

**33rd Annual
Baltimore Limb Deformity Course**
Thursday, August 24 – Saturday, August 26, 2023
(Final V2 as of 8/25/2023)



Four Seasons Hotel Baltimore
Baltimore, Maryland, USA



Course Chairmen

John Herzenberg, MD
Philip McClure, MD

LLRS Liaison

David Podeszwa, MD

Directors

Michael Assayag, MD
Christopher Bibbo, DO
Janet Conway, MD
Noman Siddiqui, DPM
Shawn Standard, MD

Endorsed by:



Faculty and Lab Assistants

Talal Abalkhail, MBBS	Riyadh, Saudi Arabia
Hummira Abawi, DPM	Baltimore, Maryland
Marcel Abouassaly, MD	Calgary, Canada
Mohamed Abu Ain, MD	Amman, Jordan
Samantha Bark, DPM	Galion, Ohio
Anil Bhave, PT	Baltimore, Maryland
L. Reid Boyce Nichols, MD	Wilmington, Delaware
Lindsey Calligaro, DPM	Ringwood, New Jersey
Brett Crist, MD	Columbia, Missouri
Ronald Delanois, MD	Baltimore, Maryland
Wiemi Douoguih, MD	Washington, District of Columbia
Mark Eidelman, MD	Haifa, Israel
Yasser Elbatrawy, MD	Cairo, Egypt
Hady Eltayeby, MD	Alexandria, Egypt
Jeanne Franzone, MD	Wilmington, Delaware
Rudolf Ganger, MD	Vienna, Austria
Marie Gdalevitch, MD	Montréal, Canada
Christine Goodbody, MD	Philadelphia, Pennsylvania
Connor Green, MD	Dublin, Ireland
Vache Hambardzumyan, MD	Peterborough, New Hampshire
Beat Hintermann, MD	Liestal, Switzerland
Christopher Iobst, MD	Columbus, Ohio
Guido LaPorta, DPM	Dunmore, Pennsylvania
Christopher Makarewich, MD	Park City, Utah
Sara Mateen, DPM	Hackensack, New Jersey
Paul Matuszewski, MD	Lexington, Kentucky
Brittany Mayer, DPM	Washington, District of Columbia
Kenji Miki, MD	Osaka, Japan
Kelsey Millionig, DPM	Des Moines, Iowa
Scott Nelson, MD	Port-au-Prince, Haiti
Robert O'Toole, MD	Baltimore, Maryland
Carlos Pargas, MD	Seattle, Washington
Christof Radler, MD	Vienna, Austria
Jessica Rivera, MD	New Orleans, Louisiana
Valentyn Rohozynskyi, MD	Kyiv, Ukraine
Daniel Ruggles, DO	Miami, Florida
Roxa Ruiz, MD	Liestal, Switzerland
Mikhail Samchukov, MD	Dallas, Texas
Gerhard Schmidmaier, MD	Heidelberg, Germany
John Sontich, MD	Cleveland, Ohio
Sean Tabaie, MD	Washington, District of Columbia
William Terrell, MD	Marietta, Georgia
Ahmed Thabet, MD	El Paso, Texas
Rishi Thakral, MD	Oklahoma City, Oklahoma
Michael Thomas, DPM	Seattle, Washington
Job Timeny, DPM	Fort Myers, Florida
Harold van Bosse, MD	Saint Louis, Missouri
Indresh Venkatarayappa, MD	Dayton, Ohio
Francisco Violante, Jr., MD	São Paulo, Brazil
Jeff Young, MD	Palo Alto, California

