40th EPOS Annual Meeting
European Paediatric Orthopaedic Society

6-9 April, 2022
Copenhagen, Denmark

European Paediatric Orthopaedic Society
### Wednesday, April 6, 2022

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>12:00-14:30</td>
<td>PRE-MEETING COURSE: THE PAEDIATRIC KNEE. TRAUMATIC INJURIES</td>
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<tr>
<td>14:30-15:00</td>
<td>Coffee break</td>
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<td>15:00-17:50</td>
<td>PRE-MEETING COURSE: THE PAEDIATRIC KNEE. TRAUMATIC INJURIES</td>
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<tr>
<td>19:00-20:30</td>
<td>WELCOME CEREMONY at Copenhagen City Hall</td>
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### Thursday, April 7, 2022

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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:00-08:20</td>
<td>OPENING CEREMONY</td>
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<tr>
<td>08:20-09:20</td>
<td>BASIC SCIENCE</td>
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<tr>
<td>09:20-10:20</td>
<td>BEST OF LOWER LIMB DEFORMITY</td>
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<tr>
<td>10:20-10:50</td>
<td>Coffee break</td>
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<tr>
<td>10:50-12:00</td>
<td>DEVELOPMENTAL DYSPLASIA OF THE HIP</td>
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<td>12:00-12:50</td>
<td>MEET THE MENTOR</td>
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<td>12:50-13:50</td>
<td>Lunch break</td>
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<tr>
<td>13:50-14:50</td>
<td>INDUSTRY SYMPOSIUM</td>
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<tr>
<td>14:50-15:40</td>
<td>HIP 1</td>
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<td>15:40-16:30</td>
<td>HIP 2</td>
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<td>16:30-17:00</td>
<td>Coffee break</td>
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<tr>
<td>17:00-18:00</td>
<td>SPINE 1</td>
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<td>18:00-19:00</td>
<td>SPINE 2</td>
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<td>19:00-20:00</td>
<td>WOW MEETING</td>
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### Friday, April 8, 2022

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<tr>
<td>08:30-09:30</td>
<td>TIVOLI CONGRESS HALL</td>
<td>BEST OF TRAUMA</td>
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<td>09:30-10:30</td>
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<td>BEST OF HIP &amp; NEUROMUSCULAR</td>
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<td>10:30-11:00</td>
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<tr>
<td>11:00-13:00</td>
<td>HARLEKIN &amp; COLUMBINE</td>
<td>GENERAL ASSEMBLY</td>
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<td>13:00-14:00</td>
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<td>Lunch break</td>
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<td>14:00-15:00</td>
<td>TIVOLI CONGRESS HALL</td>
<td>INDUSTRY SYMPOSIUM</td>
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<td>AUDITORIUM CARSTENSEN</td>
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<td>HARLEKIN &amp; COLUMBINE</td>
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<td>15:00-16:00</td>
<td>INDUSTRY SYMPOSIUM</td>
<td>LOWER LIMB DEFORMITY</td>
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<td>16:30-17:30</td>
<td>STUDY GROUP NEUROMUSCULAR</td>
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### Saturday, April 9, 2022

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<tr>
<td>08:00-09:00</td>
<td>TIVOLI CONGRESS HALL</td>
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<td>10:00-10:30</td>
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<td>PRESIDENTIAL GUEST LECTURE</td>
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<td>10:30-11:00</td>
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<td>Coffee break</td>
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<tr>
<td>11:00-12:00</td>
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<td>AWARDS 2020, PRO MAXIMIS MERITIS, TRAVELLING FELLOWSHIPS</td>
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<tr>
<td>12:00-12:30</td>
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<td>PRESIDENCY TRANSFER</td>
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<td>12:30-13:00</td>
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<td>CLOSING REMARKS</td>
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Wednesday, April 6, 2022

PRE-MEETING COURSE: THE PAEDIATRIC KNEE. TRAUMATIC INJURIES

AUDITORIUM CARSTENSEN

Chairs: Martin Gottliebsen (Denmark), Marco Turati (Italy)

12:00 Introduction
12:10 Marco Turati (Italy)

12:10 SESSION 1: PATELLO-FEMORAL INSTABILITY
13:25 Chairs: Julio Duart (Spain), Martin Gottliebsen (Denmark)

12:10 Epidemiology and aetiology. Treatment of first time dislocation
Jaakko Sinikumpu (Finland)

12:20 Imaging, measurements and classifications in PF instability
Nicolas Nicolau (UK)

12:30 Surgical procedures according to growth potential
Daniel Green (USA)

12:45 MPFL and medial quadriceps tendon-femoral ligament for PFI: Surgical technique and outcomes
Mininder Kocher (USA)

13:00 How to manage MPFLR failures?
Franck Accadbled (France)

13:10 Discussion

13:25 SESSION 2: OSTEOCHONDRITIS DISSECANS
14:30 Chairs: Nicolas Nicolau (UK), Jaakko Sinikumpu (Finland)

13:25 Epidemiology, aetiology and natural history
Marco Turati (Italy)

13:35 Imaging and instability concept & criteriae
Franck Accadbled (France)

13:45 OCD of medial femoral condyle: Surgical strategies
Joao Cabral (Portugal)

13:55 OCD in lateral femoral condyle / patella / trochlea / tibial plateau: How to treat them?
Julio Duart (Spain)
PRE-MEETING COURSE: THE PAEDIATRIC KNEE. TRAUMATIC INJURIES

AUDITORIUM CARSTENSEN

13:25  SESSION 2: OSTEOCHONDritis DISSECANS (cont.)

14:05  News from the ROCK Study Group
Mininder Kocher (USA), Daniel Green (USA)

14:20  Discussion

14:30  Coffee break

15:00  SESSION 3: PEDIATRIC ACL I
16:10  Chairs: Luca Rigamonti (USA), Marco Turati (Italy)

15:00  Epidemiology, diagnostic process and imaging
Julio Duart (Spain)

15:10  Non operative management: How? Indications and risks
Nicolas Nicolau (UK)

15:20  Transphyseal or all-epiphyseal ACL reconstruction? The battle
Franck Accadbled (France), Nicolas Nicolau (UK)

15:30  Extraphyseal ACL reconstruction
Mininder Kocher (USA)

15:45  Quadriceps tendon autograft in skeletally ACL reconstruction
Daniel Green (USA)

16:00  Discussion
PRE-MEETING COURSE: THE PAEDIATRIC KNEE. TRAUMATIC INJURIES

AUDITORIUM CARSTENSEN

16:10  SESSION 4: PEDIATRIC ACL II
17:00  Chairs: Joao Cabral (Portugal), Jaakko Sinikumpu (Finland)

16:10  Is there a role of lateral tenodesis in children with ACL injuries?
Daniel Green (USA)

16:20  ACL tears and associated lesions in skeletally immature patients
Marco Turati (Italy), Luca Rigamonti (USA)

16:30  ACL Injury prevention programs in pediatric sports
Barbara Kwiatkowski (Switzerland)

16:40  Pediatric ACL rerupture: Risk factors and management
Mininder Kocher (USA)

16:50  Discussion

17:00  SESSION 5: MENISCAL INJURIES
17:50  Chairs: Franck Accadbled (France), Martin Gottliebsen (Denmark)

17:00  MRI: Anatomical and pathologic characteristics in traumatic meniscal tears
Joao Cabral (Portugal)

17:10  Epidemiology, aetiology and physical examination
Manoj Ramachandran (UK)

17:20  Surgical management of traumatic meniscal tears
Manoj Ramachandran (UK)

17:30  Rehabilitation, return to play and performance after ACL reconstruction
Jaakko Sinikumpu (Finland)

17:40  Discussion

COPENHAGEN CITY HALL

19:00  WELCOME CEREMONY
20:30
Thursday, April 7, 2022

TIVOLI CONGRESS HALL

08:00  OPENING CEREMONY

08:20  BASIC SCIENCE
09:20  Chairs: Darko Anticevic (Croatia), Joachim Horn (Norway)
Moderator: Federico Canavese (France)

08:20  Can manipulation of the mechanical environment improve regenerate bone healing during the consolidation phase of distraction osteogenesis?
OP-001  Christopher Iobst, Vaida Glatt, Anirejuoritse Bafor, Mikhail Samchukov, Alex Cherkashin, Satbir Singh (USA)

08:25  The influence of transepiphyseal implantation of Mg-Zn-Ca screws on the growth plate of growing sheep
OP-002  Romy Marek, Valentin Herber, Patrick Holweg, Maxim Honea, Annelie Martina Weinberg (Austria)

08:30  Changes in the avascular area of the meniscus using growth plate chondrocytes in a pig model
OP-003  Ryszard Tomaszewski, Magdalena Rost-Roszkowska (Poland)

08:35  Uncovering pathways regulating chondrogenic differentiation of CHH fibroblasts
OP-004  Alzbeta Chabronova¹, Guus van den Akker¹, Mandy Meekels-Steinbusch¹, Franziska Friedrich², Andy Cremers¹, Don Surtel¹, Mandy Peffers³, Lodewijk van Rhijn¹, Ekkehart Lausch², Bernhard Zabel², Marjolein Caron¹, Tim Welting¹ (¹The Netherlands, ²Germany, ³UK)

08:40  Discussion

08:50  Anatomical variations of the lateral cutaneous femoral nerve in a paediatric population - an in vivo study
OP-005  Line Kjeldgaard Pedersen, Lise Larsen, Ole Rahbek, Bjarne Moeller-Madsen (Denmark)
TIVOLI CONGRESS HALL

08:20  BASIC SCIENCE (cont.)

