

# Newsletter

*“Through AOSpine, I learned from the best surgeons worldwide.”*

*Klaus Schnake*

*AOSpine Community Development Commission Chairperson*



## Editorial



Surgeons, when asked what they appreciate most about being a member of AOSpine, mention AOSpine's international network, the camaraderie among colleagues, and great learning opportunities.

For young surgeons, one of the most significant privileges of being an AOSpine Member is the ability to participate in fellowship and mentorship programs. We are therefore delighted to announce that the new AOSpine Fellows Alumni group officially launched at GSC in Milan.

In this AOSpine newsletter issue, you will find information about the Fellows Alumni Group, as well as stories about the journey of the AOSpine mentees, and what they've been up to since the launch of the program in August 2016.

Michael Fehlings also shares his views and insights on working with fellows, what his own mentors

taught him, and the advice he would give to a younger surgeon.

The Global Spine Congress (GSC), which was held this past May in Milan, was a huge success. We have returned with many learnings. In this AOSpine newsletter, you will find some highlights from this flagship event.

The next GSC will take place in Singapore from May 2-5, 2018. Abstracts can already be submitted. We kindly invite you to submit yours.

We are pleased to provide an introduction to the AOSpine Knowledge Forum Tumor in this newsletter, and to share with you the winners of the AOSpine European Research Awards.

The Davos Courses in December 2017 are just around the corner. We have worked hard on improving and

reworking the educational format of the courses to best suit the needs of our advanced and master's level participants. We hope you will like it and look forward to seeing you in Davos!

Last but not least, we invite you to stay in touch, and to get involved, by sharing your ideas with your AOSpine Member Representative, Alaa Ahmad.

I hope that you find this issue interesting and informative. I look forward to bringing you the next newsletter edition in September 2017.

Best wishes,

**Dan Riew**  
Chairperson,  
AOSpine International



# Inspiring Leadership – Michael Fehlings

He is a passionate researcher, mentor and educator. In the following interview, he shares insights on leadership, gives advice for less experienced surgeons and tells what inspires him.

**You have a very distinguished career as a surgeon and educator – looking back, are you where you expected to be and who inspired you?**

I would not have predicted that I would end up where I am, but I'm very happy – it has exceeded my hopes and dreams in many regards. I was inspired by my experiences looking after patients with spinal cord injury. I could see the devastating impact these injuries had on individuals – these were young people I could relate to. I was also inspired by two mentors: Drs. Charles Tator and Alan Hudson. Both had a huge impact on my career and helped me to make two important discoveries about myself: that I was passionate about the creativity and knowledge brought by research, and that I had the opportunity to travel the world and engage in the discipline I enjoy so much at an international level.

**Do you see any difference in generation Y or the millennials compared to when you were a young surgeon?**

I'd say each generation is different.

I really enjoy the mentorship and my goal remains the same: to train and coach these people to become better than me. The people I'm training and interacting with now are so incredibly bright and talented. Yes, they learn information in different ways than I used to and have a different perspective on work life balance for example, but I still see the passion for the profession and the interest in moving forward. It's easier now to maintain connectivity with people around the world. Interacting with the next generation keeps me enthusiastic and motivates me to stay on top of my game. They constantly challenge me with new knowledge and perspectives, asking very intelligent questions and trying new approaches. I feel very positive about the next generation.

**Speaking of younger generations learning information in different ways. Many surgeons struggle to embrace social media. You are very active on it and have a large follower base worldwide. Is there any advice that you can share?**  
I use Twitter a lot for knowledge

dissemination – making people aware of lectures we're giving and research we've published – and we've found that very helpful. Also, I encourage all my students and faculty to have a LinkedIn profile because it's helpful in building a web profile. Patients check it a lot, which I find very positive from a professional side. We also have our web page and try to direct traffic there whenever possible. I also have a Wikipedia profile. One area of caution is to be very careful in separating personal life from professional life, for example on Facebook. I also recommend surgeons to be careful about the types of photos disseminated on social media. With that caveat aside I'd say that social media in general is very positive for me.

**In your view, what is the biggest challenge young surgeons are facing today?**

I always tell my medical students, there are two sides to being a spine surgeon. On the one side, you get to see some very interesting procedures, the outcomes are generally good, and there are many rewards. On the other side, it's also very tough, from

both the cognitive and technical aspect. There's a lot to learn medically and the technical aspects are challenging. It can be very difficult to deal with complications. There are also challenges on a personal level. It takes a lot of your time, it's not a 9-5 job, and you need to have a very supportive family that understand that. These have always been challenges for surgeons, but probably more so now because we live in a world where information is flowing so quickly and treatment protocols move at such a fast rate. Societal expectations are changing, patients are engaged in their own care, they set very high expectations on the doctor in terms of communication and engagement, and quality is being rigorously measured so we're really under the microscope.

**What advice would you give a young surgeon with regards to new technologies and other developments in spine surgery?**

To embrace new knowledge as it comes forward but also recognize that not everything new will stand the test of time – you always should critically evaluate new techniques and information as it comes forward. Be open but always employ critical thinking. That's why I think research training is essential education for spine surgeons even if they do 't do research themselves.

**How do you manage the challenges associated with cultural differences in your team?**

If one is open to embracing the different cultural perspectives it is incredibly rewarding. I work with people from all over the world, but one of the first examples I had of true international collaboration was the AOSpine international cervical myelopathy study, which was a multicentre international study with 16 clinics in 4 continents. It was challenging to bring it together – we had to translate protocols into different languages and there were time zone challenges for scheduling – but the rewards were enormous. We found a lot of commonality and the areas of difference were interesting to explore and see if we could synthe-

size into unified protocols. The trick is to be open to the ideas of others. For me, leadership involves leading from the front, creating a clear vision and getting people excited about it, but also listening to the input people are giving you and shifting gears if necessary.

