PM</td>
<td>Pacifica 11-12</td>
</tr>
<tr>
<td><strong>Industry-sponsored Cocktail Reception</strong></td>
<td>8:00 PM - 8:45 PM</td>
<td>Java Sea</td>
</tr>
</tbody>
</table>

### Wednesday, November 28

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>6:30 AM - 6:00 PM</td>
<td>Registration North</td>
</tr>
<tr>
<td>Breakfast &amp; Exhibits</td>
<td>6:30 AM - 7:30 AM</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td><strong>GENERAL SESSION 1—Challenges &amp; Controversies in Pediatric Trauma</strong></td>
<td>7:30 AM - 10:00 AM</td>
<td>Pacifica 7</td>
</tr>
<tr>
<td><strong>Director’s Welcome</strong></td>
<td>10:00 AM - 10:10 AM</td>
<td>Pacifica 7</td>
</tr>
<tr>
<td><strong>Break &amp; Exhibits</strong></td>
<td>10:10 AM - 10:30 AM</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td><strong>CME Breakout—Ponseti 1 (hands-on workshop)</strong></td>
<td>10:30 AM - 12:00 PM</td>
<td>Banda Sea</td>
</tr>
<tr>
<td><strong>CME Breakout—Six Axis Deformity Correction with Circular Fixator I (hands-on workshop)</strong></td>
<td>10:30 AM - 12:00 PM</td>
<td>Java Sea</td>
</tr>
<tr>
<td><strong>CME Breakout—Case &amp; Controversies in Neuromuscular Conditions of the Upper Limb</strong></td>
<td>10:30 AM - 12:00 PM</td>
<td>Pacifica 8-9</td>
</tr>
<tr>
<td><strong>CME Breakout—Infant and Young Child- Cases and Complications in the Immature Hip</strong></td>
<td>10:30 AM - 12:00 PM</td>
<td>Pacifica 10</td>
</tr>
</tbody>
</table>

**Schedule Subject to Change**
### Schedule At a Glance, continued

#### Thursday, November 29

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>6:30 AM - 4:30 PM</td>
<td>Registration</td>
<td>Registration North</td>
</tr>
<tr>
<td>6:30 AM - 7:30 AM</td>
<td>Breakfast &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Industry Spotlight Sessions 3</td>
<td></td>
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<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Depuy Synthes</td>
<td>Pacifica 8-9</td>
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<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Medtronic</td>
<td>Pacifica 12</td>
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<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Orthofix</td>
<td>Pacifica 11</td>
</tr>
<tr>
<td>7:30 AM - 8:40 AM</td>
<td>OrthoPediatrics</td>
<td>Coral Sea</td>
</tr>
<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Pega Medical</td>
<td>Pacifica 10</td>
</tr>
<tr>
<td>8:40 AM - 9:00 AM</td>
<td>Break &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>9:00 AM - 11:30 AM</td>
<td>GENERAL SESSION 2: Global Orthopaedics</td>
<td>Pacifica 7</td>
</tr>
<tr>
<td>11:30 AM - 12:30 PM</td>
<td>Lunch &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>11:45 AM - 12:30 PM</td>
<td>Lunchtime Cases</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>12:30 PM - 2:00 PM</td>
<td>CME Breakout–Ponseti I (hands-on workshop)</td>
<td>Banda Sea</td>
</tr>
<tr>
<td>12:30 PM - 2:00 PM</td>
<td>CME Breakout–Six Axis Deformity Correction with Circular Fixator II: Tibia Fracture Management (hands-on workshop)</td>
<td>Java Sea</td>
</tr>
<tr>
<td>12:30 PM - 2:00 PM</td>
<td>CME Breakout–Medical Advances in Musculoskeletal Health and Disease</td>
<td>Pacifica 8-9</td>
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<tr>
<td>12:30 PM - 2:00 PM</td>
<td>CME Breakout–Pelvic Osteotomies I: Salter, Dega, Pemberton (hands-on workshop)</td>
<td>Timor Sea</td>
</tr>
<tr>
<td>12:30 PM - 2:00 PM</td>
<td>CME Breakout–Hip and Elbow Conditions in the Young Athlete</td>
<td>Pacifica 1-3</td>
</tr>
<tr>
<td>12:30 PM - 2:00 PM</td>
<td>CME Breakout–POPS Presents: Perioperative Management of the CP Patient</td>
<td>South China Sea</td>
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<tr>
<td>2:00 PM - 2:20 PM</td>
<td>Break &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>2:20 PM - 4:30 PM</td>
<td>Concurrent Session 3–Hip Conditions in the Older Child and Adolescent</td>
<td>Pacifica 7</td>
</tr>
<tr>
<td>2:20 PM - 4:30 PM</td>
<td>Concurrent Session 4–Skeletal Deformity Correction in MHE and OI</td>
<td>Pacifica 1-3</td>
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<tr>
<td>5:00 PM - 7:30 PM</td>
<td>Top Gun Surgical Simulation Competition (By Invitation Only)</td>
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#### Friday, November 30

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>6:30 AM - 5:00 PM</td>
<td>Registration</td>
<td>Registration North</td>
</tr>
<tr>
<td>6:30 AM - 7:30 AM</td>
<td>Breakfast &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Industry Spotlight Sessions 4</td>
<td></td>
</tr>
<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Depuy Synthes</td>
<td>Pacifica 8-9</td>
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<tr>
<td>7:30 AM - 8:40 AM</td>
<td>OrthoPediatrics</td>
<td>Coral Sea</td>
</tr>
<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Pega Medical</td>
<td>Pacifica 10</td>
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<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Stryker Trauma</td>
<td>Pacifica 11-12</td>
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<tr>
<td>7:30 AM - 8:40 AM</td>
<td>Zimmer Biomet</td>
<td>South China Sea</td>
</tr>
<tr>
<td>8:40 AM - 9:00 AM</td>
<td>Break &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>9:00 AM - 11:30 AM</td>
<td>Concurrent Session 5–Adolescent Idiopathic and Early Onset Scoliosis</td>
<td>Pacifica 1-3</td>
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<tr>
<td>11:30 AM - 12:30 AM</td>
<td>Lunch &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>11:45 AM - 12:30 PM</td>
<td>Lunchtime Cases</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>12:30 PM - 2:50 PM</td>
<td>GENERAL SESSION 3: Authors’ Preferred Techniques</td>
<td>Pacifica 7</td>
</tr>
<tr>
<td>2:50 PM - 3:05 PM</td>
<td>Awards and Acknowledgements</td>
<td>Pacifica 7</td>
</tr>
<tr>
<td>3:10 PM - 3:30 PM</td>
<td>Break &amp; Exhibits</td>
<td>Pacifica 6</td>
</tr>
<tr>
<td>3:30 PM - 5:00 PM</td>
<td>CME Breakout–Ponseti II</td>
<td>Banda Sea</td>
</tr>
<tr>
<td>3:30 PM - 5:00 PM</td>
<td>CME Breakout–Six Axis Deformity Correction with Circular Fixator III: Blout’s Disease (hands-on workshop)</td>
<td>Java Sea</td>
</tr>
<tr>
<td>3:30 PM - 5:00 PM</td>
<td>CME Breakout–Musculoskeletal Infections</td>
<td>Pacifica 7</td>
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<tr>
<td>3:30 PM - 5:00 PM</td>
<td>CME Breakout–Pelvic Osteotomies II: Triple, PAO</td>
<td>Timor Sea</td>
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<tr>
<td>3:30 PM - 5:00 PM</td>
<td>CME Breakout–Gait I: Normal vs Pathological Gait</td>
<td>Pacifica 8-9</td>
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<tr>
<td>3:30 PM - 5:00 PM</td>
<td>CME Breakout–POPS Presents: Pediatric Fracture Clinic: Insights from the Trenches</td>
<td>Coral Sea</td>
</tr>
<tr>
<td>3:30 PM - 5:00 PM</td>
<td>CME Breakout–Spine: Spondylosis and Spondyloisthesis</td>
<td>Pacifica 10</td>
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Schedule At a Glance, continued

Saturday, December 1

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>6:30 AM - 2:30 PM</td>
<td>Registration North</td>
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<tr>
<td>6:30 AM - 7:30 AM</td>
<td>Breakfast Pacifica 6</td>
</tr>
<tr>
<td>7:30 AM - 9:40 AM</td>
<td>GENERAL SESSION 5: The Child’s Foot Pacifica 7</td>
</tr>
<tr>
<td>8:00 AM - 2:30 PM</td>
<td>One-Day Fundamentals in Pediatric Orthopaedics Review Course Pacifica 1-3</td>
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<tr>
<td>9:40 AM - 10:10 AM</td>
<td>Break Pacifica 6</td>
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<tr>
<td>10:00 AM - 11:30 AM</td>
<td>CME Breakout–Six Axis Deformity Correction with Circular Fixator IV: Treatment of Ankle Equinus Contracture (hands-on workshop) Java Sea</td>
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<tr>
<td>10:00 AM - 11:30 AM</td>
<td>CME Breakout–Principles and Techniques in Pediatric Sports Pacifica 7</td>
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<tr>
<td>10:00 AM - 11:30 AM</td>
<td>CME Breakout–Patient and Provider Wellness Pacifica 10</td>
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<tr>
<td>10:00 AM - 11:30 AM</td>
<td>CME Breakout–Gait II: Cased-based Decision Making, from Beginner to Advanced Pacifica 8-9</td>
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<tr>
<td>11:30 AM - 12:00 PM</td>
<td>Lunch Pacifica 6</td>
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Please remember to complete the IPOS evaluation in the mobile app.

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Craft your own IPOS Adventure by Topic:

### General Pediatric Orthopaedics/Trauma
- **Challenges & Controversies in Pediatric Trauma** (General Session 1 – Wednesday, 11/28, 7:30-10 AM)
- **Global Orthopaedics** (General Session 2 – Thursday, 11/29, 9-11:30 AM)
- **Medical Advances in Musculoskeletal Health and Disease** (CME Breakout – Thursday, 11/29, 12:30 PM-2 PM)
- **Authors’ Preferred Techniques** (General Session 3 – Friday, 11/30, 12:30-2:50 PM)
- **Musculoskeletal Infections** (CME Breakout – Friday, 11/30, 3:30-5 PM)
- **Patient and Provider Wellness** (CME Breakout – Saturday, 12/1, 10-11:30 AM)

### Hip
- **Cases and Complications in the Immature Hip** (CME Breakout – Wednesday, 11/28, 10:30 AM-12 PM)
- **Pelvic Osteotomies I: Salter, Dega, Pemberton** (CME Breakout – Thursday, 11/29, 12:30-2 PM)
- **Hip Conditions in the Older Child and Adolescent** (Concurrent Session 3 – Thursday, 11/29, 2:20-4:30 PM)
- **Pelvic Osteotomies II: Triple, PAO** (hands-on workshop) (CME Breakout – Friday, 11/30, 3:30-5 PM)

### Hand & Upper Extremity
- **Congenital Conditions and Trauma of the Upper Limb** (Concurrent Session 2 – Wednesday, 11/28, 1:00-3:10 PM)

### Spine
- **Adolescent Idiopathic and Early Onset Scoliosis** (Concurrent Session 4 – Friday, 11/30, 9-11:30 AM)
- **Spine: Spondylolysis and Spondylolisthesis** (CME Breakout – Friday, 11/30, 3:30-5 PM)

### Sports
- **Hip and Elbow Conditions in the Young Athlete** (CME Breakout – Thursday, 11/29, 12:30 PM-2 PM)
- **Knee Injuries in the Young Athlete** (Concurrent Session 6 – Friday, 11/30, 9-11:30 AM)
- **Principles and Techniques in Pediatric Sports** (CME Breakout – Saturday, 12/1, 10-11:30 AM)

### Lower Extremity/Deformity
- **Six Axis Deformity Correction with Circular Fixator I** (hands-on workshop) (CME Breakout – Wednesday, 11/28, 10:30 AM-12 PM)
- **Fixator II** (hands-on workshop) (CME Breakout – Thursday, 11/29, 12:30-2 PM)
- **Fixator III** (hands-on workshop) (CME Breakout – Friday, 11/30, 3:30-5 PM)
- **Fixator IV** (hands-on workshop) (Saturday, 12/1, 10-11:30 AM)

### Neuromuscular & Cerebral Palsy
- **Case & Controversies in Neuromuscular Conditions of the Upper Limb** (CME Breakout – Wednesday, 11/28, 10:30 AM-12 PM)
- **Medical and Surgical Treatment of the Neuromuscular Patient** (Concurrent Session 1 – Wednesday, 11/28, 1:00 - 3:10 PM)
- **Gait I: Normal vs Pathological Gait** (CME Breakout – Friday, 11/30, 3:30-5 PM)
- **Gait II: Case-based Decision-Making in Gait, Analysis, from Beginner to Advanced** (CME Breakout – Saturday, 12/1, 10-11:30 AM)

### Foot
- **Ponseti I** (hands-on workshop) (CME Breakout – Wednesday, 11/28, 10:30 AM-12 PM)
- **Ponseti II** (hands-on workshop) (CME Breakout – Thursday, 11/29, 12:30-2 PM)
- **Ponseti III** (CME Breakout – Friday, 11/30, 3:30-5 PM)
- **The Child’s Foot** (General Session 4 – Saturday, 12/1, 7:30-9:40 AM)

