

Under the patronage of **H. H. Sheikh Hamdan Bin Rashid Al Maktoum**,
Deputy Ruler of Dubai, Minister of Finance and President of the Dubai Health Authority



Final Program

Your guide to the schedule
and to the venue



Global Spine Congress and
World Forum for Spine Research
Dubai, United Arab Emirates | April 13–16, 2016

www.gsc2016.org

www.wfsr2016.org

Membership

Join the leading global community of spine surgeons

AOSpine community

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

Your advantages

1. Benefit from lifelong learning opportunities.
2. Advance with our latest research discoveries.
3. Privileged networking opportunities within the largest global spine surgeon community.

Education and Career Development



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– Webcasts



Educational Events
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Discounts on
Global Spine
Congress



Fellowships
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Global Spine Journal incorporating
Evidence-Based Spine-Care Journal



Books and e-books
Discounts

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OVID online journals
– Spine
and many other top rated
spine journals



European Spine Journal
Journal of Neurosurgery: Spine

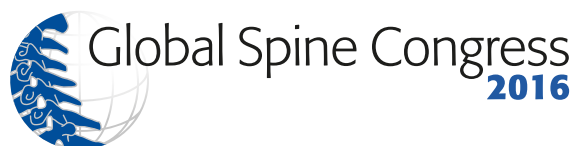


**-50% discount
for students and residents**

For further information on the latest benefits available to you, please visit www.aospine.org/membership
membership@aospine.org

We look forward to welcoming you to the AOSpine global community!

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Welcome



On behalf of AOSpine, we are very pleased to be able to personally welcome you to the 5th Annual **Global Spine Congress (GSC)**, which will, for the first time run concurrently with the 5th **World Forum for Spine Research (WFSR)** in Dubai, United Arab Emirates, from April 13-16, 2016.

Both congress programs are overflowing with hundreds of experts, showcasing the very latest approaches and techniques to spinal care. The 2016 edition in Dubai will continue to offer a unique global platform with a stimulating and focused environment for vibrant discussions, knowledge sharing, thought leadership and new friendships. Clinicians, scientists, researchers, and engineers will benefit from the lectures as well as podium and poster presentations. Renowned international faculty will lecture on the rapid advance in basic, translational, and clinical research in this area.

The Global Spine Congress is the AOSpine International Annual Meeting, which includes an audience of global participants, spine surgeons and researchers, and original research presentations. The Scientific Program will include AOSpine Symposia, Spine Society Symposia, and pre-reviewed abstracts scheduled to be presented as oral, e-poster and poster presentations.

Furthermore, the World Forum for Spine Research has established itself at the forefront of international spine care research through its commitment towards supporting researchers in developing and promoting scientific innovation, collaboration and contribution in fields related to Intervertebral Disc Degeneration. The event is based upon the unique concept of a multidisciplinary meeting this year, offering a clear focus on Spine and Intervertebral Disc Biologics.

It is important to note, that one simple registration on our system to either the GSC or WFSR will provide you with access to both congresses, a very exciting prospect indeed.

In addition, the exhibition area offers you the opportunity to exchange with the industry and learn about the newest innovations in medical technology.

Optimize your congress experience by downloading our interactive AOSpine GSC&WFSR Mobile App, where you will find information about all of the scientific sessions.

Finally, we would like to extend our sincere appreciation and gratitude to the spine societies, moderators, speakers, sponsors, and exhibitors, whose contributions help to make these global events possible. We have no doubt that all the sessions in both congresses will provide inspiration and opportunity to network further with your scientific peers with the unique approach to sharing knowledge and developing new approaches to the treatment of spinal disorders.

Organizing Committees

Executive Committees



Jeffrey Wang
Congress Chair



Daniel K. Riew
Congress Co-Chair



Michael Grevitt
Congress Co-Chair



Abdulrazzaq Alobaid
Regional Chair



Lawrence Lenke
Scientific Co-Chair



Ziya Gokaslan
Scientific Co-Chair



Imad Hashim Ahmad
Local Chair



Zayed Al-Zayed
Local Co-Chair



Keita Ito
Co-Chair



Shanmuganathan Rajasekaran
Co-Chair



Tim Yoon
Scientific Chair



Abdulaziz Al-Mutair
Local Chair



Vafa Rahimi-Movaghar
Local Chair

Organizing Committees

Regional Organizing Committee

Regional Chair: Abdulrazzaq Alobaid

Regional Co-Chair: Abdulaziz Al-Mutair

Local Chair: Imad Hashim Ahmad

Local Co-Chair: Zayed Al-Zayed

Regional Representatives:

Egypt:

Mohammad El-Sharkawi
Youssry El Hawary
Sherif Al Mekawi
Hany Said
Mohamed Abdel-Wanis
Hesham Shaker
Mahmoud Abdel-Ghany
Ali Kotb Ali
Yaser El-Oksh
Mohamed Ramadan
Ahmed Elhussiny Rizk
Hani Soliman
Tarek Aly
Hesham Farhoud
Ali Abou-Madawi
Said Eldeeb
Mohamed Elmeshtawy
Wael Koptan
Mohamed Khattab

GCC:

Ahmed Al Jahwari
Venugopal Menon
Jamal Almulla
Badryia Toorani
Narayanaswamy Varademahalli
Adel Almurawwi
Tariq Sinan
Amr El-Shawarby
Khaled Mabruk Faraj
Ismail Alkebsi
Mohamed Kandil

Iran:

Ali Haghnegahdar
Vafa Rahimi-Movaghar
Mohammad Samadian
Saeid Safaee
Babak Pourabbas Tahvildari
Mohammad Masoudi
Saeid Mehrpour
Hamed Reihami Kermani,
Seyed Vahidvari
Seyed Abrisham
Jafar Ganjpour Sales

Lebanon:

Firas Atallah
Ghassan Skaf
Chawki Nohra
Fadi Zein el Abidine
Khalil Kharrat
Mohammad Badra
Ronald Moussa
Nadime Afeiche
John Abdelnoor
Raafat Yahya
Nizar Natout

Saudi Arabia:

Sohail Bajammal
Yaser Behairy
Abdulmonem Alsiddiky
Khalid Alsaleh
Walid Mneimneh
Amal Mokeem
Zubair Wali
Ibrahim Tabsh
Abdullah Al-Othman
Mohammed Al Sayyad
Mubarak Al-Gahtany
Saleh Baessa
Mahdi Bassi
Husam Al Habib
Waleed Awwad
Salah Fallatah

Jordan:

Firas Husban
Munther Souidi
Rakan Shahaltough
Muhammed Assous
Nidal Khasawneh
Nidal Al Rousan
Mohammad Jamous
Mohammad Shahin
Fadi Al-Hadidi
Saad Hamdan
Ali Al-omari

Iraq:

Thamer Hamdan
Muzahem Taha
Haitham Shareef
Sinan Ahmed
Ali Bakir Al-Hilli
Ghazwan Hasan
Hayder Al-Gburi
Hamad Jaff
Ahmed Hamed
Waleed Wahid
Ramazan Mahmud

Pakistan:

Amer Aziz
Javed Shahzad
S. Enam
Arif Mohammad
Naeem Ahmed
Atiq Uz Zaman
Rizwan Akram
Ijaz Ahmad
Saif Ur Rehman
Naqibullah Achakzai
Asad Qureshi

Morocco:

Thami Benzakour

Libya:

Abdelfattah Abushaala

Tunisia:

Khaled Hadri
Sofiene Kallel

Organizing Committees

Venue Selection Committee

Chair: Jeffrey Wang

Co-Chair: Abdulrazzaq Alobaid, Keita Ito

Local Chair: Imad Hashim Ahmad

Local Co-Chair: Abdulaziz Al-Mutair

Society Relations Committee

International: Jeffrey Wang, Daniel K. Riew, Keita Ito

Europe: Michael Grevitt

Regional: Abdulrazzaq Alobaid, Abdulaziz Al-Mutair, Zayed Al-Zayed, Imad Hashim Ahmad

Program Committee

Bizhan Aarabi	Jose Consciencia	Cumhur Kilincer	Márton Rónai
Mohamed Abdel-Wanis	Evan Davies	Eric Klineberg	Saeid Safaei
Saad Abdullah	Enrique de Jongh	Wael Koptan	Arjun Sahgal
Ali Abou-Madawi	Maximo-Alberto Diez-Ulloa	Shekar Kurpad	Mohammad Samadian
Emre Acaroglu	Michael Dittmar	Claudio Lamartina	Milenko Savic
Naqib Ullah Achakzai	Marcel Dvorak	Victor Leung	Stefan Schaeren
Sashin Ahuja	Dmitry Dzukaev	Stephen Lewis	Matti Scholz
Rizwan Akram	Said Eldeeb	Ka Kin Li	Jaime Segura
Ahmet Alanay	Youssry El-Hawary	Alessandro Longo	Helmut Seitz
Matias Alfonso	Mohamed El-Meshtawy	Juan Lourido	Alpaslan Senkoylu
Husam Al-Habib	Mohammad El-Sharkawi	Andrzej Maciejczak	Alvaro Silva
Ali Al-Hilli	Juan Emmerich	Kin Cheung Mak	Zoltan Skaliczky
Mauro Alini	W. Mark Erwin	Alberto Maleci	Yetkin Söyüncü
Abdulaziz Almutair	Asdrubal Falavigna	Nicola Marotta	Stavros Stavridis
Ali Al-Omari	Khaled Faraj	Antonio Martin-Benlloch	Muzahem Taha
Khalid AlSaleh	Hesham Farhoud	Delio Martins	Ufuk Talu
Zayed Al-Zayed	Stephen Ferguson	Jiri Matejka	James Tan
Carlos Arias	Pedro Fernandes	Björn Meij	Mario Taricco
Raul Arjona	Manuel Fernandez	Hans Joerg Meisel	Manuel Tavares de Matos
Richard Assaker	Norman Fisher-Jeffes	Robert Meves	Martin Tejeda
Muhammed Assous	Soeren Fruensgaard	Jerônimo Milano	Paul Thng
Ufuk Aydinli	Jakab Gabor Vencel	Osmar Moraes	Claudius Thome
Massimo Balsano	Alberto Gotfryd	Olga Morillo	Patrick Tropiano
Giuseppe Barbagallo	Sibylle Grad	Thomas Mroz	Marianna Tryfonidou
Giovanni Barbanti Brodano	Michael Grevitt	Alexander Mushkin	Carlos Tucci
Paloma Bas	Josef Grohs	Fackson Mwale	Atiq Uz Zaman
Alfonso Basurco	LV Guohua	Abhay Nene	Marcelo Valacco
Pedro Bazán	Juan Pablo Guyot	Marko Neva	Patrick Van Schaeuybroeck
Constanza Bedoya	Fadi Hadidi	Nuno Neves	Peter Pal Varga
Lorin Benneker	Lisbet Haglund	Nissim Ohana	Robert Veres
Miguel Berbeo	Jim Harrop	F. Cumhur Oner	Luiz Vialle
Ernesto Bersusky	Hwan-Tak Hee	Metin Ozalay	Gomatam Vijay Kumar
Sigurd Berven	Philip Horsting	Sotiris Papastefanou	Nam Vo
Alejandro Betemps	Judith Hoyland	Jong-Beom Park	Jeffrey Wang
Chetan Bettegowda	James Iatridis	Konstantinos Paterakis	David Welsh
Dave Bharat	Ahmad Ijaz	Andrey Pershin	Peter Wendsche
Darrel Brodke	Keita Ito	Matias Petracchi	Karsten Wiechert
Ivan Broger	Manabu Ito	Roberto Postigo	Beth Winkelstein
Zori Buser	Eyal Itshayek	Julio Pozuelos	Hee Kit Wong
Miguel Casimiro	Gerd Ivanic	Yong Qiu	Karin Wuertz
Barbara Chan	Ahmed Jahwari	Vafa Rahimi-Movaghar	YH Yau
Ying Kei Chan	Jose Maria Jimenez-Avila	Shanmuganathan Rajasekaran	S. Tim Yoon
Danny Chan	Milos Jokovic	Amol Rege	Jim Youssef
Roberto Chapa	Serdar Kahraman	Ricardo Restrepo	Wen Yuan
Jens Chapman	Yoshiharu Kawaguchi	K. Daniel Riew	Alberto Zerbi
Joseph Cheng	Khalil Kharrat	Rolf Riise	Qiang Zhou
Norman Chutkan	Mohamed Khattab	Oswaldo Romano	Mehmet Zileli

Venue and Registration

Grand Hyatt Dubai Convention Centre

Grand Hyatt Dubai Convention Centre
PO Box 7978
Dubai, United Arab Emirates
www.dubai.grand.hyatt.com



For the congress, reduced rates on hotel accommodation are available for the Grand Hyatt Dubai, located next to the congress venue.

Registration

Registration Desk opening times

The Registration Desk, located in the main entrance hall of the Grand Hyatt Dubai Convention Centre, will be open according to the following schedule:

Wednesday, April 13, 2016	10:30-19:30
Thursday, April 14, 2016	07:30-19:30
Friday, April 15, 2016	07:30-18:30
Saturday, April 16, 2016	07:30-17:30

Pre-paid registration

Participants who have registered and paid in advance should bring along the print-out of the final information letter and hand it at the Registration Desk together with a valid passport or identity card.

On-site registration

On-site registration is possible from Wednesday, April 13 to Saturday, April 16. Both credit cards (AMEX, VISA and MASTERCARD) and cash are accepted on-site.

For any questions and logistics information please contact:

Organizing Secretariat
O.I.C. Srl
Viale G. Matteotti, 7
50121 Florence, Italy
Phone: +39 055 50351
Fax: +39 055 5001912
infoGSC_WFSR2016@oic.it



Delegate registration fee includes:

- Full access to the scientific sessions and exhibition (pre-courses not included)
- Admission to the lunch symposia (organized by the industry)
- Congress bag with the final program and further scientific material
- The AOSpine GSC&WFSR mobile application
- Invitation to the Exhibition Opening (Thursday, April 14, from 18:00-19:30)
- Coffee service
- Certificate of attendance
- Name badge

Accompanying person registration fee includes:

- Invitation to the Exhibition Opening (Thursday, April 14, from 18:00-19:30)

AOSpine Subaxial Classification System

Discover our new classification system
at the Global Spine Congress

**AOSpine members
receive a printed copy
of the new toolkit!**

Here's what users have to say about the
AOSpine Subaxial Classification System:

**It's easy to use, easy to
remember and reliable.**

**It puts together morphologic
characteristics and really helps
with treatment decision-making.**

**Visit the AOSpine booth and
become a member today!**

**DON'T
MISS THE
LAUNCH!**
Thursday, April 14
10:00–10:30 am
at the AOSpine
booth



Registration

Registration fee (only one registration fee is required to attend both events)

AOSpine Member ¹	USD 855
AOSpine Member Medical/Research Student, Resident, Fellow ²	USD 250
AOSpine Member Physician Assistant and Nurse practitioner	USD 425
Non-Member	USD 1005
Non-Member Medical/Research Student, Resident, Fellow ²	USD 325
Non-Member Physician Assistant and Nurse Practitioner	USD 575
Delegate from low-income country ³	USD 680
Industry Representative ⁴	USD 1000
Accompanying Person ⁵	USD 40
Pre-courses ⁶	USD 190
Day rate AOSpine Member: Thursday/Friday/Saturday	USD 395
Day rate Non-Member: Thursday/Friday/Saturday	USD 545

Registration terms

All registered participants can attend both the Global Spine Congress and the World Forum for Spine Research.

Please read the following registration terms and conditions carefully before registering. Please note that debits to your credit card will appear as O.I.C. Srl Florence (Italy) on the registration statement.

- 1. AOSpine Members receive up to USD 150 discount on the registration fee.** To benefit from the discount, you will need to become an AOSpine Member before registering. Membership status will be verified by AOSpine. Be aware if your membership is not updated, the "Non-Member fee" will be applied.
2. To qualify for the medical/research student fellows/ residents registration fee, a letter of proof from the training program director needs to be sent to: registrationGSC_WFSR2016@oic.it or shown at the Registration Desk.
3. World Bank Classification 2015. Please visit www.gsc2016.org to access the list of eligible countries.
4. Industry representatives: Non-clinical professionals, with interests in the spine field, but not treating patients.
5. The accompanying person registration fee includes a badge for the Exhibition Opening (Thursday, April 14).
6. Only registered participants can register for precourses.

Badge

Each participant receives a name badge upon collecting the congress kit at the Registration Desk. The badge is the official congress accreditation and must be worn at all times. Badges are colour-coded as follows:

Blue – AOSpine Member

Yellow – Exhibitor

Green – Accompanying Person

Ribbons

Member ribbons as well as other ribbons (Participant, Council members, Commission members, etc) will be available at the AOSpine booth. Feel free to pass by and pick up your ribbon!

Registration Desk and Organizing Secretariat

For any questions or logistics information, please contact:

O.I.C. Srl

Viale G. Matteotti, 7

50121 Florence, Italy

Phone: +39 055 50351

Fax: +39 055 5001912

infoGSC_WFSR2016@oic.it

General Information (from A-Z)

AOSpine booth

Discover the leading global community of spine surgeons by visiting the AOSpine booth. Here, we will be pleased to talk to you and answer any questions you may have about AOSpine and give you further information about AOSpine Education, Research and Community Development. Visit the booth for further details about our activities.

Opening times:

Thursday, April 14, 2016	08:00–18:00
Friday, April 15, 2016	08:00–18:00
Saturday, April 16, 2016	08:00–17:00

AOSpine booth activities

- **AOSpine Classification Launch Meet and Greet with Alex Vaccaro and Klaus Schnake**
Thursday, April 14: 10:00–10:30
- **Global Spine Journal Meet and Greet with Jeffrey Wang, Jens Chapman, Karsten Wiechert, Danielle Lieberman and other deputy editors**
Thursday, April 14: 15:00–15:30 (at the Thieme booth next to the AOSpine booth)
- **Davos Courses Presentation Meet and Greet with Mike Grevitt and available Davos Courses Module Chairpersons**
Friday, April 15: 09:30–10:00
- **European Young Researcher Award 2015 Meet and Greet with Tom Schlösser**
Friday, April 15: 15:15–15:45
- **AO Surgery Reference Meet and Greet with Luiz Vialle**
Saturday, April 16: 09:40–10:00

AOSpine symposia

There will be nine AOSpine scientific symposia during the three days of the meeting, covering the latest research and topics in spine surgery. The symposia consist of didactic lectures presented by international AOSpine speakers followed by a discussion session.

Certificate of attendance

The certificate of attendance is provided to each participant upon registration in the congress kit.

Coffee breaks

A coffee service is available in the exhibition area during the whole day.

Barcode scanning

Participants could be asked by staff from industries at exhibit booths to provide their personal contact data through barcode scanning.

In this way, information about name, surname, country, and e-mail address will be given out to companies on an individual, voluntary basis.

Please do not allow scanning of your badge by industry representatives without your direct consent.

Congress App

The AOSpine GSC&WFSR mobile application is available for download. It includes the following items and many other practical tools:

- Program
- Abstracts publication
- Real time updating on scientific sessions
- Exhibitors
- Congress venue maps

Available for iOS and Android devices, it requires:

- an iOS device running 7.0 or greater; iPad users please select 'iPhone Only' App in the App Store
- an Android device running 4.0 or greater

For any other devices the web App is available at www.gsc2016.org/app

Continuing Medical Education accreditation

The 'Global Spine Congress and World Forum for Spine Research 2016' is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialists. The EACCME is an institution of the European Union of Medical Specialists (UEMS), www.uems.net.

The 'Global Spine Congress and World Forum for Spine Research 2016' is designated for a maximum of (or 'for up to') 19 hours of European external CME credits. Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the European Union of Medical Specialists and the American Medical Association, physicians may convert EACCME credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME credit to AMA credit can be found at www.ama-assn.org/go/internationalcme.

Live educational activities, occurring outside of Canada, recognized by the UEMS-EACCME for ECMEC credits are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of The Royal College of Physicians and Surgeons of Canada.

AOSpine Member Assembly— Member Representative Election

The AOSpine International Board cordially invites you to join the Member Assembly, which will be held for the very first time in AOSpine history.

It is an excellent opportunity to learn more about AOSpine, meet old and make new friends, and network with the world's most outstanding spine surgeon community.

When: April 16, 2016 at 12:15

Where: Plenary Room

Main point: Elect the first Member Representative of AOSpine

Join us—Your vote counts!

We look forward to seeing you there!

General Information (from A-Z)

Disclaimer

AOSpine, the organizer of the Global Spine Congress, and OIC srl, the Organizing Secretariat, will not be held liable for personal injuries or for loss or damage to property incurred by participants or guests at the congress. Participants and guests are encouraged to take out insurance to cover loss incurred in the event of cancellation, medical expenses, or damage to, or loss of personal belongings when traveling.

AOSpine International and OIC srl cannot be held liable for any disruption of the Global Spine Congress and World Forum for Spine Research proceedings arising from natural, political, social, or economic events or other unforeseen circumstances beyond its control. Registration of a participant or guest confirms acceptance of this condition.

The materials presented at the meeting sessions are made available for educational purposes only. The material is not intended to represent the only (or optimal) methods or procedures appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement, or opinion of the presenters or faculty that may be helpful to others who face similar situations.

Official photographers will be present at this event, therefore, please note that any photographs taken at the meeting may be used in future AOSpine publications, on the AOSpine web site, or in other materials.

Other picture taking and video or audio recording of lectures and sessions are strictly prohibited.

Posters

GSC posters will be presented in electronic format as e-posters available at the computers located in the exhibition area.

WFSR posters will be presented in the traditional paper format on boards within the dedicated poster area in front of the exhibition entrance.

Posters are all available in the AOSpine GSC & WFSR app.

Registration to the event is mandatory for all presenters.

Exhibition

A trade show exhibition is being held during the event providing the opportunity to show the latest innovative techniques to maximize interaction between participants and sponsor representatives.

Coffee stations are available in the exhibition area during the whole day and computer workstations are located within this area for e-posters consultations.

Exhibition hours

Thursday, April 14:	08:00–20:00
Friday, April 15:	08:00–18:30
Saturday, April 16:	08:00–17:30

Language

The official language of the Global Spine Congress and World Forum for Spine Research is English.

Industry Symposia

A number of industry Instructional Course Lectures (ICLs) that include food will be held on Wednesday to Friday (check program for exact time and location).

At the event venue, there is a large number of bars and restaurants located close to the Grand Hyatt Hotel lobby.

Learning objectives

Upon completion of this program, participants should be able to:

- Discuss the latest developments in basic research for spinal disorders
- Recognize and outline the latest developments in clinical treatments for spinal disorders
- Describe the appropriate patient selection and diagnostic methods for spine surgery
- Outline evidence that justifies clinical outcomes of patient treatments

Lost and found

Lost and found items can be recovered at the Registration Desk.

No smoking policy

Smoking is not permitted at any time. In accordance with the local regulations, this event follows a strict non-smoking policy.

Education

AO Surgery Reference— Expertise at your fingertips

Try it at the AOSpine booth

From diagnosis to aftercare, your detailed step-by-step guide

- AIS ▪ Thoracolumbar Trauma
- **New module—Cervical Spine**

“Excellent app. A must app for all orthopedic surgeons, it should always be opened before going to the OR.”

Dr. Suman Kumar ★★★★★

“The scope and depth of content is extremely high which is aided by the reliability of the source.”

iMedicalApps

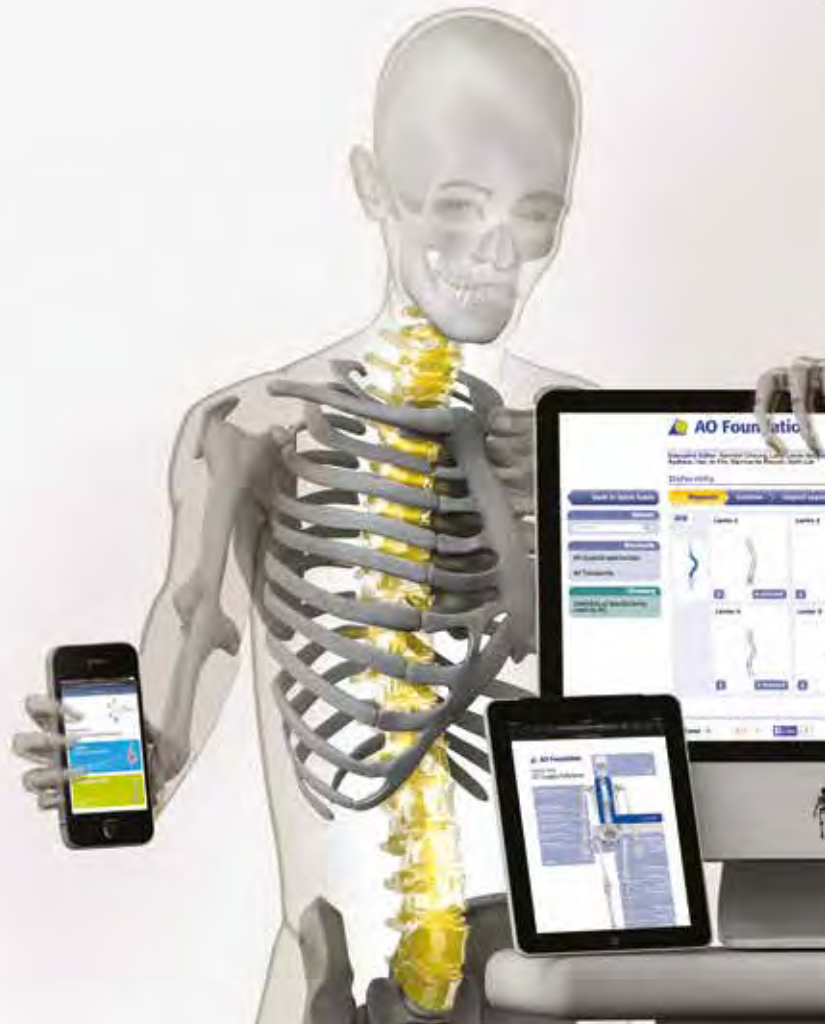
“Some of the most valuable aspects, in addition to the text, are the abundance of images demonstrating fracture patterns, patient positioning, and anatomy/surgical approaches.”

TopOrthoApps



MEET AND GREET WITH LUIZ VIALLE

Presentation of the new Cervical Spine module
April 16, 09:40-10:00 at the AOSpine booth



General Information (from A-Z)

Mobile phone and camera use

The use of mobile phones and cameras is not permitted during the scientific sessions. Participants are kindly requested to keep their mobile phones turned off during the scientific sessions.

Oral presentations

As the scientific program consists of parallel sessions, speakers are required to respect the allotted time given for their presentations. This will contribute to the smooth running of the scheduled sessions. Registration to the Global Spine Congress and World Forum for Spine Research is mandatory for oral presenters.

Slide preview room

This office is located close to the Registration Desk in front of congress room Theatre 2.

During the following times staff and equipment will be available for speakers to deliver their PowerPoint presentations:

Wednesday, April 13: 11:00-19:00

Thursday, April 14: 07:30-19:00

Friday, April 15: 07:30-18:00

Saturday, April 16: 07:30-17:00

Only computer projection is available in the meeting rooms and it is not possible to directly use personal laptops at the podium. PowerPoint presentations (Windows or Apple) on USB pens, memory sticks or personal laptops must be delivered to the slide preview desk as follows:

- **Presenters with PowerPoint presentations on USB pen:** report to the slide preview desk at least one hour before the session or the day before in case of early morning presentations.
- **Presenters with presentations on personal laptop and/or using MACINTOSH/APPLE:** report to the slide preview desk at least two hours before the session or the day before in case of early morning presentations in order to convert the file into Windows format and/or download the presentation onto the main system.
- **Presenters with video presentations:** DVD format with the name of the presenting author must be delivered to the slide preview desk at least two hours before the session or the day before in case of early morning presentations.

The indicated timings allow a smooth uploading of all presentations to the central computerized network and a swift transmission to the assigned meeting rooms. Staff members at the slide preview desk are also available to help those speakers wishing to rehearse their presentations.

GSC scientific paper sessions

There will be 55 scientific paper sessions scheduled over the course of the meeting, covering the main spine topics with original podium presentation. More than 400 peer reviewed abstracts by the Program Committee will be presented in 4-minute presentations. Each session will have a 15-minute discussion.

WFSR scientific paper session

The WFSR will consist of one symposium and six paper sessions. 11 invited talks of 15 minutes each, 30 oral presentation of seven minutes each and 19 short talks of three minutes will be presented. Lively discussions are included in the sessions and everyone is encouraged to visit the discussions at the posters during the poster sessions.

