

15th Annual International Pediatric Orthopaedic Symposium

2018

November 27 – December 1
Orlando, Florida



Loews Royal
Pacific Hotel
Orlando, Florida

Donald Bae, MD
Course Director



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15th Annual International Pediatric Orthopaedic Symposium

Presented by



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PEDIATRIC ORTHOPAEDIC SOCIETY
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AMERICAN ACADEMY OF
ORTHOPAEDIC SURGEONS



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

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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

Tuesday, November 27	3:00 PM – 7:00 PM
Wednesday, November 28	6:30 AM – 6:00 PM
Thursday, November 29	6:30 AM – 4:30 PM
Friday, November 30	6:30 AM – 5:00 PM
Saturday, December 1	6:30 AM – 2:30 PM

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	
Low Income (determined by World Bank)	\$ 1,049
Nurse/Allied Health/PA	\$ 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

Tuesday, November 27	3:00 PM – 7:00 PM
Wednesday, November 28	6:30 AM – 6:00 PM
Thursday, November 29	6:30 AM – 4:30 PM
Friday, November 30	6:30 AM – 5:00 PM

Speaker Ready Room Hours

Tuesday, November 27	3:00 PM – 7:00 PM
Wednesday, November 28	6:30 AM – 6:00 PM
Thursday, November 29	6:30 AM – 4:30 PM
Friday, November 30	6:30 AM – 5:00 PM
Saturday, December 1	6:30 AM – 2:30 PM



"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."

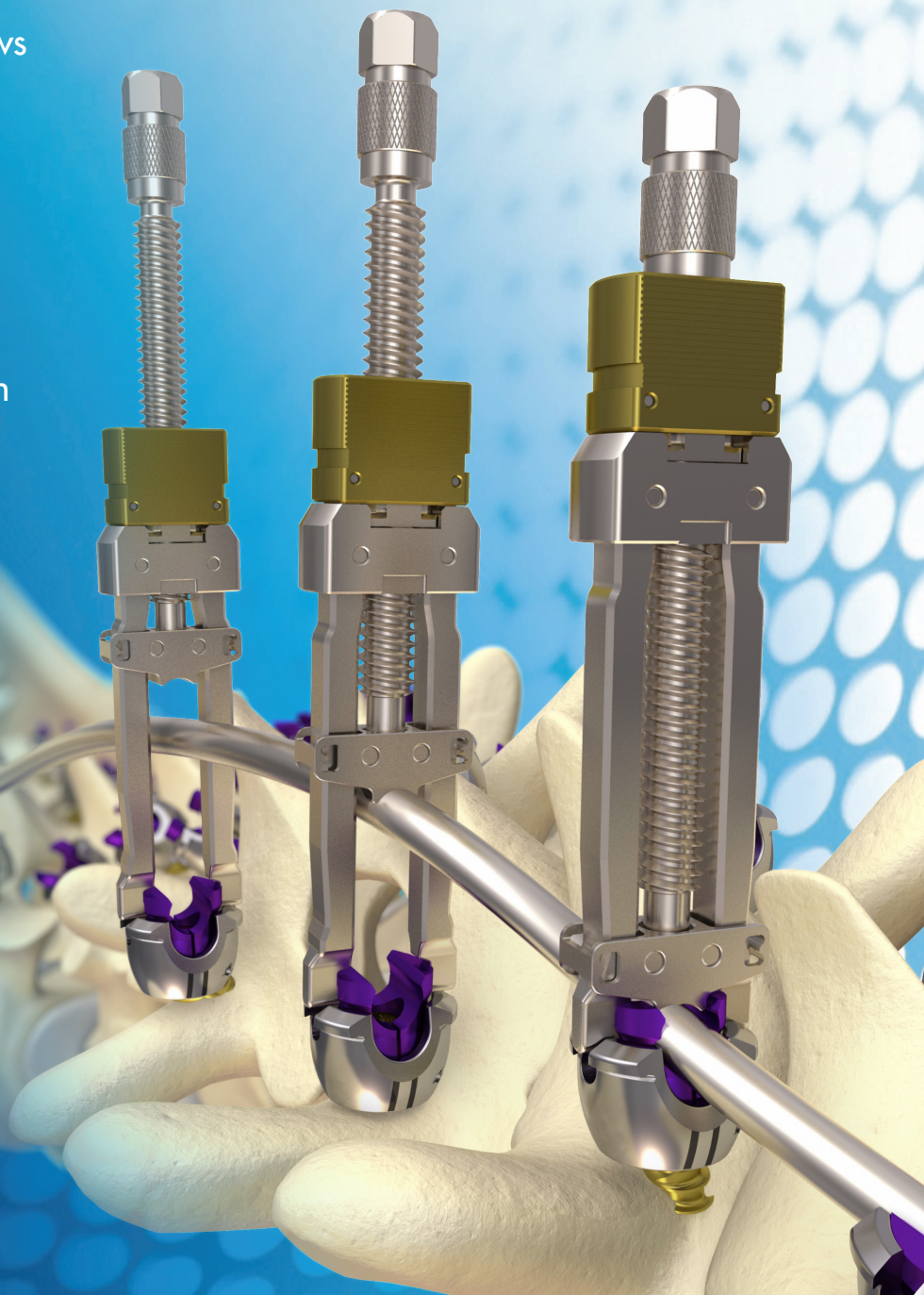
—2016 IPOS Attendee

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2018 IPOS Faculty

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Jonathan Phillips, MD
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Suken Shah, MD*
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David Farrington, MD
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James Hoi Po Hui, FRCSE
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Thomas Wirth, MD, PhD
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Javier Masquijo, MD
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or Google Play store.

