AO Trauma Course—Pelvic and Acetabular Fracture Management

December 1–6, 2019
Davos, Switzerland

Lecture room:
Pischa/Parsenn

EVENT PROGRAM
The AO's flagship educational event, the AO Davos Courses offer surgeons at all stages of their career outstanding educational and networking opportunities. Experience this pioneering spirit of peer-to-peer collaboration and learn skills that will help advance your career.

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| 5 | Welcome |

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| 7 | Chairpersons and faculty |

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| 10 | Tuesday, December 3, 2019 |

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<td>Wireless network</td>
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| 18 | Event information |

| 19 | Principles of AO educational events |

| 20 | AO Research Institute Davos (ARI) |

| 22 | Upcoming AO Davos Courses 2020 |
Mission
The AO’s mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

Purpose statement
AO Trauma is committed to improve patient care outcomes through the highest quality education. We strive to combine the right knowledge and surgical skills that empower the orthopedic and trauma surgeons to put theory into practice and to improve fracture management for the benefit of the patient.

The AO principles of fracture management

1. Fracture reduction and fixation to restore anatomical relationships.
2. Fracture fixation providing absolute or relative stability, as required by the “personality” of the fracture, the patient, and the injury.
3. Preservation of the blood supply to soft-tissues and bone by gentle reduction techniques and careful handling.
4. Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.
Welcome
Dear AO Trauma course participant,

Welcome to AO Trauma’s first-class schedule of activities at the AO Davos Courses 2019. We provide a wide range of relevant courses designed to meet your specific professional needs—and we are confident that you will find your course and the networking experiences professionally rewarding.

With a global reputation for innovation, leadership, and excellence in continuing medical education (CME), AO Trauma and the AO Education Institute are transforming education by expanding the educational activities available to you. CME is not just about face-to-face courses. Our educational opportunities address the specific clinical problems that you encounter daily. Visit our website (www.aotrauma.org) to discover the latest educational activities.

At the AO Davos Courses 2019, AO Trauma offers you a chance to actively engage in your course as well as opportunities to:

- Interact with over 300 international faculty
- Expand your professional network by establishing contacts and new relationships with colleagues, including faculty and participants from over 80 countries
- Meet with staff and surgeons from the AO’s clinical divisions, institutes, and initiatives.
- Visit the AO experience or take a tour of our headquarters, the AO center, to gain insight into the AO’s ongoing activities and resources available to support you in your clinical work
- Experience the AO spirit of collegiality and camaraderie that is felt by participants and faculty alike

Your current level of knowledge, attitudes, and skills will be challenged throughout the week. At the same time, our best-in-class curriculum and faculty will provide you with a memorable learning experience that will remain with you for a lifetime.

Your experiences with us over the next few days will result in the realization of new and meaningful knowledge, skills, and understanding that we hope will translate into improved patient care.

If you enjoy your experience this week and want to stay in touch, we invite you to become a member of AO Trauma. Doctors of medicine and osteopathy who have completed AO Trauma basic principles course are eligible for membership; contact us to learn more.

Yours sincerely,

Wa’el Taha
Chairperson AO Trauma Education Commission

Kodi Kojima
Chairperson AO Trauma International Board
Course description
Surgeons participating in this course will learn how to address acute management of pelvic ring and acetabular injuries; how to evaluate, diagnose, classify, and determine appropriate timing and indications for interventions. They will be able to apply knowledge and skills in selection and performance of the surgical approach for specific injuries and definitive reconstruction of complex fractures.

A faculty of world experts will cover key concepts of pelvic and acetabular diagnosis and treatment. Simulation exercises, including dissection of anatomical specimens, will expose participants to the essentials of the surgical approach and related anatomy. Artificial bone model practical exercises will give participants experience in the application of different reduction and fixation techniques. All concepts will be expanded and reinforced in interactive group discussions, emphasizing the diagnosis, evaluation, indications, treatment modalities, decision-making processes, and complications.

Goal of the course
The AO Trauma Course—Pelvic and Acetabular Fracture Management offers experienced participants an understanding of the initial evaluation, stabilization, and definitive treatment of patients with fractures and dislocations of the pelvic ring, acetabulum, or both. The AO Principles, the latest techniques, and up-to-date evidence will be incorporated into the course, guiding participants in developing the knowledge and skills needed to treat these injuries and improve patient outcomes.

Target participants
Participants must be fully trained orthopedic and/or trauma surgeons with subspecialty interest in the treatment of pelvic and acetabular fractures. They must have already completed the AO Trauma Courses—Principles in Operative Fracture Management and Advances in Operative Fracture Management.