08:55  Systematic isolation of key parameters for estimating skeletal maturity on AP wrist radiographs

OP-006  Ryan Furdock, Lauren Huang, James Sanders, Daniel Cooperman, Raymond Liu (USA)

09:00  Immersive VR increased the pain threshold and reduced anxiety in children

OP-007  Lucas Yang, Vincents Fisker, Line Kjeldgaard Pedersen, Jan Duedal Rölfing, Alexander Juan Møller-San Pedro, Peter Ahlburg, Mette Veien, Lene Vase, Bjarne Moeller-Madsen (Denmark)

09:05  An ovine study of retrograde femoral nail removal with and without fat grafting across the open distal femoral physis

OP-008  Kouami Amakoutou, Alex Benedick, Derrick M. Knapik, Lewis Zirkle, James M. Anderson, Raymond Liu (USA)

09:10  Discussion

TIVOLI CONGRESS HALL

09:20  BEST OF LOWER LIMB DEFORMITY

10:20  Chairs: Jaroslaw Czubak (Poland), Mark Eidelman (Israel)

Moderator: Javier Downey (Spain)

09:20  The long-term effect of femoral leg lengthening on muscle strength - a 10 year follow-up

OP-009  Bernhard Speth, Corina Nüesch, Petros Ismailidis, Marc Schmid, Andreas Krieg (Switzerland)

09:25  The Precice plate: An initial experience

OP-010  Claire Shannon, Aaron Huser, Dror Paley (Poland)
09:20  BEST OF LOWER LIMB DEFORMITY (cont.)
10:20

09:30  How balance changes during growth in pediatric patients: The role of age and patient anthropometry
OP-011  
Luca Rigamonti\textsuperscript{1,2}, Marco Turati\textsuperscript{2}, Massimiliano Piatti\textsuperscript{2}, Diego Gaddi\textsuperscript{2}, Carlo Alberto Augusti\textsuperscript{2}, Andrea Riganti\textsuperscript{2}, Marta Gandolla\textsuperscript{2}, Giovanni Zatti\textsuperscript{2}, Aaron Krych\textsuperscript{1}, Todd Milbrandt\textsuperscript{1}, Marco Bigoni\textsuperscript{2} (\textsuperscript{1}USA, \textsuperscript{2}Italy)

09:35  Discussion

09:50  The utility of the modified Fels knee skeletal maturity system in limb length prediction
OP-012  
Ryan Furdock, Elizabeth Cho, Alex Benedick, Jiao Yu, Abdus Sattar, Raymond Liu (USA)

09:55  Congenital pseudarthrosis of the tibia: Rate and time to bone union following contralateral vascularized tibial periosteal graft transplantation in 29 cases
OP-013  
Francisco Soldado, Paula Diaz-Gallardo, Jorge Giménez Knorr (Spain)

10:00  Congenital posteromedial bowing of the tibia: Comparison of early and late lengthening
OP-014  
Bhushan Sagade, Naeem Jagani, Ishani Chaudhary, Milind Chaudhary (India)

10:05  Discussion

10:20  Coffee break
10:50
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<tr>
<td>10:50</td>
<td>DEVELOPMENTAL DYSPLASIA OF THE HIP</td>
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<td>Chairs: Andreas Roposch (UK), Ole Rahbek (Denmark)</td>
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<td>Moderator: Renata Pospischill (Austria)</td>
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<td>10:50</td>
<td>Outcomes following the management of infant immature hips in a</td>
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<td>selective screening pathway</td>
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<td>Belal Darwich, Ripak Purbe, Ben Marson, Prithviraj Hallikeri, Kathryn</td>
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<td>Price (UK)</td>
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<td>10:55</td>
<td>Infants with clinical instability of hip should be seen by 2 weeks of</td>
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<td>11:00</td>
<td>Children's Hip Predictive Score (CHiP): A triage tool for predicting</td>
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<td>dislocations in children referred with hip dysplasia</td>
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<td>Evelyn Murphy, Catherine Howell, Olga Gallagher, Paula Kelly, Patrick</td>
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<td>O'Kelly, Jacques Noel, David Moore, Patrick O'Toole, Jim Kennedy (Ireland)</td>
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<td>10:50</td>
<td>Outcomes of treatment for developmental dislocation of the hip when the</td>
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<td>Pavlik method has failed</td>
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<td>Carlos Pargas, Karim Masrouha, Cordelia Carter, Pablo Castaneda (USA)</td>
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<td>11:05</td>
<td>Discussion</td>
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<td>11:00</td>
<td>Bilaterality: What influence on the prognosis of developmental hip</td>
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<td>dysplasia?</td>
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<td>Cristina Alves, André Carvalho, Ines Balacó, Pedro Sá Cardoso, João</td>
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<td>Cabral, Oliana Madeira Tarquini, Marcos Carvalho, Tah Ling (Portugal)</td>
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<td>11:00</td>
<td>The clinical significance of infolded limbus on post-reduction</td>
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<td>arthrogram in developmental dysplasia of the hip</td>
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<td>William Morris, Sai Chilakapti, Sean Hinds, John Anthony Herring, Harry</td>
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<td>K.W. Kim (USA)</td>
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<td>11:00</td>
<td>Brace treatment does not improve acetabular coverage or reduce the</td>
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<td>rate of secondary surgery following closed reduction of developmental</td>
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<td>dysplasia of the hip</td>
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<td>Arnav Kak, William Morris, Laura Mayfield, Harry K.W. Kim (USA)</td>
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<td>11:00</td>
<td>Discussion</td>
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12:00  MEET THE MENTOR
12:50 Chairs: Dan Cosma (*Romania*), Blazej Prusczynski (*Poland*)
       Moderator: Salih Marangoz (*Turkey*)

       Mentor: Alain Dimeglio (*France*)

12:50  Lunch break
13:50

13:50  INDUSTRY SYMPOSIUM
14:50  (*see page 46*)
14:50    HIP 1
15:40    Chairs: Bjarne Moller-Madsen (Denmark), Bettina Westhoff (Germany)
Moderator: Jiri Chomiak (Czech Republic)

14:50    Treatment of hip instability in children with Down syndrome: Keys to managing a challenging problem
Jessica Hughes, James Bomar, Dennis Wenger, Vidyadhar Upasani (USA)

14:55    The first North American hip surveillance program: Enrollment after five years
Stacey Miller, Jennifer Farr, Kit Johnson, Kishore Mulpuri (Canada)

15:00    Acetabular retroversion in juveniles - Mostly caused by a reduced lumbo-pelvic angulation
Heimkes Bernhard, Frimberger Vincent, Berger Nina, Hiener Ursula (Germany)

15:05    Discussion

15:15    Two surgical alternatives for Perthes disease: Intertrochanteric osteotomy vs. trochanteric tethering
Peter Stevens, Olivia Grothaus (USA)

15:20    Publication bias in orthopedics: A study on the reporting of positive outcomes in Legg-Calvé-Perthes disease
Peter Filtes, Timothy Roberts, Keenan Sobol, Pablo Castaneda (USA)

15:25    Effectiveness of triple pelvic osteotomy in patients with Legg-Calve-Perthes disease. Results of minimum 10 years follow up
Cemalettin Aksoy, Elchin Orujov, Vugar Nabi, Guney Yilmaz, Aykut Kocyigit (Turkey)

15:30    Discussion
15:40 HIP 2
16:30 Chairs: Andrzej Grzegorzewski (Poland), Nicolas Nicolau (UK)
Moderator: Stefan Huhnstock (Norway)

Femoroacetabular impingement in the unpinned contralateral hip in
patients with primary unilateral slipped capital femoral epiphysis -
preliminary radiographic outcomes
Magdalena Kwiatkowska, Marcin Kwiatkowski, Maria Czubak-Wrzosek,
Jaroslav Czubak, Marcin Tyrakowski (Poland)

15:45 What is the AVN rate of SCFE patients with complete epi-metaphyseal
discontinuity treated with the modified Dunn procedure?
Kai Ziebarth, Thoralf Liebs, Nadine Kaiser, Klaus-Arno Siebenrock, Till
Lerch (Switzerland)

15:50 Discussion

16:00 Is hip dysplasia associated with trochlear dysplasia in skeletally mature
patients?
Andrew Fithian, Ann Richey, Seth Sherman, Kevin Shea, Stephanie Pun,
Steven Frick (USA)

16:05 Incidence and risk factors of heterotopic ossification in a matched cohort
adolescent population undergoing hip arthroscopy
Aliya Feroe, Mahad Hassan, Rachel Flaugh, Stephen Maier, Danielle Cook,
Yi-Meng Yen, Mininder Kocher (USA)

16:10 Cementless ceramic-on-ceramic total hip replacement in children and
adolescents
Stefano Stallone, Giovanni Trisolino, Paola Zarantonello, Stefano Lucchini,
Giovanni Gallone, Barbara Bordini, Dante Dallari, Francesco Traina (Italy)

16:15 Discussion

16:30 Coffee break
17:00  SPINE 1
18:00  Chairs: Carol Hasler (Switzerland), Dror Ovadia (Israel)
      Moderator: Brice Illharreborde (France)

17:00  The effect of idiopathic scoliosis on epidural use and natural delivery
during childbirth - A matched cohort study
Jeff Kessler, Adam Kessler (USA)

17:05  Younger age at spinal cord detethering is potentially associated with a
       reduced risk of curve progression in children with early onset scoliosis
Rajiv Iyer, Adam Fano, Hiroko Matsumoto, Rishi Sinha, Benjamin Roye,
       Michael Vitale, Richard Anderson (USA)

17:10  Pre-operative carbohydrate drink for early recovery in pediatric spine
       fusion: Randomized control study
Jennifer Bauer, Kathryn Anderson, Eliot B. Grigg (USA)

17:15  Elastic lumbar support versus rigid thoracolumbar orthosis for acute
       pediatric spondylolysis. A prospective controlled study
Ella Virkki, Milja Holstila, Terhi Kolari, Markus Lastikka, Kimmo Mattila, Sari
       Malmi, Olli Pajulo, Ilkka Helenius (Finland)

17:20  Discussion

17:35  Closed suction wound drain reduces postoperative opioid consumption
       in adolescents undergoing pedicle screw instrumentation for idiopathic
       scoliosis. A randomized, clinical trial
Linda Helenius¹, Paul Gerdhem², Matti Ahonen¹, Jenni Jalkanen¹, Johanna
       Syvänen¹, Ilkka Helenius¹ (¹Finland, ²Sweden)

17:40  Upper instrumented vertebrae (UIV) selection matters: Increased risk
       of proximal junctional kyphosis when UIV is below T2 in Scheuermann's
       kyphosis
Adam Fano, Hiroko Matsumoto, Lisa Bonsignore-Opp, Benjamin Roye,
       Lawrence Lenke, Elizabeth Herman, Afrain Boby, Andrew Luzzi, Peter
       Newton, Baron Lonner, Michael Vitale, Harms Study Group (USA)

17:45  Association of the LBX1 gene promoter methylation in deep paraspinal
       muscles of patients with idiopathic scoliosis with disease severity
Piotr Janusz, Małgorzata Tokłowicz, Miroslaw Andrusiewicz, Małgorzata
       Kotwicka, Tomasz Kotwicki (Poland)

17:50  Discussion
18:00  SPINE 2
19:00  Chairs: Rene Castelein (The Netherlands), Muharrem Yazici (Turkey)
       Moderator: Ilkka Helenius (Finland)