Schedule At a Glance











Tuesday, November 27

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

Wednesday, November 28










Registration	6:30 AM - 6:00 PM	Registration North
Breakfast & Exhibits	6:30 AM - 7:30 AM	Pacifica 6
GENERAL SESSION 1- Challenges & Controversies in Pediatric Trauma	7:30 AM - 10:00 AM	Pacifica 7
Director's Welcome	10:00 AM - 10:10 AM	Pacifica 7
Break & Exhibits	10:10 AM - 10:30 AM	Pacifica 6
CME Breakout- Ponseti I (hands-on workshop)	10:30 AM - 12:00 PM	Banda Sea
CME Breakout- Six Axis Deformity Correction with Circular Fixator I (hands-on workshop)	10:30 AM - 12:00 PM	Java Sea
CME Breakout- Case & Controversies in Neuromuscular Conditions of the Upper Limb	10:30 AM - 12:00 PM	Pacifica 8-9
CME Breakout- Infant and Young Child- Cases and Complications in the Immature Hip	10:30 AM - 12:00 PM	Pacifica 10

CME Breakout- Dysplasias and Syndromes	10:30 AM - 12:00 PM	Pacifica 11
CME Breakout- POPS Presents: Special Considerations for Early Onset Scoliosis	10:30 AM - 12:00 PM	South China Sea
Lunch & Exhibits	12:00 PM - 1:00 PM	Pacifica 6
Concurrent Session 1- Medical and Surgical Treatment of the Neuromuscular Patient	1:00 PM - 3:10 PM	Pacifica 1-3
Concurrent Session 2- Congenital Conditions and Trauma of the Upper Limb	1:00 PM - 3:10 PM	Pacifica 7
Break & Exhibits	3:10 PM - 3:30 PM	Pacifica 6
Industry Spotlight Sessions 1	3:30 PM - 4:40 PM	
Arthrex	3:30 PM - 4:40 PM	Timor Sea
Depuy Synthes	3:30 PM - 4:40 PM	Coral Sea
NuVasive	3:30 PM - 4:40 PM	Pacifica 8-9
OrthoPediatrics	3:30 PM - 4:40 PM	Pacifica 10
Stryker Spine	3:30 PM - 4:40 PM	Pacifica 12
Industry Spotlight Sessions 2	4:50 PM - 6:00 PM	
Arthrex	4:50 PM - 6:00 PM	Timor Sea
Depuy Synthes	4:50 PM - 6:00PM	Coral Sea
OrthoPediatrics	4:50 PM - 6:00PM	Pacifica 10
Vilex in Tennessee, Inc.	4:50 PM - 6:00PM	Pacifica 8-9
Wright Medical	4:50 PM - 6:00PM	Pacifica 11
Course Director's Welcome Reception	6:15 PM - 7:15 PM	Pacifica 6








-  Foot
-  General Pediatric Orthopaedics/Trauma
-  Hand & Upper Extremity
-  Hip
-  Lower Extremity/Deformity
-  Neuromuscular & Cerebral Palsy
-  POPS
-  Spine
-  Sports
-  Syndromes, Dysplasias & Genetic Conditions

Schedule At a Glance, continued

Thursday, November 29

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

Friday, November 30

Registration	6:30 AM - 5:00 PM	Registration North
Breakfast & Exhibits	6:30 AM - 7:30 AM	Pacifica 6
Industry Spotlight Sessions 4	7:30 AM - 8:40 AM	
Depuy Synthes	7:30 AM - 8:40 AM	Pacifica 8-9
OrthoPediatrics	7:30 AM - 8:40 AM	Coral Sea
Pega Medical	7:30 AM - 8:40 AM	Pacifica 10
Stryker Trauma	7:30 AM - 8:40 AM	Pacifica 11-12
Zimmer Biomet	7:30 AM - 8:40 AM	South China Sea
Break & Exhibits	8:40 AM - 9:00 AM	Pacifica 6
Concurrent Session 5– Adolescent Idiopathic and Early Onset Scoliosis 	9:00 AM - 11:30 AM	Pacifica 1-3
Concurrent Session 6– Knee Injuries in the Young Athlete 	9:00 AM - 11:30 AM	Pacifica 7
Lunch & Exhibits	11:30 AM - 12:30 AM	Pacifica 6
Lunchtime Cases	11:45 AM - 12:30 PM	Pacifica 6
GENERAL SESSION 3 Authors' Preferred Techniques 	12:30 PM - 2:50 PM	Pacifica 7
Awards and Acknowledgements	2:50 PM - 3:05 PM	Pacifica 7
Break & Exhibits	3:10 PM - 3:30 PM	Pacifica 6
CME Breakout– Ponseti II 	3:30 PM - 5:00 PM	Banda Sea
CME Breakout– Six Axis Deformity Correction with Circular Fixator III: Blout's Disease  (hands-on workshop)	3:30 PM - 5:00 PM	Java Sea
CME Breakout– Musculoskeletal Infections 	3:30 PM - 5:00 PM	Pacifica 7
CME Breakout– Pelvic Osteotomies II: Triple, PAO 	3:30 PM - 5:00 PM	Timor Sea
CME Breakout– Gait I: Normal vs Pathological Gait 	3:30 PM - 5:00 PM	Pacifica 8-9
CME Breakout– POPS Presents: Pediatric Fracture Clinic: Insights from the Trenches 	3:30 PM - 5:00 PM	Coral Sea
CME Breakout– Spine: Spondylolysis and Spondylolisthesis 	3:30 PM - 5:00 PM	Pacifica 10