Target audience

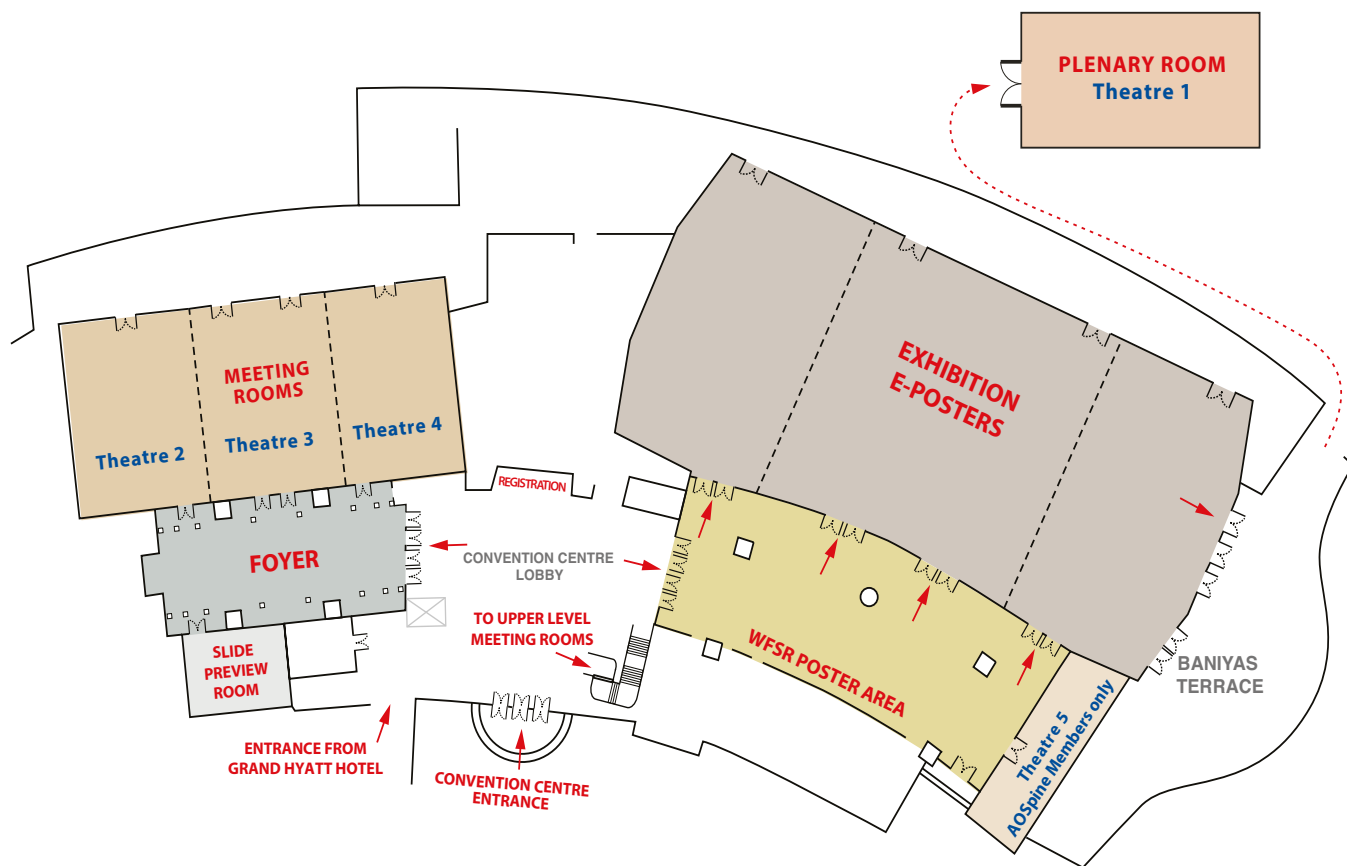
The meeting is targeted at all spine surgeons, orthopedic and neurosurgeons, researchers, or anyone aiming to further improve their knowledge in the latest developments, current concepts, and the future of spine care.

WiFi

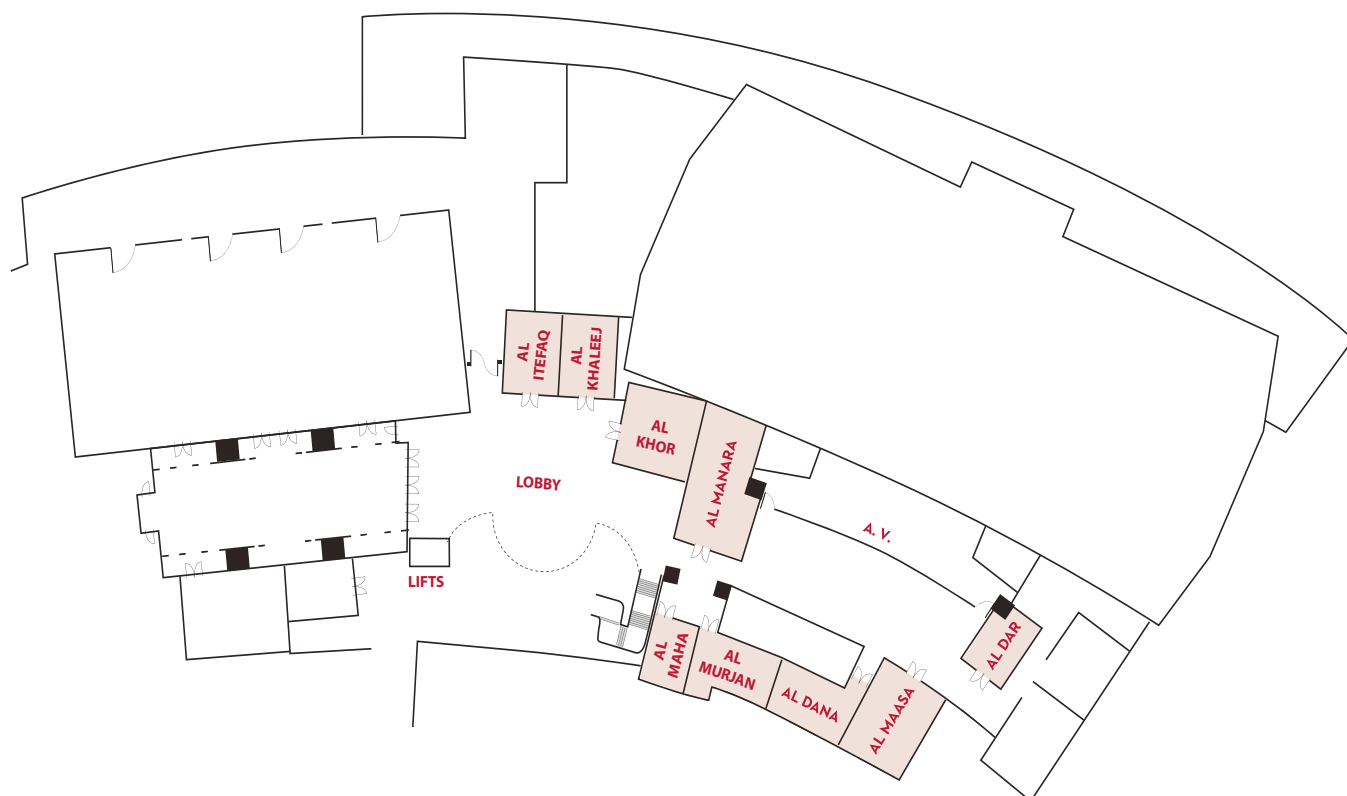
WiFi is available for congress participants throughout the convention area; please check network and password at the Registration Desk.

Grand Hyatt Floor Plan

Lower level









Upper level meeting rooms

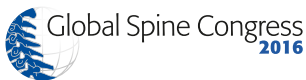











 Global Spine Congress 2016		 World Forum for Spine Research 2016		
		Theatre 2	Theatre 3	Theatre 4
10:30-13:30		REGISTRATION		
13:30-15:30				DISC: BIOMATERIALS
15:30-16:00	REGISTRATION	PRE-COURSE 	PRE-COURSE 	BREAK
16:00-18:00		KNOWLEDGE FORUM SPINAL CORD INJURY 	KNOWLEDGE FORUM TUMOR 	KNOWLEDGE FORUM DEGENERATIVE/ BIOLOGICS SYMPOSIUM: UPDATE ON GRAFT MATERIAL IN ACDF 
18:00-20:00		INDUSTRY EVENING SYMPOSIA		



KEY

-  GSC 2016 sessions
-  WFSR 2016 sessions
-  **NEW!** AOSpine members-only sessions
 These sessions are for AOSpine members only.
 Join AOSpine today at www.aospine.org/membership
-  Breaks
-  Symposia
-  Precourse (pre-registration required)

					NEW!  MEMBERS-ONLY SESSIONS
	Theatre 1	Theatre 2	Theatre 3	Theatre 4	Theatre 5
08:00-09:00	 OPENING SYMPOSIUM			DISC: MOLECULAR AGENTS AND DEGENERATION	
09:00-09:30	BEST PAPERS SESSION—DEFORMITY				
09:30-10:00	CONGRESS OPENING				
10:00-10:30	BREAK				
10:30-11:15	TRAUMA THORACOLUMBAR I	INFECTIONS I	DEFORMITY THORACOLUMBAR (ADOLESCENT) I	OSTEO: MOLECULAR AGENTS AND CELL-BASED THERAPY	MANAGING YOUR ONLINE REPUTATION
11:15-12:00	TRAUMA THORACOLUMBAR II	NOVEL TECHNOLOGIES I	DEFORMITY THORACOLUMBAR (ADOLESCENT) II		
12:00-13:30	INDUSTRY LUNCH SYMPOSIUM	INDUSTRY LUNCH SYMPOSIUM			
13:30-14:15	DEGENERATIVE LUMBAR I	DIAGNOSTICS CLINICAL	TRAUMA CERVICAL I	OSTEO: CARRIERS AND BONE	HOW TO WRITE AND PUBLISH A PAPER 
14:15-15:00	DEGENERATIVE LUMBAR II	DIAGNOSTICS	TRAUMA CERVICAL II		
15:00-15:30	BREAK				
15:30-16:15	NOVEL TECHNOLOGIES II	IMAGING I	DEFORMITY CERVICAL	DISC: CELL-BASED THERAPY	MANAGING YOUR ONLINE REPUTATION
16:15-17:00	TRAUMA THORACOLUMBAR III	IMAGING II	MINIMALLY INVASIVE SPINE SURGERY I		
17:00-18:00	 CERVICAL SPINE RESEARCH SOCIETY FOUNDED 1973	 EGYPTIAN SPINE ASSOCIATION	IRAN SPINE SURGEON'S SOCIETY & NEUROLOGICAL SOCIETY OF IRAN		
18:00-19:30	WELCOME RECEPTION & OFFICIAL EXHIBITION OPENING			POSTER SESSION	

					
	Theatre 1	Theatre 2	Theatre 3	Theatre 4	Theatre 5
					
08:00-09:00	KNOWLEDGE FORUM DEFORMITY  ADOLESCENT DEFORMITY	RECENT ADVANCES IN THE MANAGEMENT OF THORACOLUMBAR FRACTURES	AOTK SYSTEM NEW TECHNOLOGIES TO TREAT SPINAL PATHOLOGIES	DISC: DEGENERATION AND PAIN	
09:00-09:30	BEST PAPERS SESSION—DEGENERATIVE			POSTER SESSION	
09:30-10:00	BREAK				
10:00-11:00	DEFORMITY THORACOLUMBAR (ADOLESCENT) III	INFECTIONS II	DEGENERATIVE CERVICAL	DISC: DEGENERATION AND PAIN	WHAT SPINE SURGEONS CAN LEARN FROM PILOTS
11:00-12:00	DEFORMITY THORACOLUMBAR (ADOLESCENT) IV	SURGICAL COMPLICATIONS I	ARTHROPLASTY CERVICAL		
12:00-13:00	BREAK				
13:00-14:15		INDUSTRY LUNCH SYMPOSIUM	INDUSTRY LUNCH SYMPOSIUM		
14:15-15:15	DEFORMITY THORACOLUMBAR (ADULT) I	DEGENERATIVE LUMBAR III	CERVICAL FUSION	BASIC SCIENCE I	HOW TO WRITE AND PUBLISH A PAPER 
15:15-15:45	BREAK				
15:45-16:30	DEGENERATIVE LUMBAR IV	TUMORS I	NOVEL TECHNOLOGIES III	BASIC SCIENCE II	WHAT SPINE SURGEONS CAN LEARN FROM PILOTS
16:30-17:15	DEFORMITY THORACOLUMBAR (ADULT) II	TUMORS II	NOVEL TECHNOLOGIES IV	BASIC SCIENCE III	
17:15-18:15					



	Theatre 1	Theatre 2	Theatre 3	Theatre 4	Theatre 5
	AOSPINE SYMPOSIA				
08:00-09:00	KNOWLEDGE FORUM DEFORMITY  ADULT SPINAL DEFORMITY (ASD)	FAILED BACK SURGERY SYNDROME	KNOWLEDGE FORUM TRAUMA  CERVICAL SPINE TRAUMA	THE AGING SPINE	
09:00-09:30	BEST PAPERS SESSION—TRAUMA				
09:30-10:00	BREAK				
10:00-11:00	NAVIGATION	TRAUMA CERVICAL III	DEFORMITY THORACOLUMBAR (ADOLESCENT) V	EPIDEMIOLOGY	MEET THE EXPERTS: AOSpine subaxial classification
11:00-12:00	MINIMALLY INVASIVE SPINE SURGERY II	DEGENERATIVE LUMBAR V	DEFORMITY THORACOLUMBAR (ADULT) III	CERVICAL SURGERY	MEET THE EXPERTS: SINS classification
12:15-13:15	AOSPINE MEMBERS ASSEMBLY				
13:30-14:15	MINIMALLY INVASIVE SPINE SURGERY III	SURGICAL COMPLICATIONS	TRAUMA CERVICAL IV	TUMORS III	
14:15-15:00	MINIMALLY INVASIVE SPINE SURGERY IV	DEGENERATIVE LUMBAR VI	DEFORMITY THORACOLUMBAR (ADULT) IV	TUMORS IV	
15:00-15:30	BREAK				
15:30-15:45	AWARDS AND CLOSING CEREMONY				
15:45-16:00	GLOBAL SPINE CONGRESS 2017 ANNOUNCEMENT				
16:00-17:00	CLOSING SYMPOSIUM MINIMALLY INVASIVE SPINE SURGERY				

AOSpine Members-Only Sessions at GSC

AOSpine offers its members a wide range of privileges including exclusive access to members-only sessions at the Global Spine Congress and World Forum for Spine Research.

Managing your online reputation

Speaker: Pablo Galiana, CEO & Founder Digital Labs, Madrid/Spain

Date, times, and location: Thursday, April 14, 2016—10:30-12:00 & 15:30-17:00—Theatre 5

Summary of session: Technology is making one's reputation more transparent than ever. Now, anyone around the globe can search a name and get a first impression by looking online. Session attendees will receive insights on how the digital world is changing the way patients manage their health, learn how one's online reputation is a key driver for choosing doctors, and the steps to take to build, manage, maintain and protect one's online reputation.

How to write and publish a paper

Speakers: Editors-in-Chief of the *Global Spine Journal*: Jeffrey C. Wang, MD (USA), Jens R. Chapman, MD (USA), Karsten Wiechert, MD (Germany)

Dates, times, and location: Thursday, April 14, 2016—13:30-15:00; Friday, April 15, 2016—14:15-15:15—Theatre 5

Summary of session: In an open panel discussion the Editors-in-Chief and the Deputy Editors of the *Global Spine Journal*, the official journal for AOSpine International, will address questions and share insight on how scientific results are turned into a good manuscript, how a manuscript is reviewed and how it can be published successfully. Get tips and tricks from Jeffrey C. Wang, MD (USA), Jens R. Chapman, MD (USA) and Karsten Wiechert, MD (Germany).

What spine surgeons can learn from pilots

Speaker: Mark Roth, Professional pilot and Training Captain Airbus A380, Switzerland & UAE

Date, times, and location: Friday, April 15, 2016—10:00-12:00 & 15:45-17:15—Theatre 5

Summary of session: How do pilots take decisions under extremely stressfully emergency situations? How do they manage multi-national and disciplinary teams? Pilots and surgeons share a lot of the same challenges in their jobs when it comes to resilience, decision making and human resource management in high-risk environments. Get an introduction of how these challenges are faced in the aviation industry by a professional pilot and Airbus A380 Training Captain.

Meet the Experts—Launch of the AOSpine Subaxial Classification

Speakers: Dr Rajasekaran Shanmuganathan and other Knowledge Forum Trauma members

Date, time, and location: Saturday, April 16, 2016—10:00-11:00—Theatre 5

Summary of session: In this session the phase 2 of the comprehensive classification system of traumatic spine injuries—the subaxial classification—will be presented and launched by Dr Rajasekaran Shanmuganathan and other Knowledge Forum Trauma Members. Additionally, the members will get an introduction of essential aspects of the AOSpine Trauma Classification System including the already established thoracolumbar classification.

Meet the Experts—Introduction of the Spine Instability Neoplastic Score (SINS)

Speaker: Dr Charles Fisher

Date, time, and location: Saturday, April 16, 2016—11:00-12:00—Theatre 5

Summary of session: Dr Charles Fisher will provide an overview on how the SINS has been developed and assessed within the AOSpine Knowledge Forum Tumor and showcase how it can be used in clinical practice, and what the impact is.

Not an AOSpine member?

Join online today or at the Registration desk at GSC to be able to attend the exclusive Members-Only sessions.

AOSpine Members-Only sessions are limited to 50 people (first-come, first-served basis).



Spine Societies

Guest Spine Societies

The congress offers symposia on Thursday and Friday organized by guest spine societies from different countries. Participants can meet some of these guest societies' representatives and learn more about their local activities by visiting their booths, which are located in the exhibition area.

AOSpine cordially welcomes the following guest spine societies:

Thursday Spine Societies



Cervical Spine Research Society



Iran Spine Surgeon's Society



Egyptian Spine Association



Neurosurgical Society of Iran

Friday Spine Societies



North American Spine Society



European Association of Neurosurgical Societies



EUROSPINE



Scoliosis Research Society

Saturday Spine Society



American Association of Neurological Surgeons

American Association of Neurological Surgeons



شعبة الإمارات
لجراحة العظام
EMIRATES
ORTHOPAEDIC
SOCIETY

Global Spine Congress and World Forum for Spine Research have been endorsed by Emirates Orthopaedic Society

Awards Ceremonies

The Global Spine Congress and World Forum for Spine Research 2016 will each culminate in an Awards Ceremony.

On **Friday, April 15, 2016** the following awards will be presented:



World Forum for Spine Research 2016—Best Oral Presentation

The best oral presentation will be chosen on-site by the award committee

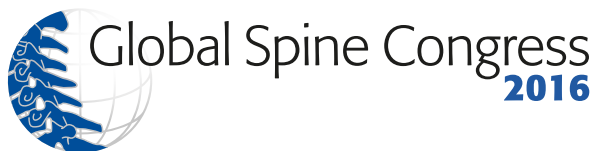
World Forum for Spine Research 2016—Best Short Talk Presentation

The best short talk presentation will be chosen on-site by the award committee

World Forum for Spine Research 2016—Best Poster

The best poster will be chosen on-site by the award committee

On **Saturday, April 16, 2016** the following awards will be presented:



Global Spine Congress 2016—Best Paper Award

The best paper will be chosen on-site by the award committee.

Global Spine Congress 2016—Best E-poster Award

The best paper will be chosen on-site by the award committee.

Global Spine Journal—Best Basic Science Paper Award 2015

This award is presented to the best basic science paper published in the Global Spine Journal. Winner will be announced at the Awards Ceremony.

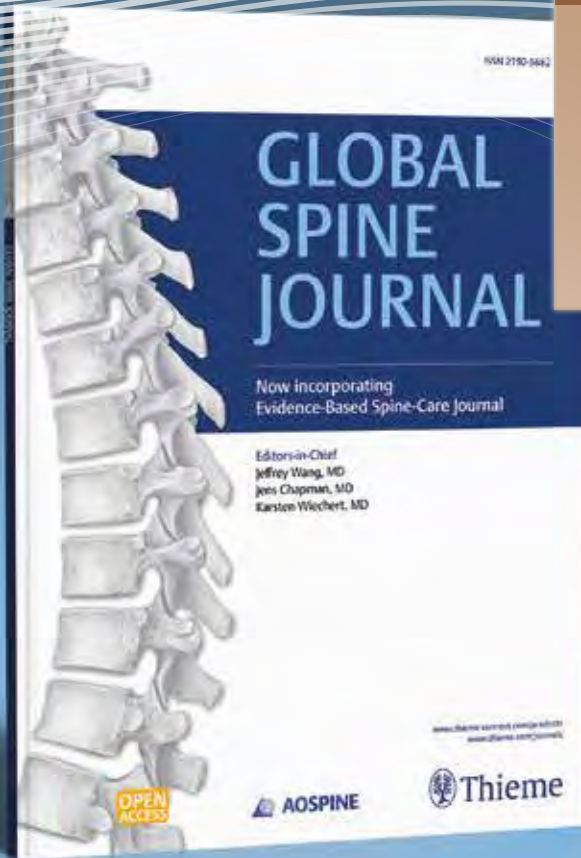
Global Spine Journal—Best Clinical Paper Award 2015

This award is presented to the best clinical paper published in the Global Spine Journal. Winner will be announced at the Awards Ceremony.

Global Spine Journal—Best Reviewer Awards 2015

The 2015 Best Reviewer Awards go to the top reviewers who had the highest average ranking in the system who also completed the largest number of high quality reviews in the most time efficient manner. The winners will be announced at the Awards Ceremony.

Education



**Meet and greet the
Global Spine Journal
Editors in chief**

Jeff Wang,
Jens Chapman &
Karsten Wiechert

**Thursday, April 14
15:00–15:30 at the
Thieme Booth**

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World Forum for
Spine Research **2016**

Wednesday



Wednesday

Thursday

Friday

E-posters & Posters

Disclosures

Authors

10:30-19:30 Participant Registration

13:30-15:30		Session 1—Disc: Biomaterials (Theatre 4)	
13:30-13:35		Welcome	Keita Ito, Sh. Rajasekaran, Tim Yoon, Vafa Rahimi-Movaghar, Abdulaziz Al-Mutair
			Moderators: Mauro Alini Abdulrazzaq Alobaid
13:35-13:50	WIN001	Structural and Functional Repair of the Annulus Fibrosus	James Iatridis
13:50-14:05	WIN002	Designing Biomaterials Systems for the Disc Pathology	Abhay Pandit
14:05-14:20		Discussion	
14:20-14:27	WO001	Annulus Fibrosus Repair using genetically engineered Silk and genipin-enhanced fibrin gel	D. Frauchiger, L. Benneker , E. Roth, B. Gantenbein
14:27-14:34	WO002	Polyethylene glycol and poly(trimethylene carbonate) block copolymers for annulus fibrosus repair have high cytocompatibility, restore axial range of motion and have some herniation risk	R. Long , S. Rotman, W. Horn, D. Assael, S. Illien-Junger, D. Grijpma, J. Iatridis
14:34-14:42		Discussion	
			Moderators: James Iatridis Abhay Pandit
14:42-14:49	WO003	Annular repair using high-density collagen gel with Riboflavin crosslinkage: Preliminary data from an in vivo ovine model	B. Pennicooke , R. Härtl, Y. Moriguchi, L. Bonassar, B. Borde
14:49-14:56	WO004	Modulation of Extracellular Matrix Activity, Neurotropic Factors and Sensory Innervation Associated Pain in Intervertebral Disc Degeneration using a Hyaluronic Acid Hydrogel	A. Srivastava, Sunny A. Abbah, O. Carroll, D. Tiernan, P. Owens, P. Dockery, D. Finn, A. Pandit, I. Mohd Isa
14:56-15:04		Discussion	
15:04-15:07	WST001	Annular repair using cross-linked high density collagen gel seeded with fibrochondrocytes: In vivo outcomes of a rodent disc study	B. Pennicooke , Y. Moriguchi, B. Borde, C. Berlin, P. Grunert, L. Bonassar, R. Härtl
15:07-15:10	WST002	BMP 2/7 release system for nucleus pulposus regeneration	G. Lang , Z. Li, X. Chen, H. Sacks, A. Yayon, F. Weber, M. Alini, S. Grad
15:10-15:13	WST003	A nanotechnology-based therapy to target inflammation in degenerated intervertebral disc: first results from an ex vivo disc organ culture	G.Q. Teixeira, A. Boldt, I. Nagl, M. Molinos , C. Leite Pereira, K. Benz, H.-J. Wilke, A. Ignatius, M.A. Barbosa, C. Neidlinger-Wilke, R.M. Goncalves
15:13-15:16	WST004	Collagen Microspheres—A Three-Dimensional Culture System for Notochordal Cells	M. Yuan , C. Yeung, T. Au, D. Chan, K. Cheah, B. Chan
15:16-15:19	WST005	Compression Induced Stress Response of Nucleus Pulposus Cells in 3D Collagen Gel	W. Chooi , B. Chan

15:30-16:00 Break

10:30-19:30 Participant Registration

16:00-18:00

Session 2—Knowledge Forum Symposium: Update on graft material in ACDF (Theatre 4)

		Moderators: Ahmet Alanay Xudong Joshua Li
16:00-16:10	Introduction: Diversity in graft choices	Tim Yoon
16:10-16:20	Bonegraft in anterior cervical fusion: Gold standard vs standard of care	Jeffrey Wang
16:20-16:25	Discussion	
16:25-16:35	Ceramics and Demineralized Bone Matrix (DBM)	Vafa Rahimi-Movaghar
16:35-16:45	Stem cells in bone graft for anterior cervical fusion	Patrick Hsieh
16:45-16:50	Discussion	
16:50-17:00	Cage vs Bone in ACDF: What is better? Cage	Hans-Jörg Meisel
17:00-17:10	Cage vs Bone in ACDF: What is better? Bone	Jong-Beom Park
17:10-17:15	Discussion	
17:15-17:25	Bone morphogenetic protein (BMP) Biology	Zorica Buser
17:25-17:35	Bone morphogenetic protein (BMP) in Anterior Cervical Spine: Usage and controversies	Faiz Ahmad
17:35-17:40	Discussion	
		Moderator: Tim Yoon
Case discussion – Graft choices panel discussion		Vafa Rahimi- Movaghar, Patrick Hsieh, Hans-Jörg Meisel, Jong-Beom Park, Faiz Ahmad, Zorica Buser
17:40-17:50	Simple case	
17:50-18:00	Complex case	

18:15-19:15 Industry Evening/Dinner Symposia



World Forum for
Spine Research **2016**

Thursday



Wednesday

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Friday

E-posters & Posters

Disclosures

Authors

08:00-10:00 Session 3 (Theatre 4)

08:00-10:00

Disc: Molecular agents and Degeneration

			Moderators: Lisbeth Haglund Vafa Rahimi-Movaghar
08:00-08:15	WIN003	Biologic targets for mitigating age-associated intervertebral disc degeneration	Nam Vo
08:15-08:30	WIN004	Link N as a therapeutic agent for early intervertebral disc degeneration	Fackson Mwale
08:30-08:45		Discussion	
08:45-08:52	WO005	The species-specific regenerative effect of notochordal cell-conditioned medium on degenerated human nucleus pulposus cells	F. Bach , S. De Vries, F. Van Heel, A. Krouwels, L. Creemers, K. Ito, B. Meij, M. Tryfonidou
08:52-08:59	WO006	TGFbeta Cross-linked to Microcarriers as Injectable IVD therapy in Dogs and Humans	A. Bertolo , F. Steffen, F. Arcolino, S. Capossela, A. Taddei, M. Baur, T. Poetzel, J. Stoyanov
08:59-09:07		Discussion	
			Moderators: Nam Vo Fackson Mwale
09:07-09:14	WO007	Anti-Inflammatory Agents Prevent Intervertebral Disc Cell Mechanobiological Alterations	T. Jacobsen, N. Chahine
09:14-09:21	WO008	Synergistic Effect of Nerve Growth Factor and Insulin-Like Growth Factor-1 on Anti-Apoptosis and Extracellular Matrix Synthesis of Rat Intervertebral Disc Cells	Jong-Beom Park , Eun-Young Park
09:21-09:29		Discussion	
09:29-09:32	WST006	The effect of bone morphogenetic protein-2 on chondrocyte-like cells derived from degenerated human and canine intervertebral discs	F. Bach , A. Miranda Bedate, F. Van Heel, M. Müller, L. Creemers, K. Ito, K. Benz, B. Meij, M. Tryfonidou
09:32-09:35	WST007	The Role Of Diabetes Type I In Intervertebral Disc Degeneration	F. Russo , G. Vadalà, K. Ngo, Y. Fan, M. Trucco, G. Sowa, J. Kang, N. Vo, V. Denaro
09:35-09:38	WST008	Serum levels of the pro-inflammatory cytokines IL-6 and TNF-alpha vary based on diagnoses in individuals with low back pain	K. Weber, O. Bloom, S. Quraishi, M. C. Overby, M. Levine, N. Chahine
09:38-09:41	WST009	Compression Loading Induced Cellular Stress Response of Intervertebral Disc Cells in Organ Culture	W. Chooi , S. Chan, B. Gantenbein, B. Chan
09:41-09:44	WST010	Aberrant DNA methylation important factor in intervertebral disc pathophysiology	N. Chutkan , S. Fulzele