**Many people ask you for advice, but where do you go or what do you do when you need inspiration?**

I go to my cottage in northern Ontario. I love the water and the woods. In the summer I go canoeing, swimming and cycling to help me unwind, and in winter I love to ski. I like to do things that allow me to relax and stop thinking.

**Which piece of research are you most proud of in your career?**

I recently read an article on the top 10 developments in spinal surgery and it was surreal to see that the article included two discoveries I have made. The first is in the area of secondary injury hypothesis, in which I discovered that after a traumatic injury to the spinal cord the initial trauma is amplified by secondary injury events including ongoing compression and ischaemia. We were able to translate this into clinical practice through a clinical trial I led, which shows that early surgical decompression and reconstruction improves the outcomes in spinal cord injury. This has been translated into guidelines that will be published in August in the Global Spine Journal. We're now taking this forward in the clinical trial of Riluzole. The other basic science discovery I made was that re-myelination can lead to improved recovery and this has been translated into clinical trial, with neural stem cells. You look at your life and say 'I guess I did something that might matter, that might actually help people.' AOSpine should also take pride in that because they made it possible for me.

**Speaking of your own educational experience, you have recently been awarded the Germán Ochoa Travelling Fellowship. What does it mean to you and**

**what are your plans?**

First, it's a great honor to receive this award. Germán was a great friend and a wonderful individual. When I heard about this award the terms of reference resonated with me because for some time I've wanted to take a sabbatical to reflect on what I've done and what I might want to do in future. Already for a while I've had an interest in deepening my collaborative relationships with European and Middle Eastern investigators.

I am taking a mini sabbatical at the Charité Clinic in Berlin. I have established connections to the Charité over the years, as I'd collaborated with investigators in basic science and clinical research studies. Also, my family is German and I speak German.

In Toronto, we have close connections with the Middle East – many surgeons from the Middle East have trained here over the years and I've been asked on various occasions to visit the region. It has struck me that spinal cord injury is a particularly important issue in the Middle East. Because AO recently sponsored the development of guidelines in spine trauma and spinal cord injury I thought that this would be an excellent opportunity to deepen relationships there. I expect to begin my fellowship early in 2018, and I'm very excited about planning the strategy and how I will emerge from the programme.

**What does being a member of AOSpine mean to you?**

AOSpine is in my view the most important international organization in professional spine surgery. It's a fantastic organization; one that embodies the spirit of fellowship and camaraderie. It's been wonderful for fostering many of the professional developments I've enjoyed, as well as the research and educational opportunities. I would really encourage people to join the AO. For me it's been a transformative experience.

## BIOGRAPHY

Michael Fehlings, MD, PhD, FRCSC,  
FACS, FRSC, FCAHS

- Professor of Neurosurgery, University of Toronto  
Vice Chairman Research Department of Surgery, University of Toronto  
Fellow Royal Society of Canada  
Fellow Canadian Academy of Health Sciences
- Halbert Chair in Neural Repair and Regeneration
- Senior Scientist McEwen Centre for Regenerative Medicine
- Co-Director, University of Toronto Spinal Program
- Head, Spine and Spinal Cord Injury Program
- Toronto Western Hospital, University Health Network

Michael Fehlings is the Chairperson of the Steering Committee of the AOSpine Knowledge Forum Tumor, and the winner of the AOSpine Germán Ochoa

Traveling Fellowship. Under his lead, the guidelines for the Management of Degenerative Cervical Myelopathy and Acute Traumatic Spinal Cord Injury were developed. They will be published as a special focus issue of the Global Spine Journal in August 2017.

The Fehlings Lab, based in Toronto, Canada, is one of the world's leading labs in the field of translational research in neural repair and regeneration. Michael Fehlings leads a research team of around 50 people. He trains between 7 and 10 Fellows from around the world with varying surgical backgrounds each year.

Michael Fehlings has received numerous prestigious awards including the Gold Medal in Surgery from the Royal College of Physicians and Surgeons (1996), nomination to the Who's Who list of the 1000 most influential scientists of the 21st century (2001), the Lister Award in Surgical Research (2006), the Leon Wiltse Award from the North

American Spine Society for excellence in leadership and/or clinical research in spine care (2009), and the Olivecrona Award (2009) from the Karolinska Institute in Stockholm, Sweden (known as the „Nobel Prize of Neuroscience“) for his important contributions in spinal cord injury. In 2012, he received the Reeve-Irvine research medal for spinal cord injury. In 2013, he was again honored by the North American Spine Society with the Henry Farfan Award for outstanding contributions in spine related basic science research. He was also honored, in 2013, to receive the H. Richard Winn Award from the Society of Neurological Surgeons, which is the highest honor for academic neurosurgeons in North America.

Official Website:  
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Follow Michael Fehlings on Twitter:  
[@drfehlings](https://twitter.com/drfehlings)



# Highlights



The KF Tumor Steering Committee met in Milan, Italy, during the Global Spine Congress 2017. Chairperson Charles Fisher (back row, left) and Ziya Gokaslan. Front row: Arjun Sahgal (left), AOSpine Research Manager Niccole Germscheid, Laurence Rhines, and Stefano Boriani. Missing: Peter Pal Varga, Chetan Bettogowda, and Norio Kawahara

## Pushing the boundaries – leading the way in spine tumor research

**The AOSpine Knowledge Forum (KF) Tumor has been spearheading the KFs since their inception and subsequent mission to achieve the best patient outcome. This key opinion leader group is unique amongst all spine study groups: the cause is not to advance any particular aspect of surgery, but in a holistic way, find the best way to manage the patient, understand the evidence, and take into account all different forms of therapy.**

The Chairperson Dr. Charles Fisher sees the task threefold: „We implement physician driven landmark clinical studies; advance patient care through multi-center analysis and peer review publications; and develop and validate treatment algorithms and outcome measures.“ The focus is on the more common metastatic and the very rare primary spine tumors. „To truly advance the care of these patients, you must have an international multi-center, multi-physician group like KF Tumor.

