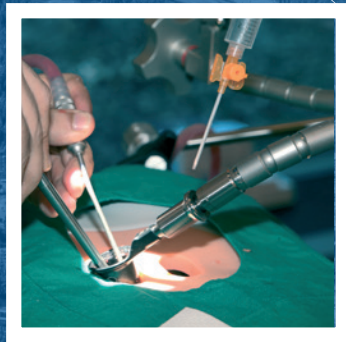




Education

# Preliminary Program

December 11-13, 2017  
Davos, Switzerland



Advancing spine care worldwide  
[www.aospine.org](http://www.aospine.org)

# Program contents

**AOSpine**—the leading global academic community for innovative education and research in spine care, inspiring lifelong learning, and improving patients' lives.

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## Welcome from the course Director

# Your personal AOSpine Davos Courses 2017 experience awaits!

Dear Colleagues,

As the new AOSpine Education Commission Chairperson, it is my great pleasure to invite you to the Davos Courses 2017.

Over the past few months, we have worked hard on improving and reworking the educational format of the courses to best suit the needs of our advanced and Masters level participants. On this front, I am convinced that this year's event will provide a number of exceptional learning and development opportunities.

I am pleased to share that we have not only modified the format of the AOSpine Davos Courses, but that we are also combining theory and practice in a entirely new way. This year, participants have the opportunity to choose one from three educational courses in the morning. In the afternoon, we will again offer the very successful and highly innovative practical MISS training on RealSpine simulators. In addition, we will offer another set of pilot courses on MISS Vertebroplasty, which includes hands-on training in small groups. More information on these sessions can be found in this program.

For participants who are unable to register for the MISS courses with limited seating, a range of seminars, lectures, and practical exercises, as well as last year's highly popular case discussion "The Good—the Bad—the Ugly—a case that taught me a lesson" are offered in the afternoon.

At the Davos Courses, our carefully trained and highly skilled international group of faculty members will not only share their extensive knowledge and experiences with you, but also make sure that you achieve the best learning experience possible for success in your daily practice.

Last but not least, the informal environment at the Davos Courses also provides the perfect setting for networking with spine experts from all over the world.

I am very excited about the Davos Courses 2017 and look forward to welcoming you there in December!

Best wishes,

**Bryan Ashman**  
Chairperson AOSpine Education Commission

# Course format and content

Over three extraordinary days, participants to the Davos Courses 2017 will have multiple opportunities to interact with renowned worldwide faculty, who will be teaching a range of spine topics at the expert level. These specialists will share their knowledge and experiences in an appropriate faculty-to-participant ratio course setting and will focus on the most relevant, evidence-based information and current controversies in spinal surgery.

The AOSpine Davos Courses 2017 are taught on advanced to Masters Level for participants with 3–10 years of practical experience. Participants can create their own customized learning experience by selecting one of three individual courses on Spinal Deformity, Degenerative Diseases, and Spinal Trauma. These highly interactive, fully case-based courses will be concurrently held each morning over 3 days, and include four 1-hour case discussions, presentations, discussions, lectures, and take-home messages. The sessions will be moderated by faculty members who are experts in their fields and have previously attended AOSpine’s extensive faculty development program.

Participants will then design their afternoon program according to their needs by choosing from a range of seminars, lectures, and practical exercises. In addition, two innovative simulation courses on MISS techniques will be offered for a separate fee and registration.

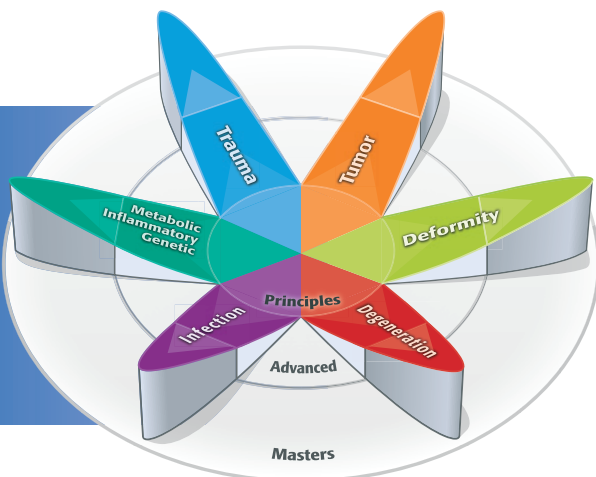
Finally, the popular informal interactive discussion sessions from last year “The Good—the Bad—the Ugly—a case that taught me a lesson,” will round off the day’s activities.

The course content is based on the latest updates and research within the field and aims to enhance participants’ expertise across several pathologies. After attending the course, participants should be able to adapt and apply new concepts and techniques to their clinical environment and to improve patient care and outcomes.

This educational event carries the AOSpine Curriculum logo. This indicates that the program, its content, and objectives have been developed based on AOSpine’s curriculum framework, and that the event meets the implementation criteria as defined by the AOSpine Education Commission (AOSEC).

Davos Courses 2017 are an important element of the AOSpine Curriculum, which features:

- A framework for continuing professional development to meet lifelong learning needs
- Educational content based on competencies and learning outcomes across several areas of pathology



# Schedule at a glance

## Sunday, December 10

Activity	Time
Participants' registration	<b>13:00–17:00</b>
Opening ceremony and welcome reception (AO Foundation)	<b>17:00–19:00</b>

## Monday, December 11 • Tuesday, December 12 • Wednesday, December 13

Activity	Time
AOSpine opening session (Monday only)	<b>08:00–08:30</b>
Spinal Deformity course	<b>08:30–10:30</b>
Degenerative Disease course	<b>08:30–10:30</b>
Spinal Trauma course	<b>08:30–10:30</b>

Coffee break	<b>10:30–11:00</b>
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Spinal Deformity course	<b>11:00–13:00</b>
Degenerative Disease course	<b>11:00–13:00</b>
Spinal Trauma course	<b>11:00–13:00</b>

Lunch break	<b>13:00–14:00</b>
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Participants choose one of the below MISS sessions or one of the alternative seminars, additionally to one of the practical exercises and panel discussions offered:

Surgeon's Cockpit: Training of MISS-Procedures under real spine conditions	<b>13:30–19:00</b>
MISS Instrumentation and Vertebroplasty course	<b>13:30–18:00</b>

or	
Seminars (organized by Central region and Knowledge Forum)	<b>14:00–15:00</b>

Coffee break	<b>15:00–15:30</b>
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Practical exercises on posterior cervical fixation, sacropelvic fixation, thoracolumbar fixation (MISS)	<b>15:30–16:30</b>
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The Good–the Bad–the Ugly panel session—Degenerative (Monday and Tuesday only)	<b>16:45–18:15</b>
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The Good–the Bad–the Ugly panel session—Deformity (Monday and Tuesday only)	<b>16:45–18:15</b>
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The Good–the Bad–the Ugly panel session—Trauma (Monday and Tuesday only)	<b>16:45–18:15</b>
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AO World Night (social event) (Tuesday only)	<b>18:00–20:30</b>
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# Faculty