### Syndromes, Dysplasias & Genetic Conditions
- **Dysplasias and Syndromes** (CME Breakout – Wednesday, 11/28, 10:30 AM-12 PM)
- **Skeletal Deformity Correction in MHE and OI** (Concurrent Session 4 – Thursday, 11/29, 2:20-4:30 PM)

### POPS
- **POPS Presents: Special Considerations for Early Onset Scoliosis** (CME Breakout – Wednesday, 11/28, 10:30 AM-12 PM)
- **POPS Presents: Perioperative Management of the CP Patient** (CME Breakout – Thursday, 11/29, 12:30-2 PM)
- **POPS Presents: Pediatric Fracture Clinic: Insights from the Trenches** (CME Breakout – Friday, 11/30, 3:30-5 PM)
Industry Spotlight Sessions (Non-CME)

**Wednesday, November 28**

**3:30 PM–4:40 PM**  
**Industry Spotlight Session #1**

**ARTHREX**  
**Managing Pediatric ACL Ruptures**  
Theodore Ganley, MD; Michael Busch, MD; Kevin Shea, MD

**DEPUY SYNTHES**  
**Pitfalls and Pearls for Proximal Femoral Osteotomies**  
James McCarthy, MD; Martin Herman, MD; Ernest Sink, MD

**NUVASIVE**  
**Early Onset Scoliosis: How to Approach and Treat EOS**  
Michael Glotzbecker, MD; Lindsay Andras, MD

**ORTHOPEDIATRICS**  
**Navigate Don’t Complicate: The Advantages of 3D Printed Guides in Scoliosis Surgery**  
Dominic Tuason, MD; Chris Hardesty, MD; Joseph DeWitt, MD

**STRYKER SPINE**  
**Best Practices in EOS and AIS – What I Have Learned**  
Suken Shah, MD; Scott Luhmann, MD; Michael Vitale, MD, MPH

**4:50 PM–6:00 PM**  
**Industry Spotlight Session #2**

**ARTHREX**  
**Glenohumeral Stabilization in the Young Population**  
Theodore Ganley, MD; Michael Busch, MD; Kevin Shea, MD

**DEPUY SYNTHES**  
**Pediatric Femur Fracture Management**  
James McCarthy, MD; Martin Herman, MD; Ernest Sink, MD

**ORTHOPEDIATRICS**  
**Decision-Making in Early Onset Scoliosis**  
Jonathan Phillips, MD; Tim Oswald, MD; Scott Luhmann, MD

**VILEX IN TENNESSEE, INC.**  
**Computer Dependent Hexapod External Fixation: The Second Generation of Software and Hardware**  
Dror Paley, MD, FRCSC; Craig Robbins, MD

**WRIGHT MEDICAL**  
**Addressing Challenging Benign Bone Tumors and Cysts in the Pediatric Population**  
Michelle Ghert, MD; Ronald Williams, PhD, MD

**Thursday, November 29**

**7:30 AM–8:40 AM**  
**Industry Spotlight Session #3**

**DEPUY SYNTHES SPINE**  
**Neuromuscular Scoliosis: Principles of Management and Complication Prevention**  
Suken Shah, MD; John (Jack) Flynn, MD; Jeffrey Sawyer, MD

**MEDTRONIC**  
**Navigation in the Pediatric Spine: When and Why**  
Daniel Mulconrey, MD; Michael Glotzbecker, MD

**ORTHOPEDIATRICS**  
**How Technology Can Improve Patients Outcome: TL-HEX Blout’s Case Discussion**  
Mikhail Samchucov, MD; Alexandre Arkader, MD; Emory Chang, MD

**ORTHOPEDIATRICS**  
**What to Do When Things Go Wrong: Pediatric Orthopedic Trauma**  
Marty Morrison, MD; Josh Murphy, MD

**PEGA MEDICAL**  
**Small Canal Solutions for the Pediatric Population: FD-GAP-SLIM IM Systems**  
Dror Paley, MD, FRCSC; Miguel Galban, MD

**Friday, November 30**

**7:30 AM–8:40 AM**  
**Industry Spotlight Session #4**

**DEPUY SYNTHES SPINE**  
**Treatment of AIS: Beyond the Basics**  
Suken Shah, MD; Daniel Sucato, MD; Michael Glotzbecker, MD

**ORTHOPEDIATRICS**  
**The Thin Black Line: Moving the Mechanical Axis via Distal Femoral Osteotomies**  
Todd Milbrandt, MD; Nick Fletcher, MD

**PEGA MEDICAL**  
**Innovation in Proximal Femoral Osteotomies: The LolliPOP System**  
Shawn Standard, MD; Elizabeth Weber, MD

**STRYKER TRAUMA**  
**Workshop Highlighting the HLRF Hexapod Software and Its Interaction with the HLRF Hardware to Manage Deformity Correction in the Lower Extremity of Pediatric Patients**  
Brad Culotta, MD

**ZIMMER BIOMET**  
**Power Pedicle Preparation, Surgeon Preservation Utilizing the Vitality + Power System**  
David Skaggs, MD, MMM; Michael Vitale, MD, MPH
PEDIATRIC ORTHOPAEDIC SURGERY CAREER OPPORTUNITY

The Department of Pediatric Orthopaedic Surgery at Joe DiMaggio Children’s Hospital is seeking an eighth full-time BE/BC fellowship-trained Pediatric Orthopaedist to join our extremely collegial, rapidly expanding practice. Subspecialty interest in upper extremity, sports, oncology or non-operative is a strong plus, but not required. This is an excellent opportunity to join a regional referral, tertiary care practice at a large freestanding and full-service children’s hospital. This is an academic-style practice with strong subspecialty programs in spinal deformity, sports medicine, limb deformity, tumors and hip surgery. Our extensive referral base includes four counties in South Florida (population nearly six million) and the Caribbean. An active transport team provides rotary, fixed-wing and ground transport (regional and international).

This is a full-time employed position with the multi-specialty Memorial Physician Group. The position offers competitive benefits and a compensation package that is commensurate with training and experience. Professional malpractice and medical liability is covered under sovereign immunity.

About Joe DiMaggio Children’s Hospital

Joe DiMaggio Children’s Hospital opened in 1992 and has grown to be the leading children’s hospital in Broward and Palm Beach counties. With 226 beds, an 84-bed Level II and III NICU, 30-bed PICU and 12-bed intermediate care unit, Joe DiMaggio Children’s Hospital combines leading-edge clinical excellence with a child- and family-friendly environment that emphasizes the Power of Play. In addition, our team specializes in treating young athletes through our [U18] Sports Medicine program.

About South Florida

South Florida offers a dynamic urban/suburban lifestyle with an abundance of cultural and recreational amenities, miles of beautiful beaches, top-rated golf courses, zoos and wildlife refuges, a vibrant arts community, museums and world-class dining. South Florida’s high quality of life – including year-round summer weather, exciting multiculturalism and no state income tax – attracts new residents from all over the country and around the world.

For more information about the division, please visit www.kidbones.net. Interested candidates should submit their CV to Michael Jofe, MD at mjofe@mhs.net.

visit kidbones.net and memorialphysician.com

LIVE. WORK. PLAY.
Tuesday, November 27

3:00 PM–7:00 PM  REGISTRATION
4:00 PM–5:15 PM  Scholarship Recipient Case Presentations
5:15 PM–6:30 PM  Career and Professional Development for Residents and Fellows
6:45 PM–8:00 PM  CONCURRENT EVENTS  (Non-CME)

Industry Pre-Course

Adolescent Idiopathic Scoliosis: Workup, Preop Planning and Tips for Success
Sponsored by NuVasive
Faculty: Suken Shah, MD; Amy McIntosh, MD
This IPOS Precourse will establish a strong foundation in the surgical treatment of AIS for the pediatric care provider to build upon during the week. Aspects of the workup and nonoperative treatment will be followed by a stepwise progression from the basics to the advanced operative considerations for the patient with AIS. There will be sufficient time for interactive, case-based discussions and questions for the faculty.

Industry Pre-Course

Villains and Heroes: Don’t Let your Implant Be Two-Face
Sponsored by OrthoPediatrics
Faculty: Jonathan Schoenecker, MD, Christopher Stutz, MD, Alexandre Arkader, MD and Brandon Ramo, MD
Innovations in orthopaedic instrumentation have propelled the ability of orthopaedic surgeons to care for pathology suffered by children in once unthinkable ways. From hardware to treat trauma, fuse the spine or lengthen a limb, the devices of the 21st century allow for correction of the most severe deformities. Paralleling these innovations in hardware are recent breakthroughs in our understanding of bone biology, and how these devices affect it. Lessons learned from past failures clearly reveal that while these innovative devices can allow the orthopaedic surgeon to be the hero, incorrect application, or technique, may be equally villainous by interfering with the bone biology necessary to unite bone. In this pre-course we will take a journey through orthopaedic time, discussing the history of development of devices, modern pearls for how not to be the villain with your device and a glimpse at the future of orthopaedic instrumentation.

Wednesday, November 28

6:30 AM–6:00 PM  REGISTRATION
6:30 AM–7:30 AM  BREAKFAST and EXHIBITS
7:30 AM–10:00 AM  GENERAL SESSION 1- Challenges & Controversies in Pediatric Trauma
Join our international faculty for brief presentations on challenging and controversial topics in pediatric trauma.

7:30 AM  Moderator: Donald Bae, MD
eModerator: Christine Ho, MD

7:30 AM  Introduction – Donald Bae, MD

7:33 AM  Posterior SCJ Dislocations: When and How to Reduce
Donald Bae, MD

7:39 AM  Proximal Humerus Fractures: Which Need Surgery?
Haemish Crawford, MD

7:45 AM  Pulseless Supracondylar: Observe or Explore
Peter Waters, MD

7:51 AM  Discussion
Panelists: Donald Bae, MD
Haemish Crawford, MD
Peter Waters, MD

7:57 AM  Adolescent T-Condylar Fracture: Approach and Fixation Options
Martin Herman, MD

8:03 AM  Monteggia Fracture-Dislocations: Cast or Surgery?
Jeffrey Sawyer, MD

8:09 AM  Radial Neck Fracture: When to Open?
Todd Milbrandt, MD

8:15 AM  Discussion
Panelists: Martin Herman, MD
Jeffrey Sawyer, MD
Todd Milbrandt, MD

8:24 AM  Upper Extremity Cases
Panelists: Haemish Crawford, MD
Peters M. Waters, MD
Christine Ho, MD
Todd Milbrandt, MD

8:50 AM  Moderator: John (Jack) Flynn, MD
eModerator: Derek Kelly, MD

8:50 AM  Femoral Neck Fracture: Is It an Emergency?
Christof Radler, MD

8:56 AM  4 Year Old with Femoral Shaft Fracture: Spica or Internal Fixation?
John (Jack) Flynn, MD

9:02 AM  Patellar Dislocation: Primary MPFL Repair?
James Hoi Po Hui, FRCSE

Schedule Subject to Change
Wednesday, November 28, continued

9:08 AM  Discussion  
Panelists: Christof Radler, MD  
John (Jack) Flynn, MD  
James Hoi Po Hui, FRCSE

9:17 AM  Tibial Spine Fracture:  
Reduce/Cast or Scope?  
Kevin Shea, MD

9:23 AM  Diaphyseal Tibia Fracture in the Teen  
with Open Physis: Best Fixation?  
Susan Scherl, MD

9:29 AM  Distal Tibia Growth Arrest:  
Open Reduction to Avoid Physeal Arrest?  
Vishwas Talwalker, MD

9:35 AM  Discussion  
Panelists:  
Kevin Shea, MD  
Susan Scherl, MD  
Vishwas Talwalker, MD

9:44 AM  Lower Extremity Cases  
Panelists:  
John (Jack) Flynn, MD  
Kevin Shea, MD  
James Hoi Po Hui, FRCSE  
Susan Scherl, MD  
Vishwas Talwalker, MD

10:00 AM  Director’s Welcome

10:10 AM  BREAK and EXHIBITS

10:30 AM–12:00 PM  CME BREAKOUT SESSIONS  
(Advance Sign-up Encouraged for Hands-on Workshops)

Case & Controversies in Neuromuscular Conditions of the Upper Limb
Case-based discussion of how to treat common upper limb deformities in children with cerebral palsy and arthrogryposis, including examination pearls and surgical techniques.

Cerebral Palsy
Moderator: Peter Waters, MD

10:30 AM  Introduction  
Peter Waters, MD

10:32 AM  Case Presentation  
Peter Waters, MD

10:36 AM  The Pronated Forearm  
Peter Waters, MD

10:44 AM  The Flexed Wrist  
Charles Goldfarb, MD

10:52 AM  The Thumb in Palm  
Scott Kozin, MD

11:00 AM  Q&A  
Panelists:  
Peter Waters, MD  
Charles Goldfarb, MD  
Scott Kozin, MD

Arthrogryposis
Moderator: Scott Kozin, MD

11:15 AM  Case Presentation  
Scott Kozin, MD

11:19 AM  Evaluation of the UE in AMC  
Christine Ho, MD

11:27 AM  Master Technique:  
Restoring Elbow Motion  
Scott Kozin, MD

11:34 AM  Master Technique: Carpal Osteotomy  
Peter Waters, MD

11:41 AM  Master Technique: First Web Space  
Charles Goldfarb, MD

11:48 AM  Discussion  
Panelists:  
Peter Waters, MD  
Charles Goldfarb, MD  
Scott Kozin, MD  
Christine Ho, MD

Cases and Complications in the Immature Hip
Join our IPOS faculty for brief presentations, debates, and case-based discussions of the immature hip. Topics covered will include infant hip dysplasia as well as Perthes disease.