That’s what makes us unique.“

To meet this objective, the KF meets in person 2-4 times a year and virtually every few months. Through research and discussion, the group advances towards a common recommendation, which as a result is truly multi-disciplinary. The only non-surgeon amongst the KF Steering Committee members, radiation oncologist Dr. Arjun Sahgal explains that in other pathologies this can be different: „For spine oncology patients the right decision can only happen in discussion. For a balanced point of view to guide decision making, we must take into account medical oncology, radiation oncology, and surgical oncology. This greatly adds to the quality of our research and knowledge and balances the education. That’s why we are so successful.“

KF Tumor in Milan, Italy, at the Global Spine Congress 2017

### **Broadening horizons**

KF Tumor was the first of the KFs

to introduce an associate structure, expanding across new regions, and welcoming members beyond the steering committee. One of them is Dr. Jorrit-Jan Verlaan from the Netherlands, who was invited two years ago. Verlaan is intrigued to see how ideas develop and change, and finds this a great opportunity: „There is a tremendous amount of knowledge in the group, I feel honored to be part of it! In the work, it does not differ so much if you are a steering committee or an associate member; it’s all about creating a group with ideas to enhance patient care.“

A wider membership base will also allow for succession planning in the Steering Committee, provide opportunities for young leaders, recognizing the importance of new ideas and perspectives. „But we don’t want to grow too quickly and sacrifice quality“, Fisher reminds. „The associate members must have the same level of commitment to high quality multi-center research. The quality of the data is always an issue;

you cannot have quality research without quality data and follow-up.”

### Landmark studies

The AOSpine Research Manager Niccole Germscheid works closely with KF Tumor and has noted the increasing global impact. The early work with SINS (Spinal Instability Neoplastic Score) has become a main stream classification system, embraced by most oncologists dealing with metastatic tumor around the world. Verlaan considers it one of the most powerful tools to identify patients in a timely manner, with direct effect to their quality of life.

Major influence comes also from the Primary Tumor Retrospective multi-center study, which according to Fisher accomplished something never done before. „With 1,500 patients entered from all over the world, it is the largest series ever, we solidified and validated things that we previously only suspected.“ Another breakthrough was the high impact study led by Chetan Bettegowda on genomics. The molecular sequencing of chordoma was correlated with patient outcome. This had not been done in the primary spine tumor world, and Fisher remembers the task was not simple: „It was challenging to get the pathologist involved, to get IRB approvals to retrieve the pathologic specimens, and to perform the genomics with formalin-fi-

xed and paraffin-embedded (FFPE) samples.“

EPOSO (The Epidemiology, Process, and Outcomes of Spine Oncology) is another valuable project. The KF has gathered data on over 400 patients with metastatic spine disease. „We will be able to better understand which patients are ideal for surgery as opposed to radiation. By having a large dataset which is so heterogeneous, we are getting answers to key questions no one has been able to answer in the past.“

Chairperson Charles Fisher speaking at the KF Tumor precourse at the Global Spine Congress 2015 in Buenos Aires, Argentina

### Changing practices

To get the most out of KF Tumor research, you are quickly referred to the Spine Focus Issue, published last year (Spine—October 15, 2016—Volume 41—Issue 20S). It provides the spine oncology community with an updated set of treatment recommendations, building from the first focus issue published in 2009 (Spine—October 15, 2009—Volume 34 Issue 22S). Over 40 collaborators from North America, Europe, Asia, and Australia were brought together; an impressive multi-disciplinary collaboration by any standards. Sahgal confirms his own practice and understanding have changed dramati-

cally with it: „I am educating my colleagues as a result of the knowledge I’ve gained and the work we’ve done in the KF, particularly with the Spine Focus Issue.“

Access the Spine Focus issue here: [journals.lww.com/spinejournal](http://journals.lww.com/spinejournal)

Going forward, the KF Tumor will look deeper into the genomics and molecular aspects of tumors and how they relate to outcome. The aim is to establish a core network of international centers to conduct prospective studies. Two networks are underway for this: the PTRON (Primary Tumor Research and Outcomes Network) and the MTRON (Metastatic Tumor Research and Outcomes Network). With such large studies, even faster progress can be expected. A key focus of AOSpine Research strategy is to transfer the outcomes into education.

Fisher is confident that the KF Tumor model will continue to be highly productive, with high quality research done on a sustained basis: „We have the infrastructure, the collaboration, and the good ideas. We know good research takes time. With KFs as part of an AO long-term plan, both from the research and the education side, you are really taking better care of patients.“