Day 1: Thursday, August 24

6:00–7:00	<u>Registration, Breakfast, and Visit with Corporate Partners</u>	<i>Marine Room and Grand Ballroom Pre-function, Level 2</i>
7:00–7:25	Welcome <i>John Herzenberg, MD, or Philip McClure, MD, and Ronald Delanois, MD</i>	<i>Grand Ballroom, Level 2</i>
7:25–7:45	Introduction to Deformity Planning Concepts: The Apex/Axis Method and MAP the ABCs <i>Shawn Standard, MD</i>	
7:45–8:05	Bone Ninja Introduction <i>Shawn Standard, MD</i>	
8:05–8:15	Alphabet Soup of Limb Alignment (Frontal Plane): MAD, LDFA, MPTA, LDTA, MPFA, LPFA, and JLCA <i>Janet Conway, MD</i>	
8:15–8:30	Frontal Plane Measurements on Normal Bones (Planning Workshop) <i>Janet Conway, MD</i>	
8:30–9:15	Assessment of Limb Alignment: Frontal Plane MAP (M easure Mechanical Axis Deviation, A nalyze Joint Angles, P ick the Bone) (Planning Workshop) <i>John Herzenberg, MD, or Michael Assayag, MD</i>	
9:15–9:45	<u>Health Break and Visit with Corporate Partners</u>	<i>Grand Ballroom Pre-function, Level 2</i>
9:45–10:15	ABCs of Deformity Correction: How to Approach Deformity Analysis and Osteotomy Planning <i>Shawn Standard, MD</i>	<i>Grand Ballroom, Level 2</i>
10:15–11:05	Tibia: Frontal Plane Single-level Deformities (Planning Workshop) <i>Michael Assayag, MD</i>	
11:05–11:50	Tibia: Frontal Plane Double-level Deformities (Planning Workshop) <i>Marie Gdalevitch, MD</i>	
11:50–12:05	It Looks Good, but Does It Feel Better? <i>Brett Crist, MD</i>	
12:05–12:35	<u>Luncheon and Visit with Corporate Partners</u>	<i>Grand Ballroom Pre-function, Level 2</i>
12:35–12:45	Head to Designated Afternoon Labs	
12:45–5:00	Thursday Afternoon Labs: Faculty and Lab Assistants: Please consult your lab assignment sheet.	

Groups A-1 and A-2:

12:45–2:45	Six-axis External Fixation 4 Lab: Malunion and Valgus Deformity Facilitator: <i>John Sontich, MD</i>	<i>Azure & Indigo Rooms, Level 2</i>
2:45–3:00	Head to Next Lab	
3:00–5:00	Six-axis External Fixation 2 Lab: Blount Disease Facilitator: <i>Scott Nelson, MD</i>	<i>Grand Ballroom B, Level 2</i>

Day 1: Thursday, August 24

Group B-1:

- 12:45–2:45 External Fixation Lab: Hindfoot/Ankle Fusion *Sienna Room, Level 2*
Facilitators: *Christopher Bibbo, DO, Guido LaPorta, DPM, and Noman Siddiqui, DPM*
- 2:45–3:00 Head to Next Lab
- 3:00–5:00 Six-axis External Fixation 3 Lab: Midfoot *Cobalt Ballroom 1, Level 2*
Cavus/Equinovarus Deformity
Facilitators: *Kelsey Millonig, DPM, and William Terrell, MD*

Group B-2:

- 12:45–2:45 Six-axis External Fixation 3 Lab: Midfoot Cavus/
Equinovarus Deformity *Cobalt Ballroom 1, Level 2*
Facilitator: *Kelsey Millonig, DPM, and William Terrell, MD*
- 2:45–3:00 Head to Next Lab
- 3:00–5:00 External Fixation Lab: Hindfoot/Ankle Fusion *Sienna Room, Level 2*
Facilitators: *Christopher Bibbo, DO, Guido LaPorta, DPM, and Noman Siddiqui, DPM*

Groups C-1 and C-2:

- 12:45–1:45 Fixator-assisted Plating Lab: Distal Femoral Valgus Deformity *Marine Room, Level 2*
Facilitator: *Janet Conway, MD*
- 1:45–1:55 Head to Next Lab
- 1:55–3:55 Six-axis External Fixation 1 Lab: Fracture with Translation,
Equinus Deformity, and Valgus Deformity *Cobalt Ballroom 2, Level 2*
Facilitators: *Rudolf Ganger, MD, and Christof Radler, MD*
- 3:55–4:00 Head to Next Lab
- 4:00–5:00 Small Canal Solutions with Intramedullary Nails *Grand Ballroom A, Level 2*
Facilitator: *Marie Gdalevitch, MD*
- 6:00 Depart Hotel for Faculty and Former Fellows Dinner *(invitation only)* *Four Seasons Hotel, Lobby*