Learning objectives
Upon completion of this course, participants will be able to:
- Define key elements in the initial evaluation of pelvic and acetabular fractures
- Classify pelvic and acetabular injuries and recognize the implications for treatment
- Apply emergency treatment and stabilization techniques for pelvic ring injuries and initial management of acetabular fractures
- Demonstrate appropriate decision-making and operative planning strategies
- Define indications and apply surgical approaches to the pelvis and acetabulum, identifying the important anatomical structures
- Describe indications and perform techniques of reduction and fixation
- Discuss early and late results and complications of pelvic and acetabular surgery
- Identify issues related to challenging fractures with compromised bone quality or late reconstructions
International faculty

Mahmoud Abdel Karim Mohamed
Cairo University Hospital
Cairo, Egypt

Abdullah Alzahrani
King Abdulaziz Medical City
Riyadh, Saudi Arabia

Javier Del Rio
Mutual de Seguridad
Santiago, Chile

Eric Johnson
UCLA Medical Center
Los Angeles, USA

Keith Mayo
Wyss Hip and Pelvis Center
Seattle, USA

Christopher Morrey
Cairns Orthopaedic Clinic
Cairns, Australia

Adrien RoaZoppi
Policlinica Metropolitana
Caracas, Venezuela

Carlos Sancineto
Hospital Italiano de Buenos Aires
Buenos Aires, Argentina

Takeshi Sawaguchi
Toyama Municipal Hospital
Toyama, Japan

Ramesh Sen
Fortis hospital Mohali Punjab
Mohali, India

David Stephen
Sunnybrook HSC
Toronto, Canada

Michael Stover
Northwestern Medical Faculty Foundation
Chicago, USA

Regional faculty

Jan Lindahl
Helsinki University Hospital
Helsinki, Finland

Michel Oransky
Humanitas Gavazzeni
Bergamo, Italy

Pol Rommens
Johannes Gutenberg University
Mainz, Germany

National faculty

Emanuel Gautier
Hospital Cantonal Fribourg
Fribourg, Switzerland

Marius Keel
Clinic Hirslanden
Zurich, Switzerland

Robin Peter
Clinique Générale-Beaulieu
Geneva, Switzerland
### Sunday
December 1, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:00</td>
<td>Opening of the congress center</td>
</tr>
<tr>
<td>15:00–17:00</td>
<td>Registration of participants</td>
</tr>
<tr>
<td>17:00–19:00</td>
<td>Opening Ceremony and Founders’ Reception</td>
</tr>
</tbody>
</table>

### Monday
December 2, 2019

**Location: Pischa/Parsenn (lectures) Ducan/Altein (practicals)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00–08:30</td>
<td>Welcome, introduction, and course logistics</td>
</tr>
</tbody>
</table>

**Module 1**

**Moderator: J Barla**

**Pelvis I—patient assessment and acute treatment**

Upon completion of this module, participants will be able to:
- Explain the pelvic anatomy
- Describe imaging protocols and radiographic diagnosis
- Explain biomechanics, injury mechanism, and classification
- Apply emergency treatment and stabilization
- Recognize concomitant injuries

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08:30–08:45</td>
<td>Radiographic (x-ray and computed tomography) assessment and classification</td>
</tr>
<tr>
<td>08:45–09:05</td>
<td>Acute management of pelvic ring disruption—hemorrhage control, role of angiography, and packing</td>
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<tr>
<td>09:05–10:15</td>
<td>Expert panel—interactive discussion with cases</td>
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<tr>
<td>10:15–10:35</td>
<td>Coffee break</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------</td>
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</tbody>
</table>
| 10:35–12:00| **Practical demonstration**  
Demonstration of binder application—stabilization of the pelvic ring with a pelvic C-clamp  
**Practical exercise 1**  
• Stabilization of the pelvic ring with an external fixator  
• Iliac crest and supraacetabular insertion of Schanz screws | J Barla, R Peter |
| 12:00–13:30| Lunch break                                                             |                            |
| 13:30–14:30| **Discussion groups 1**  
Acute management, assessment, and classification of pelvic ring injuries  
Group 1 – Landwasser 2  
Group 2 – Landwasser 4  
Group 3 – Landwasser 6  
Group 4 – Landwasser 8  
Group 5 – Landwasser 10  
Group 6 - Pischa/Parsenn | A Alzahrani  
R Sen, A RoaZoppi  
S Sims, J Lindahl  
T Sawaguchi, J Del Rio  
J Barla  
M Oransky, E Gautier |
| 14:30–14:45| Decision making—surgical indications                                    | K Mayo                     |
| 14:45–15:00| Anterior lesions (symphysis, pubic body, and rami)                       | D Stephen                  |
| 15:00–15:15| Indications and technique of iliosacral screws                           | C Morrey                   |
| 15:15–15:30| Posterior lesions—anterior or posterior approaches for local plates      | S Sims                     |
| 15:30–15:45| Posterior lesions—indications and techniques of lumbopelvic fixation     | J Lindahl                  |
| 15:45–16:00| Summary, evaluation, and take-home messages                              | M Abdel Karim              |
| 16:00–16:20| Coffee break                                                             |                            |
| 16:20–18:00| **Practical exercise 2**  
• Sacroiliac joint dislocation—anterior plating  
• Reduction and plating of symphysis disruption  
• Sacral fractures—iliosacral screw and tension band plate | D Stephen, A RoaZoppi |
| 18:00–18:15| Summary, evaluation, and take-home messages                              |                            |
## Module 3