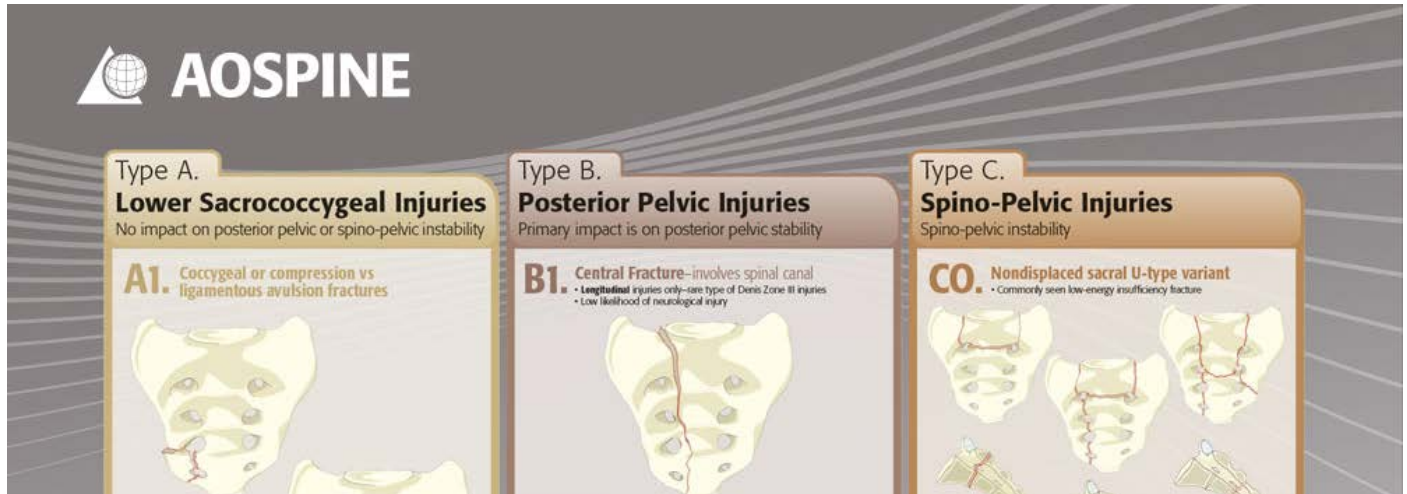
This article is part of a series on the AOSpine Knowledge Forums. The story of the Knowledge Forums was published in the AOSpine Newsletter Issue 11. Upcoming issues will showcase more KFs and their most important study projects.

### Quick facts:

- First of the 5 AOSpine KFs, launched in 2010, co-chaired by Ziya Gokaslan and Stefano Boriani
- Chairperson Charles Fisher (2014–present) leads a steering committee of 7 members; serves as a member of the AOSpine Research Commission
- Steering Committee leads a group of over 30 associate members
- Pathology focus includes both primary and metastatic spine tumors
- Published 37 peer-reviewed journal articles and 90 presentations since 2014
- Volumes 1–2 of the AOSpine Master Series, editors Charles Fisher, Ziya Gokaslan and Stefano Boriani

### Study highlights:

- Validated the Spinal Instability Neoplastic Score (SINS) in radiologists and radiation oncologists
- Collected retrospective data on 1,500 primary tumor cases (PT Retro study)
- Linked pathologic chordoma specimens to clinical outcomes (FFPE Chordoma study)
- Published a Focus Issue with evidence-based treatment recommendations for spine oncology (Spine Vol 41, Issue 20S, October 15, 2016)
- Established a prospective registry on primary (PTRON) and metastatic tumors (EPOSO/ MTRON)
- For more information about the KF Tumor: [www.aospine.org/kf-tumor](http://www.aospine.org/kf-tumor)



## AOSpine Sacral Classification System

The AOSpine Sacral Classification System was launched at the Global Spine Congress 2017 in Milan.

Download the classification toolkit and start using the classification today: <http://www.aospine.org/classification>  
Watch the training video with Alexander Vaccaro.  
<http://player.aoeducation.org/3/1/215630331/>



## Launch of AOSpine Fellows Alumni Group

The new AOSpine Fellows Alumni group was officially launched in Milan at the Global Spine Congress. Lead by Emre Acaroglu (Champion of the Fellowship Task Force) and Harry Gebhard (current Chairperson of the Fellows Alumni Steering Board), the group celebrated its inaugu-

ration with two members-only sessions, one on research and one on leadership, as well as a social event that was held in the evening for all past fellows to network with each other.

Future plans are already taking shape to allow this special group to meet

in a social setting at the next Global Spine Congress and the Fellows Alumni Steering Board is considering what other educational opportunities we can offer to AOSpine past fellows. This group is still in its infancy and we encourage all Past Fellows to join to ensure the success of this venture.



**„My fellowship - One of the best times of my life and an incredible learning experience“**



*The AOSpine fellowship is unique in its character. AOSpine is the only spine organization worldwide that offers truly international fellowship opportunities*

*to spine surgeons in a sustainable manner. The time in New York was a fantastic learning experience for me that in many aspects has lasted until today.*

Harry Gebhard

Harry Gebhard, current Chairperson of the Fellows Alumni Steering Board, did his AOSpine fellowship with Roger Härtl at the Weill Cornell Medical Center in New York in 2009. For him it was a valuable experience, which is still inspiring his career as a spine surgeon today. He describes his AOSpine fellowship as an incredibly productive and effective time period. Amongst other projects, he has worked on a research project, which is currently in the final stage of being patented. He commented: „The AOSpine fellowship is unique

to connect and build friendships with people from all over the world. Through my work for the alumni group I would like to help creating a sustainable network of Past Fellows who share the same ambitions and values.“

AOSpine Past Fellows Members-Only Session on leadership (from left to right): Fellows Alumni Steering Board members Emre Acaroglu and Harry Gebhard, AOSpine past Chairpersons Jeff Wang, Max Aebi, Luiz Vialle and John Webb

**AOSpine Fellowships – globally standardized and beyond face value**

Emre Acaroglu commented: „Fellowships are not new to AOSpine, but they have changed in character over the years. We now have established a globally standardized process where fellows are trained by designated ‘spine centers’ which are like diplomats for AOSpine, training surgeons on our behalf. The result is that surgeons across the world are now judged by standardized criteria. Also, we have developed fellowships

incentives, in turn becoming ambassadors for the organization. We believe this process of monitoring and standardization will improve the quality of AOSpine fellowships overall, and create within AOSpine a kind of non-government organization that will contribute to decision-making.“

When asked about his own AOSpine education experience, he stated:

*„I am indebted to AOSpine for transforming me from a surgeon into a real educator. I still remember attending my very first AO training for faculty post. My mind was blown that day. I decided at that very moment that I wanted to be an educator.“*

**Fellow Activities at the Global Spine Congress – new opportunities and contacts**

The AOSpine Fellowship activities at the Global Spine Congress already provided great opportunities on-site to the participants.