## Course Director

**Bryan Ashman**

Canberra Hospital, Australia

## Chairpersons

## Educational Advisors

### Spinal Deformity



**Samuel Pantoja**

Hospital Robert del Rio Clinica  
los Condes, Chile



**Emiliano Vialle**

Catholic University of Parana, Brazil

### Degenerative Disease



**Manabu Ito**

National Hospital Organization  
Hokkaido Medical Center,  
Japan



**Bharat Dave**

Stavya Spine Hospital and  
Research Institute,  
Near Nagari Hospital, India

### Spinal Trauma



**Muzahem Taha**

Sardam Hospital, Iraq



**Mohammed El-Sharkawi**

Assiut University Medical School,  
Egypt

### Surgeon's Cockpit: Training of MISS-Procedures under real spine conditions



**Roger Härtl**

Weill Cornell Medical College,  
USA



**Rick Bransford**

Harborview Medical Center,  
University of Washington, USA

### MISS Vertebroplasty



**Paul Heini**

Orthopädie Sonnenhof Bern,  
Switzerland



**Claudius Thomé**

Medical University Innsbruck,  
Austria

# Course Faculty

## Asia Pacific

Masato Tanaka  Japan

## Europe

Richard Assaker  France

Lorin Benneker  Switzerland

Pedro Berjano  Italy

Christof Birkenmaier  Germany

Daniel Chopin  France

Nikolay Gabrovsky  Bulgaria

Harry Gebhard  Switzerland

Nicholas Haden  UK

Sven Hoppe  Switzerland

Gregory Jost  Switzerland

Zdenek Klezl  UK

Andreas Korge  Germany

Khai Lam  UK

Aron Lazáry  Hungary

Hans Jörg Meisel  Germany

Cumhur Oner  Netherlands

Avelino Parajon  Spain

Pierre Roussouly  France

Stefan Schären  Switzerland

Markus Schultheiss  Germany

Alpaslan Senkoylu  Turkey

## Latin America

Mauricio Campos Daziano  Chile

William Teixeira  Brazil

## Middle East

Mohamed Abdel-Wanis  Egypt

Ali Abou-Madawi  Egypt

Atiq Uz Zamman  Pakistan

## North America

Michael Fehlings  Canada

Christoph Hofstetter  USA

# Registration and contacts

## Course registration fee

Nonmember fee	CHF 2,200
AOSpine member fee	CHF 1,892
MISS courses	CHF 500

## Cancellation policy

Until November 1, 2017	Refund of 25% of the registration fee
After November 1, 2017	No refund of the registration fee

## Course registration

Register online: [www.aodavoscourses.org](http://www.aodavoscourses.org)

## Included in course fee

AO Foundation opening ceremony and welcome reception, AOSpine opening session, access to congress center, morning courses, afternoon activities (according to program), course bag, coffee breaks, lunches, bus transportation in Davos, AO World Night, confirmation of attendance (AO certificate), and CME certificate (only upon proof of course participation)

## Course language

English

## Payment options

Bank transfer or credit card (American Express, Visa, Eurocard/Mastercard); invoice upon request.

## Venue

### Congress Center Davos, Talstrasse 49A, CH-7270 Davos Platz, Switzerland

The Congress Center Davos is situated in Davos Platz and every hotel listed on the course website is within 20-minute walking distance or 5 minutes by local bus (free for all visitors to Davos).

## Course organization

AOSpine International

Stettbachstr. 6

8600 Dübendorf, Switzerland

Melanie Schatz

Phone: +41 44 200 24 15

Fax: +41 44 200 24 12

Email: [mschatz@aospine.org](mailto:mschatz@aospine.org)



# Course information

## Accommodation

Please refer to the event page [www.aodavoscourses.org](http://www.aodavoscourses.org) for more information about accommodation and special hotel rates for Davos Courses participants.

## European CME Accreditation

An application has been made to the UEMS-EACCME® for CME accreditation of this event.

## Insurance

The course organization does not take out insurance to cover any individual against accidents, theft, or other risks.

## Mobile phone and camera use

The use of mobile phones and cameras is strictly prohibited in the lecture halls and during practical exercises.

## Social event

AO World Night will take place on Tuesday, December 12, where participants can interact with participants and faculty from other clinical divisions in the Congress Center.

## Travel by car

Davos is located in the heart of Grisons (Graubünden) in the east of Switzerland, about 150 km from Zurich. It takes approximately 2 hours from Zurich. Four-wheel drive and winter tires are strongly recommended at this time of the year. Depending on road conditions, you may need snow chains on the last few kilometers.

## Travel by plane

The nearest airport is Zurich Airport. From there you can travel to Davos either by train or by car.

## Travel by train

A regular train service will conveniently take you from Zurich main station or Zurich Airport to Davos Platz; travel time is approximately 3 hours. Tickets and train schedule available at: [www.sbb.ch](http://www.sbb.ch)



# Venue



## Congress Center Davos, Talstrasse 49A, CH-7270 Davos Platz, Switzerland

The Congress Center Davos is situated in Davos Platz and every hotel listed on the course website is within 20-minute walking distance or 5 minutes by local bus (free for all visitors to Davos).

### AOSpine registration—opening hours

Congress Center, main entrance

Sunday, December 10 13:00–17:00

### General information desk—opening hours

General information/registration for special events

Congress Center, main entrance

Sunday–Wednesday 07:30–19:00

### AOSpine Opening Session

Monday, December 11 08:00–08:30

### AO World Night

Tuesday, December 12 18:00–20:30

### AO World exhibition—opening hours

Sunday, December 10 15:00–19:00

Monday, December 11 09:00–17:00

Tuesday, December 12 09:00–20:30

Wednesday, December 13 09:00–17:00

### Industry exhibition—opening hours

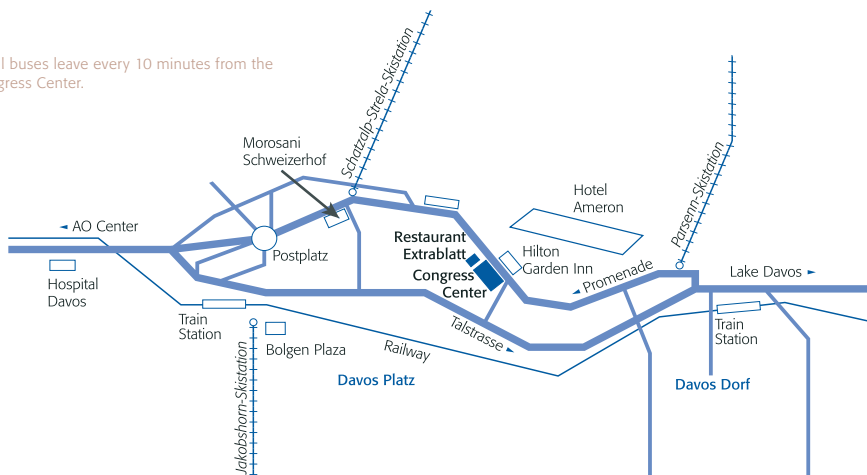
Sunday, December 10 15:00–19:00

Monday, December 11 09:00–17:00

Tuesday, December 12 09:00–18:00

Wednesday, December 13 09:00–17:00

Local buses leave every 10 minutes from the Congress Center.



### Course organization

AOSpine International  
Stettbachstr. 6  
8600 Dübendorf, Switzerland  
Melanie Schatz

**Phone:** +41 44 200 24 15  
**Fax:** +41 44 200 24 12  
**Email:** mschatz@aospine.org

# Congress Center Floorplan

## Foyer C2—House C

### Practical exercises

Monday, Tuesday and Wednesday

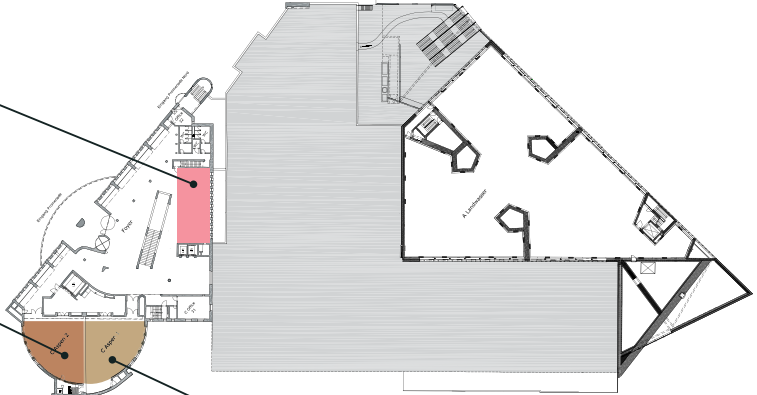
Sacropelvic fixation and Thoracolumbar fixation (MISS)

## Upper level—House C

### Room Aspen 2

Monday, Tuesday and Wednesday

Morning: Trauma course  
Afternoon: Central region seminar



## Upper level—House C

### Room Aspen 1

Monday, Tuesday and Wednesday

Morning: Deformity course  
Afternoon: Knowledge Forum seminar

The MISS Vertebroplasty course takes place in the ARI center on the AO Foundation premises. A shuttle bus will be arranged at lunch time. For the transfer, we meet at the AOSpine registration desk.