DDH in the Infant
Moderator: Ernest Sink, MD

10:30 AM  Mild Dysplasia: Pavlik Harness,  
Abduction Bracing or Observation?  
Ernest Sink, MD

Panelists:  
Lori Karol, MD  
Kishore Mulpuri, MD

Six Axis Deformity Correction with Circular Fixator I  
This hands-on workshop will guide you through six-axis deformity correction using circular external fixators. While each breakout session may be attended as a stand alone experience, registrants are encouraged to attend all four sessions to maximize their knowledge and skills. Join our international experts for this unique lab experience, complete with bone models, hexapod external fixators, and computer software programs to generate prescription for deformity correction.

Chair: Christof Radler, MD
Faculty: John Herzenberg, MD  
L. Reid Nichols, MD

Ponseti I (hands-on workshop)
From the fundamental principles to technical pearls, learn from our international experts the technique of Ponseti casting for clubfoot.

Chair: Kenneth Noonan, MD
Faculty: Jon Davids, MD  
Alain Dimeglio, MD  
Derek Kelly, MD  
Vincent Mosca, MD

15th Annual International Pediatric Orthopaedic Symposium
Wednesday, November 28, continued

10:30 AM-12:00 PM CME BREAKOUT SESSIONS continued

10:37 AM
Closed Reduction: What is Good Enough?
Thomas Wirth, MD, PhD

10:44 AM
It is Best to Perform the Open Reduction Before Walking Age
Deborah Eastwood, FRCS

10:51 AM
It is Best to Wait Until 18 Months of Age to Add a Acetabular Procedure
Pablo Castañeda, MD

10:58 AM
Discussion/Case
Ernest Sink, MD
Panelists: Deborah Eastwood, FRCS
Pablo Castañeda, MD

11:09 AM
Why Did this Open Reduction Fail?
Ira Zaltz, MD
Panelists: Ernest Sink, MD
Deborah Eastwood, FRCS
Pablo Castañeda, MD

11:16 AM
Pelvic Osteotomies
Jose Herrera Soto, MD

Debates
Moderator: Wudbhav (Woody) Sankar, MD

11:23 AM
Assessment and Imaging in 2018
Wudbhav (Woody) Sankar, MD

11:29 AM
Nonoperative Treatment Works and Here’s Why
Stephen Albanese, MD

11:35 AM
Early Surgical Containment is the Key
David Little, MBBS, FRACS, PhD

11:41 AM
Salvage Procedures and Managing Hinge Abduction
Daniel Sucato, MD, MS

11:46 AM
Case Discussion
Wudbhav (Woody) Sankar, MD
Panelists: Stephen Albanese, MD
David Little, MBBS, FRACS, PhD
Daniel Sucato, MD, MS

Neurofibromatosis

11:10 AM
Neurofibromatosis Spinal Deformity: Pearls and Pitfalls
David Farrington, MD

11:17 AM
NF Ulnar Pseudarthrosis: Brace or Operate?
Donald Bae, MD

11:23 AM
NF Tibial Pseudarthrosis: Evidence-Based Treatment
Lori Karol, MD

11:30 AM
Discussion
Panelists: David Farrington, MD
Donald Bae, MD
Lori Karol, MD

Other Syndromes

11:40 AM
Larsen’s Syndrome: Management of Hip, Knee and Foot Deformity
William Mackenzie, MD

11:47 AM
MPS: Upper Extremity
Christine Ho, MD

11:54 AM
Overgrowth Syndromes
Paul Sponseller, MD

POPS Presents: Special Considerations for Early Onset Scoliosis

Join our IPOS and POPS faculty in discussions regarding the evaluation and treatment of early onset scoliosis patients: small patients with big problems. Topics will include casting, bracing, surgical interventions, and things you need to tell your patients.

Moderator: Anne Stuedemann CPNP

10:30 AM
Epidemiology/Evaluation
Carrie Chan, CPNP

10:43 AM
Risser Casting: Indications, Techniques, Pros/Cons, Special Considerations
Nigel Price, MD

10:54 AM
Bracing: TLSO; Pearls and Pitfalls
Jill Ariagno, MSN, RN

11:05 AM
Distraction Based Fusionless Growing Techniques: Rib-based, spine-based, spine-based Magnetic
Nigel Price, MD
Wednesday, November 28, continued

11:20 AM  Special Consideration for Early Onset Scoliosis Management: Guided Growth  
           Richard Schwend, MD

11:32 AM  Perioperative/Post-operative Considerations for these Special Populations  
           Jill Ariagno, MSN, RN

11:45 AM  Panel Discussion/Case Presentation  
           Panelists:  Nigel Price, MD  
                       Richard Schwend, MD  
                       Carrie Chan, CPNP  
                       Jill Ariagno, MSN, RN

12:00 PM–1:00 PM  LUNCH and EXHIBITS

1:00 PM–3:10 PM  CONCURRENT SESSION 1 – Medical and Surgical Treatment of the Neuromuscular Patient  
                 Join our IPOS faculty for discussion of tone management, neuromuscular hip dysplasia, and spinal deformity in patients with cerebral palsy.

1:00 PM  Moderator:  Jon Davids, MD  
         eModerator:  Benjamin Shore, MD, MPH, FRCSC

Tone Management Options for Non-ambulatory Patient
1:00 PM  Introduction  
         Jon Davids, MD

1:02 PM  Botox (Indications/Ideal Candidate)  
         Benjamin Shore, MD, MPH, FRCSC

1:08 PM  Oral Baclofen (Indications/Ideal Candidate)  
         David Spiegel, MD

1:14 PM  Intrathecal Baclofen Pump (Indications/Ideal Candidate)  
         James McCarthy, MD, MHCM

1:19 PM  Selective Dorsal Rhizotomy (Indications/Ideal Candidate)  
         Tom Novacheck, MD

1:25 PM  Discussion  
         Panelists:  Benjamin Shore, MD, MPH, FRCSC  
                    David Spiegel, MD  
                    James McCarthy, MD, MHCM  
                    Tom Novacheck, MD

Neuromuscular Hip Dysplasia
1:30 PM  Pathophysiology / Pathoanatomy / Natural History  
         Jon Davids, MD

1:36 PM  Hip Surveillance: The Evidence / The Guidelines / Challenges to Implementation  
         Kishore Mulpuri, MD

1:42 PM  Soft Tissue Surgery: Indications / Technique / Pearls  
         Jonathan Phillips, MD

1:48 PM  Skeletal Surgery: Femoral Osteotomy Indications / Technique / Pearls  
         Benjamin Shore, MD, MPH, FRCSC

2:00 PM  Pelvic Osteotomy in Skeletally Mature Indications/Technique/Pearls  
         Tom Novacheck, MD

2:06 PM  Palliative Surgery: Indications/Technique/Pearls  
         Jon Davids, MD

2:14 PM  Discussion  
         Panelists:  Jon Davids, MD  
                    Kishore Mulpuri, MD  
                    Jonathan Phillips, MD  
                    Benjamin J. Shore, MD, MPH  
                    Robert Kay, MD  
                    Tom Novacheck, MD

2:25 PM  Moderator:  Lindsay Andras, MD  
         eModerator:  Nicholas Fletcher, MD

Neuromuscular Spine Deformity
2:25 PM  Pathophysiology, Natural History, Surveillance and Assessment  
         Lindsay Andras, MD

2:33 PM  Nonsurgical Management  
         David Spiegel, MD

2:39 PM  Preoperative Traction & Staged Releases  
         Michael Glotzbecker, MD

2:45 PM  Surgical Management: Indications / Technique / Pearls  
         Suken Shah, MD

2:53 PM  Concomitant Spine/Hip Disease: Pathophysiology / Treatment Options  
         Mark Erickson, MD, MMM

2:58 PM  Discussion  
         Panelists:  Lindsay Andras, MD  
                    David Spiegel, MD  
                    Michael Glotzbecker, MD  
                    Suken Shah, MD  
                    Mark Erickson, MD, MMM

1:00 PM–3:10 PM  CONCURRENT SESSION 2 – Congenital Conditions and Trauma of the Upper Limb  
                 When faced with late-presenting conditions or complications of upper limb fractures, often we ask whether it’s better to observe or intervene. Join our IPOS faculty in exploring treatment options for complications of upper extremity trauma.

1:00 PM  Moderator:  Donald Bae, MD  
         eModerator:  Martin Herman, MD

Complications of UE Trauma: Observe or Operate?
1:00 PM  Introduction  
         Donald Bae, MD

1:02 PM  Late Presenting Posterior SCJ  
         Peter Waters, MD

1:08 PM  Lateral Condyle Nonunion  
         Haemish Crawford, MD
Wednesday, November 28, continued

1:00 PM–3:10 PM  **CONCURRENT SESSION 2 continued**

1:14 PM  Chronic Monteggia  
Scott Kozin, MD

1:20 PM  Discussion  
Panelists: Peter Waters, MD  
Haemish Crawford, MD  
Scott Kozin, MD

1:35 PM  Radial Neck Malunion  
Charles Goldfarb, MD

1:41 PM  Forearm Malunion  
Martin Herman, MD

1:47 PM  DRF Growth Arrest  
Donald Bae, MD

1:52 PM  Discussion  
Panelists: Charles Goldfarb, MD  
Martin Herman, MD  
Christine Ho, MD

**Controversies in Common Congenital Conditions**  
Our expert faculty in congenital hand and upper limb differences explore current controversies in the treatment of syndactyly, radial longitudinal dysplasia, and radioulnar synostosis in this case-based session.

Moderator: Peter Waters, MD  
eModerator: Christine Ho, MD

2:00 PM  Case Presentation: Syndactyly  
Donald Bae, MD

2:03 PM  Release It with Skin Graft  
Scott Kozin, MD

2:09 PM  Graftless and/or Matrix is Better  
Charles Goldfarb, MD

2:14 PM  Discussion  
Panelists: Peter Waters, MD  
Scott Kozin, MD  
Charles Goldfarb, MD

**RLD: Observe vs Centralize vs Mobilize**

2:20 PM  Case Presentation: RLD  
Scott Kozin, MD

2:23 PM  Centralization is Tried Tested and True  
Charles Goldfarb, MD

2:29 PM  Centralization not Enough: Need to Ulnarize!  
Dror Paley, MD, FRCSC

2:35 PM  Motion Preserving Procedures are Better!  
Peter Waters, MD

2:40 PM  Discussion  
Panelists: Charles Goldfarb, MD  
Dror Paley, MD, FRCSC  
Peter Waters, MD

**RUS: Gradual or Acute**

2:50 PM  Case Presentation on RUS  
Donald Bae, MD

2:53 PM  Single-stage Correction: Set It and Forget It  
Peter Waters, MD

2:59 PM  Gradual Correction: Safer and more Powerful  
Christine Ho, MD

3:04 PM  Discussion  
Panelists: Peter Waters, MD  
Christine Ho, MD  
Scott Kozin, MD

3:09 PM  BREAK and EXHIBITS

3:30 PM–4:40 PM  **Industry Spotlight Sessions**  
(Non-CME)

4:40 PM–6:00 PM  **Industry Spotlight Sessions**  
(Non-CME)

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**Thursday, November 29**

6:30 AM–4:30 PM  **REGISTRATION**

6:30 AM–7:30 AM  BREAKFAST and EXHIBITS

7:30 AM–8:40 AM  **Industry Spotlight Sessions**  
(Non-CME)

8:40 AM  BREAK and EXHIBITS

9:00 AM–11:30 AM  **GENERAL SESSION 2 - Global Orthopaedics**  
Whether you are interested in international work or want to learn how global practices can improve your local care, don’t miss this forum on global pediatric orthopaedics! Our international experts will describe the burden of musculoskeletal disease worldwide, provide lessons learned from treating late-presenting conditions, and share stories of individual and programmatic success worldwide.