Ernesto Cabrera-Aldana (Mexico) presented his idea to create the first ‘Video Atlas of spine surgery’ at the Members-only Session and said: „Our meeting in Milan was wonderful with plenty of enriching comments coming from experts. After the session, I met many people interested in my project and I could establish contact with them.“

As a result of the social activities, several fellows are arranging to visit each other at their centers. One fellow is arranging a short observership at Queens Medical Center in Nottingham under the supervision of Michael Grevitt, Chairperson of AOSpine Education Commission who was also present at the reception.



AOSpine Past Fellows Members-Only Session on leadership (from left to right): Fellows Alumni Steering Board members Emre Acaroglu and Harry Gebhard, AOSpine past Chairpersons Jeff Wang, Max Aebi, Luiz Vialle and John Webb

in its character. AOSpine is the only spine organization worldwide that offers truly international fellowship opportunities to spine surgeons in a sustainable manner. The time in New York was a fantastic learning experience for me that in many aspects has lasted until today. Also, the fellowship has given me the opportunity

beyond their face value. For instance, if you’re a graduate of a highly esteemed university that’s not just about the education you received; it’s also a status symbol you carry throughout your life. We wanted to do the same thing, so we established AOSpine Alumni Association as a club that has access to benefits and

**Stay in touch with your colleagues and join the AOSpine Fellows Facebook Group!**

All those who have been AOSpine Fellows in the past are automatically part of this alumni group. If you are a past fellow please join our Facebook Group to get in touch with colleagues from around the world.





# AOSpine Mentorship Education – learn from the best

**There is nothing more inspiring than learning from an accomplished surgical mentor. The objective of the AOSpine mentorship education scheme is to provide younger spinal surgeons with an experienced and well respected Mentor.**

Following a thorough selection process, the first face to face meeting with the Mentors and Mentees of the AOSpine Mentorship Education Scheme took place in late August 2016 in New York, USA.

The three mentees were allowed to choose their own Mentors out of a list of thirteen surgeons that have offered to mentor a young surgeon. They opted for Jeffrey Wang from UCLA (Los Angeles, USA) Roger Härtl for Weill Cornell (New York, USA) and Alexander Vaccaro from Thomas Jefferson University Hospital (Philadelphia, USA). Each pair created their own individual program and came away with a tailor made 'Personal Development Plan'.

At the Global Spine Congress 2017, mentee Carolin Melcher (Mentor:

Roger Härtl) and Ghazwan Hassan (Mentor: Alexander Vaccaro) talked about their journey as an AOSpine mentee, their experiences, and also about what being a member of the AOSpine community means to them.

**How did your involvement in the mentoring program start and what do you appreciate most about your mentor Roger Härtl?**

**Carolin Melcher:** It all started at the 2015 Global Spine Congress in Buenos Aires. AOSpine gave out a leaflet and I brought it home and looked over it again and again, wondering if I even had a chance. I decided I had to try.

*Roger's been a fantastic mentor. I can ask him for advice on the cases I'm working – I send him x-rays to ask his opinion and if I struggle I send him an email and he tries to help.*

I picked Roger because I love getting a different view on things – I am an orthopedic surgeon and he's a neurosurgeon. We talk on the phone every four weeks and he makes time for that even before he starts practice. Roger offered a different approach, as well as having lots of

scientific insight and he's just a wonderful person too.

**What projects are you currently working on?**

**Carolin Melcher:** We quickly decided that apart from working on cases we would establish a research project for me that built on this AOSpine mentorship. We have found something now and I'm excited to take it forward. I am going to New York in July 2017 and will stay for three months, in the hope of achieving some clinical insight at the same time as continuing research in the areas I want to go into. Jeff Wang said in his speech at Global Spine Congress that education is not just about changing your view of what you do; it's about changing yourself as well. I see that in me. These mentors are like the godfathers of spinal surgery and I'm a young girl from Germany yet still I can write emails asking something and they help. That's amazing.

**How did you first hear about the mentorship program and how has the mentorship progressed since then?**

**Ghazwan Hassan:** When I first

reviewed the email, and saw the program I was very interested, so I put a plan together. I'm currently living in Baghdad, and was one of four surgeons from Iraq to apply to the program. I sent my CV and supporting documents, then had a telephone interview. Having been offered my place, I then attended a first meeting with my mentor Alex Vaccaro in New York together with the other selected mentees. We put together our road map for the first two years, and outlined how we can measure the outcome, which is very important.

**How has Dr. Vaccaro supported you in that time?**

**Ghazwan Hassan:** Alex Vaccaro gave me full access and support. When we discussed my mentorship, I saw the research program as a great step.

*I am now in the process of collecting the data for the research, which is difficult in Iraq because we don't have a database of information. This means I personally record data from each case and put it in the computer. Alex has been incredibly supportive; he's a really great guy.*

He freed up his time for me concerning the research and has been very active, answering emails within a few hours. I'm now waiting on my new visa coming through so I can work with him face to face for at least three months, as I think I will get a lot from him that way.