Schedule At a Glance, continued

Saturday, December 1

Registration	6:30 AM - 2:30 PM	Registration North
Breakfast	6:30 AM - 7:30 AM	Pacifica 6
GENERAL SESSION 5- The Child's Foot 	7:30 AM - 9:40 AM	Pacifica 7
One-Day Fundamentals in Pediatric Orthopaedics Review Course	8:00 AM - 2:30 PM	Pacifica 1-3
Break	9:40 AM - 10:10 AM	Pacifica 6
CME Breakout- Six Axis Deformity Correction with Circular Fixator IV: Treatment of Ankle Equinus Contracture  (hands-on workshop)	10:00 AM - 11:30 AM	Java Sea
CME Breakout- Principles and Techniques in Pediatric Sports 	10:00 AM - 11:30 AM	Pacifica 7
CME Breakout- Patient and Provider Wellness 	10:00 AM - 11:30 AM	Pacifica 10
CME Breakout- Gait II: Cased-based Decision Making, from Beginner to Advanced 	10:00 AM - 11:30 AM	Pacifica 8-9
Lunch	11:30 AM - 12:00 PM	Pacifica 6



orthoKids
PEDIATRIC ORTHOPAEDIC SOCIETY OF NORTH AMERICA

OrthoKids is the website for kids as well as parents to learn about pediatric orthopaedic conditions, injury prevention, and treatment. Everything on OrthoKids is provided by members of the Pediatric Orthopaedic Society of North America (POSNA), so parents and kids know that this is information that they can trust!

orthokids.org 



Help POSNA continue accomplishing the things most important to our members: education, patient care initiatives and research.

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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)

 **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: Cased-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 I** (hands-on workshop) (CME Breakout – Thursday, 11/29, 12:30-2 PM)
- **Ponseti II** (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)

 **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)

Industry Spotlight Sessions (Non-CME)

Wednesday, November 28

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

ARTHREX (Non-CME)

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 (Non-CME)

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 (Non-CME)

**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

ORTHOFIX

**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 (Non-CME)

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.

- 8:00 PM–8:45 PM **Industry-sponsored Cocktail Reception**



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: <i>Christof Radler, MD</i> <i>John (Jack) Flynn, MD</i> <i>James Hoi Po Hui, FRCSE</i>
9:17 AM	Tibial Spine Fracture: Reduce/Cast or Scope? <i>Kevin Shea, MD</i>
9:23 AM	Diaphyseal Tibia Fracture in the Teen with Open Physes: Best Fixation? <i>Susan Scherl, MD</i>
9:29 AM	Distal Tibia Growth Arrest: Open Reduction to Avoid Physeal Arrest? <i>Vishwas Talwalker, MD</i>
9:35 AM	Discussion Panelists: <i>Kevin Shea, MD</i> <i>Susan Scherl, MD</i> <i>Vishwas Talwalker, MD</i>
9:44 AM	Lower Extremity Cases Panelists: <i>John (Jack) Flynn, MD</i> <i>Kevin Shea, MD</i> <i>James Hoi Po Hui, FRCSE</i> <i>Susan Scherl, MD</i> <i>Vishwas Talwalker, MD</i>

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)

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 I** (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

**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 arthrogyrosis, including examination pearls and surgical techniques.

Cerebral Palsy

Moderator: *Peter Waters, MD*


10:30 AM	Introduction <i>Peter Waters, MD</i>
10:32 AM	Case Presentation <i>Peter Waters, MD</i>
10:36 AM	The Pronated Forearm <i>Peter Waters, MD</i>
10:44 AM	The Flexed Wrist <i>Charles Goldfarb, MD</i>
10:52 AM	The Thumb in Palm <i>Scott Kozin, MD</i>
11:00 AM	Q&A Panelists: <i>Peter Waters, MD</i> <i>Charles Goldfarb, MD</i> <i>Scott Kozin, MD</i>

Arthrogyrosis

Moderator: *Scott Kozin, MD*

11:15 AM	Case Presentation <i>Scott Kozin, MD</i>
11:19 AM	Evaluation of the UE in AMC <i>Christine Ho, MD</i>
11:27 AM	Master Technique: Restoring Elbow Motion <i>Scott Kozin, MD</i>
11:34 AM	Master Technique: Carpal Osteotomy <i>Peter Waters, MD</i>
11:41 AM	Master Technique: First Web Space <i>Charles Goldfarb, MD</i>
11:48 AM	Discussion Panelists: <i>Peter Waters, MD</i> <i>Charles Goldfarb, MD</i> <i>Scott Kozin, MD</i> <i>Christine Ho, MD</i>

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? <i>Ernest Sink, MD</i> Panelists: <i>Lori Karol, MD</i> <i>Kishore Mulpuri, MD</i>
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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

Debates

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

Perthes

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

Dysplasias and Syndromes

 This session focuses on the evaluation and treatment of skeletal dysplasias and syndromes. Included will be discussions of lower limb deformity and length discrepancies, spinal deformity in genetic disorders, and overgrowth syndromes of the upper limb.