Day 2: Friday, August 25

6:15–7:00	<u>Breakfast and Visit with Corporate Partners</u>	Grand Ballroom Pre-function, Level 2
7:00–7:05	Announcements <i>Philip McClure, MD</i>	Grand Ballroom, Level 2
7:05–7:15	Tibia Review Planning Exercises <i>Philip McClure, MD</i>	
7:15–7:30	Alphabet Soup of Limb Alignment (Sagittal Plane): PDFA, PPTA, SJLA, ADTA, and SMAA <i>Philip McClure, MD</i>	
7:30–8:00	Sagittal Plane Measurements (Planning Workshop) <i>Philip McClure, MD</i>	
8:00–8:45	Tibia: Sagittal Plane Deformities (Planning Workshop) <i>Michael Assayag, MD</i>	
8:45–9:10	Tibia: Introduction to the Oblique Plane <i>Shawn Standard, MD</i>	
9:10–9:30	Tibia: Oblique Plane Deformities (Planning Workshop) <i>Janet Conway, MD</i>	
9:30–9:45	Physical Exam of Limb Deformities <i>Janet Conway, MD</i>	
9:45–10:15	<u>Health Break and Visit with Corporate Partners</u>	Grand Ballroom Pre-function, Level 2
10:15–12:45	<i>Please visit one of the two breakout sessions listed below:</i>	
	Breakout Session: Focus on Ankle and Foot Deformities	
10:15–11:00	Preoperative Foot and Ankle Deformity Planning <i>Noman Siddiqui, DPM</i>	Grand Ballroom B, Level 2
11:00–11:35	Sagittal Plane Deformity: Bone Ninja Planning Workshop <i>Guido LaPorta, DPM</i>	
11:35–12:10	Frontal Plane Deformity: Bone Ninja Planning Workshop <i>Kelsey Millonig, DPM</i>	
12:10–12:45	Transverse Plane Deformity: Bone Ninja Planning Workshop <i>Marie Gdalevitch, MD</i>	
	Breakout Session: Focus on Femoral Deformities and Limb Length Discrepancy (Pediatric and Adult Orthopedics)	
10:15–11:15	Femur: Frontal Plane Single-level Deformities (Planning Workshop) <i>Scott Nelson, MD</i>	Grand Ballroom A, Level 2
11:15–11:35	Measuring Limb Length Discrepancies and Radiographic Assessment <i>Shawn Standard, MD</i>	
11:35–12:15	Femur: Frontal Plane Double-level Deformities (Planning Workshop) <i>Scott Nelson, MD</i>	

Day 2: Friday, August 25

12:15–12:30 Fixing It Right the First Time: Assessing Rotational, Frontal, and Sagittal Alignment in Acute Fracture Management
Robert O'Toole, MD

12:30–12:45 The Tibial Segmental Bone Defect: Strategies in Management
Paul Matuszewski, MD

12:45–1:15 Luncheon and Visit with Corporate Partners

Grand Ballroom Pre-function, Level 2

1:15–1:25 Head to Designated Afternoon Labs

1:25–5:30 Friday Afternoon Labs:
Faculty and Lab Assistants: Please consult your lab assignment sheet.

Groups A-1 and A-2:

1:25–2:25 Six-axis External Fixation 5 Lab: Mid-shaft Tibial Deformity
Facilitator: *Brett Crist, MD*

Marine Room, Level 2

2:25–2:30 Head to Next Lab

2:30–5:30 Six-axis External Fixation 1 Lab: Fracture with Translation, Valgus Deformity, and Blount Disease
Facilitators: *Rudolf Ganger, MD, John Herzenberg, MD, and Christof Radler, MD*

Cobalt Ballroom 2, Level 2

Groups B-1 and B-2:

1:25–3:25 Six-axis External Fixation 4 Lab: Post-traumatic Valgus Malunion
Facilitator: *Guido LaPorta, DPM*

Azure & Indigo Rooms, Level 2

3:25–3:30 Head to Next Lab

3:30–5:30 Six-axis External Fixation 2 Lab: Miter Frame
Facilitators: *Michael Assayag, MD, Guido LaPorta, DPM, Kelsey Millonig, DPM, and Noman Siddiqui, DPM*

Grand Ballroom B, Level 2

Group C-1:

1:25–3:25 Six-axis External Fixation 3 Lab: Blount Disease
Facilitator: *Mikhail Samchukov, MD*

Cobalt Ballroom 1, Level 2

3:25–3:30 Head to Workshop

3:30–5:30 Internal Lengthening Nail Workshop
Facilitators: *Philip McClure, MD, and Daniel Ruggles, DO*
Lecturers: *Rudolf Ganger, MD, John Herzenberg, MD, Christof Radler, MD, and Shawn Standard, MD*

Sienna Room, Level 2

Group C-2:

1:25–3:25 Internal Lengthening Nail Workshop
Facilitators: *Michael Assayag, MD, and Philip McClure, MD*
Lecturers: *Rudolf Ganger, MD, John Herzenberg, MD, Christof Radler, MD, Daniel Ruggles, DO, and Shawn Standard, MD*

Sienna Room, Level 2

3:25–3:30 Head to Next Lab

3:30–5:30 Six-axis External Fixation 3 Lab: Blount Disease
Facilitator: *Mikhail Samchukov, MD*

Cobalt Ballroom 1, Level 2

Day 2: Friday, August 25

- 5:30–5:40 Coffee Break *Cobalt Ballroom Pre-function, Level 2*
- 5:40–5:45 Head to Case Presentation Sessions
- 5:45–7:00 **Case Presentations**
- Pediatric Orthopedics – Moderators: Philip McClure, MD, and Shawn Standard, MD** *Grand Ballroom A, Level 2*
Expert Panel: L. Reid Boyce Nichols, MD, Daniel Ruggles, DO, and David Podeszwa, MD
- 5:45–7:00 Case Calamities: Show Us What You Got
Presentations by faculty and former fellows
- Post-traumatic Deformities – Moderators: Michael Assayag, MD, and Janet Conway, MD** *Azure Room, Level 2*
Expert Panel: Brett Crist, MD, Paul Matuszewski, MD, Robert O'Toole, MD, and William Terrell, MD
- 5:45–7:00 Case Calamities: Show Us What You Got
Presentations by faculty and former fellows
- Foot and Ankle – Moderator: Noman Siddiqui, DPM** *Grand Ballroom B, Level 2*
Expert Panel: Christopher Bibbo, DO, Marie Gdalevitch, MD, Beat Hintermann, MD, Guido LaPorta, DPM, and Roxa Ruiz, MD
- 5:45–7:00 Case Calamities: Show Us What You Got
Presentations by faculty and former fellows
- 7:00 Conclude
- 7:15–9:00 Reception *(ticket required)* *Splash Pool Terrace, Level 4*

Day 3: Saturday, August 26

6:30–7:00 Breakfast and Visit with Corporate Partners

Grand Ballroom Pre-function, Level 2

7:00–10:00 *Please visit one or more of the breakout sessions listed below:*

Breakout Session: Foot and Ankle Specialists

Grand Ballroom B, Level 2

- 7:00–7:30 Post-traumatic Deformity Correction
Roxa Ruiz, MD
- 7:30–7:50 Supramalleolar Deformity in Ankle Replacement
Beat Hintermann, MD
- 7:50–8:10 Acute Lengthening in Brachymetatarsia
Sara Mateen, DPM
- 8:10–8:30 Complex Circular Fixation of the Foot and Ankle
Marie Gdalevitch, MD
- 8:30–8:50 Management of Complications with External Fixation
John Sontich, MD
- 8:50–9:15 Biomechanical Impact of Foot and Ankle Deformity
Anil Bhavé, PT
- 9:15–9:45 My Approach to Adult Flexible Flatfoot
Beat Hintermann, MD
- 9:45–10:00 Discussion

Breakout Session: Pediatric & Adult Orthopedic Specialists (Combined)

Grand Ballroom A, Level 2

- 7:00–7:30 Knee Flexion Contractures Secondary to Limb Lengthening
Shawn Standard, MD
- 7:30–8:15 Femur and Knee: Introduction to Sagittal Plane Analysis (Lecture and Planning Workshop)
Shawn Standard, MD
- 8:15–8:30 Billing and Coding in 2023
William Terrell, MD
- 8:30–8:35 Adult Specialists Head to Sienna Room While Pediatric Specialists Remain

Breakout Session: Pediatric Orthopedic Specialists

Grand Ballroom A, Level 2

- 8:35–8:50 Adolescent Blount Disease
Daniel Ruggles, DO
- 8:50–9:05 Guided Growth: Indications and Limitations
L. Reid Boyce Nichols, MD
- 9:05–9:20 Dynamization for Fracture and Lengthening
Mikhail Samchukov, MD

Day 3: Saturday, August 26

9:20–9:35 Hip Preservation: Tips and Tricks
Mark Eidelman, MD

9:35–9:50 Strategies for Lengthening with Congenital Femoral Deficiency
Shawn Standard, MD