**Moderator: D Stephen**

**Pelvis III—special clinical situations, outcomes, and salvage**

Upon completion of this module, participants will be able to:
- Classify pelvic ring injuries in the elderly
- Assess clinical outcomes and manage complications
- Discuss concepts of salvage procedures

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:50–10:05</td>
<td>Classification of insufficiency pelvic fractures</td>
<td>P Rommens</td>
</tr>
<tr>
<td>10:20–10:35</td>
<td>Salvage, late reconstruction of nonunion and malunion</td>
<td>C Sancineto</td>
</tr>
<tr>
<td>10:35–10:50</td>
<td>Long-term results of pelvic fractures</td>
<td>T Sawaguchi</td>
</tr>
<tr>
<td>10:50–11:00</td>
<td>Discussion</td>
<td>P Rommens, M Stover, C Sancineto, T Sawaguchi</td>
</tr>
<tr>
<td>11:05–12:00</td>
<td>Practical exercise 3: Sacral fractures—bilateral lumbopelvic fixation with transiliac screw</td>
<td>J Lindahl</td>
</tr>
</tbody>
</table>

### Module 4

**Moderator: A Alzahrani**

**Acetabular injury assessment**

Upon completion of this module, participants will be able to:
- Define the radiographic anatomy of the innominate bone
- Interpret imaging accurately to achieve a precise diagnosis

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30–14:00</td>
<td>Radiographic assessment/interpretation including classification</td>
<td>E Gautier</td>
</tr>
<tr>
<td>14:00–14:15</td>
<td>3-dimensional planning in acetabular surgery</td>
<td>J Lindahl</td>
</tr>
<tr>
<td>14:15–14:45</td>
<td>Coffee break</td>
<td></td>
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<tr>
<td>17:45–18:00</td>
<td>Summary, evaluation, and take-home messages</td>
<td></td>
</tr>
</tbody>
</table>
## Module 5
### Moderator: C Morrey

**Acetabular decision-making and treatment**

Upon completion of this module, participants will be able to:
- Define operative indications
- Explain selection and sequence of approach
- Outline reduction techniques and tools, and where and how to apply