10.00-10.30 Coffee Break

10:30-12:00 Session 4 (Theatre 4)

10:30-12:00

Osteo: Molecular agents and Cell Based Therapy

			Moderators: Wellington Hsu Abdulaziz Al-Mutair
10:30-10:45	WIN005	The future of biologics for spinal fusion	Jeffrey Wang
10:45-11:00	WIN006	New therapies for spinal fusions "Cells, molecules and surfaces".	Hyun Bae
11:00-11:15		Discussion	
11:15-11:22	WO009	Safety and Efficacy of i-FACTOR™ Bone Graft in Anterior Cervical Discectomy and Fusion: A Prospective, Randomized, Controlled, Multi-Center, Investigational Device Exemption Study	M. Janssen , P. Arnold, R. Sasso, M. Fehlings, A. Patel
11:22-11:29	WO010	Mesenchymal Stem Cells harvested from vertebral body and iliac crest bone marrow: Are they equally good? Comparison of two tissues and two harvesting techniques.	E. Fragkakis , E. Jones, I. Pountos, P. Giannoudis
11:29-11:37		Discussion	
11:37-11:44	WO011	Generation of a vascularized, scaffold free bone graft by direct transdifferentiation of fat tissue	C. Eder , S. Schildboeck, J. Klughofer, M. Ogon
11:44-11:51	WO012	Role of Bone Marrow Mesenchymal Stem Cells Concentrate Using Selective Retention Cell Technology in Posterolateral Spinal Fusion	M. Yousef , G. La Maida, P. Dionigi, B. Misaggi, V. Re, S. Frau
11:51-12:00		Discussion	

12:00-13:30 Industry Lunch Symposia

13:30-15:00 Session 5 (Theatre 4)

13:30-15:00

Osteo: Carriers and Bone

			Moderators: Hyun Bae Khalid Alsaleh
13:30-13:45	WIN007	Novel Carriers for Growth Factors for Enhancing Spinal Fusion	Xudong Joshua Li
13:45-14:00	WIN008	Bone Healing through Synthetic Scaffolds	Wellington Hsu
14:00-14:15		Discussion	
14:15-14:22	WO013	The BMP2-variant L51P enhances the osteogenic differentiation of human mesenchymal stromal cells in the presence of intervertebral disc cells	A. Tekari , S. Chan, D. Frauchiger, L. Benneker, P. Heini, B. Gantenbein
14:22-14:29	WO014	Postoperative complications associated with rhBMP2 use in Posterior Lumbar Fusion	Z. Buser , D. Brodke, N. Esmail, H.-J. Meisel, J.-B. Park, S. Myhre, J. Youssef, J. Wang, T. Yoon
14:29-14:37		Discussion	
14:37-14:44	WO015	Peptide Amphiphile Nanogel as an Improved BMP-2 Carrier for Spinal Arthrodesis	W. Hsu , J. Weiner, D. Chun, S. Lee, M. McClendon, R. Freshman, R. Cook, M. Schallmo, S. Singh, J. Yun, C. Yun, S. Stupp, E. Hsu
14:44-14:51	WO016	Effect of Riluzole on human bone marrow stromal cells and osteoblasts	G. D. Schroeder , C. K. Kepler, S. Grad, M. Alini, D. Z. Markova, J. D. Koerner, S. Rajasekaran, J. Chapman, F. Kandziora, K. J. Schnake, M. F. Dvorak, F. C. Oner, A. R. Vaccaro
14:51-15:00		Discussion	

15:00-15:30 Coffee Break

15:30-18:00 Session 6 (Theatre 4)

15:30-18:00

Disc: Cell-based therapy

			Moderators: Hans Jörg Meisel Youssry El Hawary
15:30-15:45	WIN009	Mesenchymal stem cell based therapies for Disc repair/regeneration	Judith Hoyland
15:45-16:00	WIN010	Repair of the degenerated disc—a perspective derived from cell-based studies	Victor Leung
16:00-16:15		Discussion	
16:15-16:22	WO017	Disc regeneration using MSC transplanted via the endplate route	G. Vadalà , F. Russo, M. Musumeci, A. Valentini, M. Bernardini, L. Denaro, D. D'Avella, R. Giordano, V. Denaro
16:22-16:29	WO018	Heterochronic parabiosis approach: is it possible to interrupt the aging process of the intervertebral disc degeneration? An in vivo experimental study.	D. Colangelo , P. Robbins, L. Nasto, L. Niedernhofer, E. Pola
16:29-16:37		Discussion	
16:37-16:44	WO019	Mesenchymal Stem Cell Treatment Of Disc Lesion Prevents Fatty Infiltration And Fibrosis, But Not Muscle Fibre Transformation Of The Multifidus Muscle	P. Hodges , G. James, L. Hall, A. Schmid, C. Shu, C. Little, J. Melrose
16:44-16:51	WO020	Tissue-engineered total disc replacement: In vivo outcomes of a canine cervical disc study	Y. Moriguchi , J. Mojica Santiago, R. Navarro, P. Grunert, B. Pennicooke, C. Berlin, K. Hudson, L. Bonassar, R. Härtl
16:51-16:59		Discussion	
			Moderators: Judith Hoyland Victor Leung
16:59-17:06	WO021	Improvement of Bovine Nucleus Pulposus Cells Isolation Leads to Identification of Three Phenotypically Distinct Cell Subpopulations	M. Molinos , C. Almeida, R. Gonçalves, M. Barbosa
17:06-17:13	WO022	Contribution of Hypertrophic Chondrocytes to the Homeostasis of Annulus Fibrosis in normal and degenerative intervertebral discs	C. Chan , A. Shah, K. Cheah, D. Chan
17:13-17:21		Discussion	
17:21-17:24	WST011	Intervertebral Disc Maintenance and Repair Potential in Mice with different repair potential	Y. Zhang , C. Xiong, D. Chan, D. Sakai
17:24-17:27	WST012	Evaluation of tissue repair using MRI imaging of human intervertebral discs cultured in a bioreactor	D. Rosenzweig, R. Gawri, J. Moir, L. Beckman, D. Eglin, T. Steffen, P. Roughley, J. Ouellet, L. Haglund
17:27-17:30	WST013	Reproducible disc degeneration scale in a large animal model	G. Vadalà , F. Russo, F. De Strobel, M. Bernardini, L. Denaro, D. D'Avella, D. Eglin, M. Alini, V. Denaro
17:30-17:33	WST014	The effect of iodixanol on human intervertebral disc cells in vitro	L. Gradisnik, U. Maver, G. Bunc, T. Velnar
17:33-17:36	WST015	The Expression of Keratin 19 in Intervertebral Disc Degeneration and Aging	F. Lv, V. Leung , K. Cheung
17:36-17:39	WST016	Radiological, Histological and Biochemical Characterization of a Novel Ovine Lumbar Intervertebral Disc Injury Model	C. Daly , T. Goldschlager, P. Ghosh, G. Jenkin, J. Cooper-White, T. Naidoo
17:39-17:42	WST017	Hif-3A fine-tunes extracellular matrix production in nucleus pulposus cell under hypoxia	W.-K. Tam , K. M. Cheung, V. Y. Leung
17:42-17:45	WST018	The relationship between HELQ expression and intervertebral disc degeneration	S. Huang , Y. Zhang, Z. Liu, J. Liu
17:45-17:48	WST019	The intervertebral disc functional cell models: a new revolution for in vitro toxicology testing	T. Velnar , G. Bunc, U. Maver, L. Gradisnik

18:00-19:30 Welcome Reception, Official Exhibition opening, WFSR Poster Session



World Forum for
Spine Research **2016**

Friday



Wednesday

Thursday

Friday

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Disclosures

Authors

08:00-09:09 Session 7 (Theatre 4)

08:00-09:09

Disc: Degeneration and Pain

			Moderators: Lorin Benneker Marianna Tryfonidou
08:00-08:15	WIN011	Insights from the Disc & Other Spinal Tissues	Beth Winkelstein
08:15-08:25		Discussion	
08:25-08:32	WO023	Exploratory Study for Identifying Systemic Biomarkers that Correlate with Pain Response in Patients with Intervertebral Disc Disorders	K. Weber, C. Sison, M. Levine, S. Quraishi, O. Bloom, N. Chahine
08:32-08:39	WO024	Analysis of serum C-reactive protein in patients with lumbar disc herniation	A. Dewan
08:39-08:47		Discussion	
08:47-08:54	WO025	Proteomic analysis of degenerated intervertebral disc—identification of biomarkers of Degenerative disc disease and development of proteome database	V. Ranjani, S. G, R. Muthurajan, S. Natesan, G. R, R. Kanna, S. Rajasekaran
08:54-09:01	WO026	Intradiscal injection of a slow release formulation of celecoxib for the treatment of dogs with low back pain	A. Tellegen , M. Beukers, A. Miranda-Bedate, N. Willems, M. De Leeuw, M. Van Dijk, L. Creemers, M. Tryfonidou, B. Meij
09:01-09:09		Discussion	

09:09-10:30 WFSR Poster Session

09:30-10:00 Coffee Break

10:00-11:15 Session 7 (Theatre 4)

10:30-11:15

Disc: Degeneration and Pain

			Moderators: Beth Winkelstein Kenneth Cheung
10:30-10:37	WO027	Degradome of the Intervertebral Disc	V. Tam, N. Solis, C. Overall, T. Klein, K. Cheung, K. Cheah, D. Chan
10:37-10:44	WO028	Toll-like Receptor 2 Regulates Nerve Growth Factor Synthesis Via NF-κB Signaling in Human Intervertebral Disc Cells	E. Krock, J. Currie, M. Weber, J. A. Ouellet, L. S. Stone, D. H. Rosenzweig, L. Haglund
10:44-10:52		Discussion	
10:52-10:59	WO029	Differential gene expression profiles of cells from normal, traumatic and idiopathic scoliotic discs identify molecular dysregulation in scoliosis	S. Grad , Y. Zhang, O. Rozhnova, E. Schelkunova, M. Mikhailovsky, M. Sadovoy, L. Haglund, J. A. Ouellet, M. Alini
10:59-11:06	WO030	Effects of asymmetric dynamic loading on intervertebral disc—towards a scoliosis mimicking organ culture model	Z. Li , Y. Zhang, L. Straumann, P. Lezuo, M. Peroglio, M. Alini, S. Grad
11:06-11:15		Discussion	

11:15-11:45 WFSR Awards and Closing Ceremony (Theatre 4)

Keita Ito, Tim Yoon, Shanmuganathan Rajasekaran, Vafa Rahimi-Movaghar, Abdulaziz Al-Mutair



Global Spine Congress
2016

Wednesday



Wednesday

Thursday

Friday

Saturday

E-posters & Posters

Disclosures

Authors

10:30-19:30 Participant Registration

13:30-18:00		Knowledge Forum Tumor Pre-course—Spine Oncology (Theatre 3)	
			Moderator: Charles Fisher
13:30-13:35		Introduction	Charles Fisher
13:35-13:50		Clinical decision making: integrating advances in the molecular understanding of spine primary and metastatic tumors	Chetan Bettgowda
13:50-14:05		Benign tumors of the spine: has new chemotherapy and interventional radiology changed the treatment paradigm?	Laurence Rhines
14:05-14:20		Evidence-based management of local recurrence of chordoma of the mobile spine	Stefano Boriani
14:20-14:45		Debate: Reconstruction after total Sacrectomy for Primary Tumor? Pro.	Peter Pal Varga
		Debate: Reconstruction after total Sacrectomy for Primary Tumor? Con.	Jeremy Reynolds
14:45-15:40		Case Presentation for Audience and Expert Panel: 4 Primary Tumor Cases	Ziya Gokaslan
15:40-16:00		Coffee break	
			Moderator: Laurence Rhines
16:00-16:15		Metastatic Spine Disease: Has SINS, MIS and stereotactic radiation changed the management paradigm?	Jorrit Jan Verlaan
16:15-16:30		SBRT for metastatic disease: what are the risks and how do we prevent them?	Arjun Sahgal
16:30-16:45		Evidence based steps to change the adverse event profile in metastatic spine surgery	Nicolas Dea
16:45-17:00		Optimizing surgical stability in the metastatic spine	Charles Fisher
17:00-18:00		Case Presentation For Audience and Expert Panel: 4 metastatic cases	Ziya Gokaslan

10:30-19:30 Participant Registration

13:30-18:00		Knowledge Forum Spinal Cord Injury—Pre-course (Theatre 2)	
13:30-13:40	Introduction	Michael Fehlings	
13:40-13:55	Overview of the AOSpine SCI Guidelines Topics—What do we know? Where are the knowledge gaps?	Michael Fehlings	
13:55-14:10	Review of the GRADE Process for Systematic Reviews and Guidelines Development	Lindsay Tetreault	
14:10-14:15	Case presentation—Cervical Spinal Cord Injury with Fracture Dislocation—How best to manage?	James Harrop	
14:15-14:30	Should we use methylprednisolone? Review of the evidence on Methylprednisolone in spinal cord injury and summary of the AOSpine guideline	Jefferson Wilson	
14:30-14:45	Review of the AOSpine cervical fracture classification	Cumhur Oner	
14:45-15:00	Does it make a difference if we get a MRI? How does MRI influence management? Review of the evidence and discussion of the AOSpine guideline	Bizhan Aarabi	
15:00-15:15	What is the optimal timing of surgical intervention? Review of the evidence and discussion of the AOSpine Guideline	Shekar Kurpad	
15:15-15:20	Case resolution	James Harrop	
15:20-15:35	Question and Answer with audience and panel discussion	Michael Fehlings	
15:35-16:00	Coffee break		
16:00-16:05	Controversies in nonoperative management of spinal cord injury	Jefferson Wilson	
16:05-16:20	Type and timing of prophylactic antithrombotic measures. Review of the evidence and presentation of the AOSpine Guidelines	James Harrop	
16:20-16:35	Type and timing of rehabilitation for spinal cord injury	Anthony Burns	
16:35-16:40	Management of central cord injury. Case presentation.	Bizhan Aarabi	
16:40-16:55	How do we apply imaging in the assessment and management of central cord injury?	Shekar Kurpad	
16:55-17:10	Optimal management of central cord injury—role and timing of surgery. Review of the evidence. Presentation of the AOSpine Guideline.	Brian Kwon	
17:10-17:15	Case resolution	Bizhan Aarabi	
17:15-17:25	Question and Answer	Michael Fehlings	
17:25-17:45	Future directions in the management of spinal cord injury—What is new? What is hot?	Michael Fehlings	
17:45-18:00	Question and Answer wrap-up	Michael Fehlings	
18:00-20:00	Industry evening symposia		



Global Spine Congress
2016

Thursday



Wednesday

Thursday

Friday

Saturday

E-posters & Posters

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Authors

Thursday Program Schedule

08:00-09:00 AOSpine Opening Symposium—Knowledge Creation and Improving Patient Care (Theatre 1)		Moderator: Michael Grevitt
08:00-08:05	Introduction	Michael Grevitt
08:05-08:15	AOSpine Knowledge Fora	Luiz Vialle
08:15-08:25	Best practice guideline in the surgery of adolescent idiopathic scoliosis	Marinus de Kleuver
08:25-08:35	The need for an updated spine trauma classification	Cumhur Oner
08:35-08:50	The future: knowledge gaps in the management of thoracolumbar burst fractures	Shanmuganathan Rajasekaran
08:50-08:59	Q&As	
08:59-09:00	Close of session	Michael Grevitt

09:00-09:30 BEST PAPERS 1—DEFORMITY (Theatre 1)		Moderators: Michael Janssen Jeffrey Wang
GO001	Characterization of Distribution of Segmental Changes in Cervical Alignment After Lumbar Pedicle Subtraction Osteotomy	T. Ailon, J. Scheer, C. Shaffrey, V. Lafage, T. Protosaltis, C. Ames , International Spine Study Group
GO002	Effect of topical versus parenteral tranexamic acid on blood loss in spinal deformity surgery. A prospective randomized controlled trial.	M. El-Sharkawi, S. Sayed , W. Gad, M. El-Meshtawy
GO003	Analysis of Lumbar Foramina Size Change in Patients with Lumbar Spondylolisthesis using Kinetic Magnetic Resonance Imaging	H.-M. Huang, J.-J. Yang, N. Patel , J. Wang, P. Hsieh, J. Liu, Z. Buser, J. Wang
GO004	New Motor Deficit After Adult Spinal Deformity Surgery Leads to Worsened Early HRQOL : Subanalysis of 273 patients from Scolio Risk 1 Prospective Study	R. Saigal, S. Berven, V. Lafage, M. Kelly, B. Kopjar, J. Smith, B. Dahl, K. Cheung, L. Carreon, F. Schwab, K. Rebmann, C. Shaffrey, M. Fehlings, L. Lenke, C. Ames
	Discussion	

09:30-10:00 GSC OPENING CEREMONY (Theatre 1)

10:00-10:30 Break

10:30-12:00 AOSPINE MEMBERS-ONLY SESSION—MANAGING YOUR ONLINE REPUTATION (Theatre 5) Speaker: Pablo Galiana

10:30-12:00 Paper Sessions (Theatre 1)		
10:30-11:15 TRAUMA—THORACOLUMBAR 1		Moderators: Frank Kandziora Zayed Al-Zayed
GO016	Surgical results of 135 thoraco - lumbar fractures treated with open posterior multi-level segmental fixation—a single center experience.	J. Wasserberg , R. Veres, M. Urbansky
GO017	Thoracoscopic vertebral body replacement of burst fractures in the thoracolumbar spine with a distractable titanium cage	C. Wutte , R. Ortmaier, H. Resch, F. Plachel, R. Bogner
GO018	Surgical Treatment of Burst Fractures of the Dorsolumbar Spine by Short Segment Posterior Instrumentation. To Fuse or Not to Fuse?	W. Koptan , M. El-Sharkawi, Y. Elmiligui
GO019	Direct spondylolysis repair in young adults	M. Negm
GO020	Long Segment Posterior Instrumentation with interbody fusion using locally harvested bone graft for Fracture Dislocations of Thoraco Lumbar Spine: An Outcome Study of 60 cases	K. Farooque
GO021	Posterior spinal fixation with fusion versus without fusion in treatment of dorsolumbar and lumbar fractures	T. Elkhateeb , A. Mahmoud
11:00-11:15	Discussion	

11:15-12:00 TRAUMA—THORACOLUMBAR 2		Moderators: Cumhur Oner Khalid Alsaleh
GO034	Epidemiology of multiple contiguous and non-contiguous thoracolumbar fractures in a level 1 trauma center in Upper Egypt	M. Abdo, E. Elmorshidy
GO035	Damage control surgery for thoracolumbar spine fractures by percutaneous pedicle fixation in polytrauma patients: Initial experience	M. Valencia, A. Leiva , F. Novoa, J. Riera, I. Contesse, J. Illanes
GO036	Outcome After Implantation Of A Hydraulic Vertebral Body Replacement In Traumatic Vertebral Fractures	M. Kreinest , D. Schmahl, P. A. Grützner, S. Matschke
GO037	Spinal Canal Decompression and Neurological outcome in Thoracolumbar Burst Fractures; A review of Evidence-Based Data	O. Elwardany
GO038	Posterior vertebral column resection:A salvage for thoracolumbar kyphosis after failed anterior instrumented fusion	F. Chen , Z. Dai
GO039	The AOSpine Sacral Fracture Classification	C. Bellabarba, G.D. Schroeder , C.K. Kepler, M.F. Kurd, J.C. Krieg, C.P. Kleweno, R. Firoozabadi, J.R. Chapman, F. Kandizoria, K.J. Schnake, S. Rajesekaran, J.H. Holstein, H.C. Sagi, M.F. Dvorak, L.R. Vialle, F. C. Oner, A.R. Vaccaro
11:45-12:00	Discussion	

10:30-12:00 Paper Sessions (Theatre 2)		
10:30-11:15 INFECTIONS 1		Moderators: Jose Maria Jimenez Shahzad Javed
GO011	Simultaneous Video-Assisted Thoracoscopic Debridement/ Fusion and Percutaneous Transpedicular Instrumentation in prone position for thoracic and thoracolumbar infections	H. Abdelrahman , M. Hasan, M. Elmeshtawy, K. Younis, M. Shousha, H. Boehm
GO012	To Evaluate Post-operative functional and radiological outcomes of patients with dorsal and dorsolumbar pott's spine who underwent anterior decompression and posterior instrumentation, through only Posterior Trans-pedicular approach.	B. Mohapatra
GO013	Surgical Site Infection in Spinal operations. A tertiary centre review of 4557 consecutive procedures over 5 years.	H. Fawi , M. Ahmed, J. Sousa, M. Lewis, S. Ahuja
GO014	Radical debridement and spinal reconstruction using titanium mesh cages (TMC's) in pediatrics patients with Pott's disease and vertebral osteomyelitis	A. Mushkin , D. Naumov
GO015	Functional Outcome after Anterior Decompression and Stabilization using Locally made stand-alone Titanium Cage with Bone Graft in Caries Spine: An experience of 600+ Cases at Ghurki Hospital.	A. A. Khan, A. Aziz
11:00-11:15	Discussion	
11:15-12:00 NOVEL TECHNOLOGIES 1		Moderators: Klaus Schnake Ahmed Al-Jahwari
GO028	Predicting high surgical treatment costs at primary spinal tumor patients	Z. Szoverfi , Á. Lazary, I. Koszó, K. Papik, P. Varga
GO029	A novel technique to reconstruct anterior cervical spine after total removal of C2 and C3 vertebrae	A. Haghnegahdar
GO030	Augmented Reality Mobile Applications to Interactively Show Complex Spine Pathologies: First Version	M. Galvez, G. Rojas, J. Fuentes, T. Asahi, C. Montoya, A. Vidal, W. Currie, A. Chahin
GO031	Psychosocial representations of the illness before lumbar spine surgery and their effects on recovery	P. Pócza-Véger , M. Csabai, P. Barzó
GO032	The Shilla growth guidance technique for paediatric scoliosis at 3-year follow-up: a preliminary report	N. Sekouris , A. Pilihou, E. Vlahos, K. Soultanis, G. Sapkas, L. Flouda
GO033	Cell salvage use, benefits and costs at Ipswich hospital spinal unit UK	T. Marjoram , S. Kaleel, D. Cumming, R. Lovell, S. Bhagat, A. Hudd, D. Sharp, J. Powell
11:45-12:00	Discussion	

10:30-12:00 Paper Sessions (Theatre 3)

10:30-11:15 DEFORMITY—THORACOLUMBAR ADOLESCENT 1		Moderators: Emiliano Vialle Yousry El-Hawary
GO005	Prevalence and Significance of Vitamin D deficiency in patients with Idiopathic Scoliosis requiring corrective surgery	A. Michael , M. Hampton, O. Evans, L. Breakwell, A. Cole, B. Naylor
GO006	Efficacy Of En Bloc Direct Vertebral Body Derotation (Dvbd) In Idiopathic Scoliosis Treatment	W. Urbanski , M. Wolanczyk, S. Dragan
GO007	The Effect of Post-Operative Complications in Complex Adult Spinal Deformity Surgery on Surgical Outcomes: an international, large-scale, prospective multi-center study	K. Cheung , C. Bow, D. Samartzis, K. Kwan, M. Dekutoski, F. Schwab, O. Boachie-Adjei, K. Kebaish, A. Christopher, Q. Yong, Y. Matsuyama, B. Dahl, M. Hossein, F. Pellisé-Urquiza, L. Carreon, C. Shaffrey, M. Fehlings, L. Lenke
GO008	The Rib Construct (RC) has provided secure proximal fixation for management of patients with EOS and severe thoracic hyperkyphosis	A. Ahmad
GO009	The convex manipulation: an alternative technique in surgical treatment of adolescent idiopathic scoliosis	L. Oggiano , G. La Rosa
GO010	Can EOS 3D Morphological Analysis Better Correlate with Pain Patterns than the Lenke Classification.	L. Simoes, J. Ouellet, F. Jiang , S. Aldebeyan, A. Aoude, J. Sun, C. Ferland, N. Saran, S. Bote
11:00-11:15	Discussion	
11:15-12:00 DEFORMITY—THORACOLUMBAR ADOLESCENT 2		Moderators: David Polly KV Menon
GO022	Single stage hemivertebra excision and correction of congenital scoliosis	Y. Elbanna
GO023	Prognostic Factors Of Thoracic Hypokyphosis After Posterior Spinal Fusion In Adolescent Idiopathic Scoliosis Using By All Pedicle Screws Instrumentation.	S. Perez Vergara , R. Pedro, B. Teresa, B. Paloma
GO024	Should the spinous process be harvested as bone graft in idiopathic scoliosis surgery?	P.-L. Lai , Y.-C. Yeh, C.-C. Niu, L.-H. Chen, W.-J. Chen
GO025	Near pre-operative shoulder and trunk range of motion during gait after surgical correction of adolescent idiopathic scoliosis	R. Holewijn , I. Kingma, M. De Kleuver, J. Schimmel, N. Keijsers
GO026	The development of a core outcome set for adolescents undergoing spinal deformity surgery: an AOSpine Knowledge Forum Deformity initiative	T. Haanstra, M. Van Hooff, N. Germscheid, M. De Kleuver
GO027	Apical Vertebral Rotation Assessment in AIS: What is the Best Method Scoliometer, X-ray or MRI?	W. Cho
11:45-12:00	Discussion	

12:15-13:15 Industry Lunch Symposia

13:30-15:00 AOSPINE MEMBERS-ONLY SESSION—HOW TO WRITE AND PUBLISH A PAPER (GLOBAL SPINE JOURNAL) (Theatre 5) Speakers: Jeffrey Wang, Jens Chapman, Karsten Wiechert

13:30-15:00 Paper Sessions (Theatre 1)

13:30-14:15 DEGENERATIVE—LUMBAR 1		Moderators: Jong Beom Park Mohammad Assous
GO040	Prevalence and Clinical Relevance of Sacroiliac Joint Pain Secondary to Lumbar Fusion Procedures	D. Zhang , C. Reizinho, A. Luis, M. Casimiro, J. Cabral
GO041	Patient-reported Outcomes following Elective Surgery for Lumbar Degenerative Disease: Effect of peri-operative complications on outcomes	S. Chotai, S. Parker, A. Sivaganesan, M. McGirt, J. Cheng , C. Devin
GO042	Low Back Pain—How Significant Are The Spinopelvic Parameters?	S. K. M. LV , D. Sharma, J. Menon, D. Barathi
GO043	Transforaminal Lumbar Interbody Fusion (TLIF) Clinical and Radiological Outcome	K. Allassiri
GO044	Psychological distress can be determined before lumbar surgeries with a clinically applicable, easy-to-use tool—the short form of the DRAM	Á. Lazary , J. Sziat, Z. Szoverfi, L. Kiss, P. Varga
GO045	Lumbar total disc replacement: 9th after the operation, is it the breakpoint for clinical deterioration and spontaneous fusion?	D. Stastna , J. Chrobok, R. Kučera, L. Prokop, J. Klener
14:00-14:15	Discussion	
14:15-15:00 DEGENERATIVE—LUMBAR 2		Moderators: Hans Jörg Meisel Imad Ahmad
GO058	Predictors of Discharge Destination After Lumbar Spine Fusion Surgery	S. Aldebeyan , A. Aoude, M. Fortin, A. Nooh, P. Jarzem, J. A. Ouellet, M. Weber
GO059	Prediction of treatment outcomes for patients with Chronic Low Back Pain: the development of a clinical decision guideline for spine surgeons	M. Van Hooff , H. Van Dongen, M. Spruit, R. Ostelo, M. De Kleuver
GO060	Pelvic incidence as a prognostic variable to assess the outcome of conservative treatment in the patients with spondylolisthesis.	S. K. M. LV , D. Sharma, J. Menon, D. Barathi
GO061	Does The Position Of The Spacer In TLIF Have An Influence On Anatomical Parameters Such As Segmental Lordosis, Foraminal Height? A Prospective Randomized Study	M. Ronai , P. Varga
GO062	Outcome prediction in elective spine surgery: A prospective cohort study	E. Shiban , B. Meyer, Y. Shiban, A. Mühlberger
GO063	Expectations of Pain Improvement and Actual Pain Improvement: A Prospective Comparison for Lumbar Spine Surgery	D. Lebl, A. Sama, F. Girardi , F. Cammisa, A. Hughes, R. Duculan, C. Mancuso
14:45-15:00	Discussion	