Moderator: David Spiegel, MD  
eModerator: Coleen Sabatini, MD

**Burden of Disease**

9:00 AM  Introduction:  
Musculoskeletal Disease Worldwide  
David Spiegel, MD

9:06 AM  Burden of Disease: Clubfoot  
Matthew Varghese, MS

9:13 AM  Burden of Disease: Infection  
Richard Schwend, MD

9:20 AM  Discussion  
Panelists: David Spiegel, MD  
Matthew Varghese, MS  
Richard Schwend, MD

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### Thursday, November 29, continued

<table>
<thead>
<tr>
<th>Time</th>
<th>Session / Workshop</th>
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<tbody>
<tr>
<td>9:00 AM–11:30 AM</td>
<td><strong>GENERAL SESSION 2 continued</strong></td>
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<tr>
<td></td>
<td><strong>Global Lessons for Local Care</strong></td>
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<td></td>
<td>Moderator: Jon Davids, MD</td>
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<tr>
<td>9:30 AM</td>
<td>Clubfoot: Late Release and Arthrodeses</td>
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<tr>
<td></td>
<td>Jon Davids, MD</td>
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<tr>
<td>9:38 AM</td>
<td>Infection: Chronic Osteomyelitis</td>
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<td></td>
<td>David Spiegel, MD</td>
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<tr>
<td>9:46 AM</td>
<td>Polio and Acute Flaccid Myelitis (AFM)</td>
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<td></td>
<td>Matthew Varghese, MS</td>
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<tr>
<td>9:54 AM</td>
<td>Discussion</td>
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<td><strong>Panelists:</strong> Jon Davids, MD</td>
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<td>David Spiegel, MD</td>
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<td>Matthew Varghese, MS</td>
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<tr>
<td>10:00 AM</td>
<td>CP: Late Treatment (Braces, Reconstruction)</td>
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<td></td>
<td>Tom Novacheck, MD</td>
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<tr>
<td>10:08 AM</td>
<td>Untreated DDH/Perthes</td>
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<td></td>
<td>Kishore Mulpuri, MD</td>
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<td>10:16 AM</td>
<td>Congenital UE: Novel Solutions with Limited Resources</td>
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<td></td>
<td>Charles Goldfarb, MD</td>
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<td>10:24 AM</td>
<td>Burn Contractures</td>
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<td>Scott Kozin, MD</td>
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<td>10:31 AM</td>
<td>Discussion</td>
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<td><strong>Panelists:</strong> Tom Novacheck, MD</td>
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<td>Kishore Mulpuri, MD</td>
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<td>Charles Goldfarb, MD</td>
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<td><strong>Personal Stories, Successful Programs</strong></td>
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<td>Moderator: Kenneth Noonan, MD</td>
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<td>10:40 AM</td>
<td>Grassroot Efforts that Work</td>
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<td></td>
<td>Kenneth Noonan, MD</td>
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<td>10:46 AM</td>
<td>Society Efforts that Work (THP)</td>
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<td></td>
<td>Scott Kozin, MD</td>
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<tr>
<td>10:52 AM</td>
<td>NGO Efforts that Work (Hands-on Workshop)</td>
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<td>Matthew Varghese, MS</td>
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<tr>
<td>10:58 AM</td>
<td>QSVI: Home and Away</td>
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<td></td>
<td>Coleen Sabatini, MD</td>
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<td>11:04 AM</td>
<td>Registries and Research: Best Practices</td>
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<td></td>
<td>Pablo Castañeda, MD</td>
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<td>11:10 AM</td>
<td>Get Involved: COUR</td>
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<td></td>
<td>Coleen Sabatini, MD</td>
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<td>11:15 AM</td>
<td>Discussion</td>
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<td><strong>Panelists:</strong> Kenneth Noonan, MD</td>
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<td>Coleen Sabatini, MD</td>
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<td>Pablo Castañeda, MD</td>
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<td><strong>LUNCH and EXHIBITS</strong></td>
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### CME BREAKOUT SESSIONS

**Ponseti I (hands-on workshop)**

From the fundamental principles to technical pearls, learn from our international experts the technique of Ponseti casting for clubfoot.

**Chair:** Kenneth Noonan, MD
**Faculty:** Jon Davids, MD, Alain Dimeglio, MD, Derek Kelly, MD, Vincent Mosca, MD

**Six Axis Deformity Correction with Circular Fixator II: Tibia Fracture Management (hands-on workshop)**

This hands-on workshop will guide you through six-axis deformity correction using circular external fixators. While each breakout session may be attended as a stand alone experience, registrants are encouraged to attend all four sessions to maximize their knowledge and skills. Join our international experts for this unique lab experience, complete with bone models, hexapod external fixators, and computer software programs to generate prescription for deformity correction.

**Chair:** Christof Radler, MD
**Faculty:** John Herzenberg, MD, L. Reid Nichols, MD, Deborah Eastwood, FRCS

**Medical Advances in Musculoskeletal Health and Disease**

We are all stewards of musculoskeletal health in children! Join us in this interactive session, covering topics ranging from calcium and vitamin D deficiency to novel medical therapies for orthopaedic conditions.

**Moderator:** Michelle Caird, MD

**Vitamin D and Ca**

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>12:30 PM</td>
<td>Introduction</td>
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<td>Michelle Caird, MD</td>
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<td>12:33 PM</td>
<td>Just the Basics: A Primer on Bone Metabolism</td>
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<td></td>
<td>Michelle Caird, MD</td>
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<td>12:41 PM</td>
<td>Recurrent Fractures: When to Get a Blood Test and Treat?</td>
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<td>Susan Scherl, MD</td>
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<td>12:49 PM</td>
<td>Rickets: How to Recognize and Treat</td>
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<td></td>
<td>David Farrington, MD</td>
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<td>12:57 PM</td>
<td>The Female Triad: Approach to Management</td>
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<td>Jennifer Weiss, MD</td>
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<td>1:05 PM</td>
<td>Discussion</td>
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<td><strong>Panelists:</strong> Michelle Caird, MD</td>
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<td>Susan Scherl, MD</td>
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<td>Jennifer Weiss, MD</td>
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</table>
Thursday, November 29, continued

12:30 PM–2:00 PM CME BREAKOUT SESSIONS continued

Cutting Edge Treatment

1:20 PM Biphosphonates:
Current Uses in Pediatric Orthopaedics
David Little, MBBS, FRACS, PhD

1:26 PM Paloveratene for MHE
Dror Paley, MD, FRCSC

1:32 PM Medical Therapies for Vascular Malformations & Overgrowth Syndromes
Scott Kozin, MD

1:38 PM Steroids/Adjuvants for UBC
Alexandre Arkader, MD

1:43 PM Discussion
Panelists: David Little, MBBS, FRACS, PhD
Dror Paley, MD, FRCSC
Scott Kozin, MD

Pelvic Osteotomies I: Salter, Dega, Pemberton (hands-on workshop)
Join our international experts for a unique hands-on workshop in the techniques of pelvic osteotomies.
Faculty: Ernest Sink, MD
Wudbhav (Woody) Sankar, MD
Jose Herrera Soto, MD
Stephen Albanese, MD
Thomas Wirth, MD, PhD

Hip and Elbow Conditions in the Young Athlete
Care of the pediatric athlete’s hip and elbow will be covered in this sports session. Highlights will include evaluation and treatment of labral pathology in the young athlete’s hip, as well as a case-based approach to injuries of the elbow in throwing and overhead athletes.
Moderator: Mininder Kocher, MD, MPH

The Painful Hip
Intro Case Presentation
Mininder Kocher, MD, MPH

12:33 PM Labral Tears: Why Do They Happen?
Ira Zaltz, MD

12:39 PM High Yield History, Exam, and Imaging
Michael Busch, MD

12:46 PM Labral Tear: Repair or Debride?
Mininder Kocher, MD, MPH

12:55 PM Don’t Treat the Symptoms, Treat the Cause: Cut the Pelvis!
Ira Zaltz, MD

1:00 PM Q&A and Cases
Mininder Kocher, MD, MPH
Panelists: Michael Busch, MD
Ira Zaltz, MD

POPS: Perioperative Management of the CP Patient
Join our IPOS and POPS faculty as we discuss the optimal perioperative management of patients with neuromuscular disease. Topics will include perioperative pain control, post-surgical tone management, and strategies to prevent complications.
Moderator: Jill Ariagno, MSN, RN

12:30 PM Introduction
Anne Stuedemann, CPNP

12:35 PM Preoperative Risk Assessment
Jessica Staschak, MSN, CRNP, CPNP-PC

12:44 PM Inpatient Care
Anne Stuedemann, CPNP

12:53 PM Post-surgical Spasticity Mgt
Robert Kay, MD

1:02 PM Rehabilitation: Wheelchairs, Braces, and PT
Jessica Staschak, MSN, CRNP, CPNP-PC

1:10 PM Discussion

1:20 PM Common Post-operative Complications: Prevention / Management
James McCarthy, MD, MHCM

1:28 PM HRQL in Nonambulatory Children with CP - Are We Making a Difference with Hip and Spine Surgery?
Benjamin Shore, MD, MPH, FRCSC

1:36 PM QSVI: Small Measures, Big Impact
Daniel Sucato, MD, MS

1:44 PM Discussion
Panelists: Anne Stuedemann, CPNP
Jessica Staschak, MSN, CRNP, CPNP-PC
Robert Kay, MD
James McCarthy, MD, MHCM
Benjamin Shore, MD, MPH, FRCSC
Daniel Sucato, MD, MS

2:00 PM BREAK and EXHIBITS
Thursday, November 29, continued

2:20 PM–4:30 PM  **CONCURRENT SESSION 3 – Hip Conditions in the Older Child and Adolescent**

Treatment of SCFE and hip dysplasia in the older child/adolescent will be covered in this dynamic interactive session, highlighted by master technique presentations and case-based discussions about the treatment of complications.

**SCFE**

**Moderator:** Steven Frick, MD  
**eModerator:** Ernest Sink, MD

2:20 PM  What Defines a Stable and Unstable SCFE?  
Kishore Mulpuri, MD

2:26 PM  Stable SCFE Standards of Care  
Todd Milbrandt, MD

2:31 PM  Acute Unstable: What Should We Do?  
Daniel Sucato, MD, MS

2:37 PM  Master Technique: Perfusion Monitoring for Pinning  
Jonathan Schoenecker, MD, PhD

2:43 PM  Master Technique: Modified Dunn  
Wudbhav (Woody) Sankar, MD

2:49 PM  Modified Dunn Outcomes in 2018: Risk, Rewards and Limits  
Ira Zaltz, MD

2:55 PM  AVN: How to Diagnose and What to Do?  
Steven Frick, MD

3:00 PM  Cases and Complications  
Steven Frick, MD  
**Panelists:** Kishore Mulpuri, MD  
A. Noelle Larson, MD  
Daniel Sucato, MD, MS  
Wudbhav (Woody) Sankar, MD  
Ira Zaltz, MD  
Jonathan Schoenecker, MD, PhD

**DDH in Older Child/Adolescent**

**Moderator:** Ira Zaltz, MD  
**eModerator:** Coleen Sabatini, MD

3:17 PM  Imaging: Standard of Care and Cutting Edge  
Wudbhav (Woody) Sankar, MD

3:23 PM  Hip Arthroscopy: What Does the Data Show?  
Ernest Sink, MD

3:29 PM  Master Technique: Hip Arthroscopic Osteoplasty and Labral Repair  
Mininder Kocher, MD, MPH

3:35 PM  Pelvic Osteotomies: When and Why  
Deborah Eastwood, FRCS

3:41 PM  Master Technique: PAO  
Ernest Sink, MD

3:47 PM  Complications of PAO  
Ira Zaltz, MD

3:53 PM  Discussion  
**Panelists:** Wudbhav (Woody) Sankar, MD  
Ernest Sink, MD  
Mininder Kocher, MD, MPH  
Deborah Eastwood, FRCS  
Ira Zaltz, MD

**Case-based Discussions**

**Moderator:** David Little, MBBS, FRACS, PhD  
**eModerator:** Ira Zaltz, MD  
**Panelists:** Thomas Wirth, MD, PhD  
David Little, MBBS, FRACS, PhD  
Wudbhav (Woody) Sankar, MD  
Ira Zaltz, MD

4:00 PM  Traumatic Hip Dislocations in Adolescents  
Thomas Wirth, MD, PhD

4:09 PM  AVN After Femoral Neck Fracture  
David Little, MBBS, FRACS, PhD

4:19 PM  Down Syndrome Hips: How Are They Different and What Do We Do?  
Wudbhav (Woody) Sankar, MD

2:20 PM–4:30 PM  **CONCURRENT SESSION 4 – Skeletal Deformity Correction in MHE and OI**

A comprehensive discussion of the treatment of skeletal deformity in patients with multiple hereditary exostoses (MHE) and osteogenesis imperfecta (OI).