18:00  Mid- and long-term outcomes of lateral thoracotomy: Does the amount of
       lung parenchyma resection increase the risk of scoliosis? A retrospective
       review of 129 pediatric patients
       Riccardo Sacco¹, Damien Fron², Dyuti Sharma², Michel Bonnevalle²,
       Federico Canavese² (¹Italy, ²France)

18:05  Complication risks and costs associated with Ponte osteotomies in
       surgical treatment of adolescent idiopathic scoliosis: Insights from a
       national database
       Mohammed Shaheen, Jayme Koltsov, Samuel A. Cohen, Joanna Langner,
       Japsimran Kaur, Nicole A. Segovia, John S. Vorhies (USA)

18:10  Curve characteristics and clinical outcomes in post-sternotomy/
       thoracotomy scoliosis undergoing definitive spinal fusion
       Joanna Langner, Teeto Ezeonu, Abdul-Lateef Shafau, Japsimran Kaur, Kiley
       Poppino, Claire Shivers, Sai Chilakapati, Kimberly Hall, Meghan Imrie,
       Lawrence A. Rinsky, Anthony Riccio, John S. Vorhies (USA)

18:15  Discussion

18:30  Pediatric cervical spine fusions: Opportunity for improvement
       Edward Compton, Stephen Stephan, Kenneth Illingworth, David Skaggs,
       Lindsay Andras, Rachel Goldstein (USA)

18:35  Do rib or spinal proximal anchors in growing rod constructs yield more
       length gain over time?
       Vivian Chen¹, David Skaggs¹, Edward Compton¹, Kenneth Illingworth¹, John
       Smith¹, Francisco J. Sanchez Perez-Grueso², Scott Luhmann¹, Michael Vitale¹,
       Mark Erickson¹, Pediatric Spine Study Group¹, Lindsay Andras¹, Rachel
       Goldstein¹ (¹USA, ²Spain)

18:40  A comparison of SRS and PROMIS questionnaires in patients presenting
       with adolescent idiopathic scoliosis
       Yousi Oquendo, Nadine Javier, Xochitl Bryson, Joanna Langner, Clayton
       Maschhoff, Christian Calderon, Ann Richey, John S. Vorhies (USA)

18:45  Discussion
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<tr>
<td>19:00</td>
<td>Welcome and Introduction</td>
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<td></td>
<td>Daniela Dibello <em>(Italy)</em>, Elke Viehweger <em>(Switzerland)</em>,</td>
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<td>Antonio Andreacchio <em>(Italy)</em></td>
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<td>19:05</td>
<td>Film WOW</td>
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<td>Camila Bedeschi <em>(Brazil)</em></td>
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<td>19:10</td>
<td>Supporting and encouraging female orthopedic surgeons: Experience in UK</td>
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<td>Deborah Eastwood <em>(UK)</em></td>
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<td>19:20</td>
<td>Experience of WOW Italy</td>
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<td>Daniela Dibello <em>(Italy)</em></td>
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<td>19:30</td>
<td>A survey of family and changing gender roles of European pediatric</td>
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<td>orthopedists</td>
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<td>Elke Viehweger <em>(Switzerland)</em></td>
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<td>19:40</td>
<td>Mentorship, equity and inclusion programs: North America experience</td>
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<td>Jennifer Bauer <em>(USA)</em>, Maryse Bouchard <em>(Canada)</em>,</td>
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<td>Jamie Rice Denning <em>(USA)</em></td>
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<td>19:55</td>
<td>Inauguration WOW Europe</td>
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**AUDITORIUM CARSTENSEN**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>13:50</td>
<td><strong>INDUSTRY SYMPOSIUM</strong></td>
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<td>14:50</td>
<td><em>(see page 46)</em></td>
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</table>
14:50  Long-term minimum 15-year follow-up after lateral discoid meniscal preservation surgery in children and adolescents
Laura Lins, Aliya Feroe, Brian Yang, Kathryn Williams, Sophia Kocher, Lyle Micheli, Mininder Kocher (USA)

14:55  Meniscus tears in pediatric patients with ACL injury: Incidence, management, and outcome
Luca Rigamonti1,2, Nathaniel A. Bates1, Nathan D. Schilaty1, Bruce Levy1, Michael Stuart1, Marco Bigoni2, Todd Milbrandt1, Aaron Krych1 (1USA, 2Italy)

15:00  Delays in anterior cruciate ligament reconstruction are associated with higher rates of meniscus and chondral pathology in skeletally immature patients
Andrew Pennock, Matthew Milewski, Lauren Hutchinson, Patricia Miller, Mininder Kocher (USA)

15:05  Quadriceps tendon anterior cruciate ligament reconstruction in skeletally immature patients: Clinical and patient reported outcomes
Sofia Hidalgo Perea, Danielle E. Chipman, Frank Cordasco, Daniel Green (USA)

15:10  Discussion

15:20  Does harvesting of the semi tendinosus tendon really spare the gracilis tendon in pediatric ACL reconstruction?
Testory Maxime, Cavaignac Etienne, Jérôme Sales de Gauzy, Franck Accadbled (France)

15:25  Decrease in lateral femoral notch sign depth following ACL reconstruction in pediatric patients
Nicolas Pascual-Leone, Danielle E. Chipman, Daniel Green (USA)

15:30  Pediatric partial ACL tears: Outcomes and management practices
Megan Hannon, Nicholas Sullivan, Emily Chang, Patricia Miller, Melissa Christino, William Meehan (USA)

15:35  Discussion
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>15:40</td>
<td>SPORTS 2</td>
<td>Chairs: Catharina Chiari <em>(Austria)</em>, Franck Accadbled <em>(France)</em></td>
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<td>Moderator: Julio Duart <em>(Spain)</em></td>
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<td>15:40</td>
<td>Return to preinjury level of sports and the quality of life after tibial spine avulsion fracture with at least 2 years of follow-up</td>
<td>Maija Jääskelä*, Marco Turati*, Lasse Lempainen*, Antoine Henri*, Aurelien Courvoisier*, Nicolas Bremond*, Franck Accadbled*, Jaakko Sinikumpu* <em>(Finland, France, Italy)</em></td>
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<tr>
<td>15:45</td>
<td>Growth physis sparing medial patellofemoral ligament reconstruction in children with open physes</td>
<td>Thomas Kappe, Janina Leiprecht, Thomas Caffard, Heiko Reichel <em>(Germany)</em></td>
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<tr>
<td>15:50</td>
<td>Incidence of 2nd surgery after medial patellofemoral ligament reconstruction with osteochondral fracture fixation in pediatric patients after patella dislocation</td>
<td>Alexandra Aitchison, Sofia Hidalgo Perea, Lindsay Schlichte, Daniel Green <em>(USA)</em></td>
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<tr>
<td>15:55</td>
<td>Discussion</td>
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<td>16:05</td>
<td>Technique variation for MPFL reconstruction in skeletally immature patients: Data from the JUPITER cohort</td>
<td>Benton Heyworth, Sofia Hidalgo Perea, Daniel Green, Matthew Veerkamp, Eric Wall, Philip Wilson, Beth Shubin Stein, Shital Parikh <em>(USA)</em></td>
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<tr>
<td>16:10</td>
<td>Cartilage repair in the skeletally immature knee: A comparative study of different surgical techniques</td>
<td>Ioannes Melas, Dimitrios Metaxiotis, Michael Iosifidis <em>(Greece)</em></td>
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<tr>
<td>16:15</td>
<td>Infrapatellar realignment for patellar subluxation in the skeletally immature child</td>
<td>John Handelsman, William Facibene <em>(USA)</em></td>
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<tr>
<td>16:20</td>
<td>Discussion</td>
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<td>16:30</td>
<td>Coffee break</td>
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<td>17:00</td>
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</table>
17:00 CLUBFOOT

18:00 Chairs: Alain Dimeglio (France), Adhiambo Witlox (The Netherlands)
Moderator: Julia Funk (UK)

17:00 Gait analysis characteristics in clubfoot relapse
OP-061 Rachel Goldstein, Melissa Bent, Maia Hauschild, Adriana Conrad-Forrest, Susan Rethlefsen, Tishya Wren, Bob Kay (USA)

17:05 Weight-bearing computed tomography of the foot and ankle in the pediatric population
OP-062 Derek Kelly, Hayden Holbrook, Alexander Bowers, Karim Mahmoud, Benjamin Sheffer (USA)

17:10 The outcomes of congenital talipes equinovarus: A core outcome set for research and treatment
OP-063 Yael Gelfer, Donato Giuseppe Leo, Aisling Russell, Daniel Perry, Anna Bridgens, Deborah Eastwood (UK)

17:15 Obesity increases risk for surgical site infections and wound dehiscence after pediatric foot surgery: A retrospective cohort review using the NSQIP-pediatric database
OP-064 Farzam Farahani, Joel Rodriguez, Dane Wukich, Jacob Zide, Anthony Riccio (USA)

17:20 Discussion

17:30 Incidence and outcomes of leg length discrepancy in patients with idiopathic clubfoot deformity
OP-065 Maryse Bouchard1, Abdullah Addar1,2 (Canada, 2Saudi Arabia)

17:35 Sport ability during walking age in children with clubfeet treated with Ponseti method: A case series
OP-066 Gianluca Testa, Andrea Vescio, Alessia Caldaci, Marco Sapienza, Annalisa Culmone, Vito Pavone (Italy)

17:40 The impact of socio-economic factors on drop-out, relapse and non-compliance during Ponseti treatment in low- and middle-income countries: A scoping review
OP-067 Manon Pigeolet1,2, Anchelo Vital1, Hassan Ali Daoud1, Carol Mita1, Blake Alkire1, Daniel Corlew1 (USA, 2Belgium)
17:00        CLUBFOOT (cont.)