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<tr>
<th>Time</th>
<th>Session Description</th>
<th>Speaker</th>
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<tr>
<td>08:00–08:10</td>
<td>Decision-making—operative versus nonoperative treatment</td>
<td>R Sen</td>
</tr>
<tr>
<td>08:10–08:25</td>
<td>Decision-making—choice of approach overview</td>
<td>P Rommens</td>
</tr>
<tr>
<td>08:25–08:40</td>
<td>Kocher-Langenbeck approach—indications and techniques of reduction and fixation</td>
<td>T Sawaguchi</td>
</tr>
<tr>
<td>08:40–08:55</td>
<td>Gibson approach with trochanteric flip osteotomy and dislocation—indications and technique</td>
<td>E Gautier</td>
</tr>
<tr>
<td>08:55–09:10</td>
<td>Ilioinguinal approach—indications and techniques of reduction and fixation</td>
<td>E Johnson</td>
</tr>
<tr>
<td>09:10–09:25</td>
<td>Anterior intrapelvic (modified Stoppa) approach—indications and techniques of reduction and fixation</td>
<td>A RoaZoppi</td>
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<tr>
<td>09:25–09:40</td>
<td>Pararectus approach—indications, technique, and differences to the modified Stoppa</td>
<td>M Keel</td>
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<tr>
<td>09:40–10:00</td>
<td>Coffee break</td>
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<tr>
<td>10:00–12:00</td>
<td><strong>Practical exercise 4</strong></td>
<td>S Sims, R Sen</td>
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<tr>
<td></td>
<td>- Internal fixation of transverse plus posterior wall fractures</td>
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<tr>
<td></td>
<td>- Internal fixation of T-shaped fracture</td>
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<tr>
<td>12:00–13:30</td>
<td>Lunch break</td>
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<tr>
<td>13:30–13:45</td>
<td>Indications for extended iliofemoral approach</td>
<td>M Oransky</td>
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<tr>
<td>13:45–14:00</td>
<td>Indications for combined anterior and posterior approaches</td>
<td>R Sims</td>
</tr>
<tr>
<td>14:00–14:15</td>
<td>Acetabular fractures with concomitant pelvic ring injuries—planning of approaches and sequences for reduction and fixation</td>
<td>A RoaZoppi</td>
</tr>
<tr>
<td>14:15–14:20</td>
<td>Location change to practical exercise room</td>
<td></td>
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<td>14:20–15:35</td>
<td><strong>Practical exercise 5</strong></td>
<td>K Mayo</td>
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<tr>
<td></td>
<td>- Both-column fracture</td>
<td></td>
</tr>
<tr>
<td>15:35–15:55</td>
<td>Coffee break</td>
<td></td>
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<tr>
<td>15:55–17:25</td>
<td><strong>Discussion groups 4</strong></td>
<td></td>
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<tr>
<td></td>
<td>Definitive treatment of acetabular fractures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group 1 – Landwasser 2</td>
<td>J Barla, T Sawaguchi</td>
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<tr>
<td></td>
<td>Group 2 – Landwasser 4</td>
<td>A Alzahrani, C Morrey</td>
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<td></td>
<td>Group 3 – Landwasser 6</td>
<td>C Sancineto, J Lindahl</td>
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<td></td>
<td>Group 4 – Landwasser 8</td>
<td>D Stephen, M Abdel Karim</td>
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<tr>
<td></td>
<td>Group 5 – Landwasser 10</td>
<td>P Rommens, J Del Rio</td>
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<tr>
<td></td>
<td>Group 6 – Picha/Parsenn</td>
<td>E Johnson, S Sims</td>
</tr>
<tr>
<td>17:25–17:35</td>
<td>Summary, evaluation, and take-home messages</td>
<td></td>
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# Thursday

## December 5, 2019

**Location:** Hospital

**GREEN TEAM**

<table>
<thead>
<tr>
<th>Module 6 Modulators: J Barla, K Mayo</th>
<th>Surgical approaches</th>
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<tbody>
<tr>
<td><strong>07:10–07:25</strong> Transfer to hospital</td>
<td>Meeting point 07:10 at Congress Center main entrance</td>
</tr>
<tr>
<td><strong>07:25–07:30</strong> Preparation for the anatomical specimen laboratory</td>
<td></td>
</tr>
<tr>
<td><strong>07:30–10:00</strong> Anatomical specimen laboratory 1</td>
<td>J Barla, K Mayo</td>
</tr>
<tr>
<td><strong>07:30–07:35</strong> Introduction to anatomical specimen laboratory</td>
<td>C Morrey</td>
</tr>
<tr>
<td><strong>07:35–08:40</strong> Kocher-Langenbeck approach</td>
<td>R Sen</td>
</tr>
<tr>
<td><strong>08:40–09:30</strong> Posterior approach to the pelvic ring (including Wiltse)</td>
<td>K Mayo</td>
</tr>
<tr>
<td><strong>09:30–10:00</strong> Master table demonstration—trochanteric osteotomy and surgical hip dislocation</td>
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<tr>
<td><strong>10:00–10:30</strong> Coffee break</td>
<td></td>
</tr>
<tr>
<td><strong>10:30–13:00</strong> Anatomical specimen laboratory 2</td>
<td>E Johnson</td>
</tr>
<tr>
<td><strong>10:30–12:15</strong> Ilioinguinal approach (supine)</td>
<td>J Lindahl</td>
</tr>
<tr>
<td><strong>12:15–13:00</strong> Anterior approach to the sacroiliac joint</td>
<td>M Keel</td>
</tr>
<tr>
<td><strong>12:15–13:00</strong> Middle window</td>
<td></td>
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<tr>
<td><strong>12:15–13:00</strong> Pfannenstiel component (modified Stoppa)</td>
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<tr>
<td><strong>12:15–13:00</strong> Pararectus (supine; same side)</td>
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</tr>
<tr>
<td><strong>13:00–14:00</strong> Lunch break</td>
<td></td>
</tr>
<tr>
<td><strong>14:00–15:30</strong> Discussion groups 5 Complex cases of pelvis and complications</td>
<td>K Mayo, C Morrey, J Del Rio</td>
</tr>
<tr>
<td>Group 1 – U313</td>
<td>E Johnson</td>
</tr>
<tr>
<td>Group 2 – U314/315</td>
<td>J Lindahl</td>
</tr>
<tr>
<td>Group 3 – U317</td>
<td>A Alzahrani</td>
</tr>
<tr>
<td><strong>15:30–15:45</strong> Coffee break</td>
<td></td>
</tr>
<tr>
<td><strong>15:45–17:15</strong> Discussion groups 6 Complex cases of acetabulum and complications</td>
<td>R Sen, C Sancineto, A RoaZoppi</td>
</tr>
<tr>
<td>Group 1 – U313</td>
<td>K Mayo, C Morrey, J Del Rio</td>
</tr>
<tr>
<td>Group 2 – U314/315</td>
<td>E Johnson, J Lindahl, A Alzahrani</td>
</tr>
<tr>
<td>Group 3 – U317</td>
<td>A RoaZoppi</td>
</tr>
<tr>
<td><strong>16:45–17:15</strong> Coffee break</td>
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</table>
## Module 6
**Moderator:** S Sims