**What has been your experience of AOSpine during your mentorship?**

**Carolin Melcher:** AOSpine is the perfect path to achieve that because it is worldwide and it's something that I didn't experience before. It feels like anything is possible.

*For example, I still remember walking up to Larry Lenke in Buenos Aires because I had this case I was really struggling with, and I just walked up and said 'Hi I'm Caroline, can I ask you a question?' and he sat down and discussed it with me right away. That's the spirit of AOSpine.*

Everyone is so supportive and you get the best, and it's just an amazing journey.

**Ghazwan Hassan:** I'm very active at AOSpine and think that it's a great organization that provides me with great opportunities to advance my career. I'm a member of the Iraqi Consul, course chair and mentee. I highly recommend that all spine surgeons become a member. You can get a high level of education and build relationships with the best surgeons from around the world.



**Carolin Melcher**  
Mentor:  
Roger Härtl



**Ghazwan Hassan**  
Mentor:  
Alexander Vaccaro



At Global Spine Congress in Milan in May, Global Spine Journal presented other annual Best Paper and Best Reviewer Awards for the year 2016. The top 2 papers of 2016 as well as the top 2 reviewers of 2016 were recognized. A cash prize is awarded to the best reviewers and to the corresponding authors on the best papers, and everyone receives a certificate presented to them at the GSC Awards Ceremony.

The award winners are

### For Best Papers:

Anterior Lumbar Interbody Fusion as a Salvage Technique for Pseudarthrosis following Posterior Lumbar Fusion Surgery: Mobbs, Ralph J.; Phan, Kevin; Thayaparan, Ganesh K.; Rao, Prashanth J.: [journals.sagepub.com](http://journals.sagepub.com)

The Thoracolumbar AOSpine Injury Score : Kepler, Christopher K.; Vaccaro, Alexander R.; Schroeder, Gregory D.; Koerner, John D.; Vialle, Luiz R.; Aarabi, Bizhan; Rajasekaran, Shanmuganathan; Bellabarba, Carlo; Chapman, Jens R.; Kandziora, Frank; Schnake, Klaus J.; Dvorak, Marcel F.; Reinhold, Max; Oner, F. Cumhur: [journals.sagepub.com](http://journals.sagepub.com)

### For Best Reviewers:

Andrei Fernandes Joaquim  
Praveen Mummaneni

Interested in receiving a GSJ award in the future? In order to be considered for a Best Paper Award, your paper needs to be published in an issue for that particular year. The Editorial Board then votes on the top papers. Original Research papers only are in consideration for this award and the votes are based on the number of citations, downloads and then the top 10 papers with the most citations and downloads are read by the entire Editorial Board who then submits their votes. The papers with the most votes wins the awards. For the Best Reviewer Awards, only reviewers who reviewed papers for that year

are in consideration. The winners are based on the timeliness of their reviews, the number of reviews completed and then the average score. The Board then votes on the top reviewers. All reviews that a reviewer completes are given a score by the Deputy Editors and Editors-in-Chief after it is submitted and then this score averages out (it is out of 100).

If you have any questions, please make sure to email Managing Editor Danielle Lieberman at [Danielle.Lieberman@med.usc.edu](mailto:Danielle.Lieberman@med.usc.edu)





# Global Spine Journal – special focus issues, mobile-friendly, and more...

Global Spine Journal (GSJ) is the official scientific publication of AOSpine International. So far 2017 has been an exciting year for the journal. In January, GSJ switched publishers to SAGE Publications. The last few months have been a transitional period but things are now settling in. The GSJ Editorial Board has been very pleased with the hard work that SAGE has put in with the transition and with copy-editing the manuscripts and securing GSJ's acceptance into SCOPUS. GSJ has published 4 issues with the remaining 4 coming out in the second half of the year.

In April 2017 a **Special Focus Issue on Rare Complications in Cervical Spine Surgery** which was led by GSJ Deputy Editor Dan Riew was published. This issue was a collaboration between AOSpine North America and the Cervical Spine Research Society (CSRS). This issue contains 22 manuscripts all on this one topic, to create a comprehensive guide. You can read this issue online here: [www.journals.sagepub.com](http://www.journals.sagepub.com).

**GSJ has other Focus Issues in the works as well, including one on "Guidelines for the Management of Traumatic Spinal Cord Injury and Degenerative Cervical Mye-**

**lopathy" lead by Deputy Editor Michael Fehlings.** Look out for this issue coming out in August.

All of GSJ's issues and content, including onlinefirst articles can be read at our new online site: [www.journals.sagepub.com](http://www.journals.sagepub.com). We believe that you will find this new web site is more user-friendly and intuitive. This new site is also optimized for all smart phones, computers and tablets so that you can read and download all of your content from any device on the go. The website is a "responsive" site which means that it responds to the screen size of the device you

are reading it on without sacrificing quality. You can also find altmetric scores on an article level, which means that you can find out downloads, citations, etc. which gives readers and authors an indication of an individual article's impact. GSJ also has a new submission system for uploading articles, and this can be found here (along with instructions for authors): [www.mc.manuscript-central.com](http://www.mc.manuscript-central.com).

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# Global Spine Congress Singapore 2018 – submit your abstract until September 15, 2017!



**The Global Spine Congress 2017 in Milan was, once again, a huge success. Just under 1,600 participants from over 80 countries attended the Global Spine Congress (GSC), for which 1,048 abstracts were submitted. Read more here.**

Make sure that you submit your abstract for the Global Spine Congress Singapore until September 15, 2017, and get a chance to present your research to hundreds of spine specialists from all over the world.

Simply select one of the following topic categories and follow the on-line instructions here.