**Multiple Hereditary Exostoses**

**Moderator:** William Mackenzie, MD  
**eModerator:** Coleen Sabatini, MD

2:20 PM  Introduction  
William Mackenzie, MD

2:23 PM  MHE- Introduction and Medical Management  
Dror Paley, MD, FRCSC

2:30 PM  Neurological Problems in MHE  
L. Reid Nichols, MD

2:37 PM  Natural History of MHE in Forearm- Does It Matter?  
Charles Goldfarb, MD

2:44 PM  Early vs Late Surgery for the Forearm  
Scott Kozin, MD

2:51 PM  Discussion  
**Panelists:** Dror Paley, MD, FRCSC  
L. Reid Nichols, MD  
Charles Goldfarb, MD  
Scott Kozin, MD
### Thursday, November 29, continued

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<tr>
<th>Time</th>
<th>Session/Panel</th>
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<tr>
<td>2:20 PM–4:30 PM</td>
<td><strong>CONCURRENT SESSION 4 continued</strong></td>
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<tr>
<td>3:00 PM</td>
<td>MHE- About the Hip</td>
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<td></td>
<td>Nicholas Fletcher, MD</td>
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<td>3:07 PM</td>
<td>MHE - Management of LLD and Progressive Malalignment</td>
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<td></td>
<td>Christof Radler, MD</td>
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<td>3:14 PM</td>
<td>Master Technique: 6-Axis Deformity Correction</td>
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<td>John Herzenberg, MD</td>
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<td>3:20 PM</td>
<td>Cases &amp; Discussion</td>
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<td></td>
<td>William Mackenzie, MD</td>
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**Osteogenesis Imperfecta**

- **Moderator:** Michelle Caird, MD
- **eModerator:** Coleen Sabatini, MD

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<tr>
<th>Time</th>
<th>Session/Panel</th>
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<tbody>
<tr>
<td>3:40 PM</td>
<td>Genetics and Classification for the Orthopedist in 2018</td>
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<tr>
<td></td>
<td>L. Reid Nichols, MD</td>
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<td>3:47 PM</td>
<td>Medical Therapy: When, Why, and How</td>
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<td>Michelle Caird, MD</td>
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<tr>
<td>3:54 PM</td>
<td>Spinal Deformity in OI</td>
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<td>Suken Shah, MD</td>
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<td>4:01 PM</td>
<td>The Upper Limb in OI: When to Intervene?</td>
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<td>Scott Kozin, MD</td>
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<td>4:08 PM</td>
<td>The Lower Limb in OI - Hip and Long Bone Deformity</td>
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<td>David Farrington, MD</td>
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<td>4:15 PM</td>
<td>Master Technique: Telescoping Rod Insertion</td>
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<td>Michelle Caird, MD</td>
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<td>4:22 PM</td>
<td>Discussion</td>
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<td><strong>Panelists:</strong> L. Reid Nichols, MD</td>
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<td>Michelle Caird, MD</td>
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<td>David Farrington, MD</td>
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### Friday, November 30

**6:30 AM–5:00 PM**  
REGISTRATION

**6:30 AM–7:30 AM**  
BREAKFAST and EXHIBITS

**7:30 AM–8:40 AM**  
**Industry Spotlight Sessions**

**9:00 AM–11:30 AM**  
**CONCURRENT SESSION 5 – Adolescent Idiopathic and Early Onset Scoliosis**

Join our international experts for this session on adolescent idiopathic and early onset scoliosis. From bracing strategies, to preoperative planning, to master surgical techniques, learn cutting-edge and evidence-based treatment of spinal deformity.

- **Moderator:** Michael Vitale, MD, MPH
- **eModerator:** Michael Glotzbecker, MD

**AIS**

**9:00 AM**  
Introduction

Michael Vitale, MD, MPH

**Before the Incision**

**9:02 AM**  
Bracing: How Can We Do Better?

Michael Vitale, MD, MPH

**9:11 AM**  
Choosing Levels: My Three Rules for Leveling the Shoulders

Lindsay Andras, MD

**9:16 AM**  
Choosing Levels: My Three Rules for Choosing Lowest Instrumented Vertebra

Laurel Blakemore, MD

**9:21 AM**  
Choosing Levels: My Three Rules for Selective Thoracic Fusion

Suken Shah, MD

**9:26 AM**  
Discussion

**9:35 AM**  
Cases for the Panel: Difficult Decisions in Level Selection

Brian Smith, MD

**Panelists:** Laurel Blakemore, MD, Stephen Albanese, MD, Muharrem Yazici, MD

**Optimizing Technical Execution: Master Tips and Trick**

**9:50 AM**  
Power Screw Insertion

David Skaggs, MD, MMM

**9:56 AM**  
Apical Derotation

Muharrem Yazici, MD

**10:02 AM**  
Restoring Kyphosis

Peter Newton, MD

**10:08 AM**  
Discussion
## 15th Annual International Pediatric Orthopaedic Symposium

### Friday, November 30, continued

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<th>Time</th>
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<tr>
<td>9:00 AM–11:30 AM</td>
<td><strong>CONCURRENT SESSION 5 continued</strong></td>
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<tr>
<td>10:19 AM</td>
<td><strong>Good Judgment Comes from Bad Experience:</strong> Panel Discussion</td>
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<td>Case for Panel: Shoulders not Level Postop</td>
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<td>David Skaggs, MD, MMM</td>
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<td>Panelists: David Skaggs, MD, MMM</td>
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<td>Muharrem Yazici, MD</td>
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<td>Peter Newton, MD</td>
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<td>Michael Vitale, MD</td>
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<tr>
<td>10:07 AM</td>
<td><strong>Quality, Safety, Value in Spinal Surgery</strong></td>
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<td>10:36 AM</td>
<td>Make YOUR OR Function More Efficient</td>
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<td>John (Jack) Flynn, MD</td>
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<td>10:42 AM</td>
<td>Preventing Infection in the High Risk Child</td>
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<td>Richard Schwend, MD</td>
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<td>10:48 AM</td>
<td>Postop Pathways that Make Care Better</td>
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<td>Nicholas Fletcher, MD</td>
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<td>10:54 AM</td>
<td>Discussion</td>
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<tr>
<td>11:00 AM</td>
<td><strong>EOS and Nonidiopathic Scoliosis</strong></td>
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<td>11:06 AM</td>
<td>Evidence-based Update on MAGEC</td>
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<td>Michael Glotzbecker, MD</td>
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<td>11:12 AM</td>
<td>Debate: What to Fuse to Pelvis in GMFCS 4/5</td>
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<td>Suken Shah, MD</td>
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<td></td>
<td>and Mark Erickson, MD</td>
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<td>Panelists: Suken Shah, MD, James Hoi Po Hui, FRCSE, Mininder Kocher, MD, MPH</td>
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<tr>
<td>11:20 AM</td>
<td>Debate: Early Fusion vs. “Growth Friendly” Strategies</td>
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<td>Paul A. Sponseller, MD</td>
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<td></td>
<td>and David Farrington, MD</td>
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<td>11:28 AM</td>
<td>Discussion</td>
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<td>9:00 AM–11:30 AM</td>
<td><strong>CONCURRENT SESSION 6 – Knee Injuries in the Young Athlete</strong></td>
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<td>Learn contemporary perspectives and master techniques in the care of ACL injuries and patellofemoral instability. Brief presentations will be followed by case-based discussions of common complications and challenging conditions. Moderator: Theodore Ganley, MD</td>
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<td>9:04 AM</td>
<td><strong>Preoperative Care</strong></td>
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<td>9:37 AM</td>
<td><strong>Concurrent Session 6 – Knee Injuries in the Young Athlete</strong></td>
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<tr>
<td>9:37 AM</td>
<td>BEAR, Biologics, and the Future</td>
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<td></td>
<td>Mininder Kocher, MD</td>
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<tr>
<td>9:43 AM</td>
<td><strong>Q&amp;A</strong></td>
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<td>Theodore Ganley, MD</td>
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<tr>
<td>9:50 AM</td>
<td><strong>ACL Cases</strong></td>
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<td>Case Discussions</td>
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<td><strong>Patellofemoral Instability</strong></td>
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### Schedule

**Friday, November 30, 2018**

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<tr>
<th>Time</th>
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<tr>
<td>9:00 AM–11:30 AM</td>
<td><strong>Concurrent Session 5 continued</strong></td>
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<tr>
<td>10:19 AM</td>
<td><strong>Good Judgment Comes from Bad Experience:</strong> Panel Discussion</td>
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<td>Case for Panel: Shoulders not Level Postop</td>
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<td></td>
<td>David Skaggs, MD, MMM</td>
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<td></td>
<td>Panelists: David Skaggs, MD, MMM</td>
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<tr>
<td></td>
<td>Muharrem Yazici, MD</td>
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<td>Peter Newton, MD</td>
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<td>Michael Vitale, MD</td>
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<th>Time</th>
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<tbody>
<tr>
<td>10:07 AM</td>
<td><strong>Quality, Safety, Value in Spinal Surgery</strong></td>
</tr>
<tr>
<td>10:36 AM</td>
<td>Make YOUR OR Function More Efficient</td>
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<tr>
<td></td>
<td>John (Jack) Flynn, MD</td>
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<tr>
<td>10:42 AM</td>
<td>Preventing Infection in the High Risk Child</td>
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<td></td>
<td>Richard Schwend, MD</td>
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<td>10:48 AM</td>
<td>Postop Pathways that Make Care Better</td>
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<td></td>
<td>Nicholas Fletcher, MD</td>
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<td>10:54 AM</td>
<td>Discussion</td>
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<tr>
<td>11:00 AM</td>
<td><strong>EOS and Nonidiopathic Scoliosis</strong></td>
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<td>11:06 AM</td>
<td>Evidence-based Update on Tethering</td>
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<td>Peter Newton, MD</td>
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<tr>
<td>11:12 AM</td>
<td>Debate: What to Fuse to Pelvis in GMFCS 4/5</td>
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<td></td>
<td>Suken Shah, MD</td>
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<td></td>
<td>and Mark Erickson, MD</td>
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<td>11:20 AM</td>
<td>Debate: Early Fusion vs. “Growth Friendly” Strategies</td>
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<td></td>
<td>Paul A. Sponseller, MD</td>
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<td></td>
<td>and David Farrington, MD</td>
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<td>11:28 AM</td>
<td>Discussion</td>
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<td><strong>Concurrent Session 6 – Knee Injuries in the Young Athlete</strong></td>
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<td></td>
<td>Learn contemporary perspectives and master techniques in the care of ACL injuries and patellofemoral instability. Brief presentations will be followed by case-based discussions of common complications and challenging conditions. Moderator: Theodore Ganley, MD</td>
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<tr>
<td>10:45 AM</td>
<td>MPFL Reconstruction Technique: Quad Mininder Kocher, MD, MPH</td>
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<td>10:53 AM</td>
<td>MPFL Reconstruction Technique: Hamstring Kevin Shea, MD</td>
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<tr>
<td>11:01 AM</td>
<td>Tibial Tubereplasty: Indications and Techniques James Hoi Po Hui, FRCSE</td>
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<tr>
<td>11:09 AM</td>
<td>Questions and Cases Michael Busch, MD</td>
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**Panelists:** Theodore Ganley, MD  
Jennifer Weiss, MD  
Mininder Kocher, MD, MPH  
James Hoi Po Hui, FRCSE  
Kevin Shea, MD

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<tr>
<td>11:30 AM–12:30 PM</td>
<td>LUNCH and EXHIBITS</td>
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| 12:30 PM–2:50 PM | **GENERAL SESSION 3- Authors’ Preferred Techniques**  
*An IPOS signature session!*  
Join our international faculty as they share mastered surgical techniques in short, video-based presentations.  
**Moderator:** John (Jack) Flynn, MD  
**eModerator:** A. Noelle Larson, MD  
12:30 PM Introduction John (Jack) Flynn, MD  
12:33 PM MPFL Reconstruction for Patellar Instability Mininder Kocher, MD, MPH  
12:39 PM Talar OCD Drilling and Fixation Michael Busch, MD  
12:45 PM Arthroscopic Assisted TFCC Repair Donald Bae, MD  
12:51 PM Discussion  
12:56 PM Subtalar Coalition Excision with Navigation Kenneth Noonan, MD  
1:02 PM Plantar Medial Release for Cavovarus Foot Deformity Vincent Mosca, MD  
1:08 PM Graftless Syndactyly Release with Local Flaps and/or HA Matrix Charles Goldfarb, MD  
1:14 PM Discussion  
1:19 PM Femoral Neck Fx with Capsular Decompression Steven Frick, MD  
1:25 PM Late Monteggia Reconstruction Peter Waters, MD  
1:31 PM ORIF of Tibial Tubercle Fracture Jeffrey Sawyer, MD

**Panelists:** Theodore Ganley, MD  
Jennifer Weiss, MD  
Mininder Kocher, MD, MPH  
James Hoi Po Hui, FRCSE  
Kevin Shea, MD

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<tr>
<td>2:34 PM</td>
<td>McFarland Bypass Grafting for Tibial Pseudarthrosis Lori Karol, MD</td>
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<td>2:40 PM</td>
<td>Telescoping Nail for Osteogenesis Imperfecta Michelle Caird, MD</td>
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<td>2:46 PM</td>
<td>Discussion</td>
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<td>2:50 PM</td>
<td>Awards and Acknowledgments</td>
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<tr>
<td>3:05 PM</td>
<td>BREAK and EXHIBITS</td>
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Friday, November 30, continued

3:30 PM–5:00 PM  CME BREAKOUT SESSIONS
(Advance Sign-up Encouraged for
Hands-on Workshops)

**Ponseti II: Case-based Discussions**
From the fundamental principles to technical pearls, learn from our international experts the technique of Ponseti casting for clubfoot.

Chair: Vincent Mosca, MD
Faculty: Alain Dimeglio, MD
Steven Frick, MD
Derek Kelly, MD
Kenneth Noonan, MD

**Six Axis Deformity Correction with Circular Fixator III: Blount’s Disease**
(hands-on workshop)
This hands-on workshop will guide you through six-axis deformity correction using circular external fixators. While each breakout session may be attended as a stand alone experience, registrants are encouraged to attend all four sessions to maximize their knowledge and skills. Join our international experts for this unique lab experience, complete with bone models, hexapod external fixators, and computer software programs to generate prescription for deformity correction.