Moderator: *William Mackenzie, MD*

Skeletal Dysplasia

10:30 AM Introduction
William Mackenzie, MD

10:33 AM Genu Varum -
Assessment and Management
Michelle Caird, MD

10:40 AM Genu Valgum -
Assessment and Management
Haemish Crawford, MD

10:47 AM Limb Lengthening for Stature
Dror Paley, MD, FRCSC

10:54 AM Kyphosis: Achondroplasia vs MPS
Muharrem Yazici, MD

11:00 AM Discussion
Panelists: *Michelle Caird, MD*
Haemish Crawford, MD
Dror Paley, MD, FRCSC
Muharrem Yazici, MD

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
Management-Nonoperative*
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
Management-Operative*
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

- 1:54 PM Pelvic Osteotomy Indications / Technique / Pearls
Robert Kay, MD
- 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.

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)



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*
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

Thursday, November 29, continued

9:00 AM–11:30 AM **GENERAL SESSION 2**
continued

Global Lessons for Local Care

Moderator: *Jon Davids, MD*

- 9:30 AM Clubfoot:
Late Release and Arthrodeses
Jon Davids, MD
- 9:38 AM Infection: Chronic Osteomyelitis
David Spiegel, MD
- 9:46 AM Polio and Acute Flaccid Myelitis (AFM)
Matthew Varghese, MS
- 9:54 AM Discussion
Panelists: *Jon Davids, MD*
David Spiegel, MD
Matthew Varghese, MS
- 10:00 AM CP: Late Treatment
(Braces, Reconstruction)
Tom Novacheck, MD
- 10:08 AM Untreated DDH/Perthes
Kishore Mulpuri, MD
- 10:16 AM Congenital UE:
Novel Solutions with Limited Resources
Charles Goldfarb, MD
- 10:24 AM Burn Contractures
Scott Kozin, MD
- 10:31 AM Discussion
Panelists: *Tom Novacheck, MD*
Kishore Mulpuri, MD
Charles Goldfarb, MD

Personal Stories, Successful Programs

Moderator: *Kenneth Noonan, MD*

- 10:40 AM Grassroot Efforts that Work
Kenneth Noonan, MD
- 10:46 AM Society Efforts that Work (THP)
Scott Kozin, MD
- 10:52 AM NGO Efforts that Work
Matthew Varghese, MS
- 10:58 AM QSVI: Home and Away
Coleen Sabatini, MD
- 11:04 AM Registries and Research: Best Practices
Pablo Castañeda, MD
- 11:10 AM Get Involved: COUR
Coleen Sabatini, MD
- 11:15 AM Discussion
Panelists: *Kenneth Noonan, MD*
Scott Kozin, MD
Matthew Varghese, MS
Coleen Sabatini, MD
Pablo Castañeda, MD

11:30 AM–12:30 PM LUNCH and EXHIBITS

12:30 PM–2:00 PM **CME BREAKOUT SESSIONS**
(Advance Sign-up Encouraged for
Hands-on Workshops)

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

- 12:30 PM Introduction
Michelle Caird, MD
- 12:33 PM Just the Basics:
A Primer on Bone Metabolism
Michelle Caird, MD
- 12:41 PM Recurrent Fractures:
When to Get a Blood Test and Treat?
Susan Scherl, MD
- 12:49 PM Rickets: How to Recognize and Treat
David Farrington, MD
- 12:57 PM The Female Triad:
Approach to Management
Jennifer Weiss, MD
- 1:05 PM Discussion
Panelists: *Michelle Caird, MD*
Susan Scherl, MD
David Farrington, MD
Jennifer Weiss, MD

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 <i>David Little, MBBS, FRACS, PhD</i>
1:26 PM	Paloveratene for MHE <i>Dror Paley, MD, FRCSC</i>
1:32 PM	Medical Therapies for Vascular Malformations & Overgrowth Syndromes <i>Scott Kozin, MD</i>
1:38 PM	Steroids/Adjuvants for UBC <i>Alexandre Arkader, MD</i>
1:43 PM	Discussion Panelists: <i>David Little, MBBS, FRACS, PhD</i> <i>Dror Paley, MD, FRCSC</i> <i>Scott Kozin, MD</i>

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

12:30 PM	Intro Case Presentation <i>Mininder Kocher, MD, MPH</i>
12:33 PM	Labral Tears: Why Do They Happen? <i>Ira Zaltz, MD</i>
12:39 PM	High Yield History, Exam, and Imaging <i>Michael Busch, MD</i>
12:46 PM	Labral Tear: Repair or Debride? <i>Mininder Kocher, MD, MPH</i>
12:55 PM	Don't Treat the Symptoms, Treat the Cause: Cut the Pelvis! <i>Ira Zaltz, MD</i>
1:00 PM	Q&A and Cases <i>Mininder Kocher, MD, MPH</i> Panelists: <i>Michael Busch, MD</i> <i>Ira Zaltz, MD</i>