## Foyer C1—House C

### Practical exercises

Monday, Tuesday and Wednesday

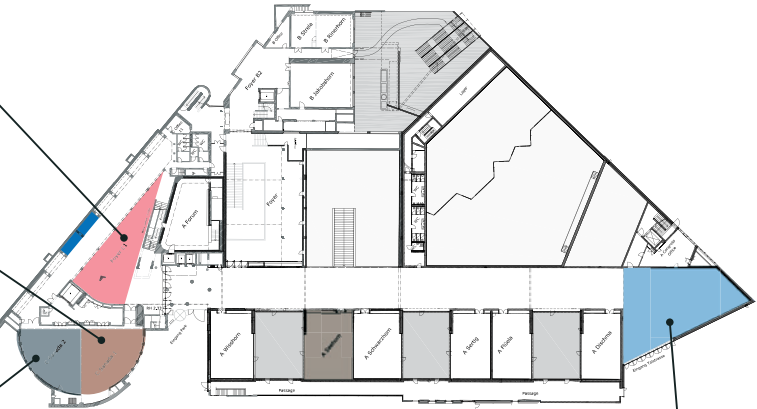
Posterior cervical fixation

## Entry level—House C

### Room Sanada 1

Monday, Tuesday and Wednesday

Morning: Degenerative course  
Afternoon: Surgeon's Cockpit: Training of MISS-Procedures under real spine conditions (theory)



## Entry level—House C

### Room Sanada 2

Monday, Tuesday and Wednesday

Surgeon's Cockpit: Training of MISS-Procedures under real spine conditions (practical exercise)

Registration



**Samuel Pantoja**—Chairperson  
Hospital Robert del Rio Clinica los Condes, Chile

**SOLD OUT**  
register for the  
waiting list!

## Deformity course

### Do you treat spinal deformities? Then these are the key things you need to know...

- How to manage early onset, adolescent, and neuromuscular scoliosis
- How to handle complex cases, including adolescent idiopathic, and neuromuscular scoliosis
- How to manage kyphosis, and spondylolisthesis
- How to manage adult degenerative deformity
- How to handle complications

### Why you should attend this course and how it could benefit your daily practice

The course is designed around real cases from experienced faculty members, with successes and hard lessons learned. The selected cases enable experienced spine surgeons to fine-tune their management skills, and the course discussions involve participants in developing management and problem-solving strategies. A substantial amount of information is shared, including pearls of knowledge and valuable take-home messages, so that surgeons are prepared for what they are likely to meet in their daily practice.

### What the fully “case-based” format will provide you with

“This 3-day course reviews the key issues, controversies, and the latest knowledge on spinal deformities. I am confident that this format, which is designed around small discussion groups led by educators, provides an optimal learning setting and enables everyone to benefit from the group’s cumulative experience.”

### Learning objectives:

- Describe the preoperative evaluation, radiological measurements, and additional investigations required for adequate preparation of a patient candidate for surgical treatment of complex spinal deformity
- Apply evidence-based algorithms for the treatment of spine deformity in representative patient populations
- Focus on the high-risk deformity patient (neuromuscular, elderly, high-grade deformity), and identify particular challenges, surgical strategies, and complication prevention and management

Time	Title	Moderators/Faculty
08:00-08:30	<b>AOSpine opening session by Bryan Ashman (Room Sanada 1)</b>	All
08:30-09:30	<b>Case 1: Degenerative scoliosis + Thoracic kyphosis</b>	E Vialle
08:30-08:40	Case presentation	P Berjano
08:40-09:00	Case discussion in small groups	All faculty
09:00-09:15	Case presentation by table groups	All faculty
09:15-09:25	Case solution	P Berjano
09:25-09:30	Take home message	D Chopin
09:30-10:30	<b>Case 2: Idiopathic scoliosis with level shoulders</b>	P Berjano
09:30-09:40	Case presentation	M Campos Daziano
09:40-10:00	Case discussion in small groups	All faculty
10:00-10:15	Case presentation by table groups	All faculty
10:15-10:25	Case solution	M Campos Daziano
10:25-10:30	Take home message	S Pantoja
10:30-11:00	<b>Coffee break (Foyer A1)</b>	
11:00-12:00	<b>Case 3: Idiopathic Scoliosis: Short fusion complication</b>	M Campos Daziano
11:00-11:10	Case presentation	C Birkenmaier
11:10-11:30	Case discussion in small groups	All faculty
11:30-11:45	Case presentation by table groups	All faculty
11:45-11:55	Case solution	C Birkenmaier
11:55-12:00	Take home message	K Lam
12:00-13:15	<b>Case 4: Congenital Scoliosis: Isolated hemivertebra</b>	K Lam
12:00-12:10	Case presentation	A Parajon
12:10-12:30	Case discussion in small groups	All faculty
12:30-12:45	Case presentation by table groups	All faculty
12:45-12:55	Case solution	A Parajon
12:55-13:00	Take home message	M Campos Daziano
13:15-14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.

Time	Title	Moderators/Faculty
08:30-09:30	<b>Case 1: Early Onset Scoliosis: Severe EOS</b>	D Chopin
08:30-08:40	Case presentation	M Campos Daziano
08:40-09:00	Case discussion in small groups	All faculty
09:00-09:15	Case presentation by table groups	All faculty
09:15-09:25	Case solution	M Campos Daziano
09:25-09:30	Take home message	C Birkenmaier
09:30-10:30	<b>Case 2: Degenerative Scoliosis: Proximal level degeneration + sagittal imbalance</b>	A Parajon
09:30-09:40	Case presentation	D Chopin
09:40-10:00	Case discussion in small groups	All faculty
10:00-10:15	Case presentation by table groups	All faculty
10:15-10:25	Case solution	D Chopin
10:25-10:30	Take home message	A Parajon
10:30-11:00	<b>Coffee break (Foyer A1)</b>	
11:00-12:00	<b>Case 3: Severe kyphoscoliosis</b>	C Birkenmaier
11:00-11:10	Case presentation	S Pantoja
11:10-11:30	Case discussion in small groups	All faculty
11:30-11:45	Case presentation by table groups	All faculty
11:45-11:55	Case solution	S Pantoja
11:55-12:00	Take home message	P Berjano
12:00-13:15	<b>Case 4: Syndromic Scoliosis: NF1</b>	S Pantoja
12:00-12:10	Case presentation	C Birkenmaier
12:10-12:30	Case discussion in small groups	All faculty
12:30-12:45	Case presentation by table groups	All faculty
12:45-12:55	Case solution	C Birkenmaier
12:55-13:00	Take home message	E Vialle
13:15-14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.

Time	Title	Moderators/Faculty
08:30–09:30	<b>Case 1: Spondylolisthesis g IV or V</b>	A Parajon
08:30–08:40	Case presentation	D Chopin
08:40–09:00	Case discussion in small groups	All faculty
09:00–09:15	Case presentation by table groups	All faculty
09:15–09:25	Case solution	D Chopin
09:25–09:30	Take home message	P Berjano
09:30–10:30	<b>Case 2: Neuromuscular with pelvic obliquity</b>	C Birkenmaier
09:30–09:40	Case presentation	S Pantoja
09:40–10:00	Case discussion in small groups	All faculty
10:00–10:15	Case presentation by table groups	All faculty
10:15–10:25	Case solution	S Pantoja
10:25–10:30	Take home message	M Campos Daziano
10:30–11:00	<b>Coffee break (Foyer A1)</b>	
11:00–12:00	<b>Case 3: Severe Scheuermann’s</b>	P Berjano
11:00–11:10	Case presentation	E Vialle
11:10–11:30	Case discussion in small groups	All faculty
11:30–11:45	Case presentation by table groups	All faculty
11:45–11:55	Case solution	E Vialle
11:55–12:00	Take home message	D Chopin
12:00–13:15	<b>Case 4: Degenerative Scoliosis—Lumbar</b>	E Vialle
12:00–12:10	Case presentation	K Lam
12:10–12:30	Case discussion in small groups	All faculty
12:30–12:45	Case presentation by table groups	All faculty
12:45–12:55	Case solution	K Lam
12:55–13:00	Take home message	E Vialle
13:15–14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.