13:30-15:00 Paper Sessions (Theatre 2)

13:30-14:15 DIAGNOSTICS—CLINICAL		Moderators: Kurpad Shekar Khalid Alsaleh
GO046	Preoperative Norepinephrine Levels In Cerebrospinal Fluid And Plasma Of Pediatric Patients Predict Postoperative Pain Intensity After Spinal Fusion Surgery	C. Ferland , A. Parent, N. Saran, P. Ingelmo, S. Marchand, P. Sarret, J. A. Ouellet
GO047	Comparative study of treatment of high grade spondylolisthesis- Reduction Vs In-situ fusion- Do we need to rethink assessment of pelvic parameters?	S. Rajasekaran , G. Das, A. Dian, A. Shetty, R. Kanna
GO048	What is more effective treatment option for discogenic low back pain -Thermocoagulation or nonoperative treatment? : A systematic review and meta-analysis	J. Jang, J. Bae , I.-T. Jang, S. Lee, H. Kim, Y.-S. Yang, J.-E. Park
GO049	Are Tarlov Cysts being identified and reported on lumbar spine MRI scan in patients with sciatica	G. Clarke , V. Kapoor, J. Baxter
GO050	Test Score (SI5): Assess Diagnostic Of Sacroiliac Joint Dysfunction	J. Acevedo, S. Quintero Oliveros
GO051	Predictive factors for the outcome of surgical treatment of Lumbar Spondylolysis in young sporting individuals	U. Debnath , V. Goel
14:00-14:15	Discussion	
14:15-15:00 DIAGNOSTICS		Moderators: Emiliano Vialle Naeem Ahmed
GO064	Verification of Nerve Decompression Using Mechanomyography	N. Wessell, W. Ghacham, J. Khalil, J. Zavatsky , S. Bartol
GO065	Morphometric analysis of pedicle and lateral mass of C1 vertebra in Indian population using 3D reconstructed computerized tomographic images, with comparative analysis of the feasibility and safety of two proposed C1 pedicle screw trajectories in rel	V. Kanagaraju
GO066	Significant Alerts in Intraoperative Neurophysiologic Monitoring During Severe Spinal Deformity Surgeries—A Categorical Description Experience in Tertiary care referral center from the subcontinent	P. Gupta , S. Acharya, K. Kalra, R. Chahal, M. Kohli
GO067	Movement along the spine induced by transcranial electrical stimulation (TES) related to the montage of electrodes.	E. Hoebink
GO068	The relationship between increased signal intensity on t2-weighted magnetic resonance imaging and the entropy of gait analysis in cervical spondylotic myelopathy	W. Tsai , C.-C. Wu, J.-H. Lin, Y.-H. Chiang, C.-K. Chang, C.-W. Yang
GO069	Less False Negative In Neuromonitoring Lumbar Screws	P. C. García , P. P. Lorensu, B. D. Rodriguez
14:45-15:00	Discussion	

13:30-15:00 Paper Sessions (Theatre 3)

13:30-14:15 TRAUMA—CERVICAL 1		Moderators: Sh. Rajasekaran Gregory Schroeder
GO052	Transpedicular screw placement for subaxial cervical trauma with neuronavigation. Experience in a third world country. Hospital Santo Tomas. Panama.	A. De Leon , O. Villarreal, J. Hermida, J. Altafulla
GO053	Dorsal fusion as correction of craniocervical and atlantoaxial instability in patients with benign and malignant lesions using O-Arm System	N. Mirchev , R. Behr
GO054	Safety and efficacy of Harms' technique in the management of atlantoaxial instability. A single institution experience and review of the literatures	A. Abou-Madawi
GO055	Treatment options for Odontoid fractures. A comparasion between Anterior and Posterior approaches.	J. Farhat Neto, J. Veiga, J. Daniel
GO056	Teriparatide (rhPTH1-34) anabolic therapy for treatment of type II dens fracture non-union in elderly patients: report of 5 cases	L. Nasto, F. Tamburrelli, V. Pambianco, G. Autore, V. Formica, D. Colangelo, E. Pola
GO057	Outcome of patients with occipitocervical fusion for acute craniocervical instability	M. F. Hoffmann , K. Freund, T. A. Schildhauer
14:00-14:15	Discussion	
14:15-15:00 TRAUMA—CERVICAL 2		Moderators: James Harrop Ali Abou-Madawi
GO070	Ilio-sacral stabilization of sacral jumper's fractures using the AO-Spine fracture system: A novel surgical technique.	A. T. Mameghani , B. Jeanneret, S. Schären
GO071	Development of a universal disease-specific outcome instrument for spine trauma patients—The AOSpine Patient Reported Outcome Spine Trauma (AOSpine PROST)	S. Sadiqi , A. Lehr, M. Post, F. Oner, AOSpine Knowledge Forum Trauma
GO072	Surgical Outcomes after Traumatic Spinal Injury in Patients with Ankylosing Spondylitis—A Review of Ireland's National Spinal Unit	M. Berney , S. Morris, M. Nugent
GO073	Outcomes of Lumbopelvic Fixation in the Treatment of Complex Sacral Fractures Using Minimally Invasive Surgical Techniques	E. Jazini, E. Nwodim, O. Tannous, K. Banagan, E. Koh, S. Ludwig, D. Gelb
GO074	Non-contiguous Cervical Spine Injury in a 14-month old Child; Case Report and Review of the Literature	A. Shawky , A. Ezzati
GO075	Surgical Protocol based on Radiological Patterns in Osteoporotic fractures (OPF) with Neurology	M. Bapat , A. Gujral, S. Naskar
14:45-15:00	Discussion	

15:00-15:30 Break

15:30-1700 AOSPINE MEMBERS-ONLY SESSION—MANAGING YOUR ONLINE REPUTATION
(Theatre 5) Speaker: Pablo Galiana

15:30-17:00 Paper Sessions (Theatre 1)

15:30-16:15 NOVEL TECHNOLOGIES 2		Moderators: Chung Chek Wong Abdulrazzaq Alobaid
GO088	PEEK Rods for Posterior Lumbar Fixation: Pros and Cons. The first French series.	T. Desjardins
GO089	Informed consent for lumbar fusion aided by tablet-PC—a prospective, randomized, controlled and blinded comparison	P. Schleicher , M. Scholz, F. Kandziora
GO090	A Novel Quantitative Automated Measurement of CSF Area for the Diagnosis of Lumbar Spinal Stenosis	L. Pei-Ching , L. Jiann-Her, C. Yung-Hsiao, W. Chao-Cheng
GO091	Treatment of osteoporotic vertebral fractures with elastoplasty : 1-year results	M. Eichler
GO092	Development and implantation of an individualized 3D printed titanium cage for cervical fusion	U. Spetzger
GO093	Magnetically controlled growing rods for the management of early-onset scoliosis: results and complications at 3-year follow-up	G. La Rosa , L. Ruzzini, L. Oggiano
16:00-16:15	Discussion	
16:15-17:00 TRAUMA—THORACOLUMBAR 3		Moderators: Lorin Benneker Imad Ahmad
GO106	Double blind placebo-controlled trial of percutaneous vertebroplasty (VOPE)	E. Hansen , A. Simony, R. Rousing, L. Y. Carreon, H. Tropp, M. Ø. Andersen
GO107	Results of Ballon Kyphoplasty in Osteoporotic Fractures with Posterior Wall Injury	A. Shawky , B. Krajnovic, A. Ezzati
GO108	Influence of PMMA screw augmentation on the primary stability of an anterolateral plating system in osteoporotic vertebrae	M. Rüger, C. Von Rüden
GO109	Treatment of vertebral body metastases in palliative patients—radiofrequencyablation, a new and secure treatmentoption	J. Müller-Broich , T. Kretschmar, M. Porten, S. Demukaj, G. Saxler
GO110	Routine bone biopsy during percutaneous vertebroplasty or kyphoplasty in the treatment of osteoporotic vertebral fractures. Does it change the management plan? Do we know the costs?	M. Shakokani, T. Robinson, D. Cummings, R. Lovell, S. Bhagat, J. Powell, S. Kaleel
GO111	Spinal osteotomy for sagittal deformities using 'Posterior Only Approach'—A novel classification system	S. Rajasekaran , S. Reddy, A. Shetty, R. Kanna
16:45-17:00	Discussion	

15:30-17:00 Paper Sessions (Theatre 2)

15:30-16:15 IMAGING 1		Moderators: Bizhan Aarabi Gregory Schroeder
GO082	Dedicated Spine Measurement Software Quantifies Key Spino-Pelvic Parameters More Reliably Than Traditional PACS	M. Gupta , J. K. Henry, F. Schwab, E. Klineberg, J. Smith, J. Gum, David W. Polly, Jr, B. Liabaud, B. Diebo, D. Kojo Hamilton, R. Eastlack, P. Passias, D. Burton, T. Protopsaltis, V. Lafage, International Spine Study Group
GO083	Validity and reliability of spine raster-stereography in Adolescent Idiopathic Scoliosis patients.	A. Tabard , A. Bonnefoy-Mazure, P. Lascombes, S. Armand, R. Dayer
GO084	Anatomic Guideline for Approach to Lateral Thoraco-Lumbar Interbody Fusion	W. Cho
GO085	Measuring Cobb's angle in scoliosis—Can Smartphones match manual methods and software based analysis? A three way crossover study	P. Sudarshan, A. Panda , A. Paramasivam, V. Varma, S. Hegde
GO086	Case Series of First Trolley Gliding Vehicle Device used in patients with Early Onset scoliosis as a Growth Guiding System	A. Aoude , L. Simoes, S. Aldebeyan, J. A. Ouellet
GO087	Morphometric Study Of Lumbar Vertebrae Pedicle Through Tomographic Exams Of Outpatients From A Brazilian University Hospital Center	L. Sandon , R. Schmidt Brock, M. Jacobsen Teixeira
16:00-16:15	Discussion	
16:15-17:00 IMAGING 2		Moderators: Claudius Thomé Shahzad Javed
GO094	Indications for Use of Dynamic Four-dimensional Computed Tomography in Diagnosing Instability in Spinal Cervical Conditions	K. Lim , J. Troupis, C. Daly, D. Oehme, T. Goldschlager
GO095	Pendulum rule versus spinopelvic parameters. How the explain the sagittal shape of the spine ?	G. Norotte
GO096	An imaging study of partiallythreaded screw fixation of C2 pedicle fracture	Q. Wang , S. Xu, G. Wang
GO097	Image of slack spinal cord	M. Fujita
GO098	Validity of CT Scan measurements of thoracic and lumbar pedicle dimensions	T. Apostolou , I. Chatziprodromidou, I. Magras, N. Foroglou
GO099	Interspinous Motion Assessment in Anterior Cervical Discectomy and Fusion: Anterior Plate versus Zero Profile Implant	J. Ballesteros Plaza , A. Munjin, J. Lecaros, J. Zamorano, M. Lecaros, C. Larrain
16:45-17:00	Discussion	

15:30-17:00 Paper Sessions (Theatre 3)

15:30-16:15 DEFORMITY—CERVICAL		Moderators: Marinus De Kleuver Karsten Wiechert
GO076	The Pathoanatomy of Congenital Cervical Stenosis: The Triangle Model	H. Mai , T. Jenkins, W. Hsu
GO077	Prospective Multicenter Assessment of Early Complication Rates Associated with Adult Cervical Deformity (ACD) Surgery in 78 Patients	J. Smith , V. Lafage, C. Shaffrey, T. Protopsaltis, P. Passias, F. Schwab, M. O'Brien, M. Gupta, G. Mundis, R. Hart, H. Kim, E. Klineberg, K. D. Riew, C. Ames, International Spine Study Group
GO078	Six different Vertebral artery configurations, in Three subjects commanding different approaches for C1-C2 distraction & fixation in cases of CVJ Anomaly : A case series	M. Chouhan , V. Prasad, G. Sutaria
GO079	Berry's Ligament And The Inferior Thyroid Artery As Reliable Anatomical Landmarks For The Recurrent Laryngeal Nerve (RLN)—A Fresh Cadaveric Study Relevant To The Cervical Spine	A. Rajabian , N. Quraishi
GO080	Distraction arthrodesis of the atlantoaxial facet joint with preservation of the C2 root for the management of intractable occipital neuralgia caused by C2 root compression	H. S. Han , S. Kang, K. Daniel Riew, J. Yi, G. Lee, A. Yeom, B.-S. Chang, C.-K. Lee, H. J. Kim, J. S. Yeom
GO081	Cervical-thoracic spine inclination (CTS): anatomy peculiarities and surgical options	A. Mushkin, S. Ryabykh , A. Gubin, S. Kolesov, S. Vissarionov, V. Snischuk, U. Eduard
16:00-16:15	Discussion	
16:15-17:00 MINIMALLY INVASIVE SPINE SURGERY 1		Moderators: Christopher Shaffrey Patrick Hsieh
GO100	Chronic painful osteoporotic vertebral compression fractures (OVCFs) of thoracolumbar spine: Percutaneous vertebroplasty versus conservative management among Egyptian patients	K. Hassan , M. El-Sharkawi
GO101	Does Level of Response to SI Joint Block Predict Response to SI Joint Fusion?	D. W. Polly , D. Cher, P. Whang, C. Frank, H. Lockstadt, C. Harvey, J. Sembrano
GO102	Treatment of Thoracolumbar Osteoporotic Vertebral Compression Fractures with Vertebral Body Stenting: A Prospective Study	A. Alobaid, I. Shehata , A. Almutair
GO103	Combined Endovascular And Surgical Treatment Of Spinal Dural Arteriovenous Fistulas	M. Vukic , D. Ozretic, M. Rados, S. Marasanov, M. Rozankovic
GO104	"Capac Ñan" Stairway Fashion Hemilaminectomy. A New Minimally Invasive Multilevel Option To Treatment Of Cervical Stenosis. An Study With 24 Months Of Follow Up.	C. Arias Pesantez
GO105	Vertebroplasty Injections Using High Viscosity Cement—a Cadaveric Study	W. Awwad, A. Baljoun, Y. Alabdulkarim , C.-H. Kim, D. Giannitsios, L. Beckman, J. A. Ouellet, T. Steffen
16:45-17:00	Discussion	

17:00-18:00 Spine Societies (Theatre 1)

Symposium hosted by CERVICAL SPINE RESEARCH SOCIETY—
Guidelines for the Management of Degenerative Cervical Myelopathy:
A Joint CSRS/AOSpine North America Initiative

17:00-17:07	Welcome, introduction and case presentations	Michael Fehlings
17:07-17:14	Overview of the Guidelines Process	Lindsay Tetreault
17:14-17:21	Natural History of Degenerative Cervical Myelopathy	Mohammed Farid Shamji
17:21-17:28	Management of the Patient with Asymptomatic/minimally symptomatic patient with cervical cord compression	James Harrop
17:28-17:35	Management of the Patient with mild degenerative cervical myelopathy	Lee Riley
17:35-17:42	Management of the Patient with moderate or Severe Degenerative cervical myelopathy	Jeffrey Wang
17:42-17:49	Panel Discussion (chaired by Michael Fehlings)	Lindsay Tetreault, Mohammed Farid Shamji, James Harrop, Jeffrey Wang, Lee Riley
17:49-18:00	Open discussion	

17:00-18:00 Spine Societies (Theatre 2)

Symposium hosted by EGYPTIAN SPINE ASSOCIATION—
Management of Cranio-cervical lesions

Moderators:
Yasser Elbanna
Mohammad Abdel Wanis

17:00-17:10	Surgery of reducible and non-reducible atlanto-axial instability	Yasser Elbanna
17:10-17:20	Anterior release of atlanto-axial compression, is it a must?	Mohamed Elmeshtawy
17:20-17:30	Management of rotatory atlanto-axial fixation	Ali Abou-Madawi
17:30-17:40	Surgery of traumatic spondylolesthesis of the axis	Wael Koptan
17:40-17:50	Lateral approach for cranio-cervical intradural tumors	Ali Abou-Madawi
17:50-18:00	Discussion and Conclusion	All

17:00-18:00 Spine Societies (Theatre 3)

Symposium hosted by IRANIAN SPINE SOCIETY &
NEUROSURGICAL SOCIETY OF IRAN

Moderators:
Saeid Safaei
Mohammad Samadian
Vafa Rahimi-Movaghar

17:00-17:30	Posterior vertebral column resection (VCR) or Posterior subtraction osteotomy (PSO)	Saeid Safaei
17:00-17:30	Posterior vertebral column resection (VCR) or Posterior subtraction osteotomy (PSO)	Hasan Ghandehari
17:30-17:50	Spinal Instrumentation: Past, Present and Future	Hamid Rahmat
17:50-18:00	The Benefits of Teamwork Spine Surgery: Neurospine surgeon / Orthospine Surgeon	Mohammad Samadian



Global Spine Congress
2016

Friday



Wednesday

Thursday

Friday

Saturday

E-posters & Posters

Disclosures

Authors

Friday Program Schedule

08:00-09:00	KNOWLEDGE FORUM DEFORMITY SYMPOSIUM—ADOLESCENT SPINAL DEFORMITY (Theatre 1)	Moderator: Marinus De Kleuver
08:00-08:03	Case presentation with focus on pre-operative considerations	Christopher Shaffrey
08:03-08:10	Lecture on pre-op evaluation and preparation	Kenneth Cheung
08:10-08:20	Discussion by panel	All
08:20-08:23	Case presentation with focus on intra-op strategy	David Polly
08:23-08:30	Lecture on intra-op strategy including consensus results	Mike Grevitt
08:30-08:40	Discussion by panel	All
08:40-08:43	Case presentation with focus on shoulder balance and PJK	Marinus de Kleuver
08:43-08:50	Lecture on shoulder balance and PJK	K. V. Menon
08:50-09:00	Discussion by panel	ALL

08:00-09:00	AOSPINE MIDDLE EAST SYMPOSIUM—RECENT ADVANCES IN THE MANAGEMENT OF THORACOLUMBAR FRACTURES (Theatre 2)	Moderators: Imad Hashim Ahmad Zayed Al-Zayed
08:00-08:10	Introduction of the new AOSpine T-L fracture classification system	Mohammad El-Sharkawi
08:10-08:20	Updates on bracing for thoracolumbar spine fractures	Amer Aziz
08:20-08:30	Diagnosing injury to the posterior ligamentous complex: Where we are in 2016?	Khalid AlSaleh
08:30-08:40	Posterior short segment pedicle screw fixation: tips and tricks	Abdulrazzaq Alobaid
08:40-08:50	Minimally invasive management of T-L spine fractures	Abdulaziz Al-Mutair
08:50-09:00	Discussion	

08:00-09:00	TK SYSTEM—NEW TECHNOLOGIES TO TREAT SPINAL PATHOLOGIES (Theatre 3)	Moderator: Robert McGuire
08:00-08:02	Introduction of program and speakers	Robert McGuire
08:02-08:14	Management of Adult Deformity using the lateral approach	Robert McGuire
08:14-08:26	Innovative Fixation techniques for Adult Deformity	Joseph Zavatsky
08:26-08:38	MIS techniques in the treatment of Lumbar Spondylolisthesis. Science vs Marketing	Avelino Parajon
08:38-08:50	Cervical Spondylosis, HNP, Stenosis...Fusion or Arthroplasty. Has the paradigm shifted?	Maarten Spruit
08:50-09:00	Discussion	All

09:00-09:30	BEST PAPERS 2—DEGENERATIVE (Theatre 1)	Moderators: John Webb Luiz Vialle
GO112	Does Age Affect Surgical Outcomes in Patients with Degenerative Cervical Myelopathy?: Results from the Prospective, Multicenter AOSpine International Study on 479 Patients	H. Nakashima , L. Tetreault, N. Nagoshi, A. Nouri, M. Fehlings
GO113	Is Preoperative Duration of Symptoms a Significant Predictor of Functional Status and Quality of Life Outcomes in Patients Undergoing Surgery for the Treatment of Degenerative Cervical Myelopathy?	L. Tetreault , B. Kopjar, J. Wilson, P. Arnold, M. Fehlings
GO114	Lumbar Spondylolisthesis: Radiographic criteria of instability	R. Hajj , Y. Assaf, J.-C. Lahoud, F. Hoyek
GO115	Computational anatomy of C2 based on Quantitative Computed Tomography and its implications for screw positioning	D. Gehweiler , D. Wähnert, M. J. Raschke, R. Richards, H. Noser, L. Kamer
	Discussion	

09:30-10:00 Break

10:00-11:30 AOSPINE MEMBERS-ONLY SESSION—WHAT SPINE SURGEONS CAN LEARN FROM PILOTS (Theatre 5) Speaker: Mark Roth

10:00-12:00 Paper Sessions (Theatre 1)		
10:00-11:00	DEFORMITY—THORACOLUMBAR ADOLESCENT 3	Moderators: Mike Grevitt KV Menon
GO116	Posterior only Vertebral Column Resection (PVCR) for Fixed Angular Kyphosis (FAK)	M. El-Sharkawi, W. Koptan, E. Elmorshidy , H. Tammam, K. Hassan, Y. El Miligui
GO117	Long term experience with Reduction technique in High grade spondylolisthesis in the young	P. Sudarshan , A. Panda, A. Paramasivam, V. Varma, S. Hegde
GO118	The correlation of anchor density and the curve correction of adolescent idiopathic scoliosis surgery	Y.-C. Yeh , P.-L. Lai, W.-J. Chen, C.-C. Niu, L.-H. Chen
GO119	VEPTR: single centre experience of 9 years.	C. Wimmer, A. Siam , T. Pfandlsteiner
GO120	Health-related Quality-of-life in Adolescent idiopathic scoliosis patients 25 years after treatment.	A. Simony , L. Carreon, S. Christensen, M. Andersen
GO121	Quality Of Life After Scoliosis Surgery In Cerebral Palsy	D. Wood, G. Cooke, A. Michael , L. Breakwell, A. Cole
GO122	Tranexamic Acid Administration in Adolescent Idiopathic Scoliosis Surgery Reduces % Total Blood Volume Loss	E. Butler, T. Garber, C. Ledonio, D. W. Polly , C. Cohn
GO123	Posterior selective fusion with pedicle instrumented correction in Thoracic and Thoracolumbar idiopathic scoliosis	J. McConnell , U. Debnath
GO124	Treatment Of Early Onset Scoliosis—An Early Experience Of Growing Rod Insertion And Lengthening	E. Mor Japar Khan, P. Ngalap Ayu, J. Goh , M. Singh, M. Mohd Rashid, D. Amir, F. Mohamad
10:45-11:00	Discussion	
11:00-12:00	DEFORMITY—THORACOLUMBAR ADOLESCENT 4	Moderators: Sigurd Berven Zayed Al-Zayed
GO152	Asymmetry of the Vertebral Body and Pedicles in the True Transverse Plane in Adolescent Idiopathic Scoliosis	R. Brink, T. Schlösser, D. Colo, K. Vincken, M. Van Stralen, S. Hui, W. Chu, J. Cheng, R. Castelein
GO153	Correlation between spinal coronal profile and proximal femur bone mineral density in adolescent idiopathic scoliosis	A. Andalib
GO154	The choice of lower instrumented vertebra in AIS Comparison of Lenke, Suk and Dubousset criteria	K. Kharrat , A. Sebaaly, M. Rizkallah, G. Kreichati
GO155	Low-density Pedicle Screw Constructs for Adolescent Idiopathic Scoliosis: Evaluation of Effectiveness and Cost	O. Tannous, E. Jazini, K. Banagan, E. Belin, D. Gelb
GO156	The physical and mental health in the conservative treatment of the idiopathic scoliosis	P. Diaremes , E. Christodoulou, K. Kafchitsas, A. Christodoulou, P. Symeonidis
GO157	Comparison of surgical outcomes by the age at the time of surgery in the treatment of congenital scoliosis: more than 10-year follow-up	D.-G. Chang , J.-H. Kim, K.-H. Na, J.-H. Lee, S.-I. Suk
GO158	Coronal and sagittal plane correction in Adolescent Idiopathic Scoliosis (AIS) using all pedicle screw versus hybrid instrumentation. A Systematic Review	W. Gad , M. El-Sharkawi, W. Koptan, M. Darwish, N. Quraishi
GO159	Selection of Lowest Instrumented Vertebra in the management of thoracolumbar and lumbar adolescent idiopathic scoliosis using pedicle screw instrumentation.	U. Nadeem , A. Shah, A. Zaman, A. Aziz
GO160	Post-operative evaluation of sagittal spinal balance in Lenke 1a and 5c type of adolescent idiopathic scoliosis: a prospective study	A. Mezentsev, D. Petrenko, D. Demchenko, V. Krishnappa
11:45-12:00	Discussion	

10:00-12:00 Paper Sessions (Theatre 2)

10:00-11:00 INFECTIONS 2		Moderators: Roberto Chapa Amer Aziz
GO134	Surgery for spinal tuberculosis: a multi-center experience of 582 case	Md. Shah Alam , K. Phan, Md. Rezaul Karim, S. Jonayed, H. Md. Munir, S. Chakraborty, T. Alam
GO135	Spinal osteomyelitis as a manifestation of neonatal sepsis—the time bomb	A. Pershin , A. Mushkin
GO136	Post-traumatic spondylodiscitis. Update, series of 17 patients and review of the literature.	H. Abdelrahman , M. Shousha, H. Boehm
GO137	Spondylodiscitis 10 years experience of 40 cases in a third level hospital in Bogotá, Colombia.	C. Bedoya, F. Alvarado, L. Morales, A. Rodriguez, M. Farfan , A. Rodriguez, D. Tafur
GO138	Demographics of tuberculosis of spine and factors affecting neurological improvement in patients suffering from tuberculosis of spine—A Retrospective analysis of 312 cases	A. Sharma , H. Chhabra, T. Chabra
GO139	Anterior column reconstruction with stand alone titanium cage, without anterior plating in tuberculosis cervical spine. An experience of 47 patients.	Q. Amin , M. Imran, R. Akram, S. Javaid, N. Ahmad, A. Aziz
GO140	Anterior column reconstruction with bundled autologous rib graft after thoracic spinal tuberculosis debridement	Q. Wang, S. Xu , G. Wang
GO141	Classification of dorso-lumbar tuberculous lesions. Prospective analysis of 270 radiological lesions.	S. Naskar , M. Bapat, A. Gujral
GO142	Single stage anterior corpectomy and posterior instrumentation in tuberculous spondylitis with varying degrees of neurological deficit	U. Debnath , J. McConnell
10:45-11:00	Discussion	
11:00-12:00 SURGICAL COMPLICATIONS 1		Moderators: Peter Varga Ghassan Skaf
GO161	Junctional kyphosis after long segment fusion	M. El-Sharkawi, W. Gad , A. Elkott, H. Tammam, M. El-Meshtawy
GO162	Intra and perioperative complications with the minimally invasive antero-lateral approach (OLIF) to the lumbar spine	C. Mehren , D. Sauer, C. Siepe, M. Mayer, A. Korge
GO163	Vertical Expandable Prosthetic Titanium Rib (VEPTR) Complications	I. Abouyoussef , N. Ventura
GO164	Why Does C5 Palsy Occur After Prophylactic Bilateral C4-5 Foraminotomy in Open-Door Cervical Laminoplasty? A Risk Factor Analysis	G. Liu, Ma. Ramona Reyes , K. Riew
GO165	Efficacy of a postoperative infection prevention protocol in spine surgery	S. Pantoja , F. Luna, B. Hervé, C. Gutierrez, R. Postigo
GO166	Intra-wound Vancomycin Reduces the Infection in Growth-Friendly Spine Surgery.	J. Haller, A. Hulet, Q. Ding, A. Presson, J. Heflin, J. Smith
GO167	Factors leading to a poor functional outcome in spinal meningioma surgery: Clinical and Surgical remarks on 173 cases	A. Raco , A. Pesce, G. Toccaceli, M. Dominicucci, R. Delfini
GO168	Incidental Dural Tears during Lumbar Surgery: Incidence and Management	O. Elfalaky, A. Elzarief
GO169	Spine Surgery under Spinal anaesthesia	M. Khattab , Y. El-Hawary, S. El-Ghamry, A. Montasser
11:45-12:00	Discussion	