### Surgical approaches

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Parallel Discussions</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:45-09:15</td>
<td>Transfer to hospital&lt;br&gt;Meeting point 08:45 at Congress Center main entrance</td>
<td></td>
</tr>
<tr>
<td>09:15-10:45</td>
<td><strong>Discussion groups 7&lt;br&gt;Complex cases of pelvis and complications</strong>&lt;br&gt;Group 4 – U313&lt;br&gt;Group 5 – U314/315&lt;br&gt;Group 6 – U317</td>
<td>E Gautier, M Stover&lt;br&gt;R Peter, D Stephen, M Abdel Karim&lt;br&gt;P Rommens, M Oransky</td>
</tr>
<tr>
<td>10:45-11:00</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11:00-12:30</td>
<td><strong>Discussion groups 8&lt;br&gt;Complex cases of acetabulum and complications</strong>&lt;br&gt;Group 4 – U313&lt;br&gt;Group 5 – U314/315&lt;br&gt;Group 6 – U317</td>
<td>R Peter, D Stephen, M Abdel Karim&lt;br&gt;P Rommens, M Oransky&lt;br&gt;E Gautier, M Stover</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>14:00-14:15</td>
<td>Preparation for the anatomical specimen laboratory</td>
<td></td>
</tr>
<tr>
<td>14:15-16:15</td>
<td><strong>Anatomical specimen laboratory 1</strong>&lt;br&gt;Introduction to anatomical specimen laboratory</td>
<td>S Sims&lt;br&gt;M Oransky&lt;br&gt;D Stephen&lt;br&gt;E Gautier, M Stover</td>
</tr>
<tr>
<td>14:20-15:25</td>
<td>• Kocher-Langenbeck approach</td>
<td></td>
</tr>
<tr>
<td>15:25-16:15</td>
<td>• Posterior approach to the pelvic ring (including Wiltse)</td>
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<tr>
<td>16:15-16:45</td>
<td>• Master table demonstration—trochanteric osteotomy and surgical hip dislocation</td>
<td>S Sims&lt;br&gt;M Stover&lt;br&gt;R Peter&lt;br&gt;M Keel</td>
</tr>
<tr>
<td>16:45-17:15</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>17:15-19:45</td>
<td><strong>Anatomical specimen laboratory 2</strong>&lt;br&gt;Ilioinguinal approach (supine)&lt;br&gt;Anterior approach to the sacroiliac joint&lt;br&gt;Middle window&lt;br&gt;Pfannenstiel component (modified Stoppa)&lt;br&gt;Pararectus (supine; opposite side)</td>
<td>M Stover&lt;br&gt;M Stover&lt;br&gt;R Peter&lt;br&gt;M Keel&lt;br&gt;M Oransky&lt;br&gt;D Stephen&lt;br&gt;E Gautier, M Stover</td>
</tr>
<tr>
<td>19:00-19:45</td>
<td></td>
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</tr>
</tbody>
</table>
Location: Piska/Parsenn (lectures) Ducan/Altein (practicals)

Module 7
Moderator: M Abdel Karim

Acetabulum additional topics

Upon completion of this module, participants will be able to:

- Define expected outcomes and complications management
- Adjust reduction and internal fixation techniques for lower density bones
- Recognize the difficulty of late-salvage techniques
- Appreciate the hip surgery continuum