**Manabu Ito**—Chairperson  
National Hospital Organization,  
Hokkaido Medical Center, Japan

**SOLD OUT**  
register for the  
waiting list!

## **Degenerative Disease Course**

### **Do you have patients with cervical and lumbar degenerative conditions? Then these are the key things you need to know...**

- When to manage cervical myelopathy with decompression alone, and when to add a fusion
- Surgical strategies for complex problems in the cervical spine with radiculomyelopathy and malalignment
- How to manage cervical degenerative neuropathies in the presence of deformity
- How to manage lumbar degenerative conditions in the presence of global imbalance
- How to manage lumbar stenosis in the presence of severe osteoporosis
- How to plan salvage strategies for lumbar revision surgery

### **Why you should attend this course and how it could benefit your daily practice**

Nowadays, surgeons are increasingly involved in the treatment of difficult degenerative conditions in both the cervical and lumbar spine. It is tough for any individual surgeon to choose the best treatment by him or herself. At this course, participants learn how to safely approach this difficult pathology for the best clinical results.

### **What the fully “case-based” format will provide you with**

“This 3-day course will cover difficult cervical and lumbar degenerative conditions, and how to select the best treatment option. Through intensive discussions with expert spine surgeons, participants gain understanding of the many different treatment options available, in addition to their benefits and risks, for a number of pathologies. This course is like a short, visiting fellowship program at a world leading spine center, as there will be many opportunities for intensive discussions with experts.”

### **Learning objectives:**

- Operative controversies—identify the indications for posterior decompression only versus posterior decompression with fusion for cervical myelopathy
- Integrate evidence and experts’ opinions to develop consensus for managing complex cervical degenerative disorders
- Formulate treatment strategy for lumbar degenerative disorders with mild to severe global spinal imbalance
- Discuss treatment options for lumbar canal stenosis with osteoporotic vertebral fractures
- Integrate all possible treatment options and determine the optimal salvage surgical strategy for lumbar degenerative diseases



Time	Title	Moderators/Faculty
08:00-08:30	<b>AOSpine opening session by Bryan Ashman (room Sanada 1)</b>	All
08:30-09:30	<b>Case 1: Cervical spondylotic radiculopathy with mild myelopathy</b>	N Gabrovsky
08:30-08:40	Case presentation	W Teixeira
08:40-09:00	Case discussion in small groups	All faculty
09:00-09:15	Case presentation by table groups	All faculty
09:15-09:25	Case solution	W Teixeira
09:25-09:30	Take home message	M Tanaka
09:30-10:30	<b>Case 2: Cervical spondylotic myelopathy with multiple stenotic lesions</b>	S Schaeren
09:30-09:40	Case presentation	M Abdel-Wanis
09:40-10:00	Case discussion in small groups	All faculty
10:00-10:15	Case presentation by table groups	All faculty
10:15-10:25	Case solution	M Abdel-Wanis
10:25-10:30	Take home message	W Teixeira
10:30-11:00	<b>Coffee break (Foyer A1)</b>	
11:00-12:00	<b>Case 3: Cervical spondylotic myelopathy with local kyphosis</b>	B Dave
11:00-11:10	Case presentation	M Abdel-Wanis
11:10-11:30	Case discussion in small groups	All faculty
11:30-11:45	Case presentation by table groups	All faculty
11:45-11:55	Case solution	M Abdel-Wanis
11:55-12:00	Take home message	N Gabrovsky
12:00-13:15	<b>Case 4: Cervical fixed kyphosis needing correction and stabilization</b>	M Tanaka
12:00-12:10	Case presentation	S Schaeren
12:10-12:30	Case discussion in small groups	All faculty
12:30-12:45	Case presentation by table groups	All faculty
12:45-12:55	Case solution	S Schaeren
12:55-13:00	Take home message	M Ito
13:00-14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.

Time	Title	Moderators/Faculty
08:30–09:30	<b>Case 1: L4 degenerative spondylolisthesis—Grade 1 or 2</b>	M Abdel-Wanis
08:30–08:40	Case presentation	N Gabrovsky
08:40–09:00	Case discussion in small groups	All faculty
09:00–09:15	Case presentation by table groups	All faculty
09:15–09:25	Case solution	N Gabrovsky
09:25–09:30	Take home message	W Teixeira
09:30–10:30	<b>Case 2: Severe ithmic spondylolisthesis (more than Grade 3)</b>	S Schaeren
09:30–09:40	Case presentation	M Tanaka
09:40–10:00	Case discussion in small groups	All faculty
10:00–10:15	Case presentation by table groups	All faculty
10:15–10:25	Case solution	M Tanaka
10:25–10:30	Take home message	P Roussouly
10:30–11:00	<b>Coffee break (Foyer A1)</b>	
11:00–12:00	<b>Case 3: Lumbar canal stenosis &amp; foraminal stenosis with osteoporotic vertebral fracture</b>	W Teixeira
11:00–11:10	Case presentation	M Tanaka
11:10–11:30	Case discussion in small groups	All faculty
11:30–11:45	Case presentation by table groups	All faculty
11:45–11:55	Case solution	M Tanaka
11:55–12:00	Take home message	M Abdel-Wanis
12:00–13:15	<b>Case 4: Lumbar degenerative scoliosis needing fixation down to pelvis</b>	M Tanaka
12:00–12:10	Case presentation	P Roussouly
12:10–12:30	Case discussion in small groups	All faculty
12:30–12:45	Case presentation by table groups	All faculty
12:45–12:55	Case solution	P Roussouly
12:55–13:00	Take home message	S Schaeren
13:00–14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.

Time	Title	Moderators/Faculty
08:30–09:30	<b>Case 1: Management of intraoperative vertebral artery injury</b>	B Dave
08:30–08:40	Case presentation	M Ito
08:40–09:00	Case discussion in small groups	All faculty
09:00–09:15	Case presentation by table group	All faculty
09:15–09:25	Case solution	M Ito
09:25–09:30	Take home message	N Gabrovsky
09:30–10:30	<b>Case 2: C5 nerve root palsy after cervical spine correction surgery</b>	M Abdel-Wanis
09:30–09:40	Case presentation	S Schaeren
09:40–10:00	Case discussion in small groups	All faculty
10:00–10:15	Case presentation by table groups	All faculty
10:15–10:25	Case solution	S Schaeren
10:25–10:30	Take home message	M Tanaka
10:30–11:00	<b>Coffee break (Foyer A1)</b>	
11:00–12:00	<b>Case 3: Implant loosening with pseudarthrosis in the lumbar spine</b>	W Teixeira
11:00–11:10	Case presentation	N Gabrovsky
11:10–11:30	Case discussion in small groups	All faculty
11:30–11:45	Case presentation by table groups	All faculty
11:45–11:55	Case solution	N Gabrovsky
11:55–12:00	Take home message	S Schaeren
12:00–13:15	<b>Case 4: Surgical site infection after lumbar spine surgery using spinal instrumentation</b>	P Roussouly
12:00–12:10	Case presentation	W Teixeira
12:10–12:30	Case discussion in small groups	All faculty
12:30–12:45	Case presentation by table groups	All faculty
12:45–12:55	Case solution	W Teixeira
12:55–13:00	Take home message	M Abdel-Wanis
13:00–14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.



**Muzahem Taha**—Chairperson  
Sardam Hospital, Iraq

**SOLD OUT**  
register for the  
waiting list!

## Spinal Trauma course

### Do you treat spinal fractures? Then these are the key things you need to know

- How to assess spinal trauma patients with reference to the new AO Spine Trauma Classification systems
- When to intervene surgically to stabilize the spine and to enhance neurological recovery
- How to identify and manage complications
- How to choose the optimal treatment for your patients based on current evidence

### Why you should attend this course and how it could benefit your daily practice

This course discusses complex trauma cases that surgeons may not be familiar with. Participants learn how to analyze information from each case and how to correlate it with a management plan. Possible complications are highlighted when dealing with complex cases. Participants also have the opportunity to apply evidence-based medicine to treat different spine trauma patterns and to discuss their own points of view in managing cases.

### What the fully “case-based” format will provide you with

“This 3-day course focuses on the complex and complicated traumatic spinal injuries (cervical, thoracolumbar, and sacral), where there is a clear controversy in treatment options. The individual topics are discussed and analyzed in order to attempt to synthesize true evidence-based practice patterns. This educational format provides an excellent platform for participants to exchange opinions and experiences in dealing with complex case scenarios. The pros and cons of each treatment modality are discussed, and the participants are able to formulate strategies to treat cases based on the evidence currently available.”