10:00-12:00 Paper Sessions (Theatre 3)

10:00-11:00 DEGENERATIVE—CERVICAL		Moderators: Juan Emmerich Muzahem Taha
GO125	A Clinical Prediction Rule for Functional Outcomes in Patients Undergoing Surgery for Severe Degenerative Cervical Myelopathy: Analysis of an International AOSpine Prospective Multicentre Dataset of 254 Subjects	L. Tetreault , B. Kopjar, P. Cote, P. Arnold, M. Fehlings
GO126	The Relationship Between Preoperative Clinical Presentation and Quantitative MRI features in patients with Degenerative Cervical Myelopathy	A. Nouri , L. Tetreault, K. Dalzell, J. Zamorano, M. Fehlings
GO127	CT-Myelogram Predictors of Outcome in Patients with Cervical Spondylotic Myelopathy: Results of a Systematic Review	F. Waly, Fahad H. Abduljabbar , M. Fortin, M. Weber
GO128	C5 Palsy After ACDF: Topographic Correlation With Chassaigne's Tubercle (C6)? A Fresh Cadaveric Study	A. Rajabian , Nasir A. Quraishi
GO129	Do racial differences affect surgical outcomes in patients with degenerative cervical myelopathy?: Results from the prospective multicenter AOSpine international study on 479 patients	N. Nagoshi , L. Tetreault, H. Nakashima, A. Nouri, M. Fehlings
GO130	Clinical Outcome Of Anterior Vs Posterior Approach For Cervical Spondylotic Myelopathy	M. Cahueque, A. Cobar, A. Ortiz , G. Caldera
GO131	The Minimum Clinically Important Difference of the modified Japanese Orthopaedic Association Scale in Patients with Degenerative Cervical Myelopathy	L. Tetreault , B. Kopjar, P. Cote, A. Nouri, M. Fehlings
GO132	Spinal cord drift after non instrumented posterior cervical laminectomy	K. Kharrat , A. Sebaaly, R. Moussa
GO133	Degenerative changes in the cervical spine are more common in middle-aged patients with thalidomide embryopathy than in healthy individuals	S. Ghassemi Jahani , A. Daielsson, R. Ab-Fawaz, H. Hebelka, B. Danielson, H. Brisby
10:45-11:00	Discussion	
11:00-12:00 ARTHROPLASTY—CERVICAL		Moderators: Bryan Ashman Youssry El-Hawary
GO143	Determination of the Center of Rotation for Flexion/Extension Before and After Insertion of 3 Different Types of Disc Prostheses, and Comparison with In-Vivo MRI-Derived Data from Healthy Volunteers.	M. Mühlbauer , E. Tomasch, W. Sinz, S. Trattng, H. Steffan
GO144	Early clinical and radiographical results of single level cervical arthroplasty with Discocerv®	S. Oh
GO145	Hybrid constructs in the surgical treatment of degenerative cervical disc disease—five-year clinical and radiological follow up	B. Szollosi , P. Varga
GO146	Adjacent segment degeneration and adjacent segment disease in patients with cervical arthroplasty with 5 years follow-up	A. Isais Gomez , A. Gonzalez-Moga, H. Santos
GO147	Clinical and radiological outcome at the 10 year follow up of total cervical disc replacement	C. Mehren , F. Heider, B. Zillner, C. Siepe, A. Korge, M. Mayer
GO148	Revision Surgeries following Artificial Disc Replacement of Cervical Spine: Analysis of 21 Cases	Jong-Beom Park , H. Chang, Jin S. Yeom, Kyung-Soo Suk, Dong-Ho Lee, Jae-Chul Lee
GO149	Surgical treatment for cervical dislocation with quadriplegia in a young child aged 5 years old: a case report and review of the literature	E. Elmorshidy
GO150	Predictors of Extended Hospital Stay after Cervical Disc replacement or Anterior Cervical Discectomy and Fusion: Results from 1,004 Patients in an FDA Trial	A. Greenberg, P. Mummaneni, S. Tim Yoon
GO151	A five-year prospective clinical and radiological review of a semi-constrained ceramic-ceramic cervical disc replacement	G. Swamy, K. Mitsiou , F. Burget, S. Nanjayan, R. Bommireddy, Z. Klezl
11:45-12:00	Discussion	

Friday

12:00-13:00 Break

13:00-14:15 Industry Lunch Symposia

14:15-15:15 AOSPINE MEMBERS-ONLY SESSION—HOW TO WRITE AND PUBLISH A PAPER (GLOBAL SPINE JOURNAL) (Theatre 5) Speakers: Jeffrey Wang, Jens Chapman, Karsten Wiechert

14:15-15:15 Paper Sessions (Theatre 1)

14:15-15:15 DEFORMITY—THORACOLUMBAR ADULT 1		Moderators: Norman Chutkan Zayed Al-Zayed
GO186	Adult Spinal Deformity in the elderly. Preliminary clinical and radiological results in 22 patients treated by a two times minimally invasive spine surgery.	M. Cimatti, S. Forcato, M. Miscusi, A. Frati, F. Polli, A. Raco
GO187	Pelvic incidence is not constant	H. Tammam , A. Alkot, W. Gad, W. Koptan, M. El-Sharkawi
GO188	Cognitive Impairment Following Adult Spinal Deformity Surgery	V. Nabiyev, S. Ayhan, S. Yuksel, T. Mmopelwa , M. Domingo Sabat, F. Pellise, A. Alanay, F. Javier Sanchez Perez Grueso, F. Kleinstuck, I. Obeid, E. Acaroglu, European Spine Study Group (ESSG)
GO189	Identifying the best treatment in Adult Spinal Deformity: A decision analysis approach	E. Acaroglu , A. Cetinyurek Yavuz, Ü. Özgür Güler, S. Yuksel, Y. Yavus, S. Ayhan, M. Domingo Sabat, F. Pellise, F. Javier Sanchez Perez Grueso, P. Grueso, A. Alanay, I. Obeid, F. Kleinstuck, European Spine Study Group (ESSG)
GO190	Reduction of pelvic tilt after surgical correction of low-grade isthmic spondylolisthesis is correlated with rather improvement of back pain than quality of life.	A. Maciejczak
GO191	Spinopelvic alignment and functional outcome after circumferential fusion for low-grade isthmic spondylolisthesis	P. Horsting , P. Ogink, M. Van Hooff, N. Keijzers, M. De Kleuver
GO192	Global tilt: A single parameter incorporating the spinal and pelvic parameters correlates with Health-Related Quality of Life Parameters	C. Yilgor , M. Enercan, A. Hamzaoglu, F. Pellise, F. Perez-Grueso, E. Acaroglu, I. Obeid, F. Kleinstuck, A. Alanay, European Spine Study Group (ESSG)
GO193	Is Sacro-femoral-pubic Angle a Good Indicator of Pelvic Tilt?	J. You, P. Le, W. Cho
	Discussion	

14:15-15:15 Paper Sessions (Theatre 2)

14:15-15:15 DEGENERATIVE—LUMBAR 3		Moderators: YH Yau Khalil Kharrat
GO194	Fulfillment of Expectations Two Years after Lumbar Spine Surgery	D. Lebl, A. Sama, F. Girardi , F. Cammisa, A. Hughes, R. Duculan, C. Mancuso
GO195	6-Minute Walk Test: A Simple Objective Test In Screening And Monitoring Of Spinal Claudication: Prospective Study On 1182 Patients	Y. Chan
GO196	Analysis of risk factors for early adjacent segment disease underwent revision surgery within 5 years after lumbar spinal fusion	J. Soh , C.-H. Hong
GO197	A Multicenter Prospective Randomized Controlled Clinical Trial to Evaluate the Effectiveness and Safety of a Standalone Percutaneous Interspinous Spacer Versus Decompressive Surgery in Degenerative Lumbar Spinal Stenosis with Neurogenic Intermittent	B. Meyer , J. Le Huec
GO198	Comparison of three doses of Epidural Steroid Injection with single dose of Epidural Steroid Injection for Lumbar Radicular pain in Spinal Stenosis patients	S. Ahmad , A. Aziz, I. Ahmed, S. Javed, N. Ahmed, A. Uz-Zaman, R. Akram
GO199	The prevalence of High-Intensity Zone in symptomatic patients and its correlation with the disc degeneration and segmental motion	J.-J. Yang, H.-M. Huang, F. Acosta, T. Chen, Z. Buser , J. Wang
GO200	Concordance Between Patients' and Surgeons' Expectations of Lumbar Spine Surgery	D. Lebl , A. Sama, C. Mancuso, R. Duculan, F. Cammisa, A. Hughes, F. Girardi
GO201	A Radiological Evaluation of effect of a single level Trans-Foraminal Lumbar Interbody Fusion (TLIF) on Lumbar Sagittal Parameters	K. Salem , C. Fisher, M. Dvorak
	Discussion	

14:15-15:15 Paper Sessions (Theatre 3)

14:15-15:15 CERVICAL FUSION		Moderators: Robert A. McGuire Naeem Ahmed
GO178	Right Versus Left Sided Exposures Of The Recurrent Laryngeal Nerve (RLN) And Its Branches—A Fresh Cadaveric Study Relevant To The Cervical Spine	A. Rajabian , N. A. Quraishi
GO179	Plate construct versus cage alone in ACDF. Does the plate maintain a Sagittal plane correction—Clinical outcome and radiological findings correlation	A. Alhammoud , A. Baco, M. Aboulebda
GO180	Cost per Quality Adjusted Life Years gained for Anterior Cervical Discectomy and Fusion For Degenerative Spine Disease in Elderly Population	S. Chotai, S. Parker, M. McGirt, C. Devin, J. Cheng
GO181	Stand-Alone Cages in Anterior Cervical Discectomy & Fusion: Mid-term Outcomes	K. Elabed
GO182	A Biomechanical Evaluation of a Versatile and Novel Anterior Cervical Fusion Device Possessing Modular and Integrated Fixation Capabilities	R. Panchal , A. Gandhi, C. Ferry, S. Farmer, J. Hansmann, J. Wanebo
GO183	Safety and efficacy of local bone with PEEK cage versus iliac bone graft in anterior cervical discectomy and fusion: a prospective study	Z. Liu , J. Liu, X. Xiong, R. Xu
GO184	Long-term clinical and radiological outcome evaluation of 3- and 4 level ACDF with a zero-profile implant. Impact of cervical sagittal alignment on clinical outcome.	G. Barbagallo , F. Certo, S. Palmucci, V. Albanese
GO185	Anterior cervical discectomy and fusion using an "oversized" PEEK cage. Radiological and clinical outcome	M. El-Sharkawi, W. Gad
	Discussion	

14:15-15:15 Paper Sessions (Theatre 4)

14:15-15:15 BASIC SCIENCE 1		Moderators: Fackson Mwale Vafa Rahimi-Movaghar
GO170	The 10,000-Fold-Effect-Retrograde Neurotransmission—A Newer Concept For Paraplegia's Physiological Revival-Use Of Intrathecal Sodium Nitroprusside In 100 Cases—A Preliminary Report	V. Tewari , M. Husain, H. Das Gupta
GO171	An experimental study on the treatment of spinal cord injury in rats by tissue engineering method that uses ADSCs modified by BDNF and NT-3 double genes combing the use of SFCS	W. Ji, Y. Qiu
GO172	Does the Location of Prophylactic Vertebral Cement Above Long-Segment Fusion Constructs Effect Endplate Stress: A Finite Element Model	A. Shah, J. Zavatsky, R. McGuire, H. Serhan, D. Briski , V. Goel
GO173	Assessment Of A Learning Strategy Among Spine Surgeons	A. Gotfryd, J. Corredor , W. Teixeira, D. Martins, J. Milano, A. Lutaka
GO174	Polymorphism in the C-terminal cytoplasmic site, Arginine Phosphorylation site and 3'UTR of Connexin 43 and its association with the progression of Disc Herniation	K. Rajsekar , M. Kuhar, N. Narayanasamy, S. Vaishya, N. Devaraj, S. Rajasekaran
GO175	Effect of Posterior Dynamic Instrumentation on High-Intensity Zone in Lumbar Degenerative Disc Disease	S. Canbay , Y. Ataker, N. Canbolat, Z. Kabaoglu, T. Oktenoglu, M. Sasani, A. Ozer
GO176	Innate lymphoid cells are present at healthy patients spinal entheses, providing a potential mechanism for spondyloarthropathy pathogenesis.	R. Cuthbert, E. Fragkakis , P. Giannoudis, R. Dunsmuir, P. Millner, D. McGonagle
GO177	Adipose-derived stem cells as a potential additive therapy in chronic compression neuropathy in rodents: a Diffusion Tensor Imaging study	L. Sottaz , S. Schären, S. Madduri, D. Schäfer, D. Kalbermatten
	Discussion	

15:15-15:45 Break

15:45-17:00 AOSPINE MEMBERS-ONLY SESSION—WHAT SPINE SURGEONS CAN LEARN FROM PILOTS (Theatre 5) Speaker: Mark Roth

15:45-17:15 Paper Sessions (Theatre 1)		
15:45-16:30 DEGENERATIVE—LUMBAR 4		Moderators: Tim Yoon Giuseppe Barbagallo
GO208	Efficacy And Safety Of Minimally Invasive Axial Presacral L5-S1 Interbody Fusion In The Treatment Of Lumbosacral Spine Pathology: A Retrospective Clinical And Radiographic Analysis	M. Balsano , A. Zachos, P. Tranquilli Leali, C. Doria
GO209	Thoracic Disc Herniation: 20 years Experience in 82 cases	A. Rahimizadeh
GO210	Qualitative Grading on Magnetic Resonance Imaging as a tool for decision making in lumbar spinal stenosis	S. Soman , J. Modi
GO211	The Surgical Management of Low Grade Single Level Adult Degenerative Spondylolisthesis: Posterolateral Fusion versus Posterior Lumbar Interbody Fusion	K. Elabed
GO212	How Lumbar Disc Geometrics Affect the Risk for Rod Fracture in Patients Undergoing Adult Spinal Deformity Surgery: An Initial Report	D. Briski, J. Zavatsky , B. Cook
GO213	Long-term follow-up results of a Combined Physical and Psychological program for patients with Chronic Low Back Pain	M. Van Hooff , J. O'Dowd, J. Van Loon, M. Spruit
16:15-16:30	Discussion	
16:30-17:15 DEFORMITY—THORACOLUMBAR ADULT 2		Moderators: Claudio Lamartina Mohammad El-Sharkawi
GO232	Is it necessary to fuse to S1 for the tilted L5 in the treatment of adult degenerative scoliosis?	D. Wang
GO233	Effect of Treatment Complications on the Outcomes in Adult Spinal Deformity: A Decision Analysis Approach	E. Acaroglu , Ü. Özgür Güler, A. Çetinyürek Yavuz, Y. Yavuz, S. Ayhan, M. Domingo Sabat, F. Pellise, F. Sanchez Perez Grueso, A. Alanay, I. Obeid, F. Kleinstuck, European Spine Study Group (ESSG)
GO234	Multilevel XLIFs, TLIFs and grade 2 posterior osteotomies for surgical correction of compensated sagittal imbalance: Outcomes in 25 consecutive adult degenerative deformities at minimum 2 years follow-up	A. Ramieri , G. Costanzo
GO235	Primary versus revision surgery for adult spinal deformity: an analysis of cost effectiveness	T. Raman , S. Nayar, R. Skolasky, S. Liu, K. Kebaish
GO236	Sagittal Plane Correction Using Lateral Transpsoas Approach: Effect of Cage Angulation and Surgical Technique on Segmental Lordosis	S. Tim Yoon , R. Melikian, J. Kim, K. Park, C. Yoon, W. Hutton
GO237	Which Factors Influence the Surgery vs. Non-surgery Decision for Adult Idiopathic Scoliosis Patients with Gray Zone (40-55°) Main Thoracic Curves?	C. Yilgor , M. Enercan, A. Hamzaoglu, F. Pellise, F. Perez-Grueso, E. Acaroglu, I. Obeid, F. Kleinstuck, A. Alanay, European Spine Study Group (ESSG)
17:00-17:15	Discussion	

15:45-17:15 Paper Sessions (Theatre 2)		
15:45-16:30 TUMORS 1		Moderators: Charles Fisher Imad Hashim Ahmad
GO220	Preoperative Embolization in Spinal Tumour Surgery	N. Kumar , A. Zaw, A. Gopinathan, B. Tan
GO221	The relation between spinal instability and response to palliative radiotherapy for symptomatic spinal metastases	A. Versteeg , J. Velden, Van Der, H. Verkooijen, C. Fisher, C. Oner, M. Vulpen, Van, L. Weir, Jorrit-Jan Verlaan
GO222	Operative management of post-tumor spinal deformity	N. Zaborovskii, D. Ptashnikov , D. Mykhailov, O. Smekalenkov, S. Masevnin, O. Lapaeva
GO223	Survival and Clinical Outcomes in Patients with Metastatic Epidural Spinal Cord Compression: Results from the AOSpine Prospective Multi-Centre Study of 142 patients	M. Fehlings , A. Nater, L. Tetreault, B. Kopjar, P. Arnold, M. Dekutoski, J. Finkelstein, C. Fisher, J. France, Z. Gokaslan, L. Rhines, P. Rose, E. Massicotte, A. Sahal, J. Schuster, A. Vaccaro
GO224	Prognostic Factors for Survival in Surgical Series of Symptomatic Metastatic Epidural Spinal Cord Compression: A Prospective North American Multi-Centre Study in 142 patients	A. Nater , M. Fehlings, L. Tetreault, B. Kopjar, P. Arnold, M. Dekutoski, J. Finkelstein, C. Fisher, J. France, Z. Gokaslan, L. Rhines, P. Rose, J. Schuster, A. Vaccaro, A. Sahgal, E. Massicotte
GO225	Surgical treatment of a C3-osteoblastoma with cord compression and encompassing the vertebral artery via combined approach	M. Samadian , M. Hallajnejad, A. Mousavi Nejad, K. Ebrahim Zadeh, O. Rezaei
16:15-16:30	Discussion	
16:30-17:15 TUMORS 2		Moderators: Laurence Rhines Ali Haghnegahdar
GO244	Vertebroplasty and Kyphoplasty for metastatic spinal lesions—A systematic review	M. Sadeghi, L. Janani, S. Aarabi, F. Shokraneh, V. Rahimi-Movaghar
GO245	Evaluation of the safety of Intraoperative Salvaged Blood by using Microwell based Culture	N. Kumar , A. Zaw, B. Khoo, J. Thiery
GO246	Lateral Approach for Anterior and Anterolateral Placed Cervical Meningioma or Schwannoma	A. Abou-Madawi
GO247	Primary malignant spinal tumors in children: 21-years retrospective single surgical clinic study	A. Mushkin, D. Malamashin
GO248	Evaluation Between The SINS Score, VAS And Neurological Status For Spinal Metastatic Tumors.	R. Cavalcante , J. Arruda, V. Zaccariotti, R. Marques, V. Santos, Y. Fernandes
GO249	Prevalence of unsuspected malignancy in patients with vertebral compression fracture undergoing percutaneous vertebroplasty	E. Hansen , A. Simony, R. Rousing, L. Y. Carreon, H. Tropp, M. Ø. Andersen
17:00-17:15	Discussion	

15:45-17:15 Paper Sessions (Theatre 3)		
15:45-16:30 NOVEL TECHNOLOGIES 3		Moderators: Chetan Bettegowda Abdulaziz Al-Mutair
GO214	A novel, objective, quantitative method of evaluation of the pain component and paresthesia coverage using comparative computerized multiparametric tactile mapping and database analysis: The "Neuro-Mapping-Tools" software (N3MT)	M. Roulaud, F. Guetarni, K. Nivole, O. Monlezun, B. Lorgeoux, P. Rigoard
GO215	Thinning, peeling and carving technique for the treatment of thoracic myelopathy caused by ossification of ligamentum flavum	D. Wang
GO216	Preoperative prone position exercises: A simple and novel method to improve tolerance in kyphoplasty for treatment of single level osteoporotic vertebral compression fractures	G. Lee , Q. Wang
GO217	Facet Joint Manipulation for Craniovertebral Junction Arthrodesis. Worth the Extra Effort?	J. Duff , Y. Henchoz, L. Bobinski
GO218	Two level anterior cervical arthrodesis with integrated spacer and plate versus traditional anterior spacer and plate system	R. Panchal , A. Beliveau, P. Lee, P. Shen, C.-S. Li, E. Klineberg, K. Kim
GO219	Validation of positioning, lordotic correction and lack of endplate damage when using a new expandable articulated lumbar intervertebral fusion cage; a cadaver study	M. Levy, J. Rigal, R. Morrison, J. Le Huec, K. Schnake
16:15-16:30	Discussion	
16:30-17:15 NOVEL TECHNOLOGIES 4		Moderators: Keita Ito Muhammed Assous
GO238	Increased Apoptosis, Expression of Matrix Degrading Enzymes and Inflammatory Cytokines of Annulus Fibrosus Cells in Genetically Engineered Diabetic Rats: Implication for Intervertebral Disc Degeneration	J.-B. Park , E.-Y. Park
GO239	Surgical management of Spinal Dural Arteriovenous fistulae with intraoperative indocyanine green angiography: Single Institute Experience	H. El-Maghraby , R. Bletechi
GO240	Development of a whole bovine long-term organ culture system that retains vertebral bone for intervertebral disc repair and biomechanical studies using PrimeGrowth media	M. Grant, L. Epure, O. Salem, M. Alaqeel, J. Antoniou, F. Mwale
GO241	Vertebral Endplate Changes / Modic Changes: An Audit Study Using Antibiotics in 147 Chronic Low Back Pain Patients	C. Manniche , L. Morsø, L. Kiertzner
GO242	The effect of post operative sand bag pressure on CSF leak after spinal surgery	H. Mousa
GO243	Early Vertebroctomy (performed in first 72 hours after delivery) as a treatment method of vertebral column deformation in patients with MMC	B. Polis , E. Nowoslawska, L. Polis
17:00-17:15	Discussion	

15:45-17:15 Paper Sessions (Theatre 4)		
15:45-16:30 BASIC SCIENCE 2		Moderators: James Iatridis Vafa Rahimi-Movaghar
GO202	Novel circulating microRNA signature as a potential non-invasive test in LDH patients: a cohort study	X. Zhou, L. Chen, S. Grad, M. Alini, H. Pan, W. Lu, S. Huang, S. Peng
GO203	Association analysis of Col9A1, Col9A2, Col9A3, Aggrecan and TNF- α gene polymorphisms with early onset of Disc Herniation in Indian population	K. Rajsekar , N. Narayanasamy, M. Kuhar, S. Vaishya, S. Rajasekaran, N. Devaraj
GO204	Anatomical Safety Of The U.s.s. Pedicular Hook-Screw In The Adult Thoracic Spine	A. Tsantrizos, A. Alobaid, A. Andreou, V. Arlet, MNS. Alsaqabi , T. Steffen
GO205	Results after lumbar discectomy for herniated disc in worker's compensation patients: more than 15 years of follow-up	R. Yurac, M. Delgado , J. Zamorano, V. Ballesteros, B. Marré
GO206	Functional Outcomes of Microdiscectomy—Does obesity affect early postoperative outcomes?	M. Foodoul , A. Baco, A. Attia
GO207	Treatment Of Gait And Sensory Changes In Experimental Disc Herniation Radiculopathy By Local And Sustained Anticytokine Delivery	M. Shamji
16:15-16:30	Discussion	
16:30-17:15 BASIC SCIENCE 3		Moderators: Mauro Alini Mohamed Abdel-Wanis
GO226	Polymer-based silver nanoparticle coated pedicle screws inhibits biofilm formation—a novel experimental model in rabbits	D. Hazer , M. Sakar, Y. Dere, G. Altinkanat, M. Ziyal, B. Hazer
GO227	Morphology And TGF- β 1 Concentration's Analysis Of Ligamentum Flavum Of Patients With Lumbar Canal Stenosis And Lumbar Disc Herniation	S. Carletti , A. Ciampini, L. Di Muro, C. Delfinis, E. Tinella, N. Caputo, R. Rispoli
GO228	An analysis of the spinal nerve roots in relation to the adjacent vertebral bodies with respect to a posterolateral vertebral body replacement procedure	W. Awwad
GO229	An In-vitro Study on The Effects of Spinal Canal Curvature on Cord Interstitial Pressure During Spinal Cord Distraction	P. Jarzem, M. Bassi, M. A. Mansi
GO230	Biomechanical Evaluation of the Transpedicular Nucleotomy with Intact Anulus Fibrosus	F. Russo , G. Vadalà, R. Hartman, K. Bell, G. Sowa, N. Vo, J. Kang, V. Denaro
GO231	Review of Patient Transfers from Spinal Surgery to the Spinal Injuries Unit	L. Grandidge, L. Breakwell, M. Athanassacopoulos, N. Chiverton, A. Cole, A. Michael
17:00-17:15	Discussion	

17:15-18:15 Spine Societies (Theatre 1)

Symposium hosted by North American Spine Society—
Current Concepts in Spine Surgery

17:15-17:18	Introduction	Jeffrey Wang
17:18-17:28	Growing Rod for Severe (>100 degree) Early Onsite Scoliosis	Yong Hai
17:28-17:38	Intraoperative navigational guidance in spine surgery	Patrick Hsieh
17:38-17:48	Spinal Fractures and Classification	Shanmuganathan Rajasekaran
17:48-17:58	MIS Spine Surgery	Abdulrazzaq Alobaid
17:58-18:08	Indications with transforaminal decompression and rhizotomy	Anthony Yeung
18:08-18:15	Questions and Answers	

17:15-18:15 Spine Societies (Theatre 2)

Symposium hosted by EUROSPINE—
Osteoporotic fractures in the elderly with preexisting spinal pathologies

17:15-17:20	Case presentation	Thomas Blattert
17:20-17:35	Osteoporotic fractures in the degenerative spine—Kyphoplasty/Vertebroplasty or Cement augmented fusion?	Michael Ogon
17:35-17:50	Early postoperative sacral fracture after lumbar fusion in the elderly—what to do?	Thomas Blattert
17:50-18:05	Restoring the sagittal profile in Osteoporotic vertebral fracture treatment—What is normal and how much is necessary?	Haluk Berk
18:05-18:15	Discussion	

17:15-18:15 Spine Societies (Theatre 3)

Symposium hosted by European Association of Neurosurgical Societies—
The challenge of primary and secondary tumors of the spine

17:15-17:30	Secondary tumors of the spine: over- or undertreatment? Finding the right attitude	Bernhard Meyer
17:30-17:45	So called benign tumors of the spine and their surgical treatment	Claudius Thome
17:45-18:00	The surgical challenge of sacral tumors	Jesus Lafuente
18:00-18:15	Medico-ethical challenges in spine tumor surgery	Wilco Peul

17:15-18:15 Spine Societies (Theatre 4)

Symposium hosted by Scoliosis Research Society—
Avoiding complications

Moderators:
David Polly
Marinus De Kleuver

17:15-17:20	Welcome & Case presentation	
17:20-17:25	Goals for adult deformity surgery	David W. Polly
17:25-17:32	Complications in Spinal Deformity Surgery: Rates and Reasons	Sigurd Berven
17:32-17:39	Predicting complications. Can we identify risk pre-operatively? ('risk stratification')	Benny Dahl
17:39-17:49	Discussion by panel	
17:49-17:56	Identification and management of preoperative spinal cord injury: Insights gained from the ScoliRisk study	Michael Fehlings
17:56-18:03	'When to say no?'	David W. Polly
18:13-18:15	Discussion by panel & closure	



Global Spine Congress
2016

Saturday



Wednesday

Thursday

Friday

Saturday

E-posters & Posters

Disclosures

Authors

AOSpine Day Symposia

08:00-09:00 KNOWLEDGE FORUM DEFORMITY SYMPOSIUM—ADULT SPINAL DEFORMITY (ASD) (Theatre 1)		Moderator: Sigurd Berven
08:00-08:03	Case presentation with focus on preop considerations	Sigurd Berven
08:03-08:10	Lecture on preop evaluation and preparation	Maarten Spruit
08:10-08:20	Discussion by panel	
08:20-08:23	Case presentation with focus on intraop strategy	Sigurd Berven
08:23-08:30	Lecture on intraop strategy for deformity correction	Chung Chek Wong
08:30-08:40	Discussion by panel	
08:39-08:43	Case presentation with focus on post-op mgt	Sigurd Berven
08:43-08:50	Lecture on postop mgt strategies	Shanmuganathan Rajasekaran
08:50-09:00	Discussion by panel	