Thrower's Elbow: Case-based Discussion

Moderator: <i>Donald Bae, MD</i>	
Panelists: <i>Theodore Ganley, MD</i> <i>Michael Busch, MD</i> <i>Charles Goldfarb, MD</i> <i>Kevin Shea, MD</i> <i>Jennifer Weiss, MD</i>	
1:15 PM	Introduction <i>Donald Bae, MD</i>
1:17 PM	Medial Epicondyle Fracture <i>Donald Bae, MD</i>
1:30 PM	Osteochondritis Dissecans of the Elbow <i>Donald Bae, MD</i>
1:45 PM	Ulnar Collateral Ligament Tear <i>Donald Bae, MD</i>

POPS: Perioperative Management of the CP Patient

POPS 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: <i>Jill Ariagno, MSN, RN</i>	
12:30 PM	Introduction <i>Anne Stuedemann, CPNP</i>
12:35 PM	Preoperative Risk Assessment <i>Jessica Staschak, MSN, CRNP, CPNP-PC</i>
12:44 PM	Inpatient Care <i>Anne Stuedemann, CPNP</i>
12:53 PM	Post-surgical Spasticity Mgt <i>Robert Kay, MD</i>
1:02 PM	Rehabilitation: Wheelchairs, Braces, and PT <i>Jessica Staschak, MSN, CRNP, CPNP-PC</i>
1:10 PM	Discussion
1:20 PM	Common Post-operative Complications: Prevention / Management <i>James McCarthy, MD, MHCM</i>
1:28 PM	HRQL in Nonambulatory Children with CP - Are We Making a Difference with Hip and Spine Surgery? <i>Benjamin Shore, MD, MPH, FRCSC</i>
1:36 PM	QSVI: Small Measures, Big Impact <i>Daniel Sucato, MD, MS</i>
1:44 PM	Discussion Panelists: <i>Anne Stuedemann, CPNP</i> <i>Jessica Staschak, MSN, CRNP,</i> <i>CPNP-PC</i> <i>Robert Kay, MD</i> <i>James McCarthy, MD, MHCM</i> <i>Benjamin Shore, MD, MPH, FRCSC</i> <i>Daniel Sucato, MD, MS</i>

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: *Wudbhav (Woody) Sankar, 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
Kishore Mulpuri, 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

2:20 PM–4:30 PM	CONCURRENT SESSION 4 continued
3:00 PM	MHE- About the Hip <i>Nicholas Fletcher, MD</i>
3:07 PM	MHE - Management of LLD and Progressive Malalignment <i>Christof Radler, MD</i>
3:14 PM	Master Technique: 6-Axis Deformity Correction <i>John Herzenberg, MD</i>
3:20 PM	Cases & Discussion <i>William Mackenzie, MD</i>
	Osteogenesis Imperfecta
	Moderator: <i>Michelle Caird, MD</i> eModerator: <i>Coleen Sabatini, MD</i>
3:40 PM	Genetics and Classification for the Orthopedist in 2018 <i>L. Reid Nichols, MD</i>
3:47 PM	Medical Therapy: When, Why, and How <i>Michelle Caird, MD</i>
3:54 PM	Spinal Deformity in OI <i>Suken Shah, MD</i>
4:01 PM	The Upper Limb in OI: When to Intervene? <i>Scott Kozin, MD</i>
4:08 PM	The Lower Limb in OI - Hip and Long Bone Deformity <i>David Farrington, MD</i>
4:15 PM	Master Technique: Telescoping Rod Insertion <i>Michelle Caird, MD</i>
4:22 PM	Discussion Panelists: <i>L. Reid Nichols, MD</i> <i>Michelle Caird, MD</i> <i>Suken Shah, MD</i> <i>Scott Kozin, MD</i> <i>David Farrington, MD</i>


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*
8:40 AM	BREAK and EXHIBITS
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: <i>Michael Vitale, MD, MPH</i> eModerator: <i>Michael Glotzbecker, MD</i>
	AIS
9:00 AM	Introduction <i>Michael Vitale, MD, MPH</i>
	Before the Incision
9:02 AM	Bracing: How Can We Do Better? <i>Michael Vitale, MD, MPH</i>
9:11 AM	Choosing Levels: My Three Rules for Leveling the Shoulders <i>Lindsay Andras, MD</i>
9:16 AM	Choosing Levels: My Three Rules for Choosing Lowest Instrumented Vertebra <i>Laurel Blakemore, MD</i>
9:21 AM	Choosing Levels: My Three Rules for Selective Thoracic Fusion <i>Suken Shah, MD</i>
9:26 AM	Discussion
9:35 AM	Cases for the Panel: Difficult Decisions in Level Selection <i>Brian Smith, MD</i> Panelists: <i>Laurel Blakemore, MD</i> <i>Stephen Albanese, MD</i> <i>Muharrem Yazici, MD</i>
	Optimizing Technical Execution: Master Tips and Trick
9:50 AM	Power Screw Insertion <i>David Skaggs, MD, MMM</i>
9:56 AM	Apical Derotation <i>Muharrem Yazici, MD</i>
10:02 AM	Restoring Kyphosis <i>Peter Newton, MD</i>
10:08 AM	Discussion