### Learning objectives:

- Identify and assess traumatic spinal injuries and possible complications
- Analyze case information
- Synthesize all pieces of information and their relationships into a meaningful whole
- Discuss management options for spinal trauma according to AOSpine principles, classification, and injuries severity protocols
- Apply available updated evidence on spinal trauma management
- Recognize possible complications and discuss treatment options

Time	Title	Moderators/Faculty
08:00-08:30	<b>AOSpine opening session by Bryan Ashman (Room Sanada 1)</b>	All
08:30-09:30	<b>Case 1: Combined C1 and C2 fracture</b>	C Oner
08:30-08:40	Case presentation	Z Klezl
08:40-09:00	Case discussion in small groups	All faculty
09:00-09:15	Case presentation by table groups	All faculty
09:15-09:25	Case solution	Z Klezl
09:25-09:30	Take home message	N Haden
09:30-10:30	<b>Case 2: C2 traumatic listhesis (hangman's fracture with displacement)</b>	A Senkoylu
09:30-09:40	Case presentation	Atiq Uz Zaman
09:40-10:00	Case discussion in small groups	All faculty
10:00-10:15	Case presentation by table groups	All faculty
10:15-10:25	Case solution	Atiq Uz Zaman
10:25-10:30	Take home message	A Abou-Madawi
10:30-11:00	<b>Coffee break (Foyer A1)</b>	
11:00-12:00	<b>Case 3: Non-union odontoid fracture</b>	Z Klezl
11:00-11:10	Case presentation	A Abou-Madawi
11:10-11:30	Case discussion in small groups	All faculty
11:30-11:45	Case presentation by table groups	All faculty
11:45-11:55	Case solution	A Abou-Madawi
11:55-12:00	Take home message	C Oner
12:00-13:15	<b>Case 4: Neglected traumatic facet dislocation in sub-axial cervical spine</b>	Atiq Uz Zaman
12:00-12:10	Case presentation	N Haden
12:10-12:30	Case discussion in small groups	All faculty
12:30-12:45	Case presentation by table groups	All faculty
12:45-12:55	Case solution	N Haden
12:55-13:00	Take home message	A Senkoylu
13:00-14:00	<b>Lunch break</b>	

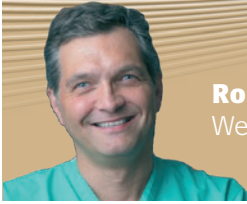
A content evaluation and faculty assessment will take place after each presentation/lecture.

Time	Title	Moderators/Faculty
08:30-09:30	<b>Case 1: Multi-level TL fractures</b>	N Haden
08:30-08:40	Case presentation	C Oner
08:40-09:00	Case discussion in small groups	All faculty
09:00-09:15	Case presentation by table groups	All faculty
09:15-09:25	Case solution	C Oner
09:25-09:30	Take home message	Z Klezl
09:30-10:30	<b>Case 2: Type B3, TL fractures</b>	A Abou-Madawi
09:30-09:40	Case presentation	Z Klezl
09:40-10:00	Case discussion in small groups	All faculty
10:00-10:15	Case presentation by table groups	All faculty
10:15-10:25	Case solution	Z Klezl
10:25-10:30	Take home message	A Senkoylu
10:30-11:00	<b>Coffee break (Foyer A1)</b>	
11:00-12:00	<b>Case 3: Type C, TL fracture</b>	A Senkoylu
11:00-11:10	Case presentation	A Abou-Madawi
11:10-11:30	Case discussion in small groups	All faculty
11:30-11:45	Case presentation by table groups	All faculty
11:45-11:55	Case solution	A Abou-Madawi
11:55-12:00	Take home message	Atiq Uz Zaman
12:00-13:15	<b>Case 4: Post-Traumatic TL kyphosis</b>	Z Klezl
12:00-12:10	Case presentation	A Senkoylu
12:10-12:30	Case discussion in small groups	All faculty
12:30-12:45	Case presentation by table groups	All faculty
12:45-12:55	Case solution	A Senkoylu
12:55-13:00	Take home message	C Oner
13:00-14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.

Time	Title	Moderators/Faculty
08:30–09:30	<b>Case 1: Type A3 sacral # (displaced transverse fracture below S1 joint)</b>	N Haden
08:30–08:40	Case presentation	Atiq Uz Zaman
08:40–09:00	Case discussion in small groups	All faculty
09:00–09:15	Case presentation by table groups	All faculty
09:15–09:25	Case solution	Atiq Uz Zaman
09:25–09:30	Take home message	A Abou-Madawi
09:30–10:30	<b>Case 2: Type B sacral # (posterior pelvic injuries)</b>	Atiq Uz Zaman
09:30–09:40	Case presentation	N Haden
09:40–10:00	Case discussion in small groups	All faculty
10:00–10:15	Case presentation by table groups	All faculty
10:15–10:25	Case solution	N Haden
10:25–10:30	Take home message	Z Klezl
10:30–11:00	<b>Coffee break (Foyer A1)</b>	
11:00–12:00	<b>Case 3: Type C # (spino-pelvic dissociation)</b>	A Abou-Madawi
11:00–11:10	Case presentation	C Oner
11:10–11:30	Case discussion in small groups	All faculty
11:30–11:45	Case presentation by table groups	All faculty
11:45–11:55	Case solution	C Oner
11:55–12:00	Take home message	N Haden
12:00–13:15	<b>Case 4: Sacral insufficiency fracture</b>	C Oner
12:00–12:10	Case presentation	A Senkoylu
12:10–12:30	Case discussion in small groups	All faculty
12:30–12:45	Case presentation by table groups	All faculty
12:45–12:55	Case solution	A Senkoylu
12:55–13:00	Take home message	Atiq Uz Zaman
13:00–14:00	<b>Lunch break</b>	

A content evaluation and faculty assessment will take place after each presentation/lecture.



**Roger Härtl**—Chairperson  
Weill Cornell Medical College, USA

## **Surgeon's Cockpit: Training of MISS-Procedures under real spine conditions**

### **Do you want to learn minimally invasive microscopic lumbar surgery? This course will teach you:**

- To formulate a plan for minimally invasive treatment of lumbar stenosis and discectomy
- Perform safe entry into the lumbar spinal canal to decompress the dura and perform a discectomy using tube retractors and microscopic visualization

### **Why you should attend this course and how it could benefit your daily practice**

This course features a novel spine simulation model that mimics the real-life situation of lumbar surgery. The hands-on session allows a surgical decompression and discectomy experience with the aid of microscopic visualization. World-renowned faculty will guide you through the workshop and provide personal insights into MISS surgery.

### **Learning objectives:**

- Formulate an appropriate operative treatment plan for common degenerative disorders
- Carry out the operative steps in microsurgical decompression of the lumbar spine
- Use an operating microscope to optimize the outcomes of microsurgical and fusion procedures



Time	Title	Moderators/Faculty	Location
13:30–13:45	Welcome to course and introduction to MISS	R Härtl	Sanada 1
13:45–13:50	Optimal integration of the microscope into surgical flow	A Korge	Sanada 1
13:50–13:55	Microsurgical drilling	C Hofstetter	Sanada 1
13:55–14:00	How to use microsurgical tools	A Parajon	Sanada 1
14:00–14:15	<b>Coffee break; delegates split into two groups</b>		Foyer
14:15–16:30	<b>Group A: Hands-on training on microscope</b> How to setup microscope, integration into workflow How to use drill and microsurgical instruments Step-by-step: microsurgical lumbar discectomy Presentation on master's table Hands-on training	R Härtl; C Hofstetter; A Korge	Sanada 2
14:15–16:30	<b>Group B: Case discussions and videos</b> Principles of minimally invasive surgery using microscopes, drill and microsurgical instruments Case examples and videos to illustrate: <ul style="list-style-type: none"> <li>▪ Tissue protection using MIS</li> <li>▪ Over the top decompression</li> <li>▪ Minimize iatrogenic instability</li> </ul>	R Assaker; A Parajon	Sanada 1
16:30–16:35	<b>Break to change groups</b>		
16:35–18:50	<b>Group B: Hands-on training on microscope</b> How to setup microscope, integration into workflow How to use drill and microsurgical instruments Step-by-step: microsurgical lumbar discectomy Presentation on master's table Hands-on training	R Härtl; C Hofstetter; A Korge	Sanada 2
16:35–18:50	<b>Group A: Case discussions and videos</b> Principles of minimally invasive surgery using microscopes, drill and microsurgical instruments Case examples and videos to illustrate: <ul style="list-style-type: none"> <li>▪ Tissue protection using MIS</li> <li>▪ Over the top decompression</li> <li>▪ Minimize iatrogenic instability</li> </ul>	R Assaker; A Parajon	Sanada 1
18:50–19:00	<b>Discussion and summary</b>	R Assaker; R Bransford; R Härtl; C Hofstetter; A Korge; A Parajon	Sanada 1