- Arthroplasty—cervical
- Arthroplasty—lumbar
- Basic Science
- Biomechanics
- Degenerative—cervical
- Degenerative—lumbar
- Deformity—thoracolumbar (Adult)
- Deformity—thoracolumbar (Adolescent)

*„I think the Global Spine Congress is an excellent gathering of spine professionals from a wide range of disciplines that have one common goal of improving spine care. I am continually impressed with the scope of the Congress and its ability to engage the participants at a highly academic level.“*

Bryan Ashman  
Chair-Elect  
AOSpine Education  
Commission



- Deformity—cervical
- Diagnostics
- Disc degeneration
- Epidemiology
- Imaging
- Infections
- Medical economics
- Minimally invasive spine surgery
- Navigation
- Nonoperative clinical treatments
- Novel technologies
- Spine biologics
- Surgical complications
- Trauma—cervical
- Trauma—thoracolumbar
- Trauma—other
- Tumors

### Notification of acceptance

Notifications of acceptance or rejection of the abstracts will be sent to the corresponding author (the submitter) of the abstract by 24 November 2017 at the latest.

The corresponding author receives all correspondence concerning the abstract. The corresponding author is responsible for informing all other co-authors of the status of the abs-

*„The quality of the sessions at the Global Spine Congress in Milan was very high, and demonstrates the excellent scientific value of the event as such, as well as of AOSpine as an organization.“*

Claudio Lamartina  
GSC Regional Chairperson



tract. In order to receive confirmation, please ensure that emails from are not marked as spam by your e-mail provider.

All abstract presenters will be asked to reconfirm their attendance after receiving the notification. If you don't reconfirm your abstract presentation, register and pay the registration fee before 20 December 2017, your abstract will be cancelled.

### Presentations of abstracts

The submission of an abstract constitutes a formal commitment by the presenting author to present the abstract (if accepted) orally or as e-poster in the session and the time assigned by the GSC Executive Program Committee.

### Publication of abstracts

Accepted abstracts will be published online in the Global Spine Journal.

We look forward to seeing you in Singapore!

*„I think the Global Spine Congress is an excellent gathering of spine professionals from a wide range of disciplines that have one common goal of improving spine care. I am continually impressed with the scope of the Congress and its ability to engage the participants at a highly academic level.“*

Rory Goodwin  
Winner of the best  
e-poster award





## Meet the winners of the European and Middle Eastern Young Researcher Awards 2017

**In order to encourage young researchers in the field of spinal care, and to support their work, AOSpine Europe and AOSpine Middle East send out annually a call for papers to their communities. Also in 2017, both regions received a good response rate with high quality participations, out of which the two best ones were chosen. Next to a financial contribution for their future research projects, AOSpine was pleased to invite both winners to the Global Spine Congress in Milano.**

### Europe

In the reviewing and scoring process of the 25 applications for the European YRA 2017, coming from 11 different countries, one paper stood out. The first place went to Turkey, more specifically to Derya Burcu Hazer from the Mugla Sitki Koçman University with her research on „Antimicrobial Effect of Polymer-Based Silver Nanoparticle Coated Pedicle Screws: Experimental Research on Biofilm Inhibition in Rabbits“. In

the study, the authors looked at a novel spine implant model that was designed to better understand the antimicrobial effect of a modified Titanium (Ti) pedicle screws with MRSA in multiple surgical sites in the lumbar spine of a rabbit. Twenty two New Zealand White rabbits were divided into group 1: infected unmodified Ti screw group (n=10), group 2: infected PP-g-PEG-Ag covered Ti screw group (n=10), and two rabbits as control-sterile group. The bacterial colony count for modified-Ti screw group was lower compared to unmodified Ti screw (17,2 vs 200 x 10<sup>3</sup> CFU/mL, p=0,029) with less biofilm formation. Ag-NPs were detected on the screw surface on 21st day postoperatively. This novel experimental design of implantation in rabbits is easy to apply and resembles human stabilization technique. Modified Ti screws were shown to have antimicrobial effect with especially inhibiting the biofilm formation. This anchored Ag NPs shows that it is resistant to tapping forces. AOSpine thanks Dr Hazer for her valid contribution.



AOSEU Board Chairman Giuseppe Barbagallo congratulating the EU YRA 2017 winner Derya Burcu Hazer at the GSC 2017, Milano, Italy



## Middle East

Following our call for applications, AOSME received 15 papers from 10 different countries all over the Middle East, of which 11 fulfilled all requirements. Out of these, a committee consisting of the AOSME Councils officers for Research have reviewed the papers, scored them by indicators such as citations of the paper, or the impact of the journal the participating paper had been published in. The first ranked paper came from Iran. 32-years old Amir Azarhomayoun from Tehran had won with his excellent article on „Sequestrectomy Versus Conventional Microdiscectomy for the Treatment of a Lumbar Disc Herniation: A Systematic Review“.



AOSME Board Chairman Abdulaziz Al-Mutair congratulating the ME YRA 2017 winner Amir Azarhomayoun at the GSC 2017, Milano, Italy