9:50–10:00 Discussion

Breakout Session: Adult Orthopedic Specialists

Sienna Room, Level 2

8:35–8:55 War Injuries in Ukraine
Valentyn Rohozynskyi, MD

8:55–9:10 Height Enhancement Surgery
Michael Assayag, MD

9:10–9:25 Deformity Correction with Intramedullary Nails
Paul Matuszewski, MD

9:25–9:40 I Need Bone Supplementation for My Segmental Bone Defect:
How Do I Choose?
Gerhard Schmidmaier, MD

9:40–9:55 Strategies for High Tibial Osteotomies with Ligamentous Deficiencies
Wiemi Douguilh, MD

9:55–10:00 Discussion

10:00–10:30 Health Break and Visit with Corporate Partners

Grand Ballroom Pre-function, Level 2

10:30–10:40 Femur Review Planning Exercises
Daniel Ruggles, DO

Grand Ballroom, Level 2

10:40–11:05 Contracture Management and the Latest Advances in Physical Therapy
Anil Bhawe, PT

11:05–11:25 Radiology Considerations
Janet Conway, MD

11:25–11:40 Acute Correction of Severe Blount Disease
Philip McClure, MD

11:40–12:00 Solutions to Surgical Stress
Christopher Iobst, MD

12:00–12:05 Discussion

12:05–12:15 Closing Remarks and Exhibitor Contest Drawing
John Herzenberg, MD, or Philip McClure, MD

12:15–12:45 Luncheon

Grand Ballroom Pre-function, Level 2

Day 3: Saturday, August 26

12:45–5:00 **Groups A and B: Saturday Afternoon Labs**

Faculty and Lab Assistants: Please consult your lab assignment sheet.

Group A-1:

- 12:45–2:45 Six-axis External Fixation 3 Lab: Hyper Equinus *Cobalt Ballroom 1, Level 2*
Facilitator: *William Terrell, MD*
- 2:45–3:00 Head to Workshop
- 3:00–5:00 Internal Lengthening Nail Workshop *Sienna Room, Level 2*
Facilitator: *Michael Assayag, MD*
Lecturers: *John Herzenberg, MD, Philip McClure, MD, Christof Radler, MD,*
and Daniel Ruggles, DO

Group A-2:

- 12:45–2:45 Internal Lengthening Nail Workshop *Sienna Room, Level 2*
Facilitator: *Michael Assayag, MD*
Lecturers: *John Herzenberg, MD, Philip McClure, MD, Christof Radler, MD,*
and Daniel Ruggles, DO
- 2:45–3:00 Head to Next Lab
- 3:00–5:00 Six-axis External Fixation 3 Lab: Hyper Equinus *Cobalt Ballroom 1, Level 2*
Facilitator: *William Terrell, MD*

Groups B-1 and B-2:

- 12:45–1:45 Six-axis External Fixation 5 Lab: Ankle Varus and Recurvatum *Marine Room, Level 2*
Facilitators: *Guido LaPorta, DPM, and Noman Siddiqui, DPM*
- 1:45–2:00 Head to Next Lab
- 2:00–5:00 Six-axis External Fixation 1 Lab: Fracture with Translation,
Varus Deformity, and Rotational Deformity *Cobalt Ballroom 2, Level 2*
Facilitators: *Rudolf Ganger, MD, and Christof Radler, MD*

5:00 **Groups A and B: Conclusion**

Day 3: Saturday, August 26

12:40–1:15 Group C: Head to Afternoon Lab

1:15–5:30 **Group C: Saturday Afternoon Labs**

Faculty and Lab Assistants: Please consult your lab assignment sheet.

Group C-1:

1:15–3:15 Six-axis External Fixation 2 Lab: Malunion with Procurvatum *Grand Ballroom A, Level 2*
Facilitator: *L. Reid Boyce Nichols, MD*

3:15–3:30 Head to Next Lab

3:30–5:30 Coxa Vara and Knee Flexion Deformity Lab *Azure & Indigo Rooms, Level 2*
Facilitators: *John Herzenberg, MD, and Shawn Standard, MD*

Group C-2:

1:15–3:15 Coxa Vara and Knee Flexion Deformity Lab *Azure & Indigo Rooms, Level 2*
Facilitators: *John Herzenberg, MD, and Shawn Standard, MD*

3:15–3:30 Head to Next Lab

3:30–5:30 Six-axis External Fixation 2 Lab: Malunion with Procurvatum *Grand Ballroom A, Level 2*
Facilitator: *L. Reid Boyce Nichols, MD*

5:30 **Group C: Conclusion**