Time	Title	Moderators/Faculty	Location
13:30–13:40	Welcome to course and introduction to MISS	R Härtl	Sanada 1
13:40–13:50	MIS treatment of lumbar stenosis and spondylolisthesis: over the top MIS decompression with and without MIS TLIF—techniques and tricks “step-by-step”	C Hofstetter	Sanada 1
13:50–14:00	<b>Delegates split into two groups</b>		
14:00–16:15	<b>Group A: Hands-on training on stenosis</b> Presentation on master's table Hands-on training	R Härtl; C Hofstetter; A Parajon	Sanada 2
14:00–16:15	<b>Group B: MIS case discussion and videos</b> Herniated lumbar disc Intraforaminal disc herniation Far lateral disc herniation Synovial cyst Lumbar spinal stenosis with and without Spondylolisthesis: step-by-step video MIS TLIF: step-by-step and video How to optimize fusion rates with MIS TLIF Complication management	R Assaker; A Korge	Sanada 1
16:15–16:35	<b>Coffee break and group change</b>		
16:35–18:50	<b>Group B: Hands-on training on stenosis</b> Presentation on master's table Hands-on training	R Härtl; C Hofstetter; A Parajon	Sanada 2
16:35–18:50	<b>Group A: MIS case discussion and videos</b> Herniated lumbar disc Intraforaminal disc herniation Far lateral disc herniation Synovial cyst Lumbar spinal stenosis with and without Spondylolisthesis: step-by-step video MIS TLIF: step-by-step and video How to optimize fusion rates with MIS TLIF Complication management	R Assaker; A Korge	Sanada 1
18:50–19:00	<b>Discussion and summary</b>	R Assaker; R Bransford; R Härtl; C Hofstetter; A Korge; A Parajon	

Time	Title	Moderators/Faculty	Location
13:30–13:40	Welcome to course and introduction to MISS	R Härtl	Sanada 1
13:40–13:50	MIS treatment of lumbar stenosis and spondylolisthesis: over the top MIS decompression with and without MIS TLIF—techniques and tricks “step-by-step”	C Hofstetter	Sanada 1
13:50–14:00	<b>Delegates split into two groups</b>		
14:00–16:15	<b>Group A: Hands-on training on stenosis</b> Presentation on master's table Hands-on training	R Härtl; A Korge; A Parajon	Sanada 2
14:00–16:15	<b>Group B: MIS case discussion and videos</b> Herniated lumbar disc Intraforaminal disc herniation Far lateral disc herniation Synovial cyst Lumbar spinal stenosis with and without Spondylolisthesis: step-by-step video MIS TLIF: step-by-step and video How to optimize fusion rates with MIS TLIF Complication management	R Assaker; C Hofstetter	Sanada 1
16:15–16:35	<b>Coffee break and group change</b>		
16:35–18:50	<b>Group B: Hands-on training on stenosis</b> Presentation on master's table Hands-on training	R Härtl; A Korge; A Parajon	Sanada 2
16:35–18:50	<b>Group A: MIS case discussion and videos</b> Herniated lumbar disc Intraforaminal disc herniation Far lateral disc herniation Synovial cyst Lumbar spinal stenosis with and without Spondylolisthesis: step-by-step video MIS TLIF: step-by-step and video How to optimize fusion rates with MIS TLIF Complication management	R Assaker; C Hofstetter	Sanada 1
18:50–19:00	<b>Discussion and summary</b>	R Assaker; R Bransford; R Härtl; C Hofstetter; A Korge; A Parajon;	



**Paul Heini**—Chairperson  
Orthopädie Sonnenhof, Switzerland

## **MISS Instrumentation and Vertebroplasty Course**

### **Do you want to learn percutaneous vertebroplasty and pedicle screw insertion? This course will teach you...**

- The appropriate use of percutaneous screw techniques
- The rationale for vertebral cement augmentation

### **Why you should attend this course and how it could benefit your daily practice**

This course uses a novel and innovative sawbones model that provides a good simulation of the in-vivo technique, with good radiological fidelity and the ability to monitor the injection of bone cement. The practical session concludes with an opportunity to practice newer navigation systems. All of these competencies are transferable to one's daily practice in a wide range of clinical pathologies.

### **Learning objectives:**

- Safely use ionizing radiation and minimize exposure risks to the patient and the surgeon
- Obtain appropriate radiological images and views to show the necessary anatomy for percutaneous cannulation of pedicle screws
- Explain the techniques and strategies for insertion of K-wires for percutaneous screw placement
- Perform the key steps in the techniques of vertebroplasty and vertebral augmentation
- Explain the use of novel instrumentation techniques
- Explain the use of image guidance and navigation systems

Time	Title	Moderators/Faculty
13:30–14:00	Transfer from congress center to ARI	C Birkenmaier; H Gebhard; P Heini; C Thomé
14:00–14:05	Welcome and introduction	P Heini
14:05–14:15	The anatomical basics for a safe approach to the vertebral body	P Heini
14:15–14:25	Introduction to image guidance—safety hazard	C Birkenmaier
14:25–14:35	Introduction to navigation	H Gebhard
14:35–15:00	<b>Coffee break and split into two groups</b>	
15:00–16:00	<b>Group A: Hands-on Training</b> Revise safe ionising radiation practice Cannulation of L1—insertion of trocar Vertebroplasty Placement of guidewires T12 & L2 Screws insertion Application of rods Distraction	C Birkenmaier; P Heini; C Thomé
15:00–16:00	<b>Group B: Case discussion</b>	H Gebhard
16:00–16:30	<b>Break to switch group</b>	
16:30–17:30	<b>Group B: Hands-on Training</b> Revise safe ionising radiation practice Cannulation of L1—insertion of trocar Vertebroplasty Placement of guidewires T12 & L2 Screws insertion Application of rods Distraction	C Birkenmaier; P Heini; C Thomé
16:30–17:30	<b>Group A: Case discussion</b>	H Gebhard
17:30–18:00	<b>Closure / summary</b>	C Birkenmaier; H Gebhard; P Heini; C Thomé
18:00–18:30	Transfer back to congress center	C Birkenmaier H Gebhard; P Heini; C Thomé

Time	Title	Moderators/Faculty
13:30–14:00	Transfer from congress center to ARI	C Birkenmaier; H Gebhard; P Heini; C Thomé
14:00–14:05	Welcome and introduction	P Heini
14:05–14:15	The anatomical basics for a safe approach to the vertebral body	P Heini
14:15–14:25	Introduction to image guidance—safety hazard	C Birkenmaier
14:25–14:35	Introduction to navigation	H Gebhard
14:35–15:00	<b>Coffee break and split into two groups</b>	
15:00–16:00	<b>Group A: Hands-on Training</b> Revise safe ionising radiation practice Cannulation of L1—insertion of trocar Vertebroplasty Placement of guidewires T12 & L2 Screws insertion Application of rods Distraction	C Birkenmaier; H Gebhard; P Heini
15:00–16:00	<b>Group B: Case discussion</b>	C Thomé
16:00–16:30	<b>Break to switch group</b>	
16:30–17:30	<b>Group B: Hands-on Training</b> Revise safe ionising radiation practice Cannulation of L1—insertion of trocar Vertebroplasty Placement of guidewires T12 & L2 Screws insertion Application of rods Distraction	C Birkenmaier; H Gebhard; P Heini
16:30–17:30	<b>Group A: Case discussion</b>	C Thomé
17:30–18:00	<b>Closure / summary</b>	C Birkenmaier; H Gebhard; P Heini; C Thomé
18:00–18:30	Transfer back to congress center	C Birkenmaier; H Gebhard; P Heini; C Thomé