The 2017 Young Researcher Award showed again the outstanding role of Iran concerning research in the region, but also the increasing quality from other parts of the Middle East, such as Lebanon, Palestine, and many others, which is a special pleasure to us. Dr Azarhomayoun summarizes his paper as follows: Open surgery for LDH can be performed by sequestrectomy (removal of disc fragments) or conventional discectomy (removal of disc fragments and disc). Sequestrectomy might be associated with a higher risk of recurrence but less low back pain (LBP) after surgery. The aim of this study was to compare the effects of sequestrectomy versus conventional microdiscectomy for lumbar disc herniation (LDH). We searched MEDLINE and EMBASE from 1980 to November 2014. We selected randomized controlled trials (RCTs) and nonrandomized prospective studies of conventional discectomy versus sequestrectomy for adult patients with LDH that evaluated the following primary outcomes: radicular pain or LBP as measured by a visual analog scale, or neurological deficits of the lower extremity. We also evaluated the following secondary outcomes: complications of surgery, reherniation rate, duration of hospi-

tal stay, postoperative analgesic use, and health-related quality-of-life measures. Two authors independently reviewed citations and articles for inclusion. We assessed the risk of bias, synthesized data, and the level of evidence using standard methodological procedures as recommended by the Cochrane Back Review Group. We identified 5 studies (746 participants) of sequestrectomy versus microdiscectomy. One study was RCT and the other 4 were nonrandomized prospective comparisons; all studies were assessed as being at a high risk of bias. There were no significant differences for leg pain, LBP, functional outcomes, complications, and hospital stay or recurrence rate for 2 years (level of evidence: Low). Sequestrectomy was associated with less analgesic consumption versus discectomy (level of evidence: Very low). In conclusion, Sequestrectomy and standard microdiscectomy were associated with similar effects on pain after surgery, recurrence rate, functional outcome, and complications; more evidence is needed to determine whether sequestrectomy is associated with less postoperative analgesic consumption.

Please join us in congratulation both winners for their achievement.



# AOSpine Ambassador's program launch

**The Ambassador initiative was launched at the Global Spine Congress in Milan in May 2017 with an exclusive reception.**

The program was developed by AOSpine Community Development International and approved by the AOSpine International Board to recognize longstanding members for their remarkable contribution, their engagement and value for the organization. The objective is that Ambassadors help to shape the future of AOSpine through their experiences, knowledge, and skills.

The Ambassador role is an honorary role in recognition of the contribution and loyalty to AOSpine. By

accepting the role, the AOSpine Ambassadors commit to representing the AOSpine values, to collaborating in special initiatives such as surveys or participating in task forces upon request of the International, Regional Boards or Commissions with the aim of developing the AOSpine community and advancing AOSpine's mission.

The initiative was created so that AOSpine could continue to build on the valuable know-how, experience and skills of its most involved members, keeping them actively contributing to the organization as consultants and members of taskforces.

Who can become an AOSpine Ambassador?

Permanent Ambassadors: Current AOSIB and Regional board members, past Chairpersons, current Member Representative, Global Spine Journal Editors-in-Chief, Knowledge Forum Chairpersons  
International Commission past chairs and Regional board members from 2013, whose terms expired before 31.12.2016, for a three-year term.

New AOSpine Ambassadors will join the program in the years following their term completion, by the end of 2017 and 2018. Their term as Ambassadors will be three years.

# Davos Courses 2017



**Over the past few months, we have worked hard on improving and reworking the educational format of the courses to best suit the needs of our advanced and master’s level participants.**

We have tried to reduce the length of the course and maximize the impact. There will be blended learning, case discussions, simulation courses, interaction with experts, tips and tricks – all the things that were valued in previous Davos Courses, but with a leaner, more efficient structure this year.

This year, participants can choose one from three educational courses in the morning:

**Spinal trauma**

**Degenerative disease\***

**Spinal deformity**

\*sold out, register for the waiting list

In the afternoon, we will again offer the very successful and highly innovative practical MISS training on simulators: „Surgeons Cockpit: Training of MISS-Procedures under real spine conditions“. In addition, we will offer another set of pilot courses on MISS Vertebroplasty, which include hands-on training in small groups. More information on these sessions can be found in the program and on our website.

For participants who are unable to register for the limited-seating MISS courses, a range of seminars, lectures, and practical exercises, as well as last year’s highly popular case discussion: „The Good, the Bad, the Ugly—a Case That Taught Me a Lesson“ are offered in the afternoon.

Check out the preliminary program on our website, via this link: <http://www.aodavoscourses.org/files/davos-courses-a5-2017-11-july-web.pdf>

Register now: <http://www.aodavoscourses.org/Registration/AOSpine.html>

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

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



Monday December 11	Tuesday December 12	Wednesday December 13
Spinal Deformity course, Degenerative Disease course or Trauma course	Spinal Deformity course, Degenerative Disease course or Trauma course	Spinal Deformity course, Degenerative Disease course or Trauma course
Lunch	Lunch	Lunch
MISS Decompression* Or MISS Vertebroplasty*	MISS Decompression* Or MISS Vertebroplasty*	MISS Decompression* Or MISS Vertebroplasty*
Alternative program to MISS courses:		
Seminar organized by Central Region on Deformity Or Seminar organized by Knowledge Forum Tumors	Seminar organized by Central Region on Degenerative Or Seminar organized by Knowledge Forum Biologics	Seminar organized by Central Region on Trauma Or Seminar organized by Knowledge Forum Spinal Cord Injury
Practical exercises on Posterior Cervical Fixation, Sacropelvic Fixation, Thoracolumbar Fixation (MISS)		
The Good-Bad-Ugly session	The Good-Bad-Ugly session	

\*participants choose one of the MISS courses or alternative program activities.  
ATTENTION: Separate registration is necessary; the MISS course fee is not included in the general Davos Courses fee.





**Alaa Ahmad, the AOSpine Member Representative, representing the voice of all AOSpine Members globally, wants your opinion.**

Which of the following do you consider to have the greatest positive outcome on improving patient scoring data?

– 1 –

Improving facilities in your area

– 2 –

More time dedicated for  
scoring patient outcome

– 3 –

Improving doctor-patient relationship

– 4 –

Increased collaboration with AO spine sectors and/or other organizations to obtain more data

<https://www.surveymonkey.com/r/DFGNP3N>

The results will be published in the upcoming AOSpine newsletter.