08:00-09:00 ASSESSMENT AND MANAGEMENT OF FAILED BACK SURGERY SYNDROME (Theatre 2)		Moderator: Mohammed Farid Shamji
08:00-08:10	Epidemiology and diagnosis of failed back surgery syndrome	Mohammad Zarrabian
08:10-08:20	Workup of the failed back surgery syndrome patient and distribution of diagnoses	Wellington Hsu
08:20-08:30	Missed structural diagnoses in the workup of the failed back surgery syndrome patient, case examples	Norman Chutkan
08:30-08:40	Management of FBSS neuropathic pain—evidence review of neuromodulation approaches including DRG and spinal cord stimulation	Philippe Rigoard
08:40-08:50	Implementing spinal cord stimulation in a structural spine surgery practice, ethics and lessons learned	Erik Van de Kelft
08:50-09:00	Questions and Answers	

08:00-09:00 KNOWLEDGE FORUM TRAUMA SYMPOSIUM—CERVICAL SPINE TRAUMA (Theatre 3)		Moderator: Cumhur Oner
08:00-08:07	Outcome measures for cervical trauma	Cumhur Oner
08:07-08:14	The role of adjuvant treatment (pharmacologic or cell based) in the treatment of Cervical Spine Injuries	Shanmuganathan Rajasekaran
08:14-08:21	The role and timing of decompression in central cord injuries	Marcel Dvorak
08:21-08:28	The treatment of cervical facet fractures, when to operate and which approach to use	Bizhan Aarabi
08:28-08:35	Proposed AOSpine classification of Upper Cervical Spinal Injuries	Gregory Schroeder
08:35-09:00	Panel Discussion	Jens Chapman, Sh. Rajasekaran, Frank Kandziora, Gregory Schroeder

08:00-09:00	AOSPINE NORTH AMERICA SYMPOSIUM—CONTROVERSIES, CHALLENGES AND OPPORTUNITIES IN THE MANAGEMENT OF THE AGING SPINE(Theatre 4)	Moderator: Michael Fehlings
08:00-08:03	Introduction	Michael Fehlings
08:03-08:15	Degenerative cervical myelopathy	Michael Fehlings
08:15-08:27	Central Cord Injury	Brian Kwon
08:27-08:39	Management of Spinal Deformity in the Aging Spine	Justin Smith
08:39-08:51	Management options to Deal with Compromised Bone Quality in the Aging Spine	Christina Goldstein
08:51-09:00	Panel Discussion	

09:00-09:30	BEST PAPERS 3—TRAUMA (Theatre 1)	Moderators: Dan Riew Jeffrey Wang
GO250	Development of a universal disease-specific outcome instrument for spine trauma—The AOSpine Clinician Reported Outcome Spine Trauma (AOSpine CROST)	S. Sadiqi , J. Verlaan, A. Lehr, F. Oner, AOSpine Knowledge Forum Trauma
GO251	The Development of a Universally Accepted Sacral Fracture Classification: A Survey of AOSpine and AOTrauma Members	G. D. Schroeder , A. R. Vaccaro, M. F. Kurd, C. K. Kepler, J. C. Krieg, C. P. Kleweno, R. Firoozabadi, F. Kandziora, K. J. Schnake, S. Rajasekaran, J. H. Holstein, H. C. Sagi, M. F. Dvorak, L. R. Vialle, F. C. Oner, C. Bellabarba, J. R. Chapman
GO252	3D-Navigation reduces radiation exposure and operative time in lumbopelvic fixations	M. F. Hoffmann , T. A. Schildhauer
GO253	Methylprednisolone for the treatment of patients with acute spinal cord injuries: A systematic review and meta-analysis	N. Evaniew, E. Belley-C��t��, N. Fallah, V. Noonan, C. Rivers, M. Dvorak
	Discussion	

09:30-10:00 Break

10:00-11:00	AOSPINE MEMBERS-ONLY SESSION—MEET THE EXPERTS—Launch of the AOSpine Subaxial Classification (Theatre 5)	Moderators: Luiz Vialle S. Rajasekaran
10:00-10:05	Introduction to AOSpine classifications	Luiz Vialle
10:05-10:15	The Thoraco-lumbar Classification	S. Rajasekaran
10:15-10:25	The Sub-axial Cervical Classification	Frank Kandziora
10:25-10:35	Proposed Sacral Classification	Gregory D. Schroeder
10:35-11:00	Case Discussions	Cumhur Oner

**11:00-12:00 AOSPINE MEMBERS-ONLY SESSION—MEET THE EXPERTS—Introduction of the Spine Instability Neoplastic Score (SINS) (Theatre 5)
Speaker: Dr Charles Fisher**

Saturday

10:00-12:00 Paper Sessions (Theatre 1)		
10:00-11:00	NAVIGATION	Moderators: Claudius Thomé Abdulaziz Al-Mutair
GO270	Complications with and without the use of Computer-Assistance in Lumbar Fusion Surgery: Analysis of 15,222 Patients in ACS-NSQIP Database	A. Aoude , A. Nooh, M. Fortin, S. Aldebeyan, P. Jarzem, J. Ouellet, Michael H. Weber
GO271	A novel approach to navigated implantation of thoracic and lumbosacral pedicle screws using inertial measurement units	G. Jost , J. Walti, L. Mariani, S. Schären, P. Cattin
GO272	Accuracy and Safety in Screw Placement in the High Cervical Spines: Retrospective Analysis of O-arm® based Navigation-assisted C1 lateral Mass and C2 Pedicle Screw	K.-S. Ryu, J.-W. Hur , J.-S. Kim, J.-H. Seong
GO273	Finite element analysis based lumbosacral revision surgery using an individual navigation template	P. Eltes , Á. Lazary, P. Varga
GO274	Surgical technique for cervical pedicle screw insertion using O-Arm	N. Shimokawa
GO275	Differences between Manufacturers of CT-based Computer Assisted Surgery Systems Do Exist: A Systematic Literature Review	A. Nooh, J. Lubov, A. Aoude, S. Aldebeyan , P. Jarzem, J. Ouellet, Michael H. Weber
GO276	The comparison between O-arm navigation system and C-arm fluoroscopy navigation system for the amount of radiation exposure in balloon kyphoplasty	Y. Maruo
GO277	O-arm Imaging and Navigation Systems for Transvertebral Anterior Cervical Foraminotomy	D. Umebayashi , Y. Yamamoto, Y. Nakajima, M. Hara
GO278	Pedicular screw placement accuracy with O-arm based navigation in patients with scoliosis	W. Urbanski , W. Jurasz, M. Wolanczyk, S. Dragan
10:45-11:00	Discussion	
11:00-12:00	MINIMALLY INVASIVE SPINE SURGERY 2	Moderators: Paul Thng Abdulaziz Al-Mutair
GO315	Postoperative complications in patients undergoing minimally invasive sacroiliac fusion	K. Schoell, Z. Buser, A. Jakoi , M. Pham, N. Patel, J. Liu, P. Hsieh, J. Wang
GO316	Lumbar spinal stenosis associated with degenerative lumbar spondylolisthesis: A systematic review and meta-analysis of secondary fusion rates following open vs. minimally invasive decompression	K. Schöller , M. Alimi, G.-T. Cong, P. Christos, R. Navarro-Ramirez, R. Härtl
GO317	Short percutaneous posterior instrumentation: a reliable option in the treatment of thoraco-lumbar post-traumatic spinal fracture	G. Caruso, F. Turiano, M. Tramacere, M. Campello
GO318	How to minimize complications of classic decompression and fusion in lumbar spinal stenosis: is a complementary interspinous fusion an alternative?	S. Moszko
GO319	Morphometric measurement of the lumbosacral spine for minimally-invasive cortical bone trajectory implant using Computed-Tomography	H. Zhang
GO320	Comparison Between Minimally Invasive Versus Open TLIF In Treatment Of Spondylolisthesis	H. Shaker, A. Taha, W. Aboymn, T. Hesham, S. El Besy, M. Khattab
GO321	Minimally Invasive Spine Surgery in patients who present late for surgery; Doing too good, too late.	M. Assous , M. Zeyad, S. Hamdan
GO322	Looking At The Future Of Motion Preservation Surgery In The Lumbar Spine With The Experience Of The Past	G. Guizzardi
11:45-12:00	Discussion	

10:00-12:00 Paper Sessions (Theatre 2)		
10:00-11:00 TRAUMA—CERVICAL 3		Moderators: Beth Winkelstein Mohammad El-Sharkawi
GO279	Intramedullary lesion length has a negative effect on neurological recovery in cervical spinal cord injury patients with AIS grades A-C	B. Aarabi , C. Sansur, D. Ibrahim, D. Hersh, E. Le, N. Akhtar-Danesh, C. Diaz, J. Massetti
GO280	Neurological recovery after traumatic cervical spinal cord injury is superior if surgical decompression and instrumented fusion are performed within 8 h versus 8-24 h after injury—a single centre experience	M. Jug , N. Kejžar, M. Vesel, S. Al Mawed, M. Dobravec, S. Herman, F. Bajrovic
GO281	The Sympathetic Nervous System Mediates Functional and Robust Respiratory Recovery Following Acute Cervical Spinal Cord Injury	Basem I. Awad
GO282	Early decompression (< 8h) versus delayed surgical management improves functional outcome after traumatic cervical spinal cord injury	L. Grassner , C. Wutte, B. Klein, O. Mach, S. Riesner, S. Panzer, M. Vogel, F. Högel, V. Bühren, M. Strowitzki, D. Maier, J. Vastmans
GO283	New Surgical Attitude In Complete Acute Traumatic Spinal Cord Injury	S. Iencean , A. Iencean
GO284	A Systematic Review of the Measurement Properties of Patient-Reported Outcome Measures in Spinal Cord Injury	A. Abedi , S. Seyedpour, L. Mokkink, F. Shokrane, V. Rahimi-Movaghar
GO285	Traumatic spinal cord injury: the impact of timing. A prospective cohort study to evaluate outcomes after early surgery (and reasons for delays).	G. Barbagallo , J. J. Van Middendorp, D. Hess, A. Hurtado-Chong, A. J. Hosman
GO286	Diagnostic Work-Up and Treatment of Traumatic Spondylolisthesis of the Axis: Case Series and Literature Review	R. Yurac, J. Zamorano, M. Valencia, B. Marre, G. Izquierdo , J. Illanes
GO287	Efficacy and Safety of Riluzole in Acute Spinal Cord Injury (SCI). Rationale and Design of AOSpine Phase III Multi-center Double Blinded Randomized Controlled Trial (RISCIS).	M. Fehlings , B. Kopjar, R. Grossman
10:45-11:00	Discussion	
11:00-12:00 DEGENERATIVE—LUMBAR 5		Moderators: Emre Acaroglu Khalil Kharrat
GO306	Biomechanical evaluation of the use of PEEK versus PMMA intervertebral spacers in lumbar stabilization: the influence of bone mineral density and vertebral geometry	T. Csakany , M. Kurutz, P. Varga, P. Éltes, P. Varga
GO307	Interbody Fusion In Low Grade Lumbar Spondylolisthesis—Clinical Outcome Do Not Correlate With Slip Reduction And Neural Foraminal Dimension	U. Debnath, J. McConnell , V. Goel
GO308	Transforaminal Lumbar Interbody Fusion or Posterior Lumbar Interbody fusion, which is better? A single-centre study	F. Ashouri , S. Khan, C. Bahtia, K. Aneiba
GO309	The quantitative observation of interbody fusion with local autogenous bone harvested from single interlaminar fenestration in PLIF	Q. Wang , Y. Yang
GO310	Comparison of NPY Y1 receptors in the Spines of Ovariectomized and Ovary Intact Rats	R. McGuire , M. Tucci, H. Benghuzzi
GO311	Early Adjacent Segment Degeneration After Short Lumbar Fusion	S. Masevnin , D. Ptashnikov, D. Michaylov, O. Smekalenkov, N. Zaborovskii, O. Lapaeva
GO312	Long-term Results of Implant Related Complications after Lumbar Fusion Using a Non-rigid Transpedicular Pedicle Screw-Rod System	A. Bank , P. Varga
GO313	The Outcome of Using Closed Suction Wound Drains in Patients Undergoing Lumbar Spine Surgery: a Systematic Review	F. Waly, M. Alzahrani, F. H. Abduljabbar , T. Landry, J. A. Ouellet, K. Moran, J. R. Dettori
GO314	Reoperation Rates Following Single-Level Discectomy	P. Heindel, A. Tuchman, P. Hsieh, M. Pham , N. Patel, A. Jakoi, J. Liu, Z. Buser, J. Wang
11:45-12:00	Discussion	

10:00-12:00 Paper Sessions (Theatre 3)		
10:00-11:00 DEFORMITY—THORACOLUMBAR ADOLESCENT 5		Moderators: Brian Ashman Asdrubal Falavigna
GO254	Reducing Rod Breakage and Pseudarthrosis in Pedicle Subtraction Osteotomy: The Importance of Rod Number and Configuration in 264 patients with 2-Year Follow-Up	M. Gupta , J. K. Henry, F. Schwab, C. Ames, E. Klineberg, J. Smith, V. Deviren, C. Shaffrey, R. Hart, R. Hostin, G. Mundis, H. Kim, D. Burton, V. Lafage, International Spine Study Group
GO255	Intrathecal baclofen pumps do not accelerate progression of scoliosis in quadriplegic spastic cerebral palsy	P. Rushton, L. Nasto, R. Aujla, M. Vloeberghs, M. Grevitt
GO256	Upright, Prone and Supine Spinal Morphology in Adolescent Idiopathic Scoliosis	R. Brink, T. Schlösser, D. Colo, K. Vincken, M. Van Stralen, S. Hui, W. Chu, J. Cheng, R. Castelein
GO257	Larger curve magnitudes (> 70 degrees) in Adolescent Idiopathic Scoliosis are associated with significantly higher cost of surgical treatment and a delayed return to function	R. Tarrant , P. Kiely
GO258	Is there a difference in outcome between top and side loading instrumentation system used for the surgical treatment of adolescent idiopathic scoliosis (AIS)	S. Fallatah
GO259	Posterior Spinal Osteotomies for Sagittal Imbalance	M. El-Sharkawi, H. Tammam , E. El-Sherif, F. Adam, H. Refae
GO260	Three Dimensional Correction of Severe Rigid Neurofibromatosis Scoliosis	W. Koptan , M. El-Sharkawi, Y. Elmilguy
GO261	Incidence of cancer and infertility, in patients treated for adolescent idiopathic scoliosis 25 years prior	A. Simony , L. Carreon, S. Christensen, M. Andersen
10:45-11:00	Discussion	
11:00-12:00 DEFORMITY—THORACOLUMBAR ADULT 3		Moderators: Teresa Bas Bernhard Meyer
GO297	Reduced Rate of Proximal Junctional Fractures Above Long-Segment Instrumented Constructs Utilizing a Tapered Dose of Bone Cement for Prophylactic Vertebroplasty —A Biomechanical Investigation	J. Zavatsky , A. Shah, R. McGuire, H. Serhan, A. Kelkar, M. Kodigudla, A. Agarwal, D. Briski, V. Goel
GO298	Impact Of The Intraoperative Neurophysiologic Monitoring In Idiopathic Scoliosis Surgery	P. Rech , R. Lanna, C. Menezes, R. Sakamoto, A. Dias, R. Vargas
GO299	What Extent A Higher Implants Density Gives More Correction? Correlation Of Scoliosis Curve Correction With The Type And Density Of Implants	P. Rubio , B. Teresa, P. Bas, S. Perez
GO300	The establishment of a Predictive Model for major postoperative complications in Spine Deformity Surgery and evaluation of its clinical application	Y. Hai , H. Zhao
GO301	Prognostic factors for curve progression in de-novo degenerative lumbar scoliosis: a systematic review on observational studies	S. Faraj , R. Holewijn, T. Haanstra, M. De Kleuver
GO302	Multiple adjacent level with Pott's disease with sever vertebral sequestration (Case presentation)	A. Elsabrout , A. Elkott
GO303	An International Consensus on the Appropriate Treatment for Adults with Spinal Deformity: An AOSpine Knowledge Forum Deformity Study	S. Berven , S. Kamper, N. Gernscheid, B. Dahl, C. Shaffrey, L. Lenke, S. Lewis, K. Cheung, A. Alanay, M. Ito, D. Polly, M. De Kleuver
GO304	Development of Validated Computer Based Preoperative Predictive Model for Proximal Junction Failure (PJF) or Clinically Significant PJK with 86% Accuracy based on 510 ASD Patients with 2-year Follow-up	J. Scheer, J. Smith , F. Schwab, V. Lafage, R. Hart, R. Shay Bess, B. Line, B. Diebo, T. Protosaltis, A. Jain, T. Ailon, D. Burton, E. Klineberg, C. Ames, International Spine Study Group
GO305	Transpedicular Wedge Opening (TWO)osteotomy for Post-Traumatic Kyphosis (PTK): own Technique and preliminary results	M. El-Meshtawy
11:45-12:00	Discussion	

10:00-12:00 Paper Sessions (Theatre 4)		
10:00-11:00	EPIDEMIOLOGY	Moderators: Roberto Chapa Emiliano Vialle
GO262	Analysis Of Normal Values Of Sagittal Spinopelvic Radiographic Parameters In Indian Population	S. K. M. LV , D. Sharma, J. Menon
GO263	Trends in hospital admissions and surgical procedures for degenerative lumbar spine disease in England: a 15 year time-series	V. Siva , M. Papadopoulos, B. Ozedemir, H. Patel
GO264	Socio-Economic Impact of Cervical Spinal Cord Injury Operated in Patients with Lower Income Group	S. A. Goel, H. N. Modi , B. R. Dave, P. R. Patel
GO265	Epidemiology of traumatic spinal cord injury in tehran, iran: A hospital-based study	M. Sharif-Alhoseini, V. Rahimi-Movaghar
GO266	Nutritional And Vitamin D Status In A Brazilian Sample Of Patients Undergoing Spinal Surgery	D. Benone Santos Neto, R. Pratali , S. Machado Martins, C. Eduardo Gonçalves Barsotti, C. Oliveira
GO267	The impact of low back and neck pain on dentistry students in Northern Greece	S. Stavridis , E. Samoladas, K. Tsitas, K. Xanthopoulou, K. Apostolidou, I. Hatzokos
GO268	Spinal Fusion Surgery: Epidemiologic And Economic Burden Attributable To First Intervention	R. Assietti , P. Cortesi, F. Cuzzocrea, D. Prestamburgo, M. Pluderi, P. Cozzolino, L. Mantovani, G. Cesana
GO269	Length of stay and post-operative complications and their relation with the glucose level preoperatively in diabetic and non-diabetic patients undergoing spinal surgeries	Y. Alman , N. Alhammad, A. Almutair, W. Awwad
10:45-11:00	Discussion	
11:00-12:00	CERVICAL—SURGERY	Moderators: Praveen Mummaneni (AANS representative) Mohamed Abdel-Wanis
GO288	Fulfillment of Patient Expectations Two Years after Cervical Spine Surgery	D. Lebl , A. Sama, C. A. Mancuso, F. Cammisa, A. Hughes, R. Duculan, F. Girardi
GO289	Does improvement of spine alignment lead to relief of neck pain associated with scoliosis at adults?	O. Lapaeva, D. Ptashnikov, S. Masevnin, D. Mikhaylov , N. Zaborovskii
GO290	Quality of Life and Functional Outcomes after Surgical Decompression in Patients with Cervical Ossification of the Posterior Longitudinal Ligament: Results from the Prospective, Multicenter AOSpine International Study on 479 Patients	H. Nakashima , L. Tetreault, N. Nagoshi, A. Nouri, M. Fehlings
GO291	Safety and efficacy of anterior cervical discectomy and fusion with stand-alone polyetheretherketone (PEEK) cages	E. Shiban , B. Meyer, J. Lehmborg, M. Nies, J. Kogler
GO292	Dysphagia Due to Ossification of the cervical anterior longitudinal ligament. Report of three cases	M. Valacco, M. Servidio , F. Imposti
GO293	Study of functional outcome of anterior cervical decompression and fusion using tricortical iliac bone graft for degenerative cervical spondylotic myelopathy with modified Japanese orthopedic association score	A. Sharma , V. Singh
GO294	Role of spinal diffusion tensor imaging in predicting post-operative outcome in cervical degenerative pathologies	F. Ahmad , R. Rindler, S. Eshraghi, F. Chokshi, M. Mossa-Basha, B. Buster, J. Chu, G. Pradilla
GO295	Single-Level, Multi-Level (Two, Three And Four Levels) And Hybrid Cervical Disc Arthroplasty: Age & Sex-Weighted Linear Regression Analysis—Results From A Single Centre.	M. Rajesh , S. Khan, S. Friesem, C. Bhatia, A. Berg, G. Reddy
GO296	Successful Treatment of Severe Occipitocervical Pain from C1-C2 Osteoarthritis Using a Modified Harms Technique	A. Deukmedjian , A. Cianciabella, B. Patel, A. Deukmedjian
11:45-12:00	Discussion	
12:15-13:15 Members Assembly (Theatre 1)		

Saturday

13:30-15:00 Paper Sessions (Theatre 1)		
13:30-14:15 MINIMALLY INVASIVE SPINE SURGERY 3		Moderators: Patrick Hsieh Muhammed Assous
GO323	Better Height Restoration and Kyphosis Correction of Osteoporotic Vertebral Compression Fractures Using Intravertebral Reduction Devices (SpineJack): One year follow up	J. Lin , S.-H. Wang, Y. Chiang, E. Lin
GO324	Complications after percutaneous pedicle screw fixation for the treatment of unstable spinal metastases	A. Versteeg , J.-J. Verlaan, P. De Baat, T. Jiya, C. Diekerhof, G. Van Solinge, C. Oner
GO325	Minimally Invasive Spine Surgery For Intracanal Tumor Resection. Clinical Study And Surgical Results.	R. Diaz , M. Berbeo, T. Quintero
GO326	Assessment of postoperative epidural hematoma after lumbar microendoscopic surgery	H. Manabe , T. Mishiro
GO327	Perioperative Morbidity In Overweight Or Obese Patients After Minimally Invasive Lumbar Spine Surgery	R. Diaz , M. Berbeo, R. Uribe
14:00-14:15	Discussion	
14:15-15:00 MINIMALLY INVASIVE SPINE SURGERY 4		Moderators: Mike Grevitt Karsten Wiechert
GO358	Maximal access surgery for posterior lumbar interbody fusion (PLIF) with divergent, cortical bone trajectory (CBT) pedicle-screws: a good option for minimize spine access and maximize the field for nerve decompression. Our experience in a case seri.	M. Pecoraro , N. Marengo, G. Vercelli, F. Zenga, D. Garbossa, A. Ducati
GO359	Extreme Lateral Interbody Fusion Using Bone Marrow Aspirate Combined With A Porous Hydroxyapatite/Collagen Composite	M. Yoshida , K. Fujio
GO360	Multicolumn Spinal Cord Stimulation Surgical Lead Implantation Using An Optic Transligamentar Minimally Invasive Technique	P. Cam, O. Monlezun, B. Lorgeoux, M. Roulaud, P. Rigoard
GO361	How safe is the XLIF approach for a skilled surgeon, when he starts to perform it	S. Moszko
GO362	Uncommon intradural-extramedullary lesions removed by direct uniportal minimally invasive technique. Clinical and radiological results. An study with 24 months of follow up.	C. Arias Pesantez , P. Peña
GO363	Inflammatory profiling of patients undergoing lumbar interbody fusion by different approaches: in search for markers of mini-invasiveness	G. Lombardi , P. Berjano, R. Cecchinato, S. Perego, V. Sansoni, F. Tartara, G. Banfi, C. Lamartina
14:45-15:00	Discussion	

13:30-15:00 Paper Sessions (Theatre 2)		
13:30-14:15	SURGICAL COMPLICATIONS	Moderators: Marcel Dvorak Ghassan Skaf
GO328	Prospective Multicenter Assessment of Intraoperative and Perioperative Complication Rates Associated with Adult Spinal Deformity (ASD) Surgery in 558 Patients	E. Klineberg, J. Smith, V. Lafage, C. Shaffrey, R. Shay Bess, F. Schwab, M. Gupta, R. Hart, T. Protopsaltis, G. Mundis, H. Kim, D. Burton, J. Scheer, C. Ames , International Spine Study Group
GO329	Vertebral Artery Injury in Cervical Spine Surgery: Results from AOSpine North America Multicenter Study on 16,582 Patients	A. Kannan , H. Mai, W. Hsu, A. Hilibrand, A. Nassr, P. Arnold, M. Fehlings, V. Traynelis, Z. Gokaslan, T. Mroz, M. Bydon, Z. Smith, E. Massicotte, K. D. Riew
GO330	Frailty and Postoperative Outcomes in Patients Undergoing Surgery for Degenerative Spine Disease	R. Charest-Morin , A. Flexman, C. Ryerson, L. Stobart, J. Street
GO331	Neurological outcomes following iatrogenic vascular injury during posterior atlanto-axial instrumented fusion	F. Ahmad , O. Akinduro, G. Baum, B. Howard, G. Pradilla, J. Grossberg, G. Rodts
GO332	Mortality and Causes of Death in Patients Requiring VEPTR Surgery.	J. Smith , J. Heflin, M. Vitale, A. Samdani, J. Morgan, Children's Spine Study Group
GO333	Frequency of Post-Operative Hematoma In Lumbar Disc Excision Through Fenestration Without Closed-Suction Drainage	M. Umair , M. Bashir, A. Aziz, R. Akram, S. Ahmad
14:00-14:15	Discussion	
14:15-15:00	DEGENERATIVE—LUMBAR 6	Moderators: Jens Chapman Muzahem Taha
GO352	The Prevalence of Vitamin D deficiency in elective spine surgery. A study in three orthopaedic centers	P. Diaremes , E. Christodoulou, G. Maier, U. Maus, C. Matzaroglou, P. Drees, K. Kafchitsas
GO353	Unilateral approach for bilateral microsurgical decompression of lumbar spinal stenosis. Synopsis of 15 years of experience with this surgical method.	U. Spetzger
GO354	Adjacent segment degeneration after lumbar spinal fusion compared with motion-preservation procedures: A meta-analysis	Y. Hai , A. Pan
GO355	Anterior lumbar interbody fusion (ALIF)—biometrical results and own experiences.	B. Kapustka , P. Chodakowski, G. Kiwic, W. Marcol, T. Wysokinski, K. Paruzel, Z. Slosarek
GO356	Spondyloptosis reduction and fixation in 25 ys old male	O. Refai
GO357	Use of Neuropathic Pain Questionnaires in Predicting the Development of Failed Back Surgery Syndrome following Lumbar Discectomy for Radiculopathy	M. Shamji , A. Shcharinsky
14:45-15:00	Discussion	

13:30-15:00 Paper Sessions (Theatre 3)		
13:30-14:15 TRAUMA—CERVICAL 4		Moderators: Samuel Pantoja Abdurazzaq Alobaid
GO334	Assessing Transverse Ligament Integrity Through a New CT Based Alternative	L. Perez Orribo , L. Brage, S. Kalb, H. Roldán-Delgado, N. Crawford, A. Newcomb
GO335	Should We Remove Bullets From The Spinal Cord?	L. Grandidge, A. Michael , M. Athanassacopoulos, N. Chiverton, L. Breakwell, A. Cole
GO336	Factors influencing outcomes during and post hospitalization in geriatric cervical spine injuries—do the young and old elderly differ?	A. Dsouza , H. Chhabra, V. Mittal
GO337	Traumatic Atlantoaxial Rotatory Fixation (AARF) with Odontoid Fracture, Case report	A. Shaker
GO338	Management Of Cervical Lateral Mass Fractures.	A. Razzaq
GO339	Anterior Cervical Decompression, Fusion And Stabilization By Cervical Plate & Screw For Traumatic Lower Cervical Spinal Injury—A Series Of 62 Patients	S. Jonayed , Prof. Md. Shah Alam, Md. Rezaul Karim, S. Chakraborty, T. Alam
14:00-14:15	Discussion	
14:15-15:00 DEFORMITY—THORACOLUMBAR ADULT 4		Moderators: Praveen Mummaneni (AANS representative) Mohammad El-Sharkawi
GO346	The Effect of Prophylactic Vertebroplasty on the Incidence of Proximal Junctional Kyphosis and Proximal Junctional Failure Following Long Posterior Spinal Fusion in Adult Spinal Deformity: A Five Year Follow up Study	T. Raman , K. Kebaish, E. Miller
GO347	Incidence, Predictors and Post-Operative Complications of Blood Transfusion in Thoracic and Lumbar Fusion Surgery: An analysis of 14,249 patients from the ACS-NSQIP database	A. Aoude , A. Nooh, M. Fortin, S. Aldebeyan, P. Jarzem, J. A. Ouellet, M. H. Weber
GO348	Predictors of Neurological Motor Decline in Complex Adult Spinal Deformity Surgery: Results of the Prospective, International, Multicenter Scolio-RISK-1 Study	M. Fehlings, L. Lenke, H. Nakashima , N. Nagoshi, C. Shaffrey, B. Kopjar, K. Cheung, L. Carreon, M. Dekutoski, F. Schwab, O. Boachie-Adjei, K. Kebaish, C. Ames, Y. Qiu, Y. Matsuyama, B. T. Dahl, H. Mehdian, F. Pellisé-Urquiza, S. Lewis, S. H. Berven
GO349	Defining Normative Quality Metrics in Complex High-Risk Deformity Cases: Results from the Scolio-Risk 1 Study	S. Berven , R. Saigal, V. Lafage, M. Kelly, B. Kopjar, J. Smith, B. Dahl, K. Cheung, L. Carreon, F. Schwab, K. Espinoza-Rebmann, C. Shaffrey, M. Fehlings, L. Lenke, C. Ames
GO350	Correlation Between Lumbopelvic and Sagittal Parameters and Health Related Quality of Life in Adults with Lumbosacral Spondylolisthesis.	Y. Gussous, A. Theologis, J. Demb, S. Berven
GO351	Recovery pattern in surgical management of late onset myelopathy due to spinal deformity	A. Gujral , M. Bapat, S. Naskar
14:45-15:00	Discussion	