Friday, November 30, continued

9:00 AM–11:30 AM	CONCURRENT SESSION 5 continued
	Good Judgment Comes from Bad Experience: Panel Discussion
10:19 AM	Case for Panel: Shoulders not Level Postop <i>David Skaggs, MD, MMM</i> Panelists: <i>David Skaggs, MD, MMM</i> <i>Muharrem Yazici, MD</i> <i>Peter Newton, MD</i> <i>Michael Vitale, MD, MPH</i>
10:27 AM	Case for Panel: STF Looks Bad <i>Muharrem Yazici, MD</i> Panelists: <i>David Skaggs, MD, MMM</i> <i>Muharrem Yazici, MD</i> <i>Peter Newton, MD</i> <i>Michael Vitale, MD, MPH</i>
	Quality, Safety, Value in Spinal Surgery
10:36 AM	Make YOUR OR Function More Efficiently <i>John (Jack) Flynn, MD</i>
10:42 AM	Preventing Infection in the High Risk Child <i>Richard Schwend, MD</i>
10:48 AM	Postop Pathways that Make Care Better <i>Nicholas Fletcher, MD</i>
10:54 AM	Discussion
	EOS and Nonidiopathic Scoliosis
11:00 AM	Evidence-based Update on MAGEC <i>Michael Glotzbecker, MD</i>
11:06 AM	Evidence-based Update on Tethering <i>Peter Newton, MD</i>
11:12 AM	Debate: When to Fuse to Pelvis in GMFCS 4/5 <i>Suken Shah, MD</i> and <i>Mark Erickson, MD, MMM</i>
11:20 AM	Debate: Early Fusion vs. "Growth Friendly" Strategies <i>Paul A. Sponseller, MD</i> and <i>David Farrington, MD</i>
11:28 AM	Discussion


9:00 AM–11:30 AM	CONCURRENT SESSION 6 – Knee Injuries in the Young Athlete  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: <i>Theodore Ganley, MD</i> eModerator: <i>Javier Masquijo, MD</i>
	ACL
9:00 AM	Introduction <i>Theodore Ganley, MD</i>
	Preoperative Care
9:04 AM	Prehab/Prevention/Risk Factors <i>Jennifer Weiss, MD</i>
9:10 AM	Is There a Role for Bracing? <i>Theodore Ganley, MD</i>
	Surgical Techniques
9:16 AM	Technique: Physéal Sparing All Epiphseal <i>Kevin Shea, MD</i>
9:23 AM	Technique: Physéal Sparing ITB <i>Michael Busch, MD</i>
9:30 AM	Technique: Anterolateral Ligament Reconstruction <i>James Hoi Po Hui, FRCSE</i>
9:37 AM	BEAR, Biologics, and the Future <i>Mininder Kocher, MD, MPH</i>
9:43 AM	Q&A <i>Theodore Ganley, MD</i>
	ACL Cases
9:50 AM	Case Discussions <i>Theodore Ganley, MD</i> Panelists: <i>Michael Busch, MD</i> <i>James Hoi Po Hui, FRCSE</i> <i>Mininder Kocher, MD, MPH</i> <i>Jennifer Weiss, MD</i> <i>Kevin Shea, MD</i>
	Patellofemoral Instability
	Moderator: <i>Michael Busch, MD</i> eModerator: <i>Jennifer Weiss, MD</i>
10:15 AM	Intro Case Presentation <i>Michael Busch, MD</i>
10:18 AM	My Top 5 Physical Examination Pearls in PF Instability <i>Javier Masquijo, MD</i>
10:24 AM	My Top 5 Radiographic Evaluation Pearls in PF Instability <i>Jennifer Weiss, MD</i>
10:30 AM	How to Optimize Non-operative Care <i>Michael Busch, MD</i>
10:38 AM	Q&A <i>Michael Busch, MD</i> Panelists: <i>Theodore Ganley, MD</i> <i>Jennifer Weiss, MD</i>



Friday, November 30, continued

- 10:45 AM MPFL Reconstruction Technique: Quad
Mininder Kocher, MD, MPH
- 10:53 AM MPFL Reconstruction Technique:
Hamstring
Kevin Shea, MD
- 11:01 AM Tibial Tubercleplasty:
Indications and Techniques
James Hoi Po Hui, FRCSE
- 11:09 AM Questions and Cases
Michael Busch, MD
Panelists: *Theodore Ganley, MD*
Jennifer Weiss, MD
Mininder Kocher, MD, MPH
James Hoi Po Hui, FRCSE
Kevin Shea, MD

11:30 AM–12:30 PM LUNCH and EXHIBITS

12:30 PM–2:50 PM **GENERAL SESSION 3-
Authors' Preferred Techniques**

An IPOS signature session!
Join our international faculty as they share
mastersurgical 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