18:00

17:45        Anterior distal epiphysiodesis as treatment of recurrent equinus deformity in Ponseti treated clubfoot patients
OP-068        Arnold Besselaar¹, Isabelle van Tilburg¹, Tessa van de Kerkhof¹, Benedicte Vanwanseele¹, Tetterna Grin¹, Saskia Wijnands¹, Marieke van der Steen¹
(¹The Netherlands, ²Belgium)

17:50        Discussion

18:00        FOOT & CONGENITAL

19:00        Chairs: Camilla Bettuzzi (Italy), Ismat Ghanem (Lebanon)
Moderator: Vladimir Kenis (Russian Federation)

18:00        Resection of calcaneo navicular coalition: Arthroscopy or open approach?
OP-069        Corin Boris, Jérôme Sales de Gauzy, Franck Accadbled (France)

18:05        Functional results of surgical treatment of tarsal coalitions: Arthroscopic resection versus open resection
OP-070        João Cabral, André Carvalho, Ines Balacó, Marcos Carvalho, Oliana Madeira Tarquini, Pedro Sá Cardoso, Tah Ling, Cristina Alves (Portugal)

18:10        Discussion

18:25        Health related quality of life in achondroplastic patients after global limb lengthening surgery
OP-071        Ignacio Ginebreda-Marti¹, Maximiliano Ibañez¹, Nicole Canu¹, Carolina Echavarria¹, Jordi Tapiolas-Badiella¹, Gianni Amato² (¹Spain, ²USA)

18:30        The fate of bent telescopic rods in children with osteogenesis imperfecta: Do all bent rods need to be revised?
OP-072        David Fralinger, Denver Burton, Kenneth Rogers, Richard Kruse, Jeanne Franzone, Mihr Thacker (USA)

18:35        What are the factors predisposing to failure of Fassier-Duval rodding in children with osteogenesis imperfecta?
OP-073        Bartosz Musielak, Łukasz Woźniak, Jerzy Sułko, Artur Oberc, Marek Jozwiak (Poland)

18:40        Discussion
13:50 INDUSTRY SYMPOSIUM
(see page 47)

14:50 NEUROMUSCULAR 1
15:40 Chairs: Thomas Dreher (Germany), Ana Presedo (France)
Moderator: Christian Wong (Denmark)

14:50 Development of hip displacement in children with cerebral palsy:
A longitudinal register study of 1045 children
Philippe Wagner, Gunnar Hägglund (Sweden)

14:55 Hip development after surgery to prevent hip dislocation in children with
cerebral palsy: A longitudinal register study of 252 children
Philippe Wagner, Gunnar Hägglund (Sweden)

15:00 The incidence of AVN after hip containment surgery in children with
cerebral palsy
Jeremy Bauer, Ellen Raney, Dennis Roy (USA)

15:05 Discussion

15:15 Practice variation and factors influencing indications for interventions for
hip displacement in non-ambulant children with cerebral palsy
Max Mifsud, Unni G. Narayanan, U. Givon, K. Graham, Marek Jozwiak,
Kishore Mulpuri, Benjamin Shore, T. Theologis, W. Schrader, The CHOP
Research Group (Canada)

15:20 Progression of hip displacement after triradiate cartilage closure in
non-ambulatory cerebral palsy (CP): Who needs continued radiographic
surveillance?
Ali Asma, Armagan Can Ulusaloglu, Michael W. Shrader, Kenneth Rogers,
Freeman Miller, Jason Howard (USA)

15:25 Femoral head deformity associated with hip displacement in cerebral
palsy: Results at skeletal maturity
Armagan Can Ulusaloglu, Ali Asma, Michael W. Shrader, Kenneth Rogers,
Freeman Miller, Jason Howard (USA)

15:30 Discussion
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<tr>
<th>Time</th>
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<tr>
<td>15:40</td>
<td><strong>NEUROMUSCULAR 2</strong></td>
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<tr>
<td>16:30</td>
<td><strong>Observational gait analysis in children with cerebral palsy using the Edinburgh Visual Gait Score (EVGS) and smartphone-based slow-motion video technology: A pilot study</strong>&lt;br&gt;<strong>Chairs:</strong> Ignacio Martínez-Caballero <em>(Spain)</em>, Elke Viehweger <em>(Switzerland)</em>&lt;br&gt;<strong>Moderator:</strong> Uri Givon <em>(Israel)</em></td>
<td>Bhushan Sagade, Alaric Aroojis, Suresh Chand <em>(India)</em></td>
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<td>15:45</td>
<td><strong>Patients GMFCS III are more susceptible to gait deterioration after single-event multilevel surgery in cerebral palsy</strong>&lt;br&gt;<strong>OP-081</strong></td>
<td>Mauro César de Morais Filho, Marcelo Fujino, Francesco Blumetti, Cátia Kawamura, José Augusto Lopes <em>(Brazil)</em></td>
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<td>15:50</td>
<td><strong>Patients and parents’ satisfaction and self-reported evaluation after single-event multilevel surgery in cerebral palsy</strong>&lt;br&gt;<strong>OP-082</strong></td>
<td>Mauro César de Morais Filho, Francesco Blumetti, Marcelo Fujino, Daniela Maury Benavides, Cátia Kawamura, José Augusto Lopes <em>(Brazil)</em></td>
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<td>15:55</td>
<td><strong>Discussion</strong></td>
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<td>16:10</td>
<td><strong>Anterior distal femoral hemiepiphysiodesis in children with fixed knee flexion deformities: Where should the screws go?</strong>&lt;br&gt;<strong>OP-085</strong></td>
<td>Akshay Seth¹, Patricia Miller², Colyn Watkins², Benjamin Shore² <em>(¹Canada, ²USA)</em></td>
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<td>16:15</td>
<td><strong>Early versus late scoliosis correction in Duchenne muscular dystrophy (DMD): Comparison of post-operative outcomes in the steroid era</strong>&lt;br&gt;<strong>OP-086</strong></td>
<td>Ali Asma, Armagan Can Ulusaloglu, Michael W. Shrader, William Mackenzie, Robert Heinle, Mena Scavina, Jason Howard <em>(USA)</em></td>
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<td>16:20</td>
<td><strong>Discussion</strong></td>
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<td>16:30</td>
<td><strong>Coffee break</strong></td>
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</table>
17:00 TRAUMA 1
18:00 Chairs: Pierre Journeau (France), Thomas Wirth (Germany)
Moderator: Luis Moraleda (Spain)

17:00 Development of a core outcome set for childhood limb fractures
OP-088 Ben Marson, Joseph Manning, Marilyn James, Simon Craxford, Sandeep Deshmukh, Daniel Perry, Benjamin Ollivere (UK)

17:05 Casting, elastic intramedullary nailing, or external fixation for pediatric tibia shaft fracture: Which is the most appropriate treatment?
A multicenter study
OP-089 Lorenza Marengo, Enrietti Emilio, Melissa Piccinino, Luca Ceroni, Silvio Boero, Daniela Dibello (Italy)

17:10 Virtual fracture clinic pathway for paediatric fractures: A prospective evaluation of 10,000 patients
OP-090 Flavia Alberghina, Paula Kelly, Jacques Noel, Carol Blackburn, Turlough Bolger, Patrick Kiely, Jim Kennedy, David Moore, Patrick O’Toole (Ireland)

17:15 Discussion

17:30 Medial epicondyle fractures in children: Operative versus non-operative treatment
OP-091 Emily Chang, Patricia Miller, Evan Stieler, Benjamin Shore, Carley Vuillermin, Collin May (USA)

17:35 Operative treatment of supracondylar humerus fractures - do we practice what we preach?
OP-092 Morten Jon Andersen (Denmark)

17:40 What percent of pediatric femur fractures result from non-accidental trauma?
OP-093 Hanna Omar, Natalya Sarkisova, Christopher Lee, Rachel Goldstein (USA)

17:45 Discussion
18:00  **TRAUMA 2**

19:00  Chairs: Manuel Cassiano *(Portugal)*, Pierre Lascombes *(Switzerland)*
Moderator: Vito Pavone *(Italy)*

18:00  Pediatric phalanx fractures: A retrospective study and review of the literature
**OP-094** Stéphanie Schizas, Nicolas Lutz, Elif Vardar, Sophie Mercakert, Pierre-Yves Zambelli, Eri Samara *(Switzerland)*

18:05  Anesthesia and secondary interventions can be avoided by casting
overriding distal metaphyseal radius fractures in children under 11 without
reduction in emergency department
**OP-095** Topi Laaksonen¹, Nicolas Nietosvaara¹, Jani Puhakka², Antti Stenroos¹, Yrjänä Nietosvaara¹, Jussi Kosola¹ *(Finland, Switzerland)*

18:10  Seymour fractures. Better do not underestimate it
**OP-096** Laura M. Perez-Lopez, Isabel Parada-Avendaño, Melisa Stitzman, Maria Luisa Cabrera, Cesar Galo Garcia Fontecha *(Spain)*

18:15  Epidemiology of pediatric pelvic fractures registered in the Swedish
Fracture Register
**OP-097** Yasmin Hailer, Lisa Larsson, Olof Wolf *(Sweden)*

18:20  Discussion

18:35  Predictors of healing in paediatric tibial fractures using the RUST score:
A 12 year retrospective review
**OP-098** Antony Roy, Pranai Buddhdev *(UK)*

18:40  Comparison between two protocols of procedural sedation and analgesia
in the treatment of pediatric both-bone forearm fractures
**OP-099** Joaquín Núñez De Armas, Luis Moraleda Novo, Gaspar González Morán, Enrique Gil Garay *(Spain)*

18:45  Displaced tibial shaft fractures in children: Method of treatment in
children weighing 50 kg or more
**OP-100** Dorota Hanf-Osetek, Paweł Bilski, Dawid Łabądź, Sławomir Snela *(Poland)*

18:50  Discussion
Friday, April 8, 2022

TIVOLI CONGRESS HALL

08:30 BEST OF TRAUMA
09:30 Chairs: Yrjana Nietosvaara (Finland), Marcell Varga (Hungary)
               Moderator: Annelie Weinberg (Germany)

08:30 The use of clinical photographs and patient reported outcome
        questionnaire as a tool to predict functional outcome in supracondylar
        humeral fractures treated operatively
        Marie-Caroline Nogaro, Senol Bekmez, Mark Camp, Unni Narayanan
        (Canada)

08:35 Intramedullary fixation for pediatric femoral nonunion in low- and
        middle-income countries
        Ryan Furdock, Lauren Huang, George Ochenjele, Lewis Zirkle, Raymond Liu
        (USA)

08:40 Outcomes of suture-button versus screw fixation for pediatric and
        adolescent syndesmosis injuries
        Emily Chang, Blair Stewig, Amy Steele, Patricia Miller, Dennis Kramer,
        Yi-Meng Yen, Benjamin Shore, Collin May (USA)

08:45 Discussion

09:00 Diaphyseal forearm fractures treated by bioabsorbable intramedullary
        nailing. Challenges to use the nailing technique
        Gergő Józsa1, Annelie Martina Weinberg2, Nicolas Lutz2, Morten Jon
        Andersen4, Erich Rutz5, Marcell Varga1 (1Hungary, 2Austria, 3Switzerland,
        4Denmark, 5Australia, 6Hungary)