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00–08:15</td>
<td>Femoral head fractures</td>
<td>R Sen</td>
</tr>
<tr>
<td>08:15–08:30</td>
<td>Reconstruction in geriatric acetabulum</td>
<td>J Barla</td>
</tr>
<tr>
<td>08:30–08:40</td>
<td>Primary hip arthroplasty with or without reconstruction in geriatric acetabulum</td>
<td>M Stover</td>
</tr>
<tr>
<td>08:40–08:50</td>
<td>Periprosthetic acetabular fractures—treatment concepts</td>
<td>M Abdel Karim</td>
</tr>
<tr>
<td>08:50–09:05</td>
<td>Late reconstruction</td>
<td>M Oranksy</td>
</tr>
<tr>
<td>09:05–09:25</td>
<td>Management of early and late failures of reconstruction</td>
<td>C Sancineto</td>
</tr>
<tr>
<td>09:25–09:40</td>
<td>Clinical outcomes of acetabular injuries</td>
<td>A Alzahrani</td>
</tr>
<tr>
<td>09:40–10:10</td>
<td>Strategies for career learning in pelvis and acetabular surgery</td>
<td>E Johnson</td>
</tr>
</tbody>
</table>

Module 8
Moderator: J Barla

Closing session

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:10–10:40</td>
<td>Price winning quiz</td>
<td>J Barla, S Sims</td>
</tr>
<tr>
<td>10:40–11:00</td>
<td>Summary, evaluation, and take-home messages</td>
<td>J Barla, S Sims</td>
</tr>
<tr>
<td>11:00–11:30</td>
<td>Sandwich break</td>
<td></td>
</tr>
</tbody>
</table>
Event organization

AO Trauma Education
Erna Perren
Clavadelstrasse 8
7270 Davos Platz
Switzerland
Phone +41 81 414 27 21
Fax +41 81 414 22 84
E-mail eperren@aotrauma.org

AO funding sources
Unrestricted educational grants from different sources are collected and pooled together centrally by the AO. All events are planned and scheduled by local and regional AO surgeon groups based on local needs assessments. We rely on industrial commercial partners for in-kind support to run simulations and/or skills training if educationally necessary.

Event venue and opening times

Congress Centre Davos
Talstrasse 49A
7270 Davos, Switzerland
Phone +41 81 414 62 00
Fax +41 81 414 62 29

General information
Sunday 12:00–19:00
Monday through Thursday 07:30–19:00
Friday 07:30–16:00

The AO experience
Sunday 14:00–17:00
Monday through Thursday 09:00–18:30 (Tuesday –20:30)
Friday 09:00–16:00

Industry exhibition
Sunday 14:00–17:00
Monday through Thursday 09:00–18:30
Friday 09:00–16:00

AO Trauma Course—Pelvic and Acetabular Fracture Management 15
Exhibitions

The AO experience
The AO experience offers you the chance to view the latest publications in the AO library, see what benefits you are eligible for in the community and membership area and take a selfie with your new colleagues. Explore AO teaching and learning resources and find out about our new digital gateway myAO at the digital zone’s interactive stations. Visit the innovation in research and development zone, to take part in hands on demos featuring some of our newest innovations, and join the AO Technical Commission’s popular Meet the Experts sessions. Don’t forget to purchase any mementos at our store in the main entrance. Experience the AO spirit, walk the timeline of AO history, and mingle with other participants. AO staff will be on-hand to help you get the most out of this experience.

Exhibition partners
Visit the exhibitions of our trusted partner DePuy Synthes, Siemens, and other exhibitors: SPI, Invibio, Precision OS, Synoste, Rimasyx, AO Alliance.

Media exhibitors
Lehamnns Media is in the welcome area.

Sponsors

We thank our trusted partner DePuy Synthes, and Siemens, for contributing in-kind support (materials 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.

We also extend our thanks to the following co-sponsors (educational grants, in-kind support):
The business center facilities in the Congress Centre Davos are accessible to everyone.

**Services**
- Internet and e-mail access
- Printer access
- www.aodavoscourses.org
  AO Davos Courses website offering course-related information

**Opening hours**
The business center is open 30 minutes before the first course of the day starts until 30 minutes after the end of the last course of the day.

**Disclaimer**
The use of your own computer in the business center network is inherently not secure. We strongly recommend that you take appropriate actions to protect your computer against unauthorized use or theft (e.g., firewall, virtual private network [VPN] connection, virus scanner).

AO cannot be held responsible for any data loss or theft.

For further information or support, please contact:
Phone +41 81 414 28 70
E-mail it.helpdesk@aofoundation.org

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**Wireless network**

**How to connect to the AO wireless local area network (LAN)**

1. Open the Wireless Network Connection window
2. Choose the **AO Business** network as shown in the image below and click on the **Connect** button
3. Our **AO Business** wireless network requires a wireless protected access (WPA) network key:
   Network key: **aowireless**
4. Then click on the **OK** button
Event information

Event fee
AO Trauma Course—Pelvic and Acetabular Fracture Management: CHF 4,350
The event fee covers the conference bag, documentation, coffee breaks, lunches, participation in AO Davos Courses night, and the course certificate.