Time	Title	Moderators/Faculty
13:30–14:00	Transfer from congress center to ARI	C Birkenmaier; H Gebhard; P Heini; C Thomé
14:00–14:05	Welcome and introduction	P Heini
14:05–14:15	The anatomical basics for a safe approach to the vertebral body	P Heini
14:15–14:25	Introduction to image guidance—safety hazard	C Birkenmaier
14:25–14:35	Introduction to navigation	H Gebhard
14:35–15:00	<b>Coffee break and split into two groups</b>	
15:00–16:00	<b>Group A: Hands-on Training</b> Revise safe ionising radiation practice Cannulation of L1—insertion of trocar Vertebroplasty Placement of guidewires T12 & L2 Screws insertion Application of rods Distraction	H Gebhard; P Heini; C Thomé
15:00–16:00	<b>Group B: Case discussion</b>	C Birkenmaier
16:00–16:30	<b>Break to switch group</b>	
16:30–17:30	<b>Group B: Hands-on Training</b> Revise safe ionising radiation practice Cannulation of L1—insertion of trocar Vertebroplasty Placement of guidewires T12 & L2 Screws insertion Application of rods Distraction	H Gebhard; P Heini; C Thomé
16:30–17:30	<b>Group A: Case discussion</b>	C Birkenmaier
17:30–18:00	<b>Closure / summary</b>	C Birkenmaier; H Gebhard; P Heini; C Thomé
18:00–18:30	Transfer back to congress center	C Birkenmaier; H Gebhard; P Heini; C Thomé

# Knowledge Forum seminars

**Location: Room Aspen 1**

**Monday, December 11, 2017**

**14:00–15:00 Knowledge Forum Tumors—Case-based interactive discussion**  
 Chairperson: **A Lazary**

14:00–14:15	Lung cancer metastasis—the smart approach	A Lazary, W Teixeira
14:15–14:30	Spinal cord compression due to RCC met— separation for radiosurgery	A Lazary, W Teixeira
14:30–14:45	Sacral chordoma—what’s on the horizon?	A Lazary, W Teixeira
14:45–15:00	Discussion	A Lazary, W Teixeira

**Tuesday, December 12, 2017**

**14:00–15:00 Knowledge Forum Biologics—Use of Osteoinductive Stimulation in Trauma and Degenerative Spine Surgery—rhBMP2 and beyond**  
 Chairperson: **HJ Meisel**

14:00–14:15	Dose dependency of rhBMP2—Preclinical and clinical outcomes	HJ Meisel
14:15–14:30	The biology—bone graft vs. substitutes for spinal fusion	HJ Meisel
14:30–14:45	In which kind of clinical cases do you use osteoinductive stimulation? (round table discussion)	K Lam, HJ Meisel, C Oner
14:45–15:00	Case presentation	J Meisel

**Wednesday, December 13, 2017**

**14:00–15:00 Knowledge Forum Spinal Cord Injuries**  
 Chairperson: **M Fehlings**

14:00–14:15	Introduction	M Fehlings
14:15–14:30	Cervical spinal cord with bilateral facet dislocation	E Vialle
14:30–14:45	Questions focusing on classification of the fracture, neurological classification and management (timing of surgery and type of surgical intervention; should an MRI be done? Role of methylprednisolone)	M Fehlings
14:45–15:00	AOSpine cervical fracture classification	C Oner
	Review of AOSpine SCI guidelines and update on the RISCIS study	M Fehlings
	Synthesis of the case	E Vialle
	Discussion	M Fehlings, C Oner, E Vialle



# Central region seminars

**Location: Room Aspen 2**

**Monday, December 11, 2017**

## Complications in adult deformity correction

Chairperson: **L Benneker**

14:00–14:15	Avoidance of general/cardiovascular/infectious complications	G Jost
14:15–14:30	Sagittal correction of the L-Spine: from front or back?	P Berjano
14:30–14:45	SI Joint pain after adult deformity correction	S Hoppe
14:45–15:00	Discussion	L Benneker, P Berjano, S Hoppe, G Jost

**Tuesday, December 12, 2017**

## Disc herniations and stenosis in the L-spine: when and how to intervene

Chairperson: **G Jost**

14:00–14:15	Timing of surgery for disc herniations with motor deficit	L Benneker
14:15–14:30	Prevention of reherniation after surgery for disc herniation	L Benneker
14:30–14:45	Short segment surgery for stenosis within a deformity	S Schaeren
14:45–15:00	Discussion	L Benneker, G Jost, S Schaeren

**Wednesday, December 13, 2017**

## Injuries of the cranio-cervical junction

Chairperson: **S Hoppe**

14:00–14:15	Cranio-cervical injuries in patients with ankylosing spondylitis	M Schultheiss
14:15–14:30	Need for navigation in upper C-spine injuries?	G Jost
14:30–14:45	Value of MRI in upper C-spine injuries	S Schaeren
14:45–15:00	Discussion	S Hoppe, G Jost, S Schaeren

# Practical Exercises

**Monday, December 11, 2017**

## Posterior cervical fixation

Time: **15:30–16:30**

Location: **Foyer C1 (ground floor)**

Chairperson: **M Abdel-Wanis**

Table instructors: **S Schären, M Tanaka**

## Sacropelvic fixation

Time: **15:30–16:30**

Location: **Foyer C2 (1st floor)**

Chairperson: **P Berjano**

Table instructors: **M Campos Daziano, S Pantoja**

## Thoracolumbar fixation (MISS)

Time: **15:30–16:30**

Location: **Foyer C2 (1st floor)**

Chairperson: **Z Klezl**

Table instructors: **A Abou-Madawi, N Haden**

**Tuesday, December 12, 2017**

## Posterior cervical fixation

Time: **15:30–16:30**

Location: **Foyer C1 (ground floor)**

Chairperson: **M Ito**

Table instructors: **N Gabrovsky, P Roussouly**

## Sacropelvic fixation

Time: **15:30–16:30**

Location: **Foyer C2 (1st floor)**

Chairperson: **E Vialle**

Table instructors: **P Berjano, K Lam**

## Thoracolumbar fixation (MISS)

Time: **15:30–16:30**

Location: **Foyer C2 (1st floor)**

Chairperson: **C Oner**

Table instructors: **M El-Sharkawi, A Senkoylu**

**Wednesday, December 13, 2017**

## Posterior cervical fixation

Time: **15:30–16:30**

Location: **Foyer C1 (ground floor)**

Chairperson: **M Tanaka**

Table instructors: **B Dave, W Teixeira**

## Sacropelvic fixation

Time: **15:30–16:30**

Location: **Foyer C2 (1st floor)**

Chairperson: **K Lam**

Table instructors: **M Campos Daziano, D Chopin**

## Thoracolumbar fixation (MISS)

Time: **15:30–16:30**

Location: **Foyer C2 (1st floor)**

Chairperson: **A Uz Zamman**

Table instructors: **N Haden, M Taha**

# The Good—the Bad—the Ugly sessions

Monday, December 11, 2017

Expert group

## Deformity

Time: 16:45–18:15

Location: **Swiss Mountain Hotel  
Ameron**

Room: **Campanello**



**Pedro  
Berjano**



**Mauricio  
Campos Daziano**



**Samuel  
Pantoja**

## Degenerative

Time: 16:45–18:15

Location: **Swiss Mountain Hotel  
Ameron**

Room: **Symondpark I**



**Mohamed  
Abdel-Wanis**



**Stefan  
Schären**



**Masato  
Tanaka**

## Trauma

Time: 16:45–18:15

Location: **Swiss Mountain Hotel  
Ameron**

Room: **Symondpark II**



**Ali Abou-  
Madawi**



**Zdenek  
Klezl**



**Atiq Uz  
Zamman**

Tuesday, December 12, 2017

Expert group

## Deformity

Time: 16:45–18:15

Location: **Swiss Mountain Hotel  
Ameron**

Room: **Campanello**



**Khai  
Lam**



**Daniel  
Chopin**



**Emiliano  
Vialle**

## Degenerative

Time: 16:45–18:15

Location: **Swiss Mountain Hotel  
Ameron**

Room: **Symondpark I**



**Nikolay  
Gabrovsky**



**Manabu  
Ito**



**Pierre  
Roussouly**

## Trauma

Time: 16:45–18:15

Location: **Swiss Mountain Hotel  
Ameron**

Room: **Symondpark II**



**Mohammad  
El-Sharkawi**



**Cumhur  
Oner**



**Alpaslan  
Senkoylu**

# AO Foundation—Principles for AO Educational Events

## 1. Academic independence

Development of all curricula, design of scientific event programs, and selection of faculty are the sole responsibilities of volunteer surgeons from the AO network. All education is planned based on needs assessment data, designed, and evaluated using concepts and evidence from the most current medical education research, and involving the expertise of the AO Education Institute ([www.aofoundation.org](http://www.aofoundation.org)).