- 1:37 PM Discussion
- 1:42 PM Proximal Femoral Osteotomy after
Prior SCFE in situ Pinning
Daniel Sucato, MD, MS
- 1:48 PM Femoral Head Reduction in Perthes
Dror Paley, MD, FRCSC
- 1:54 PM Internal Lengthening Nail for the Femur
John Herzenberg, MD
- 2:00 PM Discussion
- 2:05 PM MAGEC Insertion vs Serial Lengthenings
Michael Vitale, MD, MPH
- 2:11 PM Ponte Osteotomies
Paul Sponseller, MD
- 2:17 PM VDRO in Dislocated CP Hip
Benjamin Shore, MD, MPH, FRCSC
- 2:23 PM Discussion
- 2:28 PM FCU or ECU to ECRB Transfer
Scott Kozin, MD
- 2:34 PM McFarland Bypass Grafting for Tibial
Pseudarthrosis
Lori Karol, MD
- 2:40 PM Telescoping Nail for Osteogenesis
Imperfecta
Michelle Caird, MD
- 2:46 PM Discussion

2:50 PM–3:05 PM **Awards and Acknowledgments**

3:05 PM BREAK and EXHIBITS



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: Blout'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
- 4:20 PM Infected Long-bone Nonunion:
Resect? Span? Fix? Transport?
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 Osteotomies 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

Friday, November 30, continued

3:30 PM–5:00 PM **CME BREAKOUT SESSIONS
continued**

**POPS Presents: Pediatric Fracture Clinic:
Insights from the Trenches**

POPS

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

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




POSNA members!

Interested in joining a community of fellow pediatric orthopaedic professionals to exchange stories, tips & advice on how to promote wellness and maintain a healthy life?

Join POSNA's Physician Wellness Group on Facebook!



Saturday, December 1

6:30 AM–2:30 PM	REGISTRATION
6:30 AM–7:30 AM	BREAKFAST and EXHIBITS
7:30 AM–9:40 AM	<p>GENERAL SESSION 4- The Child's Foot An IPOS signature session! Our expert faculty will provide a comprehensive review of pediatric foot conditions. From clubfoot to vertical talus to common outpatient complaints, join us for this fast-paced, evidence-based program!</p> <p>Moderator: <i>Vincent Mosca, MD</i> eModerator: <i>Amy McIntosh, MD</i></p>
	
7:30 AM	Introduction <i>Vincent Mosca, MD</i>
	'5 in 5'
7:33 AM	5 Most Important Things to Know About Foot Biomechanics <i>Vincent Mosca, MD</i>
7:39 AM	5 Fundamental Principles in Pediatric Foot Assessment <i>Derek Kelly, MD</i>
7:45 AM	5 Most Common "Mistakes" in Pediatric Foot Surgery <i>Alain Dimeglio, MD</i>
7:50 AM	Discussion Panelists: <i>Vincent Mosca, MD</i> <i>Derek Kelly, MD</i> <i>Alain Dimeglio, MD</i>
	Clubfoot
7:55 AM	TEV: Ponseti Best Practices <i>Derek Kelly, MD</i>
8:01 AM	Heelcord Tenotomy in the Clinic: How I Do It <i>Lori Karol, MD</i>
8:07 AM	Bracing: How and for How Long <i>Alain Dimeglio, MD</i>
8:13 AM	Extensive Release for Recalcitrant or Late-presenting Clubfoot <i>Kenneth Noonan, MD</i>
8:18 AM	Discussion Panelists: <i>Derek Kelly, MD</i> <i>Lori Karol, MD</i> <i>Alain Dimeglio, MD</i> <i>Kenneth Noonan, MD</i>
	Vertical Talus
	Moderator: <i>Kenneth Noonan, MD</i> eModerator: <i>Derek Kelly, MD</i>
8:30 AM	Casting: How Much Correction Can We Get? <i>Lori Karol, MD</i>
8:36 AM	Dobbs Method for CVT: Pearls and Pitfalls <i>Kenneth Noonan, MD</i>

8:42 AM	Master Technique: Surgical Correction for Neglected CVT <i>Vincent Mosca, MD</i>
8:47 AM	Discussion Panelists: <i>Lori Karol, MD</i> <i>Kenneth Noonan, MD</i> <i>Vincent Mosca, MD</i>
	Common Clinical Conundrums
8:55 AM	The Symptomatic Flatfoot in the Teenager: What to Do? <i>Matthew Varghese, MS</i>
9:01 AM	Calcaneonavicular Coalition <i>Amy McIntosh, MD</i>
9:07 AM	Talocalcaneal Coalition <i>L. Reid Nichols, MD</i>
9:13 AM	Os Trigonum: When and How to Treat? <i>Javier Masquijo, MD</i>
9:18 AM	Discussion Panelists: <i>Matthew Varghese, MS</i> <i>Amy McIntosh, MD</i> <i>L. Reid Nichols, MD</i> <i>Javier Masquijo, MD</i>
	Cases and Complications
	Moderator: <i>Vincent Mosca, MD</i> eModerator: <i>Derek Kelly, MD</i>
9:25 AM	Discussion <i>Kenneth Noonan, MD</i> Panelists: <i>Alain Dimeglio, MD</i> <i>Matthew Varghese, MS</i> <i>Vincent Mosca, MD</i> <i>Lori Karol, MD</i>
9:40 AM	BREAK and EXHIBITS
10:00 AM–11:30 AM	CME BREAKOUT SESSIONS <i>(Advance Sign-up Encouraged for Hands-on Workshops)</i>
	Six Axis Deformity Correction with Circular Fixator IV: Treatment of Ankle Equinus Contracture
	 (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: <i>Christof Radler, MD</i> Faculty: <i>John Herzenberg, MD</i> <i>Deborah Eastwood, FRCS</i>

