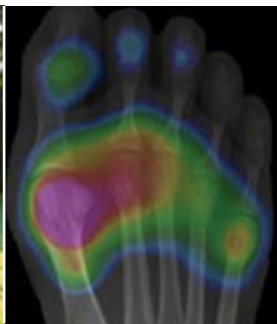


In collaboration with the
European Society of Motion Analysis in Adults and Children (ESMAC)

EPOS BAT Advanced Course

Vienna, Austria: 11-13 May 2022



Motion Analysis for Paediatric Orthopaedic Surgeons

- Understanding of gait and motion biomechanics
- Interpretation of gait reports
- Learn motion analysis methods
- Clinical application of movement analysis
- Dynamic foot deformities assessment
- Sport biomechanics in paediatric athletes

- Theoretical Lectures
- Workshops & Seminars
- Techniques in instrumental outcome evaluation



Welcome



Elke Viehweger



Martin Svehlik



Sebastian Farr

Dear Colleagues, dear Friends,

It is a great pleasure to invite you to the first multidisciplinary EPOS BAT Advanced Course with focus on clinical biomechanics and functional assessment of various conditions in pediatric orthopedics. This is the first course to be held in cooperation between two European societies: EPOS (European Paediatric Orthopaedic Society) and ESMAC (European Society for Movement Analysis in Adults and Children).

With the International Classification of Functioning, Disability and Health (ICF) as a framework for describing functioning and disability we adopted a new approach of treating children not only based on body structure but also at the functional and activity levels. However, functional approach to treatment has not been fully adopted so far.

Technology is changing our lives in many different ways and technological advancements allow us an easy access to information and help us in personal as well as professional lives. However, even if modern technologies allow us to capture movement and function easier than ever before, this is not reflected in our decision making process. Here, pediatric orthopedic surgeons still rely on static radiologic imaging like X-ray, CT or MRI examinations.

To be able to stand for the technical challenges in the 21st century pediatric orthopedic surgeons have to develop a common language with biomedical engineers and human movement scientists. Therefore we prepared a first multidisciplinary course in cooperation with ESMAC having a pediatric orthopaedic surgeon in mind. During the course you learn basics of clinical biomechanics and you get an overview about application, limitation and interpretation of different instrumented methods of functional examination like e.g. gait analysis, dynamic electromyography or pedobarography. The course is practically oriented and we are going to cover a wide variety of pediatric orthopedic topics (neuro orthopedics, foot deformities, spine, diseases of the hip, sport orthopedics etc.) as well to bring your attention to new treatment modalities like gaming therapy and offer you an insight into the nearest future. Moreover, workshops and seminars in small groups are going enhance your experience and allow us to focus on your personal needs and questions.

Our multidisciplinary faculty of pediatric orthopedic surgeons, biomedical engineers and human movement scientists is looking forward to share their knowledge with you. Help us to improve the functional outcomes of your patients and get pediatric orthopedics ready for the 21st century!

Yours,

Elke Viehweger
Co-Chair EPOS

Martin Svehlik
Co-Chair ESMAC

Sebastian Farr
EPOS Education Committee Chair

Programme

Wednesday 11 May

Schedule	Topic	Faculty
09:00	Welcome	E. Viehweger, M. Svehlik
09:15	Basics of walking	
	How we get to walk?	A. Shortland
	Gait phases	M. Svehlik
	Temporal-spatial parameters of gait	A. Kranzl
	Video Assessment Scores: Edinburgh visual score, Rancho Los Amigos...	J. Romkes
10:00	Normal gait biomechanics - Kinematics	M. Sangeux
10:45	Workshops (including coffee break)	
12:15	Essential mechanics	A. Shortland
13:00	Lunch	
14:00	Normal gait biomechanics - Kinetics	M. Sangeux
14:45	Relevant clinical examination and scores (ICF)	E. Viehweger
15:15	Workshops (including coffee break)	
16:45	Interaction between planes	A. Shortland
17:10	Interpretation of gait data	A. Van Campenhout
17:35	Communicating gait data and diagnostic of gait deviation	R. Brunner
18:00	Resume of first day - Experience of workshops	E. Viehweger, M. Svehlik, Faculty
18:15	End of the day	