European CME Accreditation
For this course the UEMS-EACCME® in Brussels have granted 31 European CME credits (ECMEC).

Swiss CME Accreditation
Additionally, an application has been made to the following Swiss societies:
Schweizerische Gesellschaft für Chirurgie (SGC/SSC)
Schweizerische Gesellschaft für Orthopädie und Traumatologie (SGO/SSO).

Conflicts of Interest (COI)
All disclosure information can be viewed at the event webpage: http://AOTRAUMA10009589.aotrauma.org

Course certificate
Course certificates will be available at the end of the event at the general information desk.

Evaluation guidelines
All AO Trauma events apply the same evaluation process, which includes pre- and post-event online evaluation and on-site written questionnaires. These evaluation tools help ensure that AO Trauma continues to meet your training needs.

Use of social media
During the AO Davos Courses 2019, you can post about your experience using the #AODavosCourses2019 hashtag. While we encourage you to share your AO Davos Courses 2019 experience with your online network, it is expressly forbidden to share any images or recordings from inside the course.

Intellectual property
Event materials, presentations, and case studies are the intellectual property of the event faculty. All rights are reserved. For more information, please see: www.aofoundation.org/legal.

Recording, photographing, or copying lectures, practical exercises, case discussions, or any event materials is strictly forbidden. Participants violating intellectual property will be dismissed.

The AO Foundation reserves the right to film, photograph, and audio record during its events. Participants must understand that in this context they may appear in these recorded materials. The AO Foundation assumes participants agree that these recorded materials may be used for the AO’s marketing and other purposes, and that they may be made available to the public.

Security
Security checks will be conducted at the building entrance. Wearing a name tag is compulsory at all times in the congress center and hospital.

Insurance
The event organization does not take out insurance to cover any individual against accident, theft, or other risks.

Use of mobile phones
Use of mobile phones is not permitted in the lecture halls or in other rooms during educational activities. Please be considerate of others by turning off your mobile phone.

Picture gallery
Check out aodavoscourses.org for a daily selection of pictures from the AO Davos Courses 2019, the best from last year’s courses, and a selection of photographs from the first-ever AO Davos Courses.

Dress code
Warm clothes and suitable shoes are recommended.
Principles of 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 AO network surgeons. All education is planned based on needs assessment data, designed and evaluated using concepts and evidence from the most current medical education research, and reflects the expertise of the AO Education Institute (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, US (www.accme.org)
- ACCME Standards for Commercial Support: Standards to Ensure Independence in CME Activities (www.accme.org)
- Criteria for Accreditation of Live Educational Events of the European Accreditation Council for Continuing Medical Education (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)
- AdvaMed Code of Ethics on Interactions with Health Care Professionals (advamed.org)
- Mecomed Guidelines on Interactions with Healthcare Professionals (www.mecomed.org)

3. Branding and advertising
No industry logos or advertising (apart from the AO Foundation and its clinical divisions) 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
In case simulations are chosen as an educational method to educate skills, we only use technology approved by the AO Technical Commission—a large independent group of volunteer surgeons developing and peer reviewing new technology.

More information about the AO Technical Commission and its development and approval processes can be found on the AO’s website: www.aofoundation.org.

5. Personnel
Industry staff members are not permitted to interfere with the educational content or engage in educational activities during the event.
AO Research Institute Davos (ARI)

Mission
The AO mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

AO Research Institute Davos (ARI)
In its work to further the AO mission, ARI’s purpose is to advance patient care through innovative orthopedic research and development.

Orthopedics concerns musculoskeletal, spine and craniomaxillofacial trauma, degenerative musculoskeletal diseases, infections, and congenital disorders.

Goals
• Contribute high-quality, applied preclinical research and development focused toward 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.

Meet with our team including our ARI Medical Research Fellows, establish contacts, freely discuss your clinical problems and ideas, and learn about the latest results from ARI.

Collaborative research programs
• Annulus fibrosus rupture
• Acute cartilage injury
• Osteochondral defect

Craniomaxillofacial
• Imaging and planning of surgery, computer aided preoperative planning
• Medication-related osteonecrosis of the jaw
• Bone regeneration and 3D printing

Spine
• Degeneration and regeneration of the intervertebral disc
• Biomarkers and patient outcomes

Trauma
• Bone infection, including the development and testing of active anti-infective interventions
• Sensing implants for objective monitoring of fracture healing
• Development of smart surgical tools
• New implant concepts for optimized bone healing
• Prediction of subject-specific risk of proximal humeral fixation failure via computational tools
• Development of generic Asian pelvic bone model
• Patient outcomes and biomarkers