09:05 Is the X-ray control 4 weeks after ESIN osteosynthesis of forearm fractures
        an indispensable standard or can it be spared?
        Sven-Oliver Dietz, Nora Laubach, Martin Schwind, Pol Rommens (Germany)

09:10 Complications in elective removal of bone lengthening nails: A report of
        225 patients
        Markus Winther Frost1, Ole Rahbek1, Søren Kold1, Anirejuoritse Bafor2, Molly
        Duncan2, Christopher Iobst2 (1Denmark, 2USA)

09:15 Discussion
Friday, April 8, 2022

TIVOLI CONGRESS HALL

09:30 BEST OF HIP & NEUROMUSCULAR
10:30 Chairs: Deborah Eastwood (UK), Hakan Omeroglu (Turkey)
Moderator: Cristina Alves (Portugal)

09:30 How much remodelling can we expect after fixation in situ of SCFE?
OP-107 A multicentric study of the German Speaking Paediatric Orthopaedic Society
Fritz Hefti¹, Danimir Cerkez², Katharina Burger³, Bjoern Vogt¹, Bernd Bittersohl¹, Kiril Mladenov¹, Kerstin Remmel¹ (¹Switzerland, ²Germany, ³Austria)

09:35 Prospective evaluation of in situ screw fixation for slipped capital femoral epiphysis
OP-108 Clarabelle DeVries, Raghav Badrinath, Samuel Baird, James Bomar, Vidyadhar Upasani (USA)

09:40 Comparison of acetabular morphology changes after pediatric pelvic osteotomies using patient-specific 3-D models
OP-109 Samuel Baird, Jason Caffrey, James Bomar, Christine Farnsworth, Vidyadhar Upasani (USA)

09:45 Clinical and kinematic outcomes after femoral rotational osteotomy
OP-110 Jeremy Bauer¹, Patrick Do¹, Jehan Hamid² (USA)

09:50 Discussion

10:05 Proximal femoral screw hemiepiphysiodesis can alter the growth of the proximal femur in children with cerebral palsy
OP-111 James McCarthy, Allyson Zakrzewski, Jacob Carl (USA)

OP-112 Thomas Krausse, Brice Iharreborde, Cindy Mallet, Jason Chinnappa, Florence Julien-Marsollier, Ana Presedo, Anne-Laure Simon (France)

10:15 Discussion

10:30 Coffee break
11:00
11:00  GENERAL ASSEMBLY

13:00  Lunch break

13:00  Lunch break

14:00  LOWER LIMB DEFORMITY

15:00  Chairs: Christof Radler (Austria), Salih Marangoz (Turkey)
       Moderator: Robert Elbaum (Belgium)

15:00  Radiographs of 366 removed internal lengthening nails reveal differences
       in bone abnormalities between different nail types: Fitbone, Precice and
       Stryde
       Christopher Iobst¹, Markus Winther Frost², Søren Kold², Ole Rahbek²,
       Anirejuoritse Bafor¹, Molly Duncan¹, Jan Duedal Rölfing² (¹USA, ²Denmark)

15:05  Two-stage lengthening with reuse of a single intramedullary telescopic
       nail in patients with achondroplasia
       Javier Alonso, María Galán-Olleros, Carlos Miranda, Rosa M. Egea-Gámez,
       Ignacio Martínez-Caballero, Angel Palazon Quevedo (Spain)

15:10  3D printed cutting guides for lower limb deformity correction in the young
       population
       Roy Gigi, Yair Gortzak, Eran Golden, Ronnie Gabay, Netta Rumack, Moshe
       Yaniv, Solomon Dadia, Eitan Segev (Israel)

15:15  Discussion

15:30  Lower limb lengthenings for congenital and acquired deficiencies using
       external fixation combined with flexible intramedullary nailing: A
       multicenter EPOS study
       Dmitry Popkov¹, Szymon Pietrzak², Alexandre Antonov¹, Tomasz Parol²,
       Mikan Lazovic³, David Podeszwa⁴, Arnold Popkov¹
       (¹Russian Federation, ²Poland, ³Serbia, ⁴USA)
15:00  LOWER LIMB DEFORMITY (cont.)

15:35  Longterm follow up of retrograde femoral approach in lengthening: Is there an impact for the knee?
OP-118

Andreas Krieg, Chao Dong, Schmid Marc, Harder Dorothee, Donners Ricardo (Switzerland)

15:40  Discussion

16:00  Coffee break

16:30  STUDY GROUP NEUROMUSCULAR

FREE PAPERS

Chairs: Reinald Brunner (Switzerland), Ana Presedo (France)

16:30  Concurrent hip dysplasia and scoliosis in children with cerebral palsy: Should we fix the hip or spine first?
SG-01

Michael W. Shrader, Ali Asma, Armagan Can Ulusaloglu, Kenneth Rogers, Freeman Miller, Jason Howard, Mutlu Cobanoglu, Suken Shah (USA)

16:35  Kinematic parameters may differentiate between idiopathic and neurologic toe-walking
SG-02

Martin Svehlik, Andreas Habersack, Tanja Kraus, Stefan Fischerauer (Austria)

16:40  Somatosensory profiles in children and adolescents with cerebral palsy
SG-03

Johanne Villars Jørgensen, Mads U. Werner, Josephine S. Michelsen, Christian Wong (Denmark)

16:45  The importance of restoring a heel-toe gait pattern in patients with unilateral spastic cerebral palsy: The correlation between femoral anteversion and asymmetrical hip internal rotation
SG-04

Michèle Kläusler, Enrico De Pieri, Rosa Visscher, Elke Viehweger, Reinald Brunner (Switzerland)

16:50  Discussion
TIVOLI CONGRESS HALL

17:30 STUDY GROUP TRAUMA
18:30 CURRENT CHALLENGES IN THE MANAGEMENT OF DIAPHYSEAL FOREARM FRACTURES
   Chairs: Nicolas Lutz (Switzerland), Melinda Witbreuk (The Netherlands)

17:30 Avoiding the complications of orthopedic treatment or nailing
SG-05 Virginie Rampal (France)

17:40 Management of refractures
SG-06 Dirk Sommerfeldt (Germany)

17:50 Current trends in the choice of material and bones to nails
SG-07 Morten Jon Andersen (Denmark)

18:00 Clinical experience with resorbable nails
SG-08 Louise Klingenberg (Denmark)

18:10 Discussion

AUDITORIUM CARSTENSEN

14:00 INDUSTRY SYMPOSIUM
   (see page 48)

15:00 UPPER LIMB
16:00 Chairs: Nunzio Catena (Italy), Sebastian Farr (Austria)
   Moderator: Sergio Martinez (Spain)

15:00 Vascularized palmar intermetacarpal flap for skin graftless syndactyly release: Anatomical study and report of 41 cases
   Francisco Soldado, Paula Diaz-Gallardo, Jorge Giménez Knorr (Spain)

15:05 Does older age and glenoid dysplasia affect outcome of soft tissue release and tendon transfer in shoulders with brachial plexus birth palsy?
   Gholamhossain Shahcheraghi, Mahzad Javid (Iran)

15:10 Estimating skeletal maturity using wrist radiographs during pre-adolescence: The epiphysial:metaphysial ratio
   Lauren Huang, Raymond Liu, Ryan Furdock, Naveen Uli (USA)

15:15 Discussion
Friday, April 8, 2022

**AUDITORIUM CARSTENSEN**

15:00 UPPER LIMP (cont.)

15:35 Carpal tunnel syndrome and finger deformities in children with mucopolysaccharidoses and mucolipidoses: A retrospective review of 52 cases
OP-123 **Clément Thirache, Mathilde Gaume, Cyril Gitiaux, Arielle Salon, Caroline Dana, Stéphanie Pannier (France)**

15:40 Transposition of distal part of pectoralis major to biceps brachii in children with arthrogryposis
OP-124 **Olga Agranovich, Petrova Ekaterina, Sergey Batkin (Russian Federation)**

15:45 Radial club hand treated by ulnarization generation 3: The new centralization
OP-125 **Jaroslaw Deszczynski, Tomasz Albrewczynski, Claire Shannon, Dror Paley (USA)**

15:50 Discussion

16:00 Coffee break

16:30 STUDY GROUP UPPER LIMP

17:30 WHICH HAND PATHOLOGIES SHOULD A PEDIATRIC ORTHOPEDIC SURGEON KNOW?

Chairs: **Nunzio Catena (Italy), Sebastian Farr (Austria)**

16:30 Trigger thumb
SG-09 **Marcos Carvalho (Portugal)**

16:39 Ganglion cysts
SG-10 **Sebastian Farr (Austria)**

16:48 Polydactyly
SG-11 **Sergio Martínez (Spain)**

16:57 Thumb hypoplasia/absence
SG-12 **Nunzio Catena (Italy)**

17:06 Syndactyly
SG-13 **Francisco Soldado (Spain)**

17:15 Discussion
### AUDITORIUM CARSTENSEN

**17:30** **STUDY GROUP SPINE**

**18:30** **LATE COMPLICATIONS IN PEDIATRIC SPINAL DEFORMITY SURGERY**

Chairs: **Moyo Kruyt (The Netherlands), Jorge Mineiro (Portugal)**

- **17:30** Introduction
  - SG-14 **Brice Ilharreborde (France)**

- **17:35** Delayed infection
  - SG-15 **Brice Ilharreborde (France), Sebastian Pesenti (France)**

- **17:45** Neurological
  - SG-16 **René Castelein (The Netherlands)**

- **17:55** Implant related
  - SG-17 **Ilkka Helenius (Finland), Muharrem Yazici (Turkey)**

- **18:05** Deformity related
  - SG-18 **Dror Ovadia (Israel)**

- **18:15** Conclusion and take away messages
  - SG-19 **Brice Ilharreborde (France)**

### HARLEKIN & COLUMBINE

**14:00** **INDUSTRY SYMPOSIUM**

**15:00** (see page 48)

**15:00** **TUMOURS & MISCELLANEOUS**

- **15:00** Chairs: **Marta Salom (Spain), Bartu Sarisozen (Turkey)**
  - Moderator: **Bartek Kowalczyk (Poland)**

- **15:00** Treatment of aneurysmal bone cysts in the proximal femur in 85 children and adolescents: Retrospective multi-center analysis
    - **(The Netherlands, Austria, Pakistan, Colombia, Egypt, Italy, Finland)**

- **15:05** Efficacy and safety of tranexamic acid in resection and endoprosthetic reconstruction of distal femoral osteosarcomas in children: A retrospective cohort study
  - **OP-127** **Bulent Erol, Omer Sofulu, Ozer Ozturk, Murat Polat, Omer Buyuktopcu, Mehmet Deniz Kesimer (Turkey)**
15:00 TUMOURS & MISCELLANEOUS (cont.)