Programme

Thursday 12 May

Schedule	Topic	Faculty
08:00	Summary day 1	M. Sangeux
08:30	Foot models: Introduction	M. Svehlik
	Foot model (Oxford, Heidelberg, ...)	J. Romkes
	Foot pressure measurement	A. Kranzl
	Clubfoot	C. Radler
09:30	Workshops (including coffee break)	
11:00	EMG - introduction	A. Shortland
	EMG - interpretation and typical patterns	A. Van Campenhout
12:00	Measurements of upper extremity	A. Kranzl
12:15	What to expect from Motion Analysis for upper limb management?	S. Farr
12:30	Lunch	
13:30	Neuroorthopaedics	
	Introduction including long-term follow up	M. Svehlik
	Cerebral palsy - Rotational deformity - Derotational osteotomy	R. Brunner
	Cerebral palsy - Pes equinus and plantarflexion/knee extension couple	E. Viehweger
	Cerebral palsy - Crouch	A. Van Campenhout
	Spina Bifida (MMC)	R. Brunner
	Muscle Dystrophy	J. Romkes
15:00	Workshops (including coffee break)	
16:30	Paediatric Foot	
	Idiopathic Planovalgus	E. Viehweger
	Idiopathic toe-walking	M. Svehlik
	Charcot Marie Tooth + Cavovarus	A. Van Campenhout
	Gait Indexes	M. Sangeux
17:15	New technologies in Motion Analysis (IMU, Markerless, Activity Monitoring, Apps, Gaming...)	M. Sangeux
18:15	Resume of the second day - Experience of workshops	
18:30	End of the day	
19:00	Course Dinner (until 23:00)	

Programme

Friday 13 May

Schedule	Topic	Faculty
08:00	Lower Limb Deformities and Hip	
	Hip pathologies (DDH, Perthes, SCFE...)	M. Svehlik
	Modelling in clinical application	M. Sangeux
	Lower Limb Alignment	A. Kranzl
	Rotational deformities of lower limb	M. Sangeux
09:30	Trunk/Scoliosis assessment	J. Romkes, E. Viehweger
10:00	Workshops (including coffee break)	
11:30	Sport biomechanics + Paediatric Knee	
	Introduction Paediatric Sports Orthopedics	E. Viehweger
	ACL Reconstruction	A. Praetorius
	Running analysis	A. Kranzl
	Back to sport testing	A. Praetorius
12:30	Lunch	
13:30	Workshops (including coffee break)	
15:00	Measuring muscle properties (ultrasound, elastosonography)	A. Shortland
15:15	Instrumented spasticity measurement	A. Van Campenhout
15:30	Conclusion and evaluation of the course	
15:45	End of the course	

Workshops

Day 1 Normal gait - observational gait analysis

Case - Kinematics

Case - Kinetics

Marker placement

Day 2 Case - Foot (Clubfoot/Flatfoot), Pedobarography

Case - EMG - Muscle transfer

Orthotic adjustments based on gait analysis

Surgical Workshop (Crouch Gait and surgical correction/Demo)

Day 3 Inertial sensors, Markerless

Case - Limb Malalignment, Derotation OT

Case - Running and sport analysis - Knee

Spasticity vs Stability/Weakness

EPOS Courses

Future EPOS BAT Trilogy & Advanced Courses

7th EPOS BAT Instructional Course Trilogy

Vienna, Austria | 12-14 October 2022

Part I

EPOS BAT Advanced Course

Vienna, Austria | 25-26 November 2022

Pediatric Hand and Upper Extremity Surgery

EPOS BAT Advanced Course

Vienna, Austria | 26-28 January 2023

Lower Limb Deformity Course

7th EPOS BAT Instructional Course Trilogy

Vienna, Austria | 15-17 March 2023

Part II

EPOS BAT Advanced Course

Vienna, Austria | 11-13 May 2023

Pediatric Spine Surgery

Course fees

Early registration fees**

(until 17 April 2022)

Participants

EUR 462.00

EPOS or ESMAC members*

EUR 374.00

Residents & Non-medical personnel*

EUR 319.00

Dinner

EUR 40.00

Late and on-site registration fees

(as of 18 April until 13 May 2022 incl.)

Participants

EUR 550.00

EPOS or ESMAC members*

EUR 462.00

Residents & Non-medical personnel*

EUR 407.00

* Proof of status mandatory

** The early registration fee is valid only when the payment is made before the early registration deadline

Registration fees include:

- Participation to all course educational activities
- Lunches & coffee breaks
- 10% VAT

Course language

English – no translation

CME Credits



20 European CME credits (ECMEC®s) have been accredited for the course.

Please note that each medical specialist should claim only those credits that he/she actually spent in the educational activity.

Opening hours

Wednesday, 11 May 07:30-18:30

Thursday, 12 May 07:30-18:30

Friday, 13 May 07:30-16:30

Contact

EPOS Central Office

courses@epos.org

Venue

Orthopaedic Hospital Speising

Speisinger Strasse 109

1130 Vienna

Austria

Auditorium: Prof. Spitzzy-Auditorium



Orthopädisches
Spital Speising

Wien

Faculty

Faculty

Reinald Brunner, Switzerland
Sebastian Farr, Austria
Andreas Kranzl, Austria
Arthur Praetorius, Germany
Christoph Radler, Austria
Jacqueline Romkes, Switzerland
Morgan Sangeux, Switzerland/France
Adam Shortland, UK
Martin Svehlik, Austria
Anja Van Campenhout, Belgium
Elke Viehweger, France

Course Programme Committee

Elke Viehweger, *Course Co-Chair EPOS*
Martin Svehlik, *Course Co-Chair ESMAC*

Course Sponsors