Chair: Christof Radler, MD
Faculty: John Herzenberg, MD
Deborah Eastwood, FRCS
L. Reid Nichols, MD

**Musculoskeletal Infections**
A live simulcast webinar for all orthopaedic providers!
This session will cover a broad spectrum of topics, including antibiotic resistant organisms, treatment of necrotizing fasciitis, surgical options for late presenting osteomyelitis, and contemporary strategies for spinal infection.

Moderator: Jonathan Schoenecker, MD, PhD

**Musculoskeletal Infection for the Orthopaedic Surgeon**

3:30 PM  Introduction  
Jonathan Schoenecker, MD, PhD

3:33 PM  Antibiotic Stewardship: When to Use Perioperative Antibiotics?  
Bryan Tompkins, MD

3:39 PM  MRSA and Resistant Organisms: Where, When, and How to Treat?  
Alexandre Arkader, MD

3:45 PM  Imaging for Infection in 2018: Best Practices  
Amy McIntosh, MD

3:50 PM  Discussion

3:56 PM  Diagnosing Septic Arthritis of the Hip: Kocher Criteria and Beyond  
Brian Smith, MD

4:02 PM  Necrotizing Fasciitis: An Orthopaedic Emergency?  
Jonathan Schoenecker, MD, PhD

4:08 PM  Strategies for Chronic Osteomyelitis  
Matthew Varghese, MS

4:14 PM  Salvages for AVN after Septic Hip Arthritis  
Jose Herrera Soto, MD

Haemish Crawford, MD

4:26 PM  Discussion

**Global Perspectives on Spinal Infection: Cases**

4:32 PM  Global Perspectives on Spinal Infection: A Case-Based Discussion  
Moderator: Michael Vitale, MD, MPH
Panelists: Mark Erickson, MD, MMM
Michael Glotzbecker, MD
Vishwas Talwalker, MD

**Pelvic Osteomies II: Triple, PAO**
(hands-on workshop)
Join our international experts for a unique hands-on workshop in the techniques of pelvic osteotomies.

Faculty: Ernest Sink, MD
Stephen Albanese, MD
Thomas Wirth, MD, PhD
Wudbhav (Woody) Sankar, MD
Ira Zaltz, MD

**Gait I: Normal vs Pathological Gait**
First of two sessions on observational and qualitative gait analysis, with specific focus on gait disturbances in cerebral palsy.

Moderator: Benjamin J. Shore, MD, MPH

3:30 PM  Introduction  
Tom Novacheck, MD

3:33 PM  Observational Gait Analysis  
Robert Kay, MD

3:49 PM  Qualitative Gait Analysis: Using the Gait Lab to Get the Data  
Tom Novacheck, MD

4:05 PM  Gait Disruption in Children with CP  
James McCarthy, MD, MHCM

4:21 PM  Common Gait Deviations in CP  
Benjamin Shore, MD, MPH, FRCS

4:37 PM  Case Discussion  
Robert Kay, MD
Spine: Spondylolysis and Spondylolisthesis
From spondylolisthesis to kyphosis to tumors, our IPOS faculty will discuss contemporary evaluation and treatment of challenging pediatric spinal conditions.

Moderator: Daniel Sucato, MD, MS

Spondylolysis and Spondylolisthesis
3:30 PM Introduction
Daniel Sucato, MD, MS

3:33 PM Clinical Evaluation & Imaging: How to Make the Diagnosis Every Time with Minimal Radiation
A. Noelle Larson, MD

3:39 PM Bracing: Does It Work?
David Skaggs, MD, MMM

3:45 PM Discussion

3:51 PM Surgical Treatment of Spondylolysis
David Farrington, MD

3:58 PM Surgical Treatment of High Grade Slip
Daniel Sucato, MD, MS

4:05 PM Discussion

Scheuermann’s
4:10 PM What Is It?
Michael Glotzbecker, MD

4:15 PM Indications for Bracing... and What Brace to Use?
Laurel Blakemore, MD

4:20 PM Surgical Indications and Technique
A. Noelle Larson, MD

4:25 PM Discussion

Spinal Tumors (LCH, Bone Cysts, OCE, etc.)
4:31 PM LCH
Alexandre Arkader, MD

4:37 PM Cysts
Brian Smith, MD

4:43 PM Discussion
Daniel Sucato, MD, MS

POPS Presents: Pediatric Fracture Clinic: Insights from the Trenches
Join POPS faculty for pediatric fracture care as seen through the eyes of the “fracture clinic”. Topics will include clinical evaluation, radiographic interpretation, principles of casting, and how to avoid loss of reduction, pressure sores, and skin burns. There will be casting demonstrations.

Moderator: Anne Stuedemann, CPNP

3:30 PM Introduction
Gerad Montgomery, MSN, FNP-C

3:40 PM Upper Extremity:
2 Case Studies start to finish covering Hx, Exam, X-rays and Tx
(casting 1 of 2 cases)
Carrie Chan, CPNP
Jessica Staschak, MSN, CRNP, CPNP-PC

4:00 PM Lower Extremity:
2 case studies start to finish covering Hx, Exam, X-rays and Tx
(casting 1 of 2 cases)
Denise Brewster, DNP, RN, CPNP,
Nigel Price, MD

4:20 PM 2 case studies start to finish covering Hx, Exam, X-rays and Tx
(casting of 1 of 2 cases)
Gerad Montgomery, MSN, FNP-C
Jill Ariagno, MSN, RN

4:40 PM Q&A
### Saturday, December 1

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<tr>
<th>Time</th>
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<tr>
<td>6:30 AM</td>
<td>REGISTRATION</td>
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<tr>
<td>6:30 AM</td>
<td>BREAKFAST and EXHIBITS</td>
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<tr>
<td>7:30 AM</td>
<td><strong>GENERAL SESSION 4 - The Child’s Foot</strong></td>
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<td>An IPOS signature session! Ours expert faculty will provide a</td>
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<td>comprehensive review of pediatric foot conditions. From clubfoot to</td>
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<td>vertical talus to common outpatient complaints, join us for this</td>
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<td>fast-paced, evidence-based program!</td>
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<tr>
<td>7:30 AM</td>
<td>Introduction</td>
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<td><strong>Vincent Mosca, MD</strong></td>
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<td>7:30 AM</td>
<td>‘5 in 5’</td>
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<tr>
<td>7:33 AM</td>
<td>5 Most Important Things to Know About Foot Biomechanics</td>
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<td><strong>Vincent Mosca, MD</strong></td>
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<td>7:39 AM</td>
<td>5 Fundamental Principles in Pediatric Foot Assessment</td>
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<td><strong>Derek Kelly, MD</strong></td>
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<td>7:45 AM</td>
<td>5 Most Common “Mistakes” in Pediatric Foot Surgery</td>
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<td><strong>Alain Dimeglio, MD</strong></td>
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<td>7:50 AM</td>
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<td>7:55 AM</td>
<td><strong>Clubfoot</strong></td>
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<tr>
<td>8:01 AM</td>
<td>TEV: Ponseti Best Practices</td>
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<td><strong>Derek Kelly, MD</strong></td>
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<td>8:07 AM</td>
<td>Heelcord Tenotomy in the Clinic:</td>
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<td>How I Do It</td>
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<td><strong>Lori Karol, MD</strong></td>
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<td>8:13 AM</td>
<td>Bracing: How and for How Long</td>
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<td><strong>Alain Dimeglio, MD</strong></td>
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<td>8:18 AM</td>
<td>Extensive Release for Recalcitrant or Late-presenting Clubfoot</td>
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<td>8:30 AM</td>
<td><strong>Vertical Talus</strong></td>
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<td>8:30 AM</td>
<td>Casting: How Much Correction Can We Get?</td>
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<td><strong>Lori Karol, MD</strong></td>
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<tr>
<td>8:36 AM</td>
<td>Dobbs Method for CVT: Pearls and Pitfalls</td>
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<td></td>
<td><strong>Kenneth Noonan, MD</strong></td>
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### Common Clinical Conundrums

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<tr>
<td>8:42 AM</td>
<td>Master Technique: Surgical Correction for Neglected CVT</td>
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<tr>
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<td><strong>Vincent Mosca, MD</strong></td>
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<td>8:47 AM</td>
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<tr>
<td>8:55 AM</td>
<td>The Symptomatic Flatfoot in the Teenager: What to Do?</td>
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<td><strong>Matthew Varghese, MS</strong></td>
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<tr>
<td>9:01 AM</td>
<td>Calcaneonavicular Coalition</td>
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<tr>
<td></td>
<td><strong>Amy McIntosh, MD</strong></td>
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<tr>
<td>9:07 AM</td>
<td>Talocalcaneal Coalition</td>
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<td></td>
<td><strong>L. Reid Nichols, MD</strong></td>
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<tr>
<td>9:13 AM</td>
<td>Os Trigonum: When and How to Treat?</td>
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<td></td>
<td><strong>Javier Masquijo, MD</strong></td>
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<tr>
<td>9:18 AM</td>
<td>Discussion</td>
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<td><strong>Panelists:</strong> <strong>Matthew Varghese, MS</strong> <strong>Amy McIntosh, MD</strong> <strong>L. Reid Nichols, MD</strong> <strong>Javier Masquijo, MD</strong></td>
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### Cases and Complications

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<th>Time</th>
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<tr>
<td>9:25 AM</td>
<td>Discussion</td>
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<td><strong>Panelists:</strong> <strong>Matthew Varghese, MS</strong> <strong>Amy McIntosh, MD</strong> <strong>L. Reid Nichols, MD</strong> <strong>Javier Masquijo, MD</strong></td>
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<tr>
<td>9:40 AM</td>
<td>BREAK and EXHIBITS</td>
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### Six Axis Deformity Correction with Circular Fixator IV: Treatment of Ankle Equinus Contracture (hands-on workshop)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td><strong>CME BREAKOUT SESSIONS</strong></td>
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<tr>
<td></td>
<td>(Advance Sign-up Encouraged for Hands-on Workshops)</td>
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<tr>
<td></td>
<td><strong>Six Axis Deformity Correction with Circular Fixator IV</strong></td>
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<tr>
<td></td>
<td><strong>Treatment of Ankle Equinus Contracture</strong></td>
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<tr>
<td></td>
<td>(hands-on workshop)</td>
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<tr>
<td></td>
<td>This hands-on workshop will guide you through six-axis deformity</td>
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<tr>
<td></td>
<td>correction using circular external fixators. While each</td>
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<tr>
<td></td>
<td>breakout session may be attended as a stand alone experience,</td>
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<td></td>
<td>registrants are encouraged to attend all four sessions to</td>
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<tr>
<td></td>
<td>maximize their knowledge and skills. Join our international</td>
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<tr>
<td></td>
<td>experts for this unique lab experience, complete with bone</td>
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<tr>
<td></td>
<td>models, hexapod external fixators, and computer software programs to</td>
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<td></td>
<td>generate prescription for deformity correction.</td>
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<td></td>
<td><strong>Chair:</strong> <strong>Christof Radler, MD</strong></td>
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<tr>
<td></td>
<td><strong>Faculty:</strong> <strong>John Herzenberg, MD</strong> <strong>Deborah Eastwood, FRCS</strong></td>
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</table>
### Saturday, December 1, continued

**10:00 AM–11:30 AM** CME BREAKOUT SESSIONS continued

#### Principles and Techniques in Pediatric Sports

Join us for this live simulcast international webinar on care of the pediatric and adolescent athlete! Topics covered will include treatment of shoulder instability, ACL tears in the skeletally immature, and osteochondritis dissecans of the knee.

**Moderator:** Mininder Kocher, MD, MPH

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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td>Introduction</td>
<td>Mininder Kocher, MD, MPH</td>
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<tr>
<td>10:05 AM</td>
<td>Shoulder Instability: Should We Do Primary Repair?</td>
<td>Michael Busch, MD</td>
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<tr>
<td>10:14 AM</td>
<td>Technique: Latarjet Reconstruction</td>
<td>Donald Bae, MD</td>
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<tr>
<td>10:23 AM</td>
<td>ACL in the Skeletally Immature Patient</td>
<td>Javier Masquijo, MD</td>
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<tr>
<td>10:32 AM</td>
<td>Technique: Physeal Sparing ACL Reconstruction</td>
<td>Mininder Kocher, MD, MPH</td>
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<tr>
<td>10:40 AM</td>
<td>Discussion</td>
<td>Panelists: Mininder Kocher, MD, MPH</td>
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<td>Michael Busch, MD</td>
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<td>Donald Bae, MD</td>
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<td></td>
<td></td>
<td>Javier Masquijo, MD</td>
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<tr>
<td>10:50 AM</td>
<td>PF Instability: Evaluation</td>
<td>Michael Busch, MD</td>
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<tr>
<td>10:59 AM</td>
<td>Technique: MPFL Reconstruction</td>
<td>James Hoi Po Hui, FRCSE</td>
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<tr>
<td>11:08 AM</td>
<td>Knee OCD: Contemporary Perspectives</td>
<td>Kevin Shea, MD</td>
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<tr>
<td>11:17 AM</td>
<td>Technique of Drilling +/- Fixation of Knee OCD</td>
<td>Theodore Ganley, MD</td>
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<tr>
<td>11:25 AM</td>
<td>Discussion</td>
<td>Panelists: Michael Busch, MD</td>
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<td>James Hoi Po Hui, FRCSE</td>
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<td></td>
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<td>Theodore Ganley, MD</td>
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**Moderator:** Kevin Shea, MD

#### Patient and Provider Wellness

Improving and sustaining the health of our care delivery teams is critically important. Join us for this breakout session focusing on wellness. Learn about burnout, team dynamics, strategies to improve provider health, as well as the new POSNA wellness initiative.