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*

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

- 10:00 AM Introduction
Vishwas Talwalker, MD
- 10:03 AM The Problem
Henry (Hank) Chambers, MD

- 10:09 AM Who Me?
Jennifer Weiss, MD
- 10:15 AM Patient Wellness
L. Reid Nichols, MD
- 10:21 AM What About the team?
Anne Studemann, CPNP
- 10:26 AM Discussion
- Moderator: *Jennifer Weiss, MD*
- 10:35 AM Tools for My Toolbox
Jennifer Weiss, MD
- 10:43 AM Wellness in International Work
Richard Schwend, MD
- 10:49 AM POSNA WTF
Vishwas Talwalker, MD
- 10:55 AM QSVI
Daniel Sucato, MD, MS
- 11:00 AM Discussion
- 11:10 AM Change Behavior
Donald Bae, MD
- 11:20 AM Write Yourself Well

Gait II: Case-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*

Panelists: *James McCarthy, MD, MHCM*
Robert Kay, MD
Benjamin Shore, MD, MPH, FRCSC

- 10:00 AM Introduction
Tom Novacheck, MD
- 10:03 AM Case 1: Jump Type Gait
Tom Novacheck, MD
- 10:14 AM Discussion
- 10:24 AM Case 2: Miserable Malalignment
Tom Novacheck, MD
- 10:35 AM Discussion
- 10:45 AM Case 3: Crouch Gait
Tom Novacheck, MD
- 10:56 AM Discussion
- 11:06 AM Case 4: HWG IV
Tom Novacheck, MD
- 11:17 AM Discussion
- 11:25 AM Wrap-up

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.



8:00 AM–2:30 PM

Saturday, One-Day Fundamentals in Pediatric Orthopaedics Review Course

For pediatric orthopaedic learners of all levels, our IPOS faculty will provide high-yield presentations on pediatric orthopaedic knowledge needed for in-training and board examinations, as well as maintenance-of-certification (MOC) test requirements! Just the facts, and just what you need to know! *Included with Full IPOS Registration.*

Moderator: *Jeffrey Sawyer, MD*

- 8:00 AM Introduction
Jeffrey Sawyer, MD
- 8:10 AM How to Review and Take the MOC
Henry (Hank) Chambers, MD
- 8:20 AM Sports
Jennifer Weiss, MD
- 8:45 AM Hip (Nontrauma)
Wudbhav (Woody) Sankar, MD
- 9:10 AM Neuromuscular
Henry (Hank) Chambers, MD
- 9:35 AM Tumor
Alexandre Arkader, MD
- 9:50 AM BREAK
- 10:15 AM Genetics/Endocrine
Henry (Hank) Chambers, MD
- 10:40 AM Upper Extremity Fractures
Susan Scherl, MD
- 11:05 AM Spine
Todd Milbrandt, MD
- 11:30 AM LUNCH

Moderator: *Henry (Hank) Chambers, MD*

- 12:10 PM Lower Extremity Fracture
Jeffrey Sawyer, MD
- 12:40 PM Upper Extremity Congenital
Christine Ho, MD
- 1:00 PM Foot
Derek Kelly, MD
- 1:20 PM Lower Extremity Deformity
Amy McIntosh, MD
- 1:45 PM Infection
Martin Herman, MD
- 2:05 PM High Yield Images
Jeffrey Sawyer, MD
- 2:25 PM Wrap up

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 MPST™ Enzyme-Panel Program: A Testing Resource for Diagnosis of Mucopolysaccharidoses

Lorne Clarke, MD, CM, FRCPC, 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 Blount'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

Liegenes 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; Mitsuhiro Kodama, MD, PhD; Yoshihisa Masakado, MD, PhD; Yosuke Ogiri, MS; **Takehiko Takagi, MD, PhD**; Masahiko Watanbe, MD, PhD; Yusuke 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



BEFORE REDUCTION



AFTER REDUCTION

**CHOOSE YOUR
DEFORMITY
SOLUTION**

Empowering Surgeons to
Help Improve Deformity
Procedures



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Delivering innovative solutions to enhance patient care

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 PANTALOOON® 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

We're 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, craniomaxillofacial, 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

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

Further, Together

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. OrthoPediatrics' 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

Rubin Institute for Advanced Orthopedics

The Rubin Institute for Advanced Orthopedics (RIO) 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 RIO 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 RIO 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®

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 healthcare 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.



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.



Stryker

Stryker is one of the world's leading medical technology companies and, together with our customers, is driven to make healthcare better. We offer innovative products and services in Orthopaedics, Medical and Surgical, and Neurotechnology and Spine that help improve patient and hospital outcomes.



Vilex in Tennessee, Inc.

Vilex is a high growth US based device manufacturer of precision engineered extremity solutions, specializing in internal and external fixation devices for foot and ankle, pediatrics, deformity correction, and reconstructive surgery. The Orthex ring system is the most advanced computer dependent hexapod, featuring the Orthex's "Point & Click" based Ring Positioning System (RPS) and advanced HA Coated implants for large and small bone corrections.



WISHBONE™ MEDICAL

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.



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



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For More Information

For more information please visit these sites:
<https://www.visitorlando.com/>
<https://www.citywalkhollywood.com/>

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

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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.

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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.

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IPOS

December 10 - 14, 2019

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