Veterinary medicine
• Improving osteosynthesis for small and large animals

Multidisciplinary
• 3R principles: refinement of preclinical studies
• Bioreactor culture systems and mechanobiology
• Development, standardization, optimization, and improvement of preclinical models and methods
• Ex vivo testing using advanced biomechanical models
• Gene transfer: non-viral and viral
• Implant design using the finite element methods
• Implant positioning assistance, C-arm guided implant placement
• In-vivo and in-vitro quantification of bone turnover and scaffold degradation
• Medical additive manufacturing and biofabrication
• Medical computed tomography (CT) 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

For the AO Research Institute Davos Activity Report 2018 and recent publications, go to www.aofoundation.org/ari/publications.
Save the date: Madrid, April 2020
Sharing a world of knowledge

AO Trauma provides an outstanding selection of AO Trauma courses designed to meet your specific professional needs. We are confident that you will find the course offerings as well as the networking opportunity professionally rewarding.

Your current level of knowledge, attitudes, and skills will be challenged throughout the week. The best-in-class curriculum and faculty will provide you with a memorable learning experience that will remain with you for a lifetime.

All courses include one day of anatomical specimen lab.

AO Trauma Masters Course—Shoulder Trauma
Chairpersons:
Stefaan Nijs (BE), Ashraf Moharram (EG)
AOTRAUMA10010974.aotrauma.org

AO Trauma Masters Course—Fractures around the Elbow
Chairpersons:
Gregory Della Rocca (US), Pedro Labronici (BR)
AOTRAUMA10010997.aotrauma.org

AO Trauma Masters Course—Hip Fractures
Chairpersons:
Michael Baumgaertner (US), Rodrigo Pesantez-Hoyos (CO)
AOTRAUMA10010971.aotrauma.org

AO Trauma Masters Course—Knee Injuries and Deformities
Chairpersons:
Hans Philipp Lobenhoffer (DE), Steffen Schröter (DE)
AOTRAUMA10010972.aotrauma.org

AO Trauma Masters Course—Foot and Ankle
Chairpersons:
Mandeep Dhillon (IN), Stefan Rammelt (DE)
AOTRAUMA10010973.aotrauma.org

For more information visit: www.aotrauma.org
Upcoming AO Davos Courses 2020

AO Davos Courses—November 29–December 4, 2020

• AO Trauma Course—Basic Principles of Fracture Management
• AO Trauma Course—Advances Principles of Fracture Management
• AO Trauma Course—Advanced Principles of Fracture Management for Swiss residents
• AO Trauma Masters Course—Current Concepts
• AO Trauma Course—Pelvic and Acetabular Fracture Management
• AO Trauma Masters Kurs (German speaking)
• AO Trauma Course—Managing Pediatric Musculoskeletal Injuries
• AO Trauma and AO Recon Course—Comprehensive Periprosthetic Fracture Management of the Hip and Knee

AO Davos Courses—December 6–9, 2020

• AO Trauma Course—Basic Principles of Fracture Management for Swiss Surgeons
• AO Spine Courses
• AO CMF Courses
• AO VET Masters Course—Small Animal
• AO VET Masters Course—Large Animal
• AO Recon Course—Principles in Shoulder Arthroplasty
• AO Recon Course—Complex Total Hip and Knee Arthroplasty
• AO PEER Course—Level 1 Principles of Clinical Research
• AO PEER Course—Level 2 Grant writing
• AO PEER Course—Level 2 GCP and study management
• AO PEER Course—Level 2 Publication writing course

This course list is subject to further change.
The final list of AO Davos Courses and worldwide courses will be available on www.aotrauma.org in January 2020.
Expanding precision medicine in image-guided surgery

siemens-healthineers.com/surgery

Expanding precision medicine through a complete imaging portfolio for orthopedic trauma, spine and CMF surgery ranging from mobile C-arms and robotic angiography systems to computed tomography and magnetic resonance imaging, as well as multi-modality suites.

Engineered to be truly patient-oriented, ARTIS pheno® is a unique floor-mounted robotic C-arm system for individualized preprocedural planning, intraoperative guidance, and immediate checkup in 2D and 3D directly in the hybrid operating room – regardless of patient condition or procedure complexity.

To provide 3D capabilities that can be seamlessly integrated into clinical routine, we developed Cios Spin®: a mobile 2D and 3D C-arm for intraoperative quality assurance. Delivering new insights and perspectives, Cios Spin gives you more certainty in surgical routine – and full control over your procedures.
Discover the advantages of joining the leading global trauma and orthopedic community, providing its members with education, research, and networking opportunities worldwide. Join us and share your passion.