**Moderator:** Vishwas Talwalker, MD

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<thead>
<tr>
<th>Time</th>
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<th>Presenter(s)</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td>Introduction</td>
<td>Vishwas Talwalker, MD</td>
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<tr>
<td>10:03 AM</td>
<td>The Problem</td>
<td>Henry (Hank) Chambers, MD</td>
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### Gait II: Cased-based Decision-Making in Gait, Analysis, from Beginner to Advanced

Second of two breakout sessions on gait analysis. Join our panel of international experts as they discuss case-based evaluation and treatment of crouched gait, jump type gait, and “miserable malalignment.”

**Moderator:** Tom Novacheck, MD

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td>Introduction</td>
<td>Tom Novacheck, MD</td>
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<tr>
<td>10:03 AM</td>
<td>Case 1: Jump Type Gait</td>
<td>Tom Novacheck, MD</td>
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<tr>
<td>10:14 AM</td>
<td>Discussion</td>
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<tr>
<td>10:24 AM</td>
<td>Case 2: Miserable Malalignment</td>
<td>Tom Novacheck, MD</td>
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<tr>
<td>10:35 AM</td>
<td>Discussion</td>
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<td>10:45 AM</td>
<td>Case 3: Crouch Gait</td>
<td>Tom Novacheck, MD</td>
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<td>10:56 AM</td>
<td>Discussion</td>
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<tr>
<td>11:06 AM</td>
<td>Case 4: HWG IV</td>
<td>Tom Novacheck, MD</td>
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<tr>
<td>11:17 AM</td>
<td>Discussion</td>
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<tr>
<td>11:25 AM</td>
<td>Wrap-up</td>
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11:30 AM–12:00 PM LUNCH
Saturday, December 1

Review Course Accreditation
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Academy of Orthopaedic Surgeons and the Pediatric Orthopaedic Society of North America. The American Academy of Orthopaedic Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

The American Academy of Orthopaedic Surgeons designates the One Day Fundamentals in Pediatric Orthopaedics MOC Review Course for a maximum of 5.5 AMA PRA Category 1 Credits™, for those attending only the live Saturday MOC Review Course. Physicians should claim only the credit commensurate with the extent of their participation in this live activity.
**ePoster Listing**

**ePoster #1**
Rate of Complication and Distant Follow Up for Minimally Displaced Pediatric Proximal Humerus Fractures Managed Non-Operatively
Courtney Baker, MD; A. Noelle Larson, MD; Todd Milbrandt, MD; William Shaughnessy, MD
Mayo Clinic, Rochester, MN

**ePoster #2**
Simply Test for MPS™ Enzyme-Panel Program: A Testing Resource for Diagnosis of Mucopolysaccharidoses
Lorne Clarke, MD, CM, FRCP, FCCMG; Ingrid Cristian, MD; Marc Finch; Elaina Jurecki; Laura Pollard, PhD, FACMG; Cathleen Raggio, MD; Tim Wood, PhD, FACMG
BC Children’s Hospital Research Institute, Vancouver, BC

**ePoster #3**
Dual C-arm Technique: Supracondylar Humerus Fractures
Melissa Esparza, MD; David Falgout, MD; Kevin Lawson, MD; Matthew Morin, MD; Jordan Smith, MD
University of Arizona, Department of Orthopaedic Surgery, Tucson, AZ

**ePoster #4**
Improvement in Gross Motor Functional Measure after Lower Extremity Surgery in Cerebral Palsy, A Matched Cohort Study
Nolan Farrell; Amanda Whitaker, MD
Nationwide Children’s Hospital, Department of Orthopaedic Surgery, Columbus, OH

**ePoster #5**
Management of Infantile Blout’s Disease With Molded Orthoses: A New Perspective
Bruno Luiz Renato Agrizzi de Angeli; Felippi Guizardi Cordeiro; Liégenes Feil, MD; Roberto Guarniero; Maria Cândida de Miranda Luzo; Sérgio Ferreira Massa; Nei Botter Montenegro
Universidade de São Paulo, Faculdade de Medicina, Hospital das Clínicas, Instituto de Ortopedia e Traumatologia, São Paulo, Brazil

**ePoster #6**
Risk Factors for Failed Closed Reduction of Pediatric Distal Radius Fractures
Alexandre Arkader, MD; Scott LaValva, BA; Benjamin H. Rogers, BA; Apurva Shah, MD, MBA
The Children’s Hospital of Philadelphia, Division of Orthopaedics, Philadelphia, PA

**ePoster #7**
Intrathoracic Ectopic Parathyroid Associated to Brown Tumor in a Pediatric Patient
Liégenes Aline Feil; Juliane Lobato Flores; Marcelo Teodoro Ezequiel Guerra; Ana Paula Limberger
Universidade Luterana do Brasil, São José, Canoas, Brazil

**ePoster #8**
Is Trident Fixation Technique Feasible for Pediatric Knee Arthrodesis with Recycled Bone Graft?
Yu-Min Lin, MD, PhD
Taichung Veterans General Hospital, Department of Orthopaedics, Taichung City, Taiwan

**ePoster #9**
Outcomes of Pediatric Meniscal Injuries
Jay Albright, MD; Alexia Gagliardi, BA; Jane Gralla, PhD; Stephanie Logterman, MD
Children’s Hospital Colorado, Aurora, CO

**ePoster #10**
Use of Inlet Radiographs in the Assessment of Reduction After the Surgical Treatment of Developmental Dysplasia of the Hip
F.G. Cordeiro; R.M. Godoy Jr.; R. Guarniero; Bruno Massa, BSF; N.B. Montenegro; J.C. Rodrigues
Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil

**ePoster #11**
Risk Factors for Venous Thromboembolism in Children Undergoing Orthopaedic Surgery
Jonathan N. Grauer; Ryan P. McLynn; Elbert Mets, BA
Yale School of Medicine, New Haven, CT

**ePoster #12**
Comparison of Perioperative Adverse Outcomes after Pediatric Supracondylar Humerus Fracture Surgery by Pediatric and Non-Pediatric Subspecialty Trained Orthopaedic Surgeons
David B. Frumberg; Jonathan N. Grauer; Ryan P. McLynn; Elbert Mets, BA
Yale School of Medicine, New Haven, CT

**ePoster #13**
Socioeconomic Factors Impact Pediatric Fracture Care Compliance
Dina Iacone, BS; Blake Meza, BS; Wudbhav Sankar, MD; Apurva S. Shah, MD, MBA
Children’s Hospital of Philadelphia, Philadelphia, PA
ePoster Listing, continued

ePoster #14
Does Obesity Increase the Complication Rate in Spica Casting for Pediatric Femur Fractures?
Daniel Havlichek, BS; Meghan Hill, BS; Amil Jayasuriya, BS; Gerald Lilly, BS, MPH; Philip Nowicki, MD; Robin Wolschendorf, BS
Michigan State University College of Human Medicine, East Lansing, MI

ePoster #15
Industry Payments to Pediatric Orthopaedic Surgeons Reported by the Open Payments Database: 2014 to 2017
Jonathan N. Grauer, MD; Neil Pathak, BS; Brian Smith, MD
Yale School of Medicine, New Haven, CT

ePoster #16
Pediatric Orthopedic Injuries Related to Diving in Swimming Pools: An 11-Year Retrospective Study Utilizing the National Electronic Injury Surveillance System (NEISS)
Alexander Adams BS; Keith Baldwin MD; Ronit Shah BS
Children’s Hospital of Philadelphia, Philadelphia, PA

ePoster #17
Type IV Tibial Tubercle Fracture - Salter-Harris Type II Variant: Case Report and Review of the Literature
Kyle Andrews; Marshall Gillette; Lucas Mckean; Christopher Sanford; Ronit Shah
University of Toledo; Toledo, OH

ePoster #18
Availability of Global Health Opportunities in North American Pediatric Orthopaedic Fellowship Programs
James Dahm, BS; Laura Lins, BA; Kenneth Noonan, MD; Jordan Shaw, MD; Natasha Simske, BS; Alexander Siy, BS; Paul Whiting, MD
University of Wisconsin, Madison School of Medicine and Public Health, Department of Orthopaedics and Rehabilitation, Madison, WI

ePoster #19
Two Distinct Operative Techniques for the Correction of the Spastic Rigid Equinovarus Feet in One Patient: A Case Report
Philip Nowicki, MD; Monique Squiers
Helen DeVos Children’s Hospital, Grand Rapids, MI

ePoster #20
Novel Selective Motor Fascicle Transfer for Transhumeral Amputees to Achieve More Intuitive Control of A Highly Developed Prosthetic Arm
Ryu Kato, PhD; Mitsuhiko Kodama, MD, PhD; Yoshihisa Masakado, MD, PhD; Yosuke Ogiri, MS; Takehiko Takagi, MD, PhD; Masahiko Watanbe, MD, PhD; Yosuke Yamanoi, MS
National Center for Child Health and Development Hospital, Tokyo, Japan

ePoster #21
Characteristics of Cubitus Varus Deformity After Lateral Humeral Condylar Fracture
Atsuhito Seki, MD, PhD; Takehiko Takagi, MD, PhD; Shinichiro Takayama, MD, PhD
National Center for Child Health and Development Hospital, Tokyo, Japan

ePoster #22
On-Top Plasty for Floating Digit Acquires Morphology and Function
Atsuhito Seki, MD, PhD; Takehiko Takagi, MD, PhD; Shinichiro Takayama, MD, PhD
National Center for Child Health and Development Hospital, Tokyo, Japan

ePoster #23
Crush Injuries of the Pediatric Hand: An 18-Year Retrospective Epidemiological Study
Keith D. Baldwin, MD, MPH, MSPT; Kevin Pirruccio BA; Apurva S. Shah, MD, MBA; Daniel Weltsch, MD
Children’s Hospital of Philadelphia, Philadelphia, PA

ePoster #24
Kickball and Its Underappreciated Pediatric Injury Burden – An 18-Year Retrospective Epidemiological Study
Keith D. Baldwin, MD, MPH, MSPT; Kevin Pirruccio BA; Daniel Weltsch, MD
Children’s Hospital of Philadelphia, Philadelphia, PA

ePoster #25
Vitamin D Trends in the Pediatric Orthopaedic Population: A Survey
Michael Horan, MD; Kevin Williams, MD
Palmetto Health Orthopedic Center, Columbia, SC
Rod Link Reducer
3-Plane Deformity Correction System

Choosing Your Deformity Solution
Empowering Surgeons to Help Improve Deformity Procedures

BEFORE REDUCTION
AFTER REDUCTION

SELECT SOLUTIONS:
- SILC®
- CREO® & CREO AMP®
- CREO® Threaded & CREO AMP® Threaded
- CREO® Threaded CoCr & CREO AMP® Threaded CoCr

Delivering innovative solutions to enhance patient care

Learn more at GlobusMedical.com/Deformity
**Exhibitor Listing** (Includes non-profit exhibitors)

**Amazing Stim**

**AquaCast Liner**
AquaCast Liner is a cost-effective product that differentiates your practice and increases patient satisfaction – and referrals. AquaCast® Liner is a waterproof and breathable cast liner similar to the WL Gore & Associates Procel® and PANTALOON® protective liners. Replacing the cotton liners and stockinettes underneath a fiberglass cast, this 5th generation product, is improved from the Gore version to make application easier. AquaCast has become the choice for hospitals and practices looking to improve skin health in fracture care. The improved design on the Hipster® protective liner (used in hip spica, shoulder spica, femur fractures and other body casts) also makes application faster and easier for these types of casts.

**CURE International**
CURE International is a non-profit organization that operates charitable hospitals and programs in 29 countries worldwide where patients experience the life-changing message of God’s love for them, receiving surgical treatment regardless of gender, religion, or ethnicity. CURE’s efforts are focused on providing medical care to children suffering primarily from orthopedic and neurological conditions.

**DIERS Medical Systems**
DIERS Medical Systems is an innovative company offering a radiation-free system for assessment of the spine and trunk. Using surface topography, the DIERS formetric system can provide a 3-D reconstruction of the spine as a static measurement or while the spine is in motion. The addition of lower extremity video analysis and foot pressure measurements from the integrated treadmill turns the spine system into a fully functional compact gait lab. The DIERS formetric system provides reliable outcomes data for clinicians who treat patients with scoliosis, kyphosis, neuromuscular disorders, gait abnormalities, or sports injuries.