15:10 Treatment of unicameral bone cysts in the proximal femur in 89 children and adolescents: Retrospective multi-center study
Thom van Geloven¹, Lizz van der Heijden¹, Dietmar Dammerer², Masood Umer³, Kevin Doering³, C Soto-Montaya⁴, I. Badr⁵, Philipp Scheider², Tanja Kraus², M. Haara⁶, Giovanni Beltrami⁷, Minna Laitinen⁶, Domenico Campanacci⁷, Pieter-Bas de Witte¹, Michiel van de Sande¹ (¹The Netherlands, ²Austria, ³Pakistan, ⁴Colombia, ⁵Egypt, ⁶Finland, ⁷Italy)

15:15 Treatment outcomes of monostotic fibrous dysplasia in the proximal femur in 47 children and adolescents: Retrospective multi-center cohort study
Thom van Geloven¹, Maartje Meier¹, Dietmar Dammerer², Masood Umer³, Kevin Doering³, C. Soto-Montaya⁴, I. Badr⁵, Philipp Scheider², Tanja Kraus², M. Haara⁶, Giovanni Beltrami⁷, Minna Laitinen⁶, Domenico Campanacci⁷, Pieter-Bas de Witte¹, Michiel van de Sande¹ (¹The Netherlands, ²Austria, ³Pakistan, ⁴Colombia, ⁵Egypt, ⁶Finland, ⁷Italy)

15:20 Discussion

15:35 Can Virtual reality headsets be used safely as a distraction method for paediatric orthopaedic patients? A feasibility study
Karen Shepherd, Yogita Shanmugharaj, Obada Kattan, Michail Kokkinakis (UK)

15:40 Asymmetric growth after percutaneous epiphysiodesis
Hannah Weinmayer, Anne Breen, Harald Steen, Joachim Horn (Norway)

15:45 Use of resorbable magnesium screws in children: Systematic review of the literature and short-term follow-up from our series
Danya Falcioni, Valentina Maestri, Valentino Coppa, Antonio Pompilio Gigante (Italy)

15:50 Discussion

16:00 Coffee break

16:30
HARLEKIN & COLUMBINE

16:30 STUDY GROUP TUMOUR
17:30 Chairs: Bartu Sarisozen (Turkey), Michiel van de Sande (The Netherlands)

16:30 Pyomyositis
SG-20 Marta Salom (Spain)

16:39 Chronic recurrent multifocal osteomyelitis
SG-21 Bartek Kowalczyk (Poland)

16:48 Vertebral infections
SG-22 Ilkka Helenius (Finland)

16:57 Treatment of postoperative and implant related infections
SG-23 Deborah Eastwood (UK)

17:06 Septic arthritis 2022
SG-24 Dimitri Ceroni (Switzerland)

17:14 Discussion

HARLEKIN & COLUMBINE

17:30 STUDY GROUP METABOLICS
18:30 Experts: Deborah Eastwood (UK), Joachim Horn (Norway)
Ralph Sakkers (The Netherlands), Thomas Wirth (Germany)

17:30 X-linked hypophosphatemic rickets: My best case & my worst case
SG-25 Gabriel Mindler (Austria)

17:45 Osteogenesis imperfecta: My best case & my worst case
SG-26 Muharrem Inan (Turkey)

18:00 Spondyloepiphyseal dysplasia: My best case & my worst case
SG-27 Darko Anticevic (Croatia)

18:15 Larsen syndrome: My best case & my worst case
SG-28 Valdimir Kenis (Russian Federation)
Saturday, April 9, 2022

TIVOLI CONGRESS HALL

08:00  BEST OF THE BEST
09:00  Chairs: Antonio Andreacchio (Italy), Steven Frick (USA)
       Moderator: David M. Farrington (Spain)

08:00  Development of the LIMB-Q Kids: A new patient reported outcome
       measure for children with lower limb deformities
       Harpreet Chhina, Anne Klassen, Jacek Kopec, Anthony Cooper (Canada)

08:05  Persistently raised titanium levels in children after spinal instrumentation
       OP-134 Peter John Cundy, Brian Freeman, Georgia Antoniou, William Cundy
       (Australia)

08:10  The effect of knee height asymmetry on gait biomechanics
       OP-135 Haluk Altiok, Jeremy Bauer, Jacqueline C. Simon, Abdal Kawaiah, Robert
       Burnham, Cathleen Buckon, Susan Sienko, Ann Flanagan, Karen Kruger,
       Joseph Krzak (USA)

08:15  Discussion

08:30  Patient-reported outcomes of over 900 adults who had childhood
       OP-136 Legg-Calve-Perthes disease (LCPD)
       Harry K.W. Kim, Molly McGuire, Roi Armakias, Michael Millis, Bella
       Vakulenko-Lagun (USA)

08:35  Operative treatment of distal tibial epiphyseal fractures with
       bioabsorbable screws - nine years of experience
       OP-137 Marcell Varga, Tamás Kassai, Gergő Józsa (Hungary)

08:40  Short bioresorbable intramedullary nailing of severely displaced distal
       OP-138 forearm fractures in children - an alternative to K-wires
       Marcell Varga, Gergő Józsa, Zsófia Krupa, Tamás Kassai (Hungary)

08:45  Discussion
### BEST E-POSTERS

<table>
<thead>
<tr>
<th>Time</th>
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<td>09:00</td>
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**Chairs:** Ignacio Sanpera *(Spain)*, Jeff Sawyer *(USA)*  
**Moderator:** Martin Gottliebsen *(Denmark)*

<table>
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| 10:00 | Chairs: Ignacio Sanpera *(Spain)*, Jeff Sawyer *(USA)*  
**Moderator:** Martin Gottliebsen *(Denmark)* |

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<td>Demographic and clinical characteristics of patellar instability patients from prospective JUPITER (Justifying Patellar Instability Treatment by Early Results) cohort</td>
<td>Meghan Bishop, Jacqueline Brady, Simone Gruber, Matthew Veerkamp, Joseph Nguyen, Benton Heyworth, Marc Tompkins, Daniel Green, Eric Wall, JUPITER Study Group, Beth Shubin Stein, Shital Parikh <em>(USA)</em></td>
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<td>09:03</td>
<td>Displaced midshaft clavicle fractures treated with ORIF vs non-op: Equivalent strength, endurance, and kinematics</td>
<td>Clare Kehoe, Roger Widmann, Nicolas Pascual-Leone, David Scher, Emily Dodwell <em>(USA)</em></td>
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<td>09:06</td>
<td>Treatment of recurrent patellar dislocation in children and adolescents with medial patellofemoral ligament reconstruction - pediatric technique</td>
<td>João Cabral, Ines Balacó, Marcos Carvalho, Oliana Madeira Tarquini, Pedro Sá Cardoso, Tah Ling, Cristina Alves <em>(Portugal)</em></td>
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<td>09:09</td>
<td>Appropriate surgical timing of Salter innominate osteotomy for acetabular dysplasia in children</td>
<td>Kenta Sawamura, Hiroshi Kitoh, Hiroshi Kaneko, Akiko Kitamura, Saori Matsuyama, Kenichi Mishima, Masaki Matsushita, Yasunari Kameya, Tadashi Hattori <em>(Japan)</em></td>
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<td>09:12</td>
<td>Sprengel deformity - clinical and radiographic outcome following surgical intervention</td>
<td>Antfang Carina, Andrea Laufer, Georg Goshgeger, Anna Maria Rachbauer, Gregor Toporowski, Adrien Frommer, Henning Tretow, Robert Rödl, Bjoern Vogt <em>(Germany)</em></td>
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<td>Discussion</td>
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<td>09:30</td>
<td>Firearm-associated orthopedic injuries in the pediatric population of New York State (2016-2020)</td>
<td>Cordelia Carter, Charles Lin, Utkarsh Anil <em>(USA)</em></td>
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<td>09:33</td>
<td>Corrective procedure for flexion contracture of the elbow in neonatal palsy sequelae: Long term follow up</td>
<td>Filippo M. Senes, Anna Maria Nucci, Annalisa Valore, Nunzio Catena <em>(Italy)</em></td>
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09:00  BEST E-POSTERS (cont.)

10:00

09:36  Electromyography role in children with split cord malformation
EP-52 diagnosis
Margarita Savina, Vissarionov Sergey, Vahtang Torja, Alina Khodorovskaya

09:39  Participation and motor abilities in children with idiopathic clubfeet after
treatment with the Ponseti method
EP-24 Arnold Besselaar¹, Lianne van Dijk¹, Lianne Grin¹², Saskia Wijnands¹², van
der Marieke Steen¹, Benedicte Vanwanseele² (The Netherlands)

09:42  Objectively measured sleep metrics in infants and toddlers undergoing
night-time boots and bar brace treatment for clubfoot compared to age
matched controls
EP-27 Charlotte Sununu, Natalie Barnett, Clare Kehoe, David Scher,
Emily Dodwell (USA)

09:45  Discussion
E-POSTERS

EP-01  Prolonged bisphosphonate therapy in children with severe osteogenesis imperfecta could create intramedullary canal obliteration or sclerosis
Darko Anticevic, Željko Jeleč (Croatia)

EP-02  Progress and recurrence of the disease in dysplasia epiphesealis hemimelica: A systematic review of literature
Alina Khodorovskaya, Vladimir Kenis, Eugeniy Melchenko (Russia)

EP-03  Allografting is an effective biological method of fixation and increases bone trophicity in osteogenesis imperfecta
Sarah El Yahiaouni, Marine De Tienda, Georges Finidori, Valérie Dumaine, Alina Badina, Stéphanie Pannier, Mathilde Gaume, Zagorka Péjin (France)

EP-04  Role of fibular shortness in genu valgum deformity in multiple hereditary exostosis patients
Ravot Chloé, Adrien Roy, Launay Franck, Antoine Couvreur, Jean-Luc Jouve, Sebastien Pesenti (France)