13:30-15:00 Paper Sessions (Theatre 4)

13:30-14:15 TUMORS 3		Moderators: Ziya Gokaslan Luiz Vialle
GO340	Posterior Transpedicular Approach for Circumferential Decompression and Anterior Reconstruction Using Trabecular Metal Mesh Cage in Patients with Metastatic Spinal Tumor	S.-C. Yang
GO341	Management of spinal degenerative stenosis in patients with spinal tumors	O. Smekalenkov, D. Ptashnikov , N. Zaborovskii, D. Mihaylov, S. Masevnin
GO342	Surgical Management of Spinal Osteblastomas	A. Versteeg, S. Boriani, P. Varga, A. Luzzatti, M. Fehlings, M. Bilsky, L. Rhines, J. Reynolds, M. Dekutoski, Z. Gokaslan, N. Germscheid, N. Dea , C. Fisher
GO343	Lumbo-iliac reconstruction after total sacrectomy	J. Saavedra , J. Buritica, H. Madrinan-Navia, M. Riveros, M. Garcia
GO344	Malignant osteolytic lesions in the sacrum (S1-S3) treated by targeted radiofrequency ablation: a new option for metastases in the sacrum	J. Müller-Broich , T. Kretschmar, M. Porten, S. Demukaj, G. Saxler
GO345	Surgical Treatment of Solitary Spinal Plasmacytoma	M. Abdel-Wanis
14:00-14:15	Discussion	
14:15-15:00 TUMORS 4		Moderators: Stefano Boriani Ali Haghnegahdar
GO364	Outcome of Posterior Stabilisations for Metastatic Spinal Lesions	H. Julian, S. Thomson, E. Verzin, N. Darwish , G. McLorinan, A. Hamilton, N. Eames
GO365	Characteristics of patients who survived less than three months or greater than two years after surgery for spinal metastases: can we avoid inappropriate patient selection?	J.J. Verlaan , D. Choi, F. C. Oner, O. Gtstg
GO366	Percutaneous Decompression and Fixation on Complex Spinal Metastases	A. Silva, J. Illanes
GO367	A systematic review and expert opinion of preferred reconstructive techniques after en bloc spinal column tumor resection	R. A. Glennie, N. Dea , T. Ailon, L. Rhines, D. Sciubba, J. Verlan, C. Bettegowda, M. Clarke, Z. Gokaslan, C. Fisher
GO368	Incidence and risk factors for adverse outcomes after open surgery for spinal metastatic fractures	S. Theiss
14:45-15:00	Discussion	

15:00-15:30 Break

15:30-15:45 GLOBAL SPINE CONGRESS AWARDS AND CLOSING CEREMONY (Theatre 1)

15:45-16:00 GLOBAL SPINE CONGRESS 2017 ANNOUNCEMENT (Theatre 1)

16:00-17:00 AOSPINE CLOSING SYMPOSIUM—MINIMALLY INVASIVE SPINE SURGERY (Theatre 1)

16:00-17:00 AOSPINE CLOSING SYMPOSIUM—MINIMALLY INVASIVE SPINE SURGERY (Theatre 1)		Moderator: Patrick Hsieh
16:00-16:05	Introduction and opening comments	Patrick Hsieh
16:05-16:20	Maximizing the Benefits of MIS in Complex Spinal Pathologies	Patrick Hsieh
16:20-16:35	Total 3D navigation for MIS fusion surgery	Roger Hartl
16:35-16:50	State of the Art: Transforaminal Endoscopic Decompression	Anthony Yeung
16:50-17:00	Discussions	

E-posters & Posters



E-posters & Posters

Disclosures

Authors

Back/neck pain—clinical

- GP001** A Study Of The Modified Quebec Task Force Classification Of Chronic Low Back Pain With Regards To Activity Limitation, Global Perceived Effect, Sick Leave And Its Prognostic Implications
K. Kalyan Kumar Varma
- GP002** Low Back Pain & Sciatica As The Prominent Clinical Manifestations Of Pelvic Venous Congestion Syndrome. A Case Report
G. Delaportas, G. Manolarakis
- GP003** Multicolumn Spinal Cord Stimulation For Significant Low Back Pain In Failed Back Surgery Syndrome: A National, Multicentre, Randomized, Controlled Health Economics Study (ESTIMET)
M. Roulaud, O. Monlezun, B. Lorgeoux,
P. Rigoard, G. Estimét
- GP004** Subcutaneous Peripheral Nerve Stimulation As "Hybrid Stimulation" After Failure Of Spinal Cord Stimulation To Control The Back Pain Component In Failed Back Surgery Syndrome Patients. A Randomized Controlled Study (CUMPNS)
O. Monlezun, B. Lorgeoux, M. Roulaud,
P. Rigoard
- GP005** Influence of psychiatric comorbidities on clinical outcome before and after elective spine surgery. A prospective observational study
B. Meyer, E. Shiban, Y. Shiban, A. Mühlberger
- GP006** Post traumatic stress disorder symptoms following elective spine surgery. Is surgery really the reason?
E. Shiban, B. Meyer
- GP007** Episacral Lipomata As A Cause Of Lower Back Pain : Series Of Cases Managed By Excision
A. Singh, **K. Ramalingam**, L. Kang Kai, S. Jeremy
- GP008** Diagnostical challenges of tumor-like conditions of cervical neural arch in childhood
Z. Hoffer, Á. Lazary, P. Varga

Basic Science—other

- GP009** Thoracic Volume Progressively Decreases in a Virtual Osteoporotic Vertebral Wedging Model with Increasing Severity of Kyphotic Deformity
Po-Chih Lee, C. Ledonio, **D. W. Polly**, K. E. Jones, A. Erdman
- GP010** Thoracic Volume Modeling in Virtual Sagittal Curve Progression
C. Ledonio, P.-C. Lee, **D. W. Polly**, K. E. Jones, A. Erdman
- GP011** Proposal of a new trajectory for screws in the lateral mass of the cervical spine
M. Diez Ulloa, S. Amhaz-Escanlar, A.-A. Jorge-Mora

Biomechanics—other

- GP012** Morphometry of Vertebrae in Saudi Population with a Comparison to Other Population
M. Hasen, H. Al-Habeeb, F. Molani
- GP013** Biomechanical Study Examining the S2 Alar Iliac Screw Insertional Torque
C. Ledonio, H. Donguyen, E. Santos, J. Sembrano, R. Morgan, **D. W. Polly**
- GP014** Biomechanical effect of intravertebral cleft on osteoporotic vertebral compression fractures and variations after treatment by percutaneous vertebral augmentation: a three-dimensional finite element analysis
L. Ye, **X. Jiang**, D. Liang, S. Zhang, Z. Yao

Deformity—cervical

- GP015** Results of Posterior Occipito-Cervical Decompression and Fusion in Case of Basilar Invagination : A Case Series.
A. Patel

Deformity—thoracolumbar (adolescent)

- GP016** Evaluation Of The Shoulder Imbalance Angular Parameters And The Usage Of Midtrapezial Angle Clinically And Radiologically In Adolescent Idiopathic Scoliosis (AIS) Cases
F. Barishan, B. Akesen

- GP017** Pedicle morphometric analysis in Adolescent Idiopathic Scoliosis - Importance of Surgeon Familiarity With Patient Specific Variables
P. Sudarshan, A. Panda, A. Paramasivam, V. Varma, S. Hegde
- GP018** The Choice of Upper Instrumented Vertebra in AIS and Shoulder Balance
K. Kharrat, G. Khouri, G. Kreichati
- GP019** Shilla procedure and crankshaft phenomenon
K. Kharrat, A. Sebaaly, G. Kreichati, M. Rizkallah
- GP020** Is there a correlation between the apical vertebral rotation and the pelvic incidence in adolescent idiopathic scoliosis?
K. Kharrat, A. Sebaaly, A. Assi, I. Ghanem, R. Rachkidi
- GP021** Preliminary results of treatment of early onset scoliosis using magnetic growing rods.
A. Siam, E. Shaheen, N. Mohamad-Ali, T. Pfandlsteiner, C. Wimmer
- GP022** Conversion of implant failure in early onset scoliosis to magnetic growing rod. A series of five cases.
A. Siam, E. Shaheen, T. Pfandlsteiner, C. Wimmer
- GP023** Three Column Fixation-A Dynamic Method In Scoliosis Surgery
Md. Shah Alam, Md. Rezaul Karim, S. Jonayed, H. Md. Munir, S. Chakraborty, T. Alam
- GP024** Preoperative LIV tilt affects post operative coronal imbalance in patients with Lenke 5C scoliosis
A. Shetty, **S. Rajasekaran**, S. Subramani, R. Kanna
- GP025** Video-Assisted Thoracoscopic Surgery (VATS) for Anterior Release of Rigid Thoracic Scoliosis
A. Elbadrawi, M. Wafa
- GP026** 2 Year Outcome Of A New Modified Luque Trolley Technque Versus Traditional Growing Rods In The Management Of Progressive Juvenile Onset Scoliosis
A. Cottam, B. Van Herwijnen, E. Davies
- GP027** The Effect of Waiting for Surgery on Patients with Adolescent Idiopathic Scoliosis
S. Fallatah, M. Sait, F. Almutairi
- GP028** Management Of Children With Complicated Spinal Deformities In Countries With Minimal Resources
A. Ahmad
- GP029** Impact of longer surgical wait-list times on length of hospitalisation, return to function and cost of surgical treatment in patients with Adolescent Idiopathic Scoliosis undergoing Posterior Spinal Fusion
R. Tarrant, D. Moore, P. Kiely
- GP030** Intraoperative electromyography and instrumentation in patients with idiopathic scoliosis.
A. Dias, R. Alvarenga Boy Lanna, M. Ferreira Junior, R. Sakamoto Falcon, P. Renato Rech, R. De Almeida Vargas, C. Magalhães Menezes
- GP031** Comparison of the DIERS Formetric 4D Scanner and plain Radiographs in terms of accuracy in Idiopathic Scoliosis Patients
V. Kumar, A. Cole, L. Breakwell, **A. Michael**
- GP032** Is Radiographic Control Necessary After Every Lengthening of Magnetically Controlled Growing Rod?
C. Yilgor, A. Alanay
- GP033** All Pedicle Screw Instrumentation for Scheuermann's Kyphosis Correction
W. Koptan, M. El-Sharkawi, Y. Elmiligui
- GP034** Posterior vertebral column resection (PVCR) in Early Onset Spinal Deformities (EOSD)
M. El-Sharkawi, W. Koptan, A. Elkott, H. Tammam, W. Gad, **N. Abol Oyouun**, A. Shawky
- GP035** Management of early onset scoliosis using Growing Spine Profiler (GSP)
M. El-Sharkawi, W. Koptan, **A. Elkott**, H. Tammam, W. Gad, N. Abol Oyouun, A. Shawky
- GP036** Posterior selective fusion with pedicle instrumented correction in Thoracolumbar adolescent idiopathic scoliosis (AIS)
U. Debnath, J. McConnell
- GP037** Quality of life of children and adolescents with idiopathic scoliosis treated conservatively with DoboMed method.
B. Kapustka, M. Zimon, E. Matusik, P. Chodakowski, J. Durmala

- GP038** Posterior based 2 or 3 column spinal osteotomies and release followed by a controlled halo-pelvic distraction in the management of neglected and complicated spinal deformities: A safe and new technique.
V. Kanagaraju, H. Chhabra
- GP039** A comparison of Stryker Xia3 and Depuy Expedium FAS instrumentation for the correction of adolescent idiopathic scoliosis
A. Khan, A. Fragakis, P. Loughenbury, J. Ong, R. Husein
- GP040** Low Body Weight In Patients With Adolescent Idiopathic Scoliosis
C. Jacob Junior, I. Machado Cardoso, J. Lucas Batista Junior, T. Cardoso Maia, M. Alexandre Novo Brazolino, T. Gervazoni Debom, B. Roncaglio
- GP041** Analysis Of Curves Of Allowances Submitted To Patients Arthrodesis Selective In Curves Lenke Type 1: Fellow Up Two Years
C. Jacob Junior, T. Gervazoni Debom, T. Thiago Maia, J. L. Batista Junior, I. Machado Cardoso, M. A. Novo Brazolino
- GP042** Intrinsic sacral deformity in L5 istmic lythic spondylolysis
M. Díez Ulloa, D. Barahona-Lorenzo, A. Gallego-Goyanes
- GP043** Proximal junctional kyphosis in pediatric deformity: Analysis of management with a surgical technique limiting cervical extension
S. Pantoja, A. Chahin, G. Arriagada, F. Luna
- GP047** Influence of the level of pedicle subtraction osteotomy on pelvic tilt change in adult spinal deformity.
A. Sebaaly, **K. Kharrrat**, G. Kreichati, M. Rizkallah
- GP048** How reliable is the surgeon's ability to differentiate between idiopathic and degenerative deformity in adults; what parameters help them decide?
E. Acaroglu, Ü. Özgür Güler, S. Ayhan, T. Mmopelwa, M. Domingo Sabat, F. Pellise, F. Javier Sanchez Perez Grueso, A. Alanay, I. Obeid, F. Kleinstuck, European Spine Study Group (ESSG)
- GP049** Multiple Regression Analysis of Factors Affecting the Mental Component Score Constituents of SF-36 in Adult Spinal Deformity
S. Ayhan, S. Yuksel, A. Niyazi, V. Nabyev, Ü. Özgür Güler, T. Mmopelwa, M. Domingo Sabat, F. Pellise, A. Alanay, F. Javier Sanchez Perez Grueso, F. Kleinstuck, I. Obeid, **E. Acaroglu**, European Spine Study Group (ESSG)
- GP050** Mental Health and Self Image Perception of Non-disabled Adult Idiopathic Scoliosis Patients Having Mild to Moderate Curves Compared to Normal Population
C. Yilgor, M. Enercan, A. Hamzaoglu, F. Pellise, F. Perez-Grueso, E. Acaroglu, I. Obeid, F. Kleinstuck, A. Alanay, European Spine Study Group (ESSG)
- GP051** Postoperative spine and spinal implants instability as complications of treatment of the rigid scoliotic deformation in adult and elderly patients
D. Mikhaylov, **D. Ptashnikov**, S. Masevni, N. Zaborovskii
- GP052** Pedicle subtraction osteotomy in management of rigid thoracolumbar kyphosis in adults
M. Negm
- GP044** Anterior Hyperlordotic Cages : Early Experience and Radiographic Results.
P. Saville, A. Kadam, H. Smith, V. Arlet
- GP045** The Use of MAGEC Growing Rods as a temporary distraction rod in Severe Kyphoscoliosis: A Case Report.
J. Smith, J. Morgan
- GP046** How Much Deformity Correction and Maintenance Can We Obtain by LLIF and Will It Be Affected by Approach Side or Levels?
W. Cho
- GP053** Prevalence and Complications of Post-Operative Transfusion for Cervical Fusion Procedures in Spine Surgery; an Analysis of 11,588 patients from the ACS-NSQIP database
A. Aoude, S. Aldebeyan, M. Fortin, A. Nooh, P. Jarzem, J. A. Ouellet, M. H. Weber
- GP054** Laminoplasty For The Treatment Of Cervical Myelopathy. 5 Year Experience At University Clinic Colombia
J. Uribe, W. Chaparro, **M. Herrera**

Deformity—thoracolumbar (adult)

Degenerative cervical

- GP055** Evaluation of effectiveness of Riluzole in the treatment of early cervical spondylotic myelopathy using Diffusion Tensor Imaging- A double blinded, placebo-controlled Randomised Controlled trial.
S. Rajasekaran, S. Aiyer, R. Kanna, A. Shetty
- GP056** Rationale, design and early trial performance of AOSpine North America multi-center double blind randomized controlled trial of safety and efficacy of riluzole in CSM (CSM - Protect Trial).
M. Fehlings, B. Kopjar
- GP057** Results Of Multi-Level (Three And Four Levels) Cervical Disc Arthroplasty: Age-Weighted Linear Regression Analysis—Results From A Single Centre.
M. Rajesh, S. Khan, S. Friesem, C. Bhatia, G. Reddy
- GP058** Surgical management of recurrent compressive myelopathy after anterior cervical discectomy and fusion
M. Negm
- GP059** Stand alone anterior multiple levels cervical cage
M. Khattab, M. Khattab, S. El Ghamry, Y. El-Hawary, Y. El-Hawary, Y. El-Hawary
- GP060** Reliable Measure Of Safe Zone For Cervical Spinal Surgery In Keeping Of The Embryologic Origins Of The Course Of The Recurrent Laryngeal Nerve (RLN) On Right And Left
A. Rajabian, Nasir A. Quraishi
- GP061** Surgical outcome of the selective posterior spinal fusions for ossification of posterior longitudinal ligament in the cervical spine
T. Mishiro, **H. Manabe**
- GP062** The modified Japanese Orthopaedic Association Scale: Establishing Criteria for Mild, Moderate and Severe Disease in Patients with Degenerative Cervical Myelopathy
L. Tetreault, A. Nouri, A. Singh, R. Bartels, B. Kopjar, P. Arnold, M. Fehlings
- GP063** Change in Function, Pain and Quality of Life following Structured Nonoperative Treatment in Patients with Degenerative Cervical Myelopathy: A Systematic Review
L. Tetreault, M. Shamji, J. Rhee, J. Wilson, I. Anderson, A. Dembek, K. Pagarigan, J. Dettori, M. Fehlings
- GP064** Change in Impairment Following Operative Treatment of Degenerative Cervical Myelopathy: A Systematic Review and Meta-Analysis
M. Shamji, **L. Tetreault**, S. Kurpad, D. Brodke, J. Smith, P. Arnold, E. Brodt, J. Dettori, M. Fehlings
- GP065** Chin on Chest Deformity in a Patient with Fibrodysplasia Ossificans Progressiva: Case Report
A. Rodriguez, **F. Alvarado Gomez**, D. Meneses
- ### Degenerative lumbar
- GP066** Mini anterior lumbar interbody fusion: One year follow up for a Novel Device
K. Elabed
- GP067** Radiological outcome of Lumbar Lordosis restored following Extreme Lateral Interbody Fusion (XLIF) plus Pedicle Screw Insertion (PSI)
S. Rehman
- GP068** Influence of lumbar lordosis restoration on clinical outcome in degenerative lumbar patients from the "pre-balance" period: ex post analysis of spinal parameters restoration and clinical outcome in a medium follow-up.
C. Martini, E. Pieracci, P. Lepori
- GP069** Is there sacral deformity predisposing to L4 degenerative spondylolisthesis?
M. Diez Ulloa, D. Barahona-Lorenzo, A. Gallego-Goyanes
- GP070** Degenerative scoliosis de novo : prospective study of 50 cases operated with Stand-Alone ALIF with one years minimum follow-up.
G. Norotte
- GP071** Lumbosacral parameters and Intervertebral disc changes in adult patients with pars defects.
A. Baco, K. Mukhtar, **N. Khan**, S. Ghouri, E. Shaikh
- GP072** 1_Stand alone ALIF for degenerative lumbar spine diseases
Y. Elbanna
- GP073** Unplanned reoperation of lumbar spinal surgery during the primary admission: a multicenter study based on a large patient population
J. Liu, **Z. Liu**, S. Huang, H. Deng

- GP074** Clinico-radiological evaluation of Unilateral Single Cage filled with Local Morselized Bone Graft in posterior lumbar interbody fusion (PLIF) for degenerative lumbar disc- retrospective study Suresh kumar B.C, Navaladi Shankar, Rampathy reddy
S. Kumar
- GP075** Radiological assessment of bilateral decompression through unilateral approach for the treatment of lumbar spinal canal stenosis.
H. Shigematsu, E. Iwata, A. Okuda, Y. Tanaka, **M. Koizumi**
- GP076** Predicting Factors For Patient Reported Satisfaction After Transforaminal Lumbar Interbody Fusion: a two-year follow-up
B. Lim, **J. Chen**
- GP077** Overpowering posterior instrumentation and fusion using a modified anterior lumbar interbody fusion technique, an experience of 11 cases.
N. Wigner, **P. Saville**, A. Kadam, H. Smith, V. Arlet
- GP078** Annulo- nucleoplasty using Disc- FX® in the management of lumbar disc pathology: Early 2 year results
N. Kumar
- GP079** The influence of the fusion degree of the vertebrae on the process of destabilization of the pedicle fixation system after TLIF and PLIF
I. Basankin, V. Porhanov, K. Tahmazyan, V. Shapovalov, S. Malahov, A. Volynsky
- GP080** Cost per Quality Adjusted Life Years Gained Following Anterior Cervical Discectomy and Fusion in Elective Degenerative Pathology in Obese and Non-obese patients
S. Chotai, S. Parker, M. McGirt, **J. Cheng**, C. Devin
- GP081** Intraoperative Electrophysiological Monitoring Navigation Results During Sagittal Anterior Reduction Maneuver Of High Grade Spondylolisthesis L5-S1 Using An ALIF Surgical Technique
R. Diaz, M. Berbeo, A. Guarnizo, J. Sardi
- GP082** Risk factors for adverse events and reintervention after surgery for lumbar spine stenosis. A 10 years experience of clinical practice in a third level Hospital from Bogotá, Colombia.
F. Alvarado, L. Morales Saenz, A. Rodriguez Munera, **M. Farfan**, A. Rodriguez Buitrago, D. Tafur Victoria, L. Vásque Viana, C. Gutierrez Rodriguez
- GP083** Value of combination of two minimal invasive techniques in elderly patients with multisegmental lumbar canal stenosis and spondylosis. Midterm results
H. Abdelrahman, M. Alhashash, H. Boehm
- GP084** Use of a Sublaminar Decompression as an Alternative to Traditional Laminectomy in Degenerative Disorders of the Lumbar Spine
K. Peddada, B. Elder, W. Ishida, Sheng-Fu Lo, C. Holmes, **C. Rory Goodwin**, T. Witham
- Diagnostics—clinical**
- GP085** The SpineCor Brace in 2015. A form of Chiropractic Child Abuse? A report of three cases.
J. Smith, J. Heflin
- GP086** A CTè-based Analysis of Implant Position of Sacroiliac Joint Fusion: Is There a Learning Curve for Safe Placement?
J. Herseth, C. Ledonio, **D. W. Polly**
- GP087** Sacral Bone Mineral Density Using Opportunistic CT Scans: A Retrospective Crossè sectional Analysis
R. Hoel, C. Ledonio, **D. W. Polly**
- GP088** The validity of rasterstereography—a systematic review
A. Skwara, **M. Mohokum**, S. Schülein
- GP089** Reconsideration of the definition of Chiari malformation type 1 radiologically and clinically
T. Murakami
- GP090** Evaluating sagittal balance with lumbopelvic parameters: a single-center performance improvement project
A. Chiappini, M. Cunningham, L. Mariani, **G. Jost**

Epidemiology

- GP091** Contribution of Arab Researchers to the Spine Literature over the last 20 years.
A. Siam, G.-M. Gouda-Mohamed, A. Shawky
- GP092** Oswestry Disability Index: Is Telephonic Administration Valid?
A. Yaszemski, C. Ledonio, T. Garber,
D. W. Polly
- GP093** Growing trend of the Arab surgeons' contribution in spine surgery: a systemic review of the top-ranked spine journals.
A. Siam, G.-M. Gouda-Mohamed, A. Shawky
- GP094** Spinopelvic Parameters Evaluation In A Brazilian Population Sample: A Systematic Review
C. Jacob Junior, T. Cardoso Maia,
M. Alexandre Novo Brazolino,
I. Machado Cardoso, J. L. Batista Junior

Imaging

- GP095** Comparative Analysis Of Evaluation Of Lumbar Lordosis Measured In The Standing Positions Radiography And Magnetic Resonance Imaging
C. Jacob Junior, I. Machado Cardoso,
J. Lucas Batista Junior, T. Cardoso Maia,
M. Alexandre Novo Brazolino,
T. Gervazoni Debom, B. Roncaglio
- GP096** Sacro-pelvic tilt as a predictor for optimal lumbar lordosis
K. Mukhtar, A. Baco, N. Khan, A. Alhammoud,
M. Arbash

Infections

- GP097** Challenges in spine: management of spinal infections. A flow-chart to guide decision making.
A. Gasbarrini, R. Ghermandi, M. Girolami,
S. Bandiera, G. Barbanti Brodano, S. Terzi,
L. Babbi, **S. Boriani**
- GP098** Kyphotic deformity associated with Acute Tubercular Spondylodiscitis treated by single stage posterior only surgery.
S. Rajasekaran, A. Shetty, A. Dian, G. Das,
R. Kanna

- GP099** The role of vancomycin powder to prevent wound infection in spine surgery- Protocol of Randomized control trail
A. Alhammoud, A. Baco, M. Head, N. Mehrab,
M. Arbash
- GP100** Long-term outcome following surgical treatment for spondylodiscitis in 211 cases
E. Shiban, I. Janssen, B. Meyer, J. Reiner,
F. Ringel
- GP101** Bacterial contamination in osteosynthesis material removed after 6/8 months postoperative
C. Nirino, C. Nemirovsky
- GP102** Are ESR and CRP acceptable predictors for early post spinal surgery infectious complication?
S. Safaei
- GP103** Anterior versus posterior approach in surgical treatment of tuberculous spondylodiscitis of thoracic and lumbar spine
K. Hassan, **E. Elmorshidy**
- GP104** Debridement, internal fixation and interbody fusion to treat single level thoracic tuberculosis via anterior approach only
H. Refae, H. Refae
- GP105** Simultaneous Anterior Debridement and Posterior Instrumentation for Multiple Level Tuberculous Spondylodiscitis
W. Koptan, M. El-Sharkawi, Y. Elmiligui
- GP106** Instrumented circumferential fusion for tuberculosis of the dorso-lumbar spine. A single or double stage procedure?
O. Refai, M. Elsabrouh, M. Hasan, H. Ali,
M. El-Sharkawi, G. Said
- GP107** Medium-Term Outcome of Posterior Surgery in The Treatment of Non-Tuberculous Bacterial Spinal Infection
A. Aljawadi, **A. Dawoodi**, E. Imo, G. Sethi,
F. Arnall, M. Chaudhry, J. George,
S. Mohammed, R. Verma, A. Tambe, N. Yasin,
I. Siddique
- GP108** Early diagnosis and operative management in Non tuberculous spondylodiscitis - Outcome in a case series of 34 patients
P. Sudarshan, A. Panda, A. Paramasivam,
V. Varma, S. Hegde

GP109 Post operative comparison of the results of the use of antibiotic prophylaxis one and five days in patients undergoing Lumbar Arthrodesis

C. Jacob Junior, J. L. Batista Junior, I. Machado Cardoso, T. Cardoso Maia, M. Alexandre Novo Brazolino, T. Gervazoni Debom, B. Roncaglio

GP110 Posterior transpedicular decompression and pedicle screw fixation for early stage thoracic, thoracolumbar and lumbar tuberculosis

A. Dsouza, **K. Das**

Medical economics

GP111 The Development Of Cell Salvage As A Technique Within Adult And Pediatric Spinal Surgery—A Small Retrospective Study

P. Hamrikova, J. Sayer, Z. Al Zayed

Minimally invasive spine surgery

GP112 Complications and Re-operation Rate after Extra-foraminal Microscopic-assisted Percutaneous Nucleotomy

A. Shawky, D. Babic, A. Siam, A. Ezzati

GP113 Randomized Controlled Trial of Minimally Invasive Sacroiliac Joint Fusion Using Triangular Titanium Implants vs. NonSurgical Management for Sacroiliac Joint Dysfunction

D. W. Polly, D. Cher, K. Wine, P. Whang, C. Frank, H. Lockstadt, C. Harvey, J. Sembrano

GP114 Microdiscectomy Reduces Back Pain In Patients With Lumbar Disc Herniation

C. Jacob Junior, I. Machado Cardoso, J. L. Batista Junior, T. Cardoso Maia, M. A. Novo Brazolino, T. Gervazoni Debom, B. Roncaglio

GP115 The role of minimally invasive spine surgery for Thoraco-lumbar fractures in patients with Ankylosing Spondylitis and Diffuse Idiopathic Skeletal Hyperostosis (DISH)

H. El-Maghraby, S. Nagaraja, R. Bletechi

GP116 Minimally invasive percutaneous fixation of Thoraco-lumbar fractures in a major trauma centre and single institute experience

H. El-Maghraby, R. Bletechi, S. Nagaraja

GP117 The implication of bone cement distribution in fracture area for the clinical outcome of percutaneous vertebroplasty: a retrospective comparative clinical study

X. Jiang, L. Mo, D. Liang

Navigation—clinical

GP118 Stimulation EMG Thresholds During Percutaneous Robotic Assisted Pedicle Screw Placement

A. Cannestra

Nonoperative clinical treatments

GP119 Clinical outcomes among patients with chronic low back pain treated with pregabalin monotherapy in Fort portal regional referral hospital in western Uganda: case series report

G. Pariyo

Novel technologies—clinical

GP120 Radiation exposure in single level lumbar fusion: Our experience in Robotic guidance compared to literature review of minimally invasive fusions

P. Sudarshan, A. Panda, A. Paramasivam, V. Varma, S. Hegde

GP121 Accuracy Of Robotic Guidances In Transpedicular Spinal Screw Placement: A Series Of 93 Patients For The First Time In Vietnam

T. Nguyen Le Bao, T. Nguyen Van, H. Nguyen Dinh

GP122 Application of the Ultrasonic Bone Shaver in Spine Surgery—experience in 307 patients

D. Hazer, B. Yasar, A. Akbas, Hans-Eric Rosberg

GP123 Surgical Management of the Spinal Cord Vascular Lesions Supplied by the Anterior Spinal Artery

S. Neckrysh, P. Krotenkov

GP124 The Apifix automatic self-correction technique for Adolescent Idiopathic Scoliosis at 1½ years follow-up: a preliminary report.