Industry participation is not allowed during the entire curriculum development and planning process to ensure academic independence and to keep content free from bias.

## 2. Compliance to accreditation and industry codes

All planning, organization, and execution of educational activities follow existing codes for accreditation of high-quality education:

- Accreditation Criteria of the Accreditation Council for Continuing Medical Education, USA ([www.accme.org](http://www.accme.org))
- ACCME Standards for Commercial Support: Standards to Ensure Independence in CME Activities ([www.accme.org](http://www.accme.org))
- Criteria for Accreditation of Live Educational Events of the European Accreditation Council for Continuing Medical Education ([www.uems.eu](http://www.uems.eu))

Events that receive direct or indirect unrestricted educational grants or in-kind support from industry also follow the ethical codes of the medical industry, such as:

- Eucomed Guidelines on Interactions with Healthcare Professionals ([www.medtecheurope.org](http://www.medtecheurope.org))
- AdvaMed Code of Ethics on Interactions with Health Care Professionals ([www.advamed.org](http://www.advamed.org))
- Mecomed Guidelines on Interactions with Healthcare Professionals ([www.mecomed.org](http://www.mecomed.org))

## 3. Branding and advertising

No industry logos or advertising (with the exception of the AO Foundation and AO Clinical Division) are permitted in the area where educational activities take place.

Sponsors providing financial or in-kind support are allowed to have a promotional booth or run activities outside the educational area with approval from the event chairperson.

## 4. Use of technologies and products in simulations

If case simulations are chosen as an educational method to educate skills, we only use technology approved by the AOTK System (AOTK)—a large independent group of volunteer surgeons developing and peer-reviewing new technology (more information about AOTK, its development and approval process can be found on the AO Foundation website: [www.aofoundation.org](http://www.aofoundation.org)).

## 5. Personnel

Industry staff is not allowed to interfere with the educational content or engage in educational activities during the event.

# Business center

There are business center facilities in the Congress Center which are accessible to course participants.

## Services

- Internet and email access
- Document printing

## Location

There are two business centers at the Congress Center, one at the entrance at the AO World and one outside the Faculty Lounge.

## Opening hours

30 minutes before the first course of the day starts until 30 minutes after the last course ends.

## Disclaimer

The use of your own computer in the business center network is not secure. We strongly recommend that you take appropriate actions to protect your computer against unauthorized use or theft (eg, Firewall, VPN connection, Virus scanner, etc). The AO Foundation cannot be held responsible for any data loss or theft.

## For further information or support please contact:

The AO Foundation

Phone: +41 81 414 28 70

Email: [it.support@aofoundation.org](mailto:it.support@aofoundation.org)

## Wireless network

A special wireless network is accessible and free for course participants.

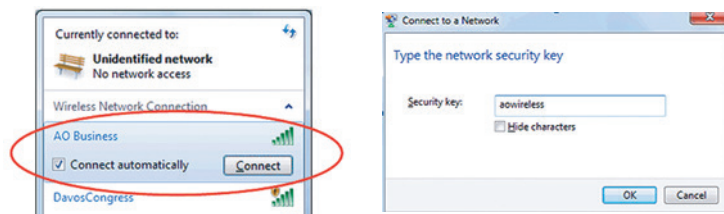
## Services

- Internet and email access

## Locations

- At public places in the Congress Center

## How to connect



- Open the wireless network connection window
- Choose the "AOBusiness" network as shown in the picture below and click on the "connect" button
- Network key: **aowireless**
- Press the "OK" button

# ARI (AO Research Institute Davos)

## Mission

Excellence in applied Preclinical Research and Development within trauma and disorders of the musculoskeletal system and translation of this knowledge to achieve more effective patient care worldwide.

## Goals

- Contribute high quality applied **Preclinical Research and Development** focused towards clinical applications/solutions.
- Investigate and **improve the performance** of surgical procedures, devices and substances.
- Foster a **close relationship** with the AO medical community, academic societies, and universities.
- Provide research environment/support/training for AO clinicians.

At the AO World booths, meet with our team including our ARI Medical Research Fellows, establish contacts, freely discuss your clinical problems, ideas, and learn about the latest results from the AO Research Institute Davos (ARI). **Insight into the AO Center** will show our infrastructure under one roof and enable you to meet some of our research team.

## Areas:

### Collaborative Research Programs

- Annulus Fibrosus Rupture
- Acute Cartilage Injury

### Cranio-maxillofacial

- Imaging and planning of surgery, computer aided preoperative planning
- Medication-Related Osteonecrosis of the Jaw
- Bone Regeneration

### Spine

- Degeneration and regeneration of the intervertebral disc
- Fracture fixation in osteoporotic bone

### Trauma

- Bone infection, including the development and testing of active anti-infective interventions
- Fracture fixation in osteoporotic bone including intra-operative assessment of bone quality, augmentation techniques and prophylaxis

- Evaluation of the cortical and trabecular bone remodeling (with special regards to the porosity) in the proximal humerus and its impact on the fracture zones
- Development of smart surgical instruments and implant concepts for optimized bone healing
- Patient outcomes and biomarkers

## Veterinary Medicine

- Improving osteosynthesis for small and large animals

## Multidisciplinary

- Analysis of implant-specific functional anchorage with CT-technology
- Ex vivo testing using advanced biomechanical models
- In vivo studies using established or newly developed preclinical models
- Gene transfer—non-viral and viral
- Implant design using the Finite Element Methods
- Implant positioning assistance, C-arm guided implant placement
- Telemetric monitoring of bone healing
- In vivo and in vitro quantification of bone turnover and scaffold degradation
- Longitudinal analysis within in-vivo studies using CT-technology
- Medical image processing and analysis
- Polymers to deliver cells and biological factors, create potential space for tissue development and guide the process of tissue regeneration
- Prototype development and production
- Stem cell therapies for the treatment of bone, intervertebral disc and cartilage defects
- Bioreactor culture systems and mechanobiology
- Surface modification of PEEK to improve tissue integration
- Thermoresponsive gel for delivery of antibiotics, stem cells, growth factors, transfected cells etc.
- 3R—refinement of preclinical studies
- Development, standardization, optimization and improvement of preclinical models and methods

For the 2016 AO Research Institute Davos activity report and recent publications go to:

**[www.aofoundation.org/ari/publications](http://www.aofoundation.org/ari/publications)**

# AO World

## AO World

Visit the AO World in the main foyer, home to the AO Clinical Divisions, AO Institutes and the AO Foundation Initiatives. Here you can explore by visiting all the booths in the AO World.

## Industry exhibitors

Visit the exhibitions of our major industry partners DePuy Synthes, Siemens, and Carl Zeiss AG, who are also contributing in-kind support (material and logistics), and the other exhibitors: Augmedics, Ethicon, ICUC, Invibio, SYNBONE, Touch Surgery, and Victorinox.

## Media exhibitors

Lehmanns Media can be found at the entrance to the Congress Center.



# Sponsors and exhibitors

We thank our major industry partners DePuy Synthes and Siemens for contributing in-kind support (material and logistics) without which this event would not be possible. A special thanks to DePuy Synthes and Siemens for providing an unrestricted educational grant for this event.

Furthermore we thank Carl Zeiss Mediatec AG for their in-kind support during the Surgeon's Cockpit course.



We also extend our thanks to the following co-sponsors (educational grants, in-kind support):

Credit Suisse



Synbone



Ethicon