EP-05  An evidence-based clinical practice guideline for developmental dysplasia of the hip under the age of 1 year: Part 1: Centered hips
Christiaan van Bergen, Pieter-Bas de Witte, Willeboordse Floor, Babette L. de Geest, Margret Foreman - van Drongelen, Bart J. Burger, Yvon Den Hartog, J.H. van Linge, Renske M. Pereboom, Simon Robben, Adhiambo Witlox, Melinda M.E.H. Witbreuk (The Netherlands)

EP-06  Gestational week and sonographic acetabular roof a-angle. A prospective, pilot, cohort of Caucasian - Greek population
Vasiliki Chatziravdeli, Christos Kazas, Ilias Chatziioannidis, George Mitsiakos, Elissavet Diamanti, Dimitrios Metaxiotis (Greece)

EP-07  Appropriate surgical timing of Salter innominate osteotomy for acetabular dysplasia in children
Kenta Sawamura, Hiroshi Kitoh, Hiroshi Kaneko, Akiko Kitamura, Saori Matsuyama, Kenichi Mishima, Masaki Matsushita, Yasunari Kamiya, Tadashi Hattori (Japan)

EP-08  What is the interobserver reliability of an Ultrasound enhanced physical examination of the hip in infants? A prospective study on the ease of acquisition of skills to diagnose hip dysplasia
Neha Jejurikar, Leon Moscona Mishy, Monica Rubio, Romina Cavallaro, Pablo Castaneda (USA)
**EP-09** Development and validation of a diagnostic aid for DDH in early infancy: Building on the results of a multinational EPOS study
Andreas Roposch, Annie Hurley, Rachel Buckingham, Claudia Maizen, Pranai Buddhdev, Aresh Hashemi-Nejad (UK)

**EP-10** Does age at start of treatment have an influence of follow-up development of unstable hips?
Bettina Westhoff, Hannes Kubo, Hakan Pilge, Jan-Philipp Holthoff, Martin Hufeland, Ruediger Krauspe (Germany)

**EP-11** AVN: How to minimize it? The effectiveness of Morel progressive traction in DDH (III-IV grade IHDI)
Federica De Rosa, Daniele Sini, Chiara Arrigoni, Carlo Origo (Italy)

**EP-12** Comparison of pubo femoral distances in lateral versus supine positioning of the child
Hans-Christen Husum, Christian Klitt Jensen, Michel Bach-Hellfritzsch, Mads Henriksen, Ole Rahbek (Denmark)

**EP-13** Residual dysplasia in left-sided and right-sided hip dislocation in children with developmental dysplasia of the hip
Hsin-Ying Lin, Suzanne de Vos-Jakobs, Stijn Westerbos, Max Reijman (The Netherlands)

**EP-14** Parental experiences of children with developmental dysplasia of the hip: A qualitative study
Wesley Theunissen, Marieke van der Steen, Florens van Douveren, Adhiambo Witlox, Jaap Tolk (The Netherlands)

**EP-15** Traction assisted reduction compared with surgical reduction for treatment of walking age developmental dysplasia of the hip
Jason Chinnappa\(^1\), Anne-Laure Simon\(^1\), Alexandre Gounot\(^1\), Philippe Souchet\(^1\), Brice Ilharreborde\(^1\) (France, Australia)

**EP-18** The importance of monitoring and factors that may influence leg length difference in developmental dysplasia of the hip
Rajiv Merchant, Jaap Tolk, Anouska Ayub, Deborah Eastwood, Aresh Hashemi-Nejad (UK)
EP-19 A delayed imaging protocol for risk-factor based screening for developmental dysplasia of the hip reduces treatment rates: A COVID induced study
Anish Sanghrajka, Rajiv Merchant, Rachael Fisher, Helen Chase (UK)

EP-20 Total hip arthroplasty followed by intramedullary femoral lengthening for staged reconstruction of unilateral neglected hip dislocation
Bjoern Vogt, Robert Roedl, Georg Gosheger, Adrien Frommer, Christoph Theil, Gregor Toporowski, Andrea Laufer (Germany)

EP-21 Is the lateral cuneiform large enough to support interference screw fixation for tibialis anterior tendon transfer in children aged 3 to 6 years?
Jordan Polk, Zachary Meyer, Jacob Zide, Yassine Kanaan, Anthony Riccio (USA)

EP-22 The Ponseti method for the treatment of clubfeet associated with Down syndrome
Edwin Portalatin-Perez¹, Sarah Parenti², Jordan Polk², Chan-Hee Jo², Anthony Riccio² (¹Portorico, ²USA)

EP-23 Interrelations between the too-long anterior calcaneal process, hind and mid-tarsal bone volumes, angles and osteochondral lesion of the dome of the talus. Analysis by software slicer of 69 CT scan of feet
Giovanni Lucchesi¹, François Bonnel², Alain Dimeglio², Giovanni Beltrami¹, Federico Canavese² (¹Italy, ²France)

EP-24 Participation and motor abilities in children with idiopathic clubfeet after treatment with the Ponseti method
Arnold Besselaar¹, Lianne van Dijk¹, Lianne Grin¹², Saskia Wijnands¹², Marieke van der Steen¹, Benedicte Vanwanseele¹² (The Netherlands)

EP-25 Atypical triplane fractures in adolescents: How much displacement is acceptable for conservative treatment?
Chaemoon Lim (South Korea)

EP-26 Location of sustentaculum tali on foot AP radiographs reduces the risk of subtalar joint articular facets damage in calcaneal lengthening osteotomy
Sapogovskiy Andrey, Vladimir Kenis (Russia)

EP-27 Objectively measured sleep metrics in infants and toddlers undergoing night-time boots and bar brace treatment for clubfoot compared to age matched controls
Charlotte Sununu, Natalie Barnett, Clare Kehoe, David Scher (USA)
EP-30  The optimized Oxford hip skeletal maturity system proves resilient to rotational variation  
**Julio Castillo Tafur, Ryan Furdock, Abdu Sattar, Raymond Liu** *(USA)*

EP-31  Long term follow-up (35 years) of untreated patients with idiopathic increased femoral anteversion  
**Anders Grønseth, Suki Liyanarachi, Joachim Horn, Terje Terjesen** *(Norway)*

EP-32  Hip morphology in periacetabular osteotomy patients treated for developmental dysplasia of the hip as infants compared to those without infant treatment  
**Bridget Ellsworth, Joshua Bram, Ernest Sink** *(USA)*

EP-34  The mini open approach for the correction of femoral-acetabular impingement after a slipped upper femoral epiphysis is effective and reproducible  
**Karim Masrouha, Pablo Castaneda, Leon Moscona Mishy, Salim Habib** *(USA)*

EP-35  Testing a new surgical principle of guided growth for correction of rotational deformity of long bones in children  
**Andreas Peter Balslev-Clausen, Klaus Hindsø, Peter Buxbom, Christian Wong** *(Denmark)*

EP-36  How are pre-operative surgeon and patient expectations related to patient-reported outcomes after periacetabular osteotomy?  
**Samantha Ferraro, Patricia Miller, Michael Millis** *(USA)*

EP-37  Hip instability in children with trisomy 21  
**Milud Shadi, Pawel Glowka, Marek Jóźwiak, Tomasz Kotwicki** *(Poland)*

EP-38  An anatomic study of the proximal tibial epiphysis with relevance to percutaneous epiphysiodesis using transphyseal screws  
**Michael Do, Conor McCarthy, Daniel Cooperman, Raymond Liu** *(USA)*

EP-39  Femur lengthening over nail in adolescents: Is the lateral shift of the mechanical axis inevitable?  
**Kyeong-Hyeon Park¹, Chang-Wug Oh²** *(South Korea, USA)*

EP-40  Drop landing analysis of rotational osteotomies  
**Peter Stevens, Bruce Macwilliams** *(USA)*
EP-41 Tension band plating for correction of leg length difference
Jaap Tolk, Rajiv Merchant, Aresh Hashemi-Nejad, Deborah Eastwood (UK)

EP-42 Morphology of the knee joint after tension-band plating
Emma Julie Hvidberg, Maria Kirstine Møller-Madsen, Jan Duedal Rølfing, Bjarne Moeller-Madsen, Ahmed A. Abood (Denmark)

EP-43 Our experience of treatment of congenital pseudoarthrosis of tibia using X-union protocol
Petr Vvedenskiy, Maxim Vlasov (Russia)

Anne Breen, Joachim Horn, Harald Steen, Are Pripp, Ragnhild Gunderson, Else Merckoll, Ivan Hvid, Wajeeha Zaidi, Hilde Kristine Sandberg Mentzoni (Norway)

EP-46 MPLF reconstruction and hemi-epiphysiodesis for patellar instability with genu valgum
Dayna Philips¹, Matthew Veerkamp¹, Eric Wall, Matthew Ellington¹, Nicole Friel¹, John Schlechter¹, Daniel Green¹, Javier Masquijo², Shital Parikh¹ (¹USA, ²Argentina)

EP-47 Lengthening of the femur in adolescents with congenital diseases. Comparison of three different techniques
Szymon Pietrzak, Dariusz Grzelecki, Tomasz Parol, Jaroslaw Czubak (Poland)

EP-48 Many radiologic indices for patellofemoral instability are unreliable
Peter Fabricant, Madison Heath, Douglas Mintz, Kathleen Emery, Matthew Veerkamp, Simone Gruber, Daniel Green, Eric Wall, Marc Tompkins, Benton Heyworth, JUPITER Study Group, Beth Shubin Stein, Shital Parikh (USA)

EP-49 Management of first-time patellar dislocation: A survey of PRISM members
Shital Parikh, Matthew Veerkamp, PRISM Patellofemoral RIG (USA)
**EP-50** Demographic and clinical characteristics of patellar instability patients from prospective JUPITER (Justifying Patellar Instability Treatment by Early Results) cohort
Meghan Bishop, Jacqueline Brady, Simone Gruber, Matthew Veerkamp, Joseph Nguyen, Benton Heyworth, Marc Tompkins, Daniel Green, Eric Wall, JUPITER Study Group, Beth Shubin Stein, Shital Parikh (USA)

**EP-51** Suicidal ideation in pediatric orthopedic patients
Whitney Herge, Farzam Farahani, Aaron Hurd, Claire Shivers, Shelby Cerza, Sarah Parenti, Anthony Riccio (USA)

**EP-52** Electromyography role in children with split cord malformation diagnosis
Margarita Savina, Vissarionov Sergey, Vahtang Torja, Alina Khodorovskaya (Russia)