N. Sekouris, A. Pilihou, A. Sovatzoglou, K. Soultanis, N. Karavidas, L. Flouda, E. Vlahos

GP125 Report of one year follow up of patients after TLIF using a 3-dimensional expandable cage for lumbar fusion with lordotic correction

R. Morrison, J. Rigal, J. Le Huec, **K. Schnake**

Surgical complications

- GP126** Final Fusion in Patients Treated with Rib Based Distraction: A Review of Peri-operative Results
J. Heflin, J. Morgan, V. Heagy, **J. Smith**
- GP127** The Impact of Obesity on the Orthopedic Spinal Surgical Operative Time and Hospital Stay at King Khalid University Hospital
W. Awwad, **K. Binown**, A. Alkadhaib, N. Modahi
- GP128** Iliac-Cava Complication After L4-L5 Discectomy
J. Fernandez La Villa, D. Fernández Fernández, M. Nogales Asensio, Á Vega Curiel, J. Herrero Pineda
- GP129** A case report of rod migration into cerebellum through foramen magnum after Lateral Mass Fixation
A. Sharma

Trauma—cervical

- GP130** CT Analysis of Anatomical Variation and Injury Affecting Posterior Pedicle Screw Fixation for Unstable Hangman's Fractures
G. Lee, **Q. Wang**
- GP131** Open Fracture of the Cervical Spine Due to a Peculiar Injury Mechanism
V. Ballesteros, J. Lecaros, **J. Zamorano**, A. Munjin

Trauma—other

- GP132** Assessment of whole spine MRI for multilevel noncontaguous spinal fractures- incidence, patterns & missed injuries
R. Kanna, C. Gaike, A. Maheswaran, A. Shetty, S. Rajasekaran
- GP133** Timing of decompression in patients with acute spinal cord injury: a systematic review
M. Fehlings, J. Wilson, P. Arnold, C. Shaffrey, M. Shamji, T. Mroz, A. Skelly, J. Chapman, L. Tetreault, B. Aarabi, S. Casha
- GP134** Sacral Fractures
M. Suarez Huerta, J. Betegon-Nicolas, P. Casas-Ramos, M. Esteban-Blanco, J. Villar-Perez, J. Hernandez Encinas, A. Lozano-Muñoz, M. Fernandez-Gonzalez

Trauma—thoracolumbar

- GP135** Evaluation of functional and radiographic outcomes of thoracolumbar fractures
A. Andalib
- GP136** Neurological Recovery after Early Reposition, Decompression and Instrumented Fusion of C-Type L2 Fracture: a case report
I. Coc, T. Banic, V. Bilic, N. Somun, Z. Kejla
- GP137** The Value of CT and MRI in the evaluation and management of patients with thoracolumbar spinal injuries
S. Rajasekaran, A. Vaccaro, R. Mughes, G. Schroeder, F. C. Oner, L. Vialle, J. Chapman, M. Dvorak, M. Fehlings, A. Shetty, K. Schnake, A. Maheswaran, F. Kandziora
- GP138** Usefulness of Prone Extension CT in Development of Therapeutic Strategy for Osteoporotic Delayed Vertebral Collapse with Neurologic Compromise
X. Jiang, L. Ye, D. Liang, Z. Yao, S. Zhang

Tumors

- GP140** Craniovertebral Junction Meningiomas: Analysis of Clinical and Radiological Results
A. Raco, A. Pesce, G. Toccaceli, A. Frati, D. Dugoni, R. Delfini
- GP141** The influence of histological subtype in predicting survival of lung cancer patients with spinal metastases
N. Kumar, Kimberly-Anne Tan, J. Tan, A. Zaw
- GP142** Is Salvaged Blood Ideal for Transfusion in Metastatic Oncological Surgeries?
A. Zaw, **N. Kumar**
- GP143** Outcome Of Kyphoplasty In Vertebral Compression Fractures For Multiple Myeloma
U. Debnath, V. Goel
- GP144** The use of secondary prognostic parameters when malignancy of undefined primary origin is present in spinal metastases
J.W. Daniel, J. C. E. Veiga
- GP145** Primary Osteosarcoma of T2 Pedicle in a Young Adult: Case report
A. F. Rodriguez Buitrago, A. Rodriguez Munera, L.C. Morales Saenz, **F. Alvarado Gomez**, C. Bedoya Viscaya, E. Jimenez Hakim

Basic Science—other

WP001 Histopathological Features Of Facet Osteoarthritis In Patients With Lumbar Spinal Stenosis

C. Netzer, K. Urech, T. Huegle, R. Benz, A. Hirschmann, J. Geurts, S. Schaeren

Biomechanics—other

WP002 Static test of flexo compression in posterior thoracolumbar spinal fixation with conical cylindrical screws

C. Nirino, C. Nemirovsky

Degenerative lumbar

WP003 Utility Of Fusion Surgery In Patients With Degenerative Lumbar Spondylolisthesis & Their Outcome

Md. Shah Alam, Md. Rezaul Karim, S. Jonayed, H. Md. Munir, A. Matin, S. Chakraborty, T. Alam

WP004 Spontaneous Resolution of Sequestered Lumbar Disc Herniation: A Prospective Cohort Study
acute spinal cord injury: a systematic review

A. Rahimizadeh, M. Saghri

Disc biologics—clinical

WP005 Modic Changes in Lumbar Spine - Prevalence and Genetic Association Analysis through Single Nucleotide Polymorphism analysis of 71 Polymorphisms

S. Rajasekaran, A. Shetty, R. Kanna

Disc biologics—non-clinical

WP006 Genetic contribution to degeneration and repair potentials of the intervertebral disc in mice

C. Xiong, Y. Li, F. Muhammad Rai, L. Sandell, Y. Zhang, Y. Song, Kathryn S. E. Cheah, P. Sham, D. Chan

Disc degeneration—clinical

WP007 Outcome and differences in the clinical results of three different surgical methods for lumbar disk herniation

A. Haghnegahdar

WP008 Phenotype standardization is the urgent need in genetic association studies of disc degeneration - Results of analysis of genetic association of 71 SNPs with highly specific phenotypes in 809 subjects.

S. Rajasekaran, R. Kanna, S. Natesan, R. Muthurajan, V. Ranjani, K. Cheung, D. Chan, Patrick Y. Kao, A. Yee, A. Prasad

WP009 Long-term follow-up of disc degeneration after discography: minimum 5-year follow-up at a single center experience

J.-W. Hur, K.-S. Ryu, J.-S. Kim, J.-H. Seong

WP010 Use of an interspinous device above the level of interbody fusion: Does it reduce the worsening of adjacent segment degeneration?

P. Sudarshan, A. Panda, A. Paramasivam, V. Varma, S. Hegde

WP011 Surgical Strategy for Thoracic Disc Herniation: Analysis of 27 Cases Managed with Transthoracic Microdiscectomy, Lateral Extracavitary Approach and Arthropediclectomy

P. Krotenkov, **S. Neckrysh**

WP012 Microdiscectomy results using the Caspar technique

T. Velnar, G. Bunc

WP013 The Stand-Alone cervical cages with Integrated Screw Fixation: Results in 315 consecutive operated levels

H. El-Maghraby, S. Joshi

Disc degeneration—non-clinical

WP014 Discectomy-related information on the internet: Does the quality follow the surge?

G. Sheridan, Y. Elhassan, N. Mujtaba, S. Mugtaba, P. Kiely, J. Noel

WP015 The role of caveolin-1 in intervertebral disc degeneration and regeneration

F. Bach, Y. Zhang, L. Verdonschot, A. Miranda Bedate, L. Creemers, K. Ito, B. Meij, D. Sakai, D. Chan, M. Tryfonidou

Imaging

WP016 New 5-grade scale for anterior fusion estimation: validation for infectious spondylitis

A. Mushkin, I. Baulin, G. Pavel, S. Nina, **D. Naumov**

Novel technologies—clinical

WP017 The experience of Eggshell Technique during kyphoplasty to prevent cement leakage in treatment of osteoporotic vertebral fracture.

H. Lo

Spine biologics, bone—clinical

WP018 A study of sacral anthropometry to determine S1 sacral screw placement for spinal lumbosacral fixation in the Korean population

K.-Y. Ha, **I.-S. Oh**

Spine biologics, bone—non-clinical

WP019 Effects of Long-Term Exposure of Exogenous Advanced Glycation Endproducts on Vertebral Bone Microarchitecture; Sex-Differences on Structure Derived Mechanical Properties

W. F. Kindschuh, P. Palacio-Mancheno, X. Chen, J. Iatridis, **S. Illien-Junger**

Spine biologics, other—clinical

WP020 Neural stem cells transplantation as a neuroprotective strategy for Amyotrophic Lateral Sclerosis (ALS)

S. Carletti, R. Rispoli, A. Di Chirico, C. Spera, L. Bolli, M. Scarcella, D. Frondizzi, G. Stipa, L. Mazzini, M. Gelati, A. Vescovi

Surgical complications

WP021 Neurological Complications Of Multisegmental Spine Reconstruction In Children: Post-Op Spinal Cord Electrical Stimulation (SCES) And Training Decrease Motor Deficit

E. Shapkova, D. Emeljannikov, E. Shtyrina, A. Mushkin

Disc biologics—non-clinical

- WST001** Annular repair using cross-linked high density collagen gel seeded with fibrochondrocytes: In vivo outcomes of a rodent disc study.
B. Pennicooke, Y. Moriguchi, B. Borde, C. Berlin, P. Grunert, L. Bonassar, R. Härtl
- WST011** Intervertebral Disc Maintenance and Repair Potential in Mice with different repair potential
Y. Zhang, C. Xiong, D. Chan, D. Sakai
- WST017** Hif-3a fine-tunes extracellular matrix production in nucleus pulposus cell under hypoxia
W.-K. Tam, Kenneth M. Cheung, V. Y. Leung

Disc degeneration—non-clinical

- WST002** BMP 2/7 release system for nucleus pulposus regeneration
G. Lang, Z. Li, X. Chen, H. Sacks, A. Yayon, F. Weber, M. Alini, S. Grad
- WST003** A nanotechnology-based therapy to target inflammation in degenerated intervertebral disc: first results from an ex vivo disc organ culture
G. Q. Teixeira, A. Boldt, I. Nagl, **M. Molinos**, C. Leite Pereira, K. Benz, H.-J. Wilke, A. Ignatius, M. A. Barbosa, C. Neidlinger-Wilke, R. M. Goncalves
- WST006** The effect of bone morphogenetic protein-2 on chondrocyte-like cells derived from degenerated human and canine intervertebral discs
F. Bach, A. Miranda Bedate, F. Van Heel, M. Müller, L. Creemers, K. Ito, K. Benz, B. Meij, M. Tryfonidou
- WST007** The Role Of Diabetes Type I In Intervertebral Disc Degeneration
F. Russo, G. Vadalà, K. Ngo, Y. Fan, M. Trucco, G. Sowa, J. Kang, N. Vo, V. Denaro
- WST013** Reproducible disc degeneration scale in a large animal model
G. Vadalà, F. Russo, F. De Strobel, M. Bernardini, L. Denaro, D. D'Avella, D. Eglin, M. Alini, V. Denaro
- WST014** The effect of iodixanol on human intervertebral disc cells in vitro
L. Gradisnik, U. Maver, G. Bunc, **T. Velnar**

- WST015** The Expression of Keratin 19 in Intervertebral Disc Degeneration and Aging
F. Lv, **V. Leung**, K. Cheung
- WST016** Radiological, Histological and Biochemical Characterization of a Novel Ovine Lumbar Intervertebral Disc Injury Model
C. Daly, T. Goldschlager, P. Ghosh, G. Jenkin, J. Cooper-White, T. Naidoo
- WST018** The relationship between HELQ expression and intervertebral disc degeneration
S. Huang, Y. Zhang, Z. Liu, J. Liu
- WST019** The intervertebral disc functional cell models: a new revolution for in vitro toxicology testing
T. Velnar, G. Bunc, U. Maver, L. Gradisnik

Basic Science—other

- WST004** Collagen Microspheres—A Three-Dimensional Culture System for Notochordal Cells
M. Yuan, C. Yeung, T. Au, D. Chan, K. Cheah, B. Chan
- WST005** Compression Induced Stress Response of Nucleus Pulposus Cells in 3D Collagen Gel
W. Chooi, B. Chan
- WST009** Compression Loading Induced Cellular Stress Response of Intervertebral Disc Cells in Organ Culture
W. Chooi, S. Chan, B. Gantenbein, B. Chan
- WST010** Aberrant DNA methylation important factor in intervertebral disc pathophysiology
N. Chutkan, S. Fulzele

Disc degeneration—clinical

- WST008** Serum levels of the pro-inflammatory cytokines IL-6 and TNF-alpha vary based on diagnoses in individuals with low back pain
K. Weber, O. Bloom, S. Quraishi, M. Chris Overby, M. Levine, **N. Chahine**

Novel technologies—non-clinical

- WST012** Evaluation of tissue repair using MRI imaging of human intervertebral discs cultured in a bioreactor
D. Rosenzweig, R. Gawri, J. Moir, L. Beckman, D. Eglin, T. Steffen, P. Roughley, J. Ouellet, **L. Haglund**

Disclosures



E-posters & Posters

Disclosures

Authors

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Global Spine Congress and World Forum for Spine Research disclosure policy /Disclosure information index

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Aaraqabi, Bizhan	Nothing to declare
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Disclosure Information Index

M	
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Mokkink, Lidwine B	01: I receive Royalties for the book "Measurements in Medicine" from Cambridge University Press.
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Ouellet, Jean	01: None 02: AONA Spine,None,03a: None,03b: Consultant. Depuysynthes,Depuys Synthes,Yes with TGV design and modifications,03c: None,04: None,05: AO Foundation,None,06: AONA FELLOWSHIP FUNDING INSTITUTION RECEIVES FUNDS,None,07: None,08: AO TK , chairman Deformity expert group,None,Shriners Hospitals,09: Analytic support for this work was provided by Spectrum Research, Inc. with funding from AOSpine,None
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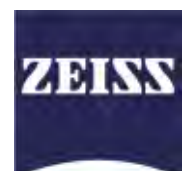
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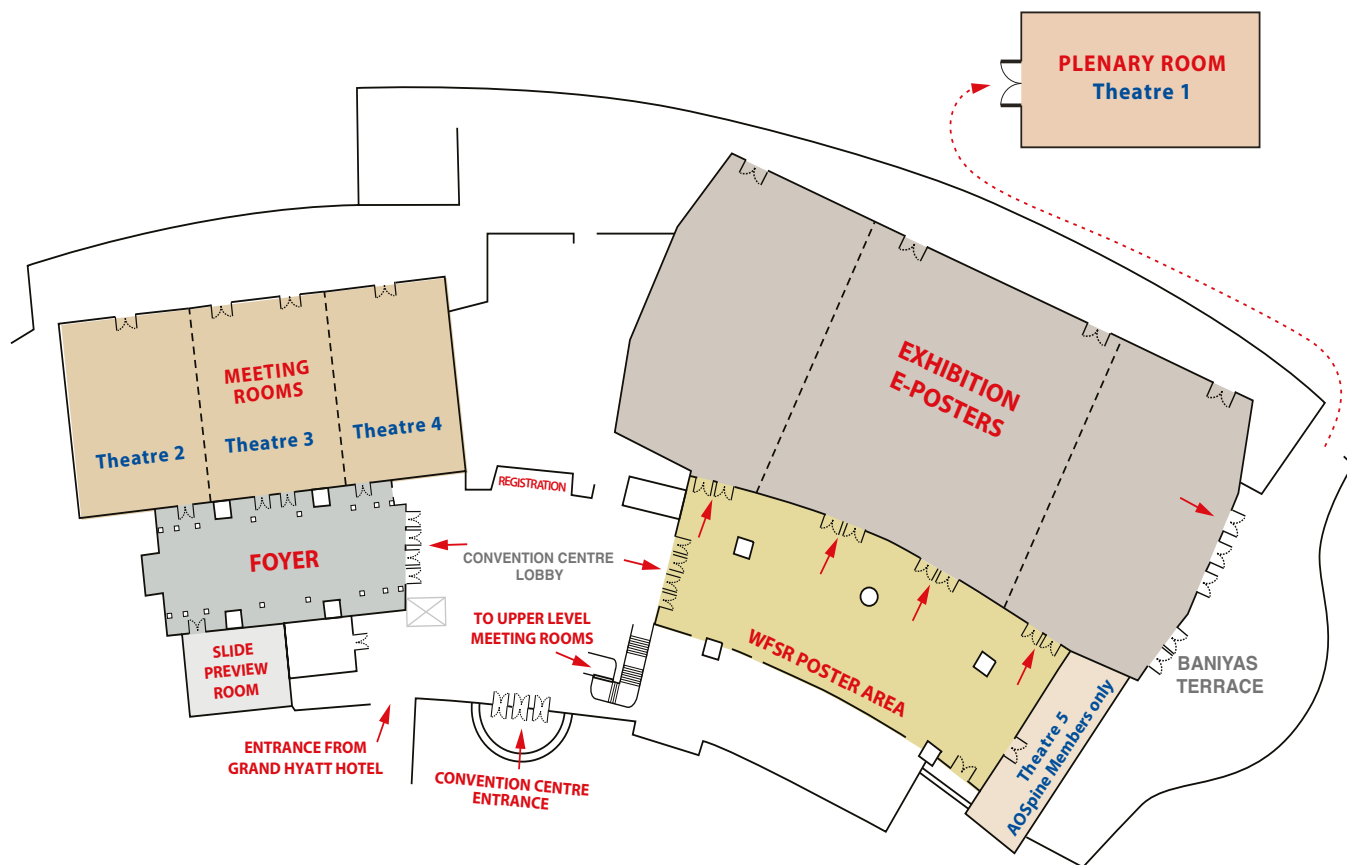
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INSTRUCTIONAL COURSE LECTURE

TITLE: Minimally Invasive Treatment Options for Degenerative Lumbar Spine and Deformity

FACULTY: Prof. Claudio Lamartina, Istituto Ortopedico, Galeazzi, Milano

DATE: Friday, 15 April

TIME: 13:00-14:00

ROOM: Theatre Three - Grand Hyatt | Dubai Convention Center

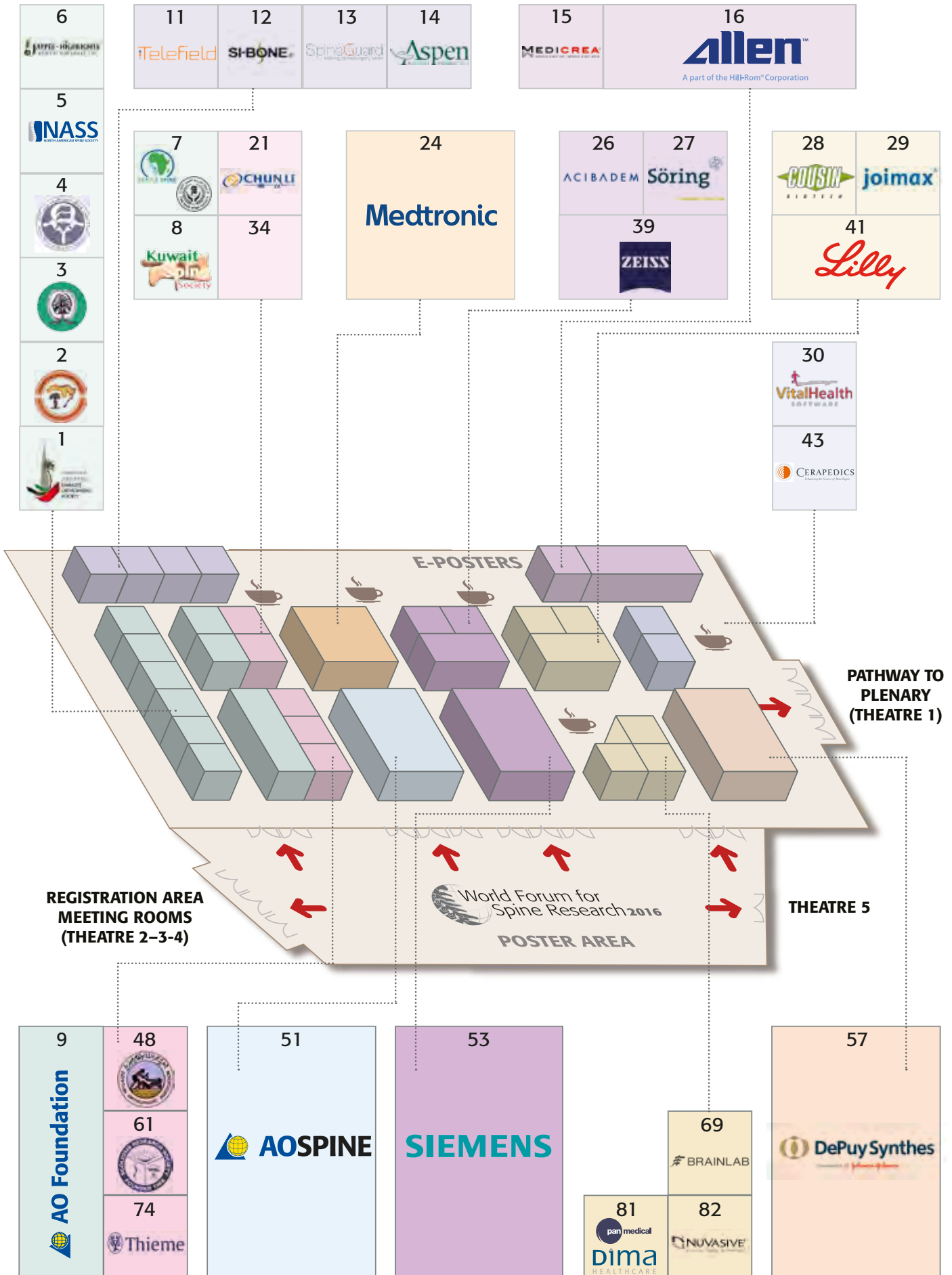
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Exhibition Area

Exhibition Area

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Exhibition area

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Industry Symposia (Lunch/Evening)

Wednesday, April 13

Evening Symposium

18:00-20:00 Medtronic (Theatre 2)

Options for Optimal Sagittal Realignment in Adult Deformity

Followed by buffet dinner

Medtronic

Thursday, April 14

Lunch Symposium

12:15-13:15 Siemens (Theatre 1)

Clinical basis for the choice of intraoperative imaging modalities in spine surgery

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Lunch Symposium

12:15-12:45 Lilly (Theatre 2)

Management of Osteoporosis

Lilly

Friday, April 15

Lunch Symposium

13:00-14:00 AOAlliance (Theatre 2)

Spinal trauma care in low-income countries (LICs): solutions, not dilution



AO **Alliance**
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Lunch Symposium

13:00-14:00 Nuvasive (Theatre 3)

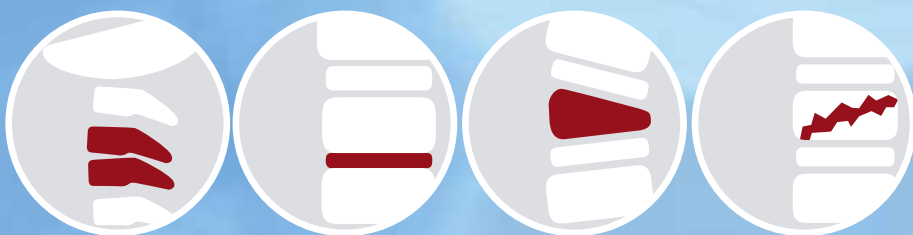
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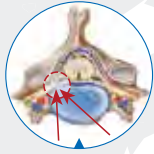
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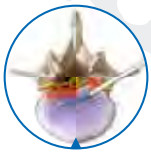
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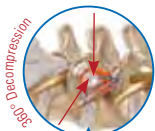
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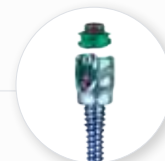
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The AO Foundation, founded in 1958, is a medically guided non-profit organization led by an international group of surgeons specialized in the treatment of trauma and disorders of the musculoskeletal system. It has established specialty areas for trauma, spine, craniomaxillofacial, and veterinary surgery. These specialties continually redefine the state-of-the-art in their field, maintaining activities in research, development, clinical investigation, and education.

AOSpine

AOSpine is a professional medical association of spine surgeons and a clinical division of the AO Foundation. AOSpine is the leading global academic community of spine surgeons dedicated to generating, distributing and sharing knowledge through research, education and community development.

Established in June 2003, the organization is led by the AOSpine International Board. The board guides and supports the AOSpine regions Asia Pacific, Europe and Africa, Latin America, Middle East, and North America. Each region drives more than 150 local educational activities within the AOSpine international network. Today, AOSpine fosters a global community of 30,000 members and associates from all over the world.

AOSpine Research

AOSpine drives and transforms spine care through a variety of pioneering research programs. Teams of research experts gather in intra- and inter-regional research programs and create valuable synergies between science and practical surgery. AOSpine continuously innovates spine surgery, offering its members the chance to be involved in the scientific advancement of spine care worldwide.

AOSpine Education

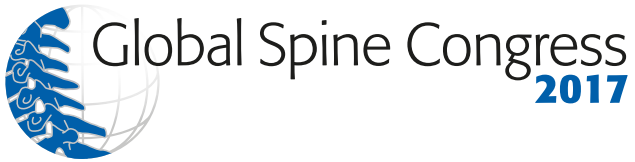
AOSpine fosters lifelong learning for spine surgeons worldwide by offering educational activities that are developed and delivered by expert faculty, providing specific pathology courses based on a comprehensive competency-based curriculum. Highly interactive educational programs involve the learners, and by encouraging them to develop mentoring skills, AOSpine ensures the dissemination of know-how to the next generation of spine surgeons.

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AOSpine encourages its members to generate, distribute, and exchange knowledge whilst also allowing them to build professional relationships both locally and globally.

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A range of initiatives and activities, across five regions, ensure the continual strengthening and growth of our leading global community. AOSpine's strong academic credibility translates into attractive membership benefits designed to keep members connected to the latest advances and high-class education in spine surgery.



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