**DePuy Synthes Companies**
DePuy Synthes Companies of Johnson & Johnson provides the most comprehensive orthopaedic and neurological solutions in the world. The company offers an unparalleled breadth of products, services, programs and research and development capabilities. DePuy Synthes Companies’ solutions in the specialties of joint reconstruction, trauma, neurological, craniofacial, spinal surgery and sports medicine are designed to advance patient care while delivering clinical and economic value to health care systems worldwide.

**East Coast Orthotic & Prosthetic Corp.**

**EOS Imaging**
EOS imaging designs, develops and markets EOS, an innovative medical imaging system dedicated to orthopedics and osteoarticular pathologies. The EOS platform connects imaging to care by adding value along the entire patient care pathway from diagnosis to follow-up. Low dose and Micro Dose EOS exams provide full body, stereoradiographic images in weight-bearing positions. The biplanar images are acquired simultaneously in less than 20 seconds without magnification. The accompanying sterEOS workstation generates patient-specific 3D models, calculates over 100 clinical parameters and offers customizable patient reports. EOS imaging also provides 3D Services and 3D surgical planning solutions for spine, hip and knee.

**Globus Medical**
Globus Medical, Inc. is a leading musculoskeletal solutions company and is driving significant technological advancements across a complete suite of products ranging from spinal and trauma therapies to robotics, navigation and imaging. Founded in 2003, Globus’ single-minded focus on advancing spinal surgery has made it the fastest growing company in the history of orthopedics. Globus is driven to utilize superior engineering and technology to achieve pain free, active lives for all patients with musculoskeletal disorders.
**Hely & Weber**

Hely & Weber develops, manufactures and distributes innovative bracing solutions. Our commitment to quality, comfort, durability, fit, and function set industry standards, ensuring total customer satisfaction and confidence in our products. We have expanded our offering to include a wide variety of pediatric products to take care of your smallest patients. We recently launched a flagship product, ‘The Tiny Cast-Away’, which is a stable elbow brace that is a casting alternative or can be used for step down immobilization following cast removal. We will be showcasing this and a number of other unique pediatric products.

**Inion, Inc.**

Inion is a medical device company focused on the development and commercialization of innovative biodegradable and bioactive implants for Spinal, Specialty Orthopaedic and Craniomaxillofacial applications. Inion’s proprietary blending technology enables application specific implants which have ‘custom-fit’ capabilities for patients that do not interfere with imaging.

**K2M Group Holdings, Inc.**

K2M Group Holdings, Inc. is a global leader of complex spine and minimally invasive solutions focused on achieving three-dimensional Total Body Balance™. Since its inception, K2M has designed, developed and commercialized innovative complex spine and minimally invasive spine technologies and techniques used by spine surgeons to treat some of the most complicated spinal pathologies. K2M has leveraged these core competencies into Balance ACS™, a platform of products, services, and research to help surgeons achieve three-dimensional spinal balance across the axial, coronal and sagittal planes, with the goal of supporting the full continuum of care to facilitate quality patient outcomes. The Balance ACS platform, in combination with the Company’s technologies, techniques and leadership in the 3D-printing of spinal devices, enable K2M to compete favorably in the global spinal surgery market.

**Medtronic**

Medtronic

Making healthcare better is our priority, and we believe medical technology can play an even greater role in improving people’s lives. With challenges facing families and healthcare systems — such as rising costs, aging populations, and the burden of chronic disease — we are using the power of technology to take healthcare Further, Together. Innovation and collaboration are central to who we are. Since the late 1940s, we have been working with others to alleviate pain, restore health, and extend life. Today, we are a medical technology leader, employing more than 84,000 people worldwide, and offering therapies and solutions that enable greater efficiency, access, and value — for healthcare systems, providers, and the people they serve.

**MHE Research Foundation**

The MHE Research Foundation is a nonprofit 501(c) (3) organization dedicated to the support of Researchers, Physicians & Families dealing with Multiple Hereditary Exostoses Syndrome (MHE) Multiple Osteochondroma Syndrome (MO) a rare genetic bone disease.

**Misonix, Inc.**

Misonix utilizes ultrasonic technology in the form of a debridement modality which provides safe and effective removal of all nonviable tissue while safely preserving healthy structures.

**NuVasive, Inc.**

NuVasive is a leader in spine technology focused on minimally disruptive, procedurally integrated solutions, and is translating over fifteen years of leadership in spine care into innovative solutions for the pediatric market. In an effort to advance the treatment options for Early Onset Scoliosis, Adolescent Idiopathic Scoliosis, and Limb Length Discrepancies, NuVasive has invested in state-of-the-art technologies and is supporting progress of education and industry research in this space.
Ortho Care Casting
Ortho Care Casting, LLC is a manufacturer of a full line of FDA approved liner and casting products. Our full line allows healthcare providers to fulfill all of their casting needs in one place. Founded by a manufacturer of orthopedic products with over 10 years of experience, Ortho Care Casting is committed to providing the most up to date technology and products in the waterproof casting market. We are a woman owned enterprise who services leading hospitals as well as health care clinics and private practices.

Orthofix, SRL
JuniOrtho™ is a range of products and resources created by Orthofix®, dedicated to children and young adults with bone fractures and deformities. With a long history of developing innovative and leading-edge solutions, Orthofix has now brought all of its paediatric expertise and products together under the JuniOrtho banner. With the backing of Orthofix and their exhaustive orthopaedic knowledge base, the JuniOrtho team boasts an unrivalled level of in-house expertise within the field of paediatric orthopaedics. Our well-rounded product portfolio offers comprehensive solutions within both the limb reconstruction and trauma specialties.

OrthoPediatrics
Founded in 2006, OrthoPediatrics is an orthopedic company focused exclusively on providing a comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatrics currently markets 25 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This offering spans trauma & deformity, scoliosis, and sports medicine/other procedures. Ortho-Pediatrics’ global sales organization is focused exclusively on pediatric orthopedics and distributes its products in the United States and 38 countries outside the United States.

Paragon 28
Paragon 28 aims to strategically build a company around the core principles that drive innovation and quality. We work relentlessly to advance the science behind foot & ankle surgery. P28 is passionate about blending different surgical philosophies from various global thought leaders to develop biomechanically and clinically relevant surgical solutions. We are committed to creating complete surgeon-centric systems, specialty instruments, and next generation implants to solve real world issues faced by foot & ankle Surgeons. Paragon 28 currently supplies a full array of next generation plates, screws, biologics, and bone wedges and is constantly adding to its robust product portfolio.

Pega Medical
For more than two decades, Pega Medical has been offering innovative deformity correction solutions. Pega’s family of IM Nails (Fassier-Duval Telescopic Rod, SLIM and GAP Endo-Exo Medullary Systems) are specifically designed for small bones, often seen with metabolic and genetic disease. Additional products such as The Hinge Plate and the Free-Gliding SCFE Screw complete our portfolio of growth modulating orthopedic devices. For limb deformity and length discrepancy, the Paley’s Osteotomy System offers unique instrumentation for complex procedures. Our latest innovation: The LolliPOP modular hip plating system, completes a portfolio of forward thinking technologies developed in collaboration with expert orthopedic surgeons from around the world.

Rubin Institute for Advanced Orthopedics
The Rubin Institute for Advanced Orthopedics (RIAO) is home to some of the world’s most renowned orthopedic surgeons and offers state-of-the-art treatment in a variety of orthopedic conditions in both children and adults. The RIAO hosts the annual, CME-accredited Baltimore Limb Deformity Course (focus on lower extremity – including foot – deformity analysis and correction). Clinical and research fellowship opportunities are available. The Multiplier and Bone Ninja apps were developed here. The RIAO is in Maryland, USA.
Setting Scoliosis Straight Foundation
The Setting Scoliosis Straight Foundation (SSSF) is a not-for-profit charitable foundation working with the Harms Study Group to support discoveries, and advance techniques, in spinal deformity treatment of children and adolescents worldwide. SSSF also sponsors the Surgeon Performance Program, a quality improvement registry designed to assist in optimizing surgeon performance and improving patient outcomes in Adolescent Idiopathic Scoliosis (AIS) surgery. Surgeon participants will receive real-time reporting through ‘dashboard reports.’ Reporting contains comparative practice data that supports the identification of best practices and shared learning. In addition, participation in this program will allow educational opportunities through program supported surgeon education events.

Shriners Hospitals for Children
The Shriners Hospitals for Children is a one-of-a-kind international health care system dedicated to improving the lives of children by providing pediatric specialty care, innovative research and outstanding teaching programs. Our Mission: Provide the highest quality care to children with neuromusculoskeletal conditions, burn injuries and other special healthcare needs within a compassionate, family-centered and collaborative care environment. Provide for the education of physicians and other health care professionals. Conduct research to discover new knowledge that improves the quality of care and quality of life of children and families. This mission is carried out without regard to race, color, creed, sex or sect, disability, national origin, or ability of a patient or family to pay.

WishBone Medical
WishBone Medical is a Warsaw, Indiana based pediatric orthopedic company focused globally on the unmet needs of children suffering from orthopedic issues. Our commitment is to provide anatomically appropriate, innovative implants and instruments in sterile packed, single-use, disposable kits to surgeons and their patients who are still growing. Because KIDS are not just little adults.

Smith & Nephew
Smith & Nephew is a global medical technology business with global leadership positions in Orthopaedic Reconstruction, Sports Medicine, Trauma Fixation, Extremities & Limb Restoration, and Advanced Wound Management.

Wolters Kluwer Health
Wolters Kluwer Health is a leading global provider of information and point of care solutions for the healthcare industry. Our solutions are designed to help professionals build clinical competency and improve practice so that healthcare organizations can succeed in value-based care delivery models. Product solutions include Lippincott, Ovid®, and UpToDate®.
Wright Medical
Wright Medical Group N.V. is a global medical device company focused on Extremities and Biologics. We deliver innovative, value-added solutions improving quality of life for patients worldwide, such as PRO-DENSE™ Injectable Regenerative Graft that is the first and only bone graft to have an indication for benign bone cysts and tumors in the pediatric population (ages 6 and up).

Zimmer Biomet
Zimmer Biomet Spine is a leader in restoring mobility, alleviating pain, and improving the quality of life for patients around the world by delivering surgeons a comprehensive portfolio of quality spine technologies and procedural innovation, best-in-class training, and unparalleled service via a network of responsive team members and sales professionals.

Exhibit Hall Hours
- Wednesday, November 28: 6:30 AM – 7:15 PM
- Thursday, November 29: 6:30 AM – 4:30 PM
- Friday, November 30: 6:30 AM – 4:00 PM

Interested in sponsoring the POSNA Annual Meeting and IPOS 2019?
Visit posna.org for the 2019 Corporate Partner Opportunities brochure.
For More Information
For more information please visit these sites:
https://www.visitorlando.com/
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Dining & Entertainment Districts
Orlando is a culinary hot spot with new award-winning restaurants and celebrity chefs, such as Wolfgang Puck, Todd English and Emeril Lagasse and now Chef Morimoto, that cater to visitors from across the globe. With over 5,000 restaurants you’ll find an extensive menu from fine dining and international eateries to casual cafes and chic wine bars, there’s something for every taste or budget. The destination has six distinctive dining districts including the Convention District (I-Drive), Restaurant Row, Universal Citywalk®, Disney Springs™, Downtown Orlando, and charming Winter Park.

Vibrant Nightlife
From casually sipping wine and enjoying a leisurely cigar at a trendy outdoor lounge, to dancing at a high-energy club and checking out a rock band at a live venue, Orlando provides attendees with nearly unlimited nighttime opportunities. You can see live music performances at the House of Blues at Disney Springs™ (formally Downtown Disney®) and Hard Rock Live at Universal CityWalk®. Experience mind-bending entertainment with the La Nouba™ by Cirque du Soleil® or the Blue Man Group. Or discover a modern, big-city nightlife scene in downtown Orlando that includes dozens of dance clubs, bars, restaurants, and live music venues.

Loews Hotel Guest Benefits
Get More Rides, More Often
When you stay at Loews Royal Pacific Resort, you’ll receive free* Universal Express Unlimited™ to skip the regular lines at most popular rides and attractions at Universal Studios Florida™ and Universal’s Islands of Adventure™, including The Amazing Adventures of Spider-Man®, Despicable Me Minion Mayhem™ and now The Wizarding World of Harry Potter™. That’s a value of $129.99† per person, per day. Valid theme park admission required.

Early Park Admission† to the Wizarding World of Harry Potter™
Enjoy Early Park Admission† to The Wizarding World of Harry Potter™ and Universal’s Volcano Bay™ one hour before the theme park opens to the public when you stay at this on-site hotel. Valid theme park admission required.

Fun, Free and Easy Transportation
Waterways, roads and walking paths connect this Preferred resort hotel to Universal Studios Florida™, Universal’s Islands of Adventure™ and Universal CityWalk™. Guests of Premier and Preferred on-site hotels can get around easily with complimentary water taxis and shuttle services. Universal’s Volcano Bay™ is accessible only by complimentary shuttle.

Need Child Care during IPOS?
Visit Kids Night Out for more information http://kidsniteout.com/
SAVE THE DATES

Annual Meeting
May 15 - 18, 2019
Charlotte, North Carolina

IPOS
December 10 - 14, 2019
Orlando, Florida

WIFI information:
SSID: IPOS2018
Password: orlando2018