**EP-53** Validity of the patient reported outcome information system (PROMIS) in children and adolescents with lower extremity conditions
Nicholas Sullivan, Patricia Miller, Susan Mahan, Samantha Spencer, James Kasser, Matthew Milewski, Dennis Kramer, Collin May (USA)

**EP-54** Using a digital inclinometer significantly improves the accuracy of derotation osteotomy: A simulation study
Anish Sanghrajka, Daniel Watts, Helen Chase, Daniel Bye (UK)

**EP-55** Double calcaneal osteotomy in correction of severe planovalgus foot deformity in ambulatory children with spastic cerebral palsy. A prospective case series study
Ahmad Saeed Aly, Shady Abdelghaffar (Egypt)

**EP-56** Hip displacement in spinal muscular atrophy: The influence of genetic severity and functional level
Armagan Can Ulusaloglu, Ali Asma, Michael W. Shrader, Mena Scavina, William Mackenzie, Amanda Erb, Jason Howard (USA)

**EP-57** The influence of baseline gait velocity on treatment results after single-event multilevel surgery in patients with cerebral palsy
Mauro César de Morais Filho, Marcelo Fujino, Francesco Blumetti, Cátia Kawamura, José Augusto Lopes (Brazil)
EP-58 Predictors of postoperative urinary retention after posterior spinal fusion for adolescent idiopathic scoliosis
Tommi Yrjälä, Linda Helenius, Markku Taittonen, Hanna Oksanen, Heli Keskinen, Terhi Kolari, Ilkka Helenius (Finland)

EP-59 Treatment of recurrent patellar dislocation in children and adolescents with medial patellofemoral ligament reconstruction - pediatric technique
João Cabral, Ines Balacó, Marcos Carvalho, Oliana Madeira Tarquini, Pedro Sá Cardoso, Tah Ling, Cristina Alves (Portugal)

EP-60 First report and analysis of anterior inferior iliac spine avulsion re-fracture of the hip
Javier Besomi, Jose Tomas Bravo, Cristian Olmedo, Jorge Joannon, Daniela Landea, Pedro Salgado (Chile)

EP-61 Walking hip spicas for paediatric femoral shaft fractures: improving outcomes & reducing caregiver burden
Ben Steward, Helen Gille, Pranai Buddhdev (UK)

EP-62 Fully displaced pediatric supracondylar humerus fractures: Which ones need to go at night?
Susan Mahan, Patricia Miller, Jiwoo Park, Nicholas Sullivan, Carley Vuillermin (USA)

Cordelia Carter, Charles Lin, Utkarsh Anil (USA)

EP-64 Global variations in the management of diaphyseal forearm fractures in children: A survey of EPOS and POSNA members
Ludger Tüshaus¹, Christoph Roeder², Annelie Martina Weinberg², Louise Klingenberg³, Sven-Oliver Dietz¹, Nicolas Lutz⁴, Federico Canavese⁵, Cristina Alves⁶ (¹Germany, ²Austria, ³Denmark, ⁴Switzerland, ⁵France, ⁶Portugal)

EP-65 Construct validity of a novel simulator for pinning of supracondylar humeral fractures
Jan Duedal Rölfing¹, Steven Long², Ahmed A. Abood¹, Emily Connor¹, Emily Wagstrom¹, Geb Thomas¹, Don Anderson¹, Heather Kowalski¹ (¹Denmark, ²USA)
EP-66  Two-fold risk of fractures among children whose mother smoked during the pregnancy  
Roope Parviainen, Juha-Jaakko Sinikumpu (Finland)

EP-67  Clinical outcome of supracondylar humerus fractures in patients younger than 30 months  
Ahmet Hamdi Akgülle, Bulent Erol, Yavuz Şahbat, Hayati Kart, Özgür Baysal (Turkey)

EP-69  Surgical exploration of the pink pulseless supracondylar fracture  
Philip McKeag, Hean Wu Kang, Richard Napier (UK)

EP-70  Treatment of unicameral bone cysts: A comparative study during 8-year period  
Bojan Bukva, Sinisa Ducic, Mikan Lazovic, Filip Milanovic (Serbia)

EP-71  Percutaneous alcohol-based sclerotherapy in aneurysmal bone cyst in children and adolescents. A retrospective study of 41 patients  
Maria Tirta, Georgia Antoniou, Anastasia Pilichou, Panagiotis Krallis, Maria Stefanou1 John Anastasopoulos (Greece)

EP-72  The proximal congenital radioulnar synostosis: Quality of life of paediatric patients. A multicentre study  
Paola Zarantonello, Giovanni Luigi Di Gennaro, Sebastian Farr, Giovanni Trisolino, Diego Antonioli, Giovanni Gallone, Stefano Stallone (Austria)

EP-73  Corrective procedure for flexion contracture of the elbow in neonatal palsy sequelae: Long term follow-up  
Filippo M. Senes, Anna Maria Nucci, Annalisa Valore, Nunzio Catena (Italy)

EP-74  The treatment outcome of pediatric trigger thumb: Open surgery versus nonoperative management according to age  
Jung Yun Bae, Ju Mi Hwang (South Korea)

EP-75  Temporary epiphysiodesis in adolescent patients with ulnocarpal impaction syndrome  
Philipp Scheider, Rudolf Ganger, Sebastian Farr (Austria)

EP-76  Age-related outcomes and complications of osteodistraction in the pediatric upper extremity: A large retrospective single-center study of 61 cases  
Philipp Scheider, Rudolf Ganger, Sebastian Farr (Austria)
EP-77  Testing a new method of osteosynthesis of antebrachium fractures in children; A prospective randomized controlled longitudinal study
Lærke Gyllenborg, Christian Wong, Ture Karbo (Denmark)

EP-78  Flexor tendon injuries in the pediatric age: What results can be expected?
Marcos Carvalho, Ricardo Marques, Pedro Sá Cardoso, Tah Ling, Ines Balacô, Oliana Madeira Tarquini, João Cabral, Cristina Alves (Portugal)

EP-79  Peripheral nerve injuries of the upper extremity in paediatric population: long-term outcomes and prognostic factors
Justine Fleurette, Mathilde Gaume, Marine De Tienda, Caroline Dana, Stéphanie Pannier (France)

EP-80  Signaling overuse sports injuries in the pediatric elbow: Physicians' item collection
Brinne Roorda, Christiaan van Bergen, Denise Eygendaal, Bertram The, Iris van Oost (The Netherlands)

EP-81  Innovation of COVID-19 pandemic; A prospective study on paediatric forearm fractures manipulations in A&E department of a District General Hospital
Hafiz Umer, Hafiz-Javaid Iqbal, Matthew Nixon, Mark Webb, Peter Kenyon, Sophie Dodd (UK)

EP-82  Displaced midshaft clavicle fractures treated with ORIF vs non-op: Equivalent strength, endurance, and kinematics
Clare Kehoe, Roger Widmann, Nicolas Pascual-Leone, David Scher, Emily Dodwell (USA)

EP-84  Sprengel deformity - clinical and radiographic outcome following surgical intervention
Antfang Carina, Andrea Laufer, Georg Goshheger, Anna Maria Rachbauer, Gregor Toporowski, Adrien Frommer, Henning Tretow, Robert Rödl, Bjoern Vogt (Germany)

EP-85  Measurement for objective diagnosis of multidirectional instability of shoulder in adolescent patients
Mason Yoder, Matthew Veerkamp, Colin McDonald, Shital Parikh (USA)

EP-86  Sulphur biology in skeletal development: An explorative study into the aetiology of developmental dysplasia of the hip
Amanda Rhodes, Sehrish Ali, Ling Lee, Brijil Joseph, Judwin Ndzo, Nicholas Clarke, Martin Feelisch, Alexander Aarvold (UK)
INDUSTRY SYMPOSIA

TIVOLI CONGRESS HALL

13:50  ORTHOPEDIATRICS INDUSTRY SYMPOSIUM
CHALLENGES IN PEDIATRIC FOOT SURGERY AN INTERACTIVE CASE-BASED DISCUSSION

Faculty:

Cristina Alves (Portugal)
Luis Moraleda (Spain)
Sebastian Farr (Austria)

AUDITORIUM CARSTENSEN

13:50  ORTHOFIX INDUSTRY SYMPOSIUM
DIGITAL APPLICATION TECHNOLOGY IN PEDIATRIC LIMB RECONSTRUCTION SURGERY. WHERE ARE WE?
Points of view and experiences about how technology can support surgeons in their most complex cases and patients before and after surgery

Faculty:

Ignacio Sanpera (Spain)
Manuel Cassiano (Portugal)
Jan Rölfing (Denmark)
INDUSTRY SYMPOSIA

HARLEKIN & COLUMBINE

13:50  NUVASIVE SPECIALIZED ORTHOPEDICS INDUSTRY SYMPOSIUM
14:50  A GUIDELINE FOR INTRAMEDULLARY DEFORMITY CORRECTION
       AND LENGTHENING

Faculty:

Christof Radler (Austria)
Micha Langendörfer (Germany)
INDUSTRY SYMPOSIA

AUDITORIUM CARSTENSEN

14:00 ORTHOFIX INDUSTRY SYMPOSUM
15:00 USE OF THE FITBONE® LENGTHENING NAIL IN ADOLESCENT POPULATIONS

Shared experiences and case discussions focused on using the Fitbone intramedullary lengthening nail in younger patients (greater than 12 through 21 years of age)

Faculty:

Franck Accadbled (France)
Andreas Krieg (Switzerland)
Jan Rölfing (Denmark)

HARLEKIN & COLUMBINE

14:00 IPSEN INDUSTRY SYMPOSIUM
15:00 HOW CAN WE HARNESS ARTIFICIAL INTELLIGENCE TO IMPROVE THE DIAGNOSIS OF RARE BONE CONDITIONS?

Chairperson: David Elvira (Ipsen Pharma)

14:00 Chairperson’s welcome and introduction
David Elvira (Ipsen Pharma)

14:05 Advances in orthopaedic diagnosis using artificial intelligence: A fracture case study
Soheil Ashkani Esfahani (USA), Hamid Ghaednia (USA)

14:20 Man versus machine: Can you beat the algorithm?
David Elvira (Ipsen Pharma)

14:25 Fibrodysplasia ossificans progressiva (FOP): How can we advance diagnosis?
Zulf Mughal (UK)

14:40 Panel discussion and Q&A
EPOS Future Annual Meetings

Join EPOS 41st Annual Meeting from 29 March - 1 April 2023, in Krakow, Poland

EPOSNA Meeting on May 2024 in Washington DC, USA