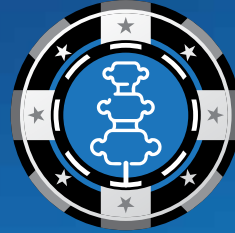


THE 36TH ANNUAL MEETING OF THE AANS/CNS SECTION
ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES

SPINE SUMMIT

2020



FOCUS on Data-driven Innovation

The Cosmopolitan of Las Vegas



PRELIMINARY SCIENTIFIC PROGRAM

ADVANCE REGISTRATION DEADLINE: FRIDAY, FEBRUARY 7, 2020

LAS VEGAS MARCH 5-8



Congress of
Neurological
Surgeons



American
Association of
Neurological
Surgeons

SPINE SUMMIT 2020 IS JOINTLY PROVIDED BY THE CONGRESS OF NEUROLOGICAL SURGEONS
AND THE AANS/CNS SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES.

Learn more about Spine Summit 2020 at CNS.ORG/SPINE

FOCUS on Data-driven Innovation

Dear Colleague,

We would like to invite you to join us for Spine Summit 2020, the 36th annual meeting of the Joint Section on Disorders of the Spine and Peripheral Nerves. The meeting will be held March 5–8, 2020 in Las Vegas, Nevada, at The Cosmopolitan of Las Vegas. Industry leaders from around the world will be gathering to discuss topics under our 2020 theme, Focus on Data-driven Innovation.

The most exciting spine meeting of the year will deliver can't miss scientific sessions, relevant special courses, compelling breakouts, and spirited debates on controversial topics in our field. You'll also have the opportunity to collaborate with spine and peripheral nerve surgeons at the forefront of the field, discover new technology and innovations, and discuss strategies to find balance and direction in a time of rapid and meaningful change in health care.

This year, we are proud to honor Neurosurgery Honored Guest, Daniel K. Resnick; Orthopedics Honored Guest, K. Daniel Riew; and Peripheral Nerve Meritorious Awardee, Robert J. Spinner. These outstanding leaders in the field will be sharing their knowledge during award presentations, Happy Hour debates, and at the Cahill Controversies.

In addition to oral presentations showcasing the best ongoing research in our field, we continue to showcase residents' scientific contributions with the Charlie Kuntz Scholarship Awards, the J.A.N.E. Award, the Mayfield Awards, and the Kline Peripheral Nerve Top Abstract Award.

Be sure to visit our cutting-edge Exhibit Hall to see the latest in technology, products, and services. **As always, you'll enjoy a lively Opening Reception and Young Neurosurgeons' Reception and Dinner.** Don't forget to carve out time to visit the bustling entertainment and nightlife on the Las Vegas strip.

The 36th Annual Meeting of the Section on Disorders of the Spine and Peripheral Nerves provides you an unparalleled opportunity to stay on the leading edge of spine and peripheral nerve surgery, while enjoying the world-class atmosphere and accommodations in Las Vegas.

Make your arrangements and register today at cns.org/spine.

Sincerely,



Zohar Ghogawala



Section Chair



Domagoj Coric



Annual Meeting Chair



Luis M. Tumialán



Scientific Program Chair

Meeting Highlights

- Eight Special Courses
- Hands on Cadaver Session (Non-CME)
- Cahill Controversies Session
- Beer and Wine Happy Hour Debates: Orthopedics versus Neurosurgery
- Oral Presentations, Charles Kuntz Scholars, Mayfield Awards, and J.A.N.E. Award
- APRN/PA Seminar offered complimentary for PAs and RNs who register for the Spine Summit 2020
- ***NEW*** Dinner Seminar

Important Dates to Remember

FEBRUARY 7, 2020

- Advance registration and housing deadline.

FEBRUARY 17, 2020—CANCELLATION DEADLINE

- \$100 processing fee will be charged for written cancellations received by this date, regardless of cause.
- Special Course and Dinner Seminar tickets will be refunded in full until this date.

Absolutely no refunds will be given after February 17, regardless of cause.

PROGRAM AT A GLANCE

THURSDAY

MARCH 5, 2020

11:00 am–5:30 pm

Registration

12:30–1:30 pm

Non-CME Pre-Meeting
Luncheon Seminar

1:30–3:30 pm

Seminar for APRN and PAs

1:30–5:30 pm

Special Course 1

Novel and Emerging
Technologies in Spine Surgery

Special Course 2

Spinal Deformity: Applying
Current Deformity Concepts to
Your Practice, a Cased Based
Approach

Special Course 3

Challenges in the Surgical
Treatment of Pain

Special Course 4

Introduction to Spinal Coding:
From Decompression to
Deformity

6:30–8:30 pm

Opening Reception

9:00–11:00 pm

Dinner Seminar

Spine Summit Honored
Guest Dinner Symposium:
The Future of Spine Surgery:
Predictions about Technology,
Healthcare and the Evolution
of Tomorrow's Spine Surgeon

FRIDAY

MARCH 6, 2020

6:30 am–6:30 pm

Registration

6:30–7:30 am

Continental Breakfast

7:00–7:45 am

Challenging Cases 1

Oral Board-style Challenging
Cases: Cervical

7:45–8:00 am

Opening Remarks

8:00–9:30 am

Scientific Session 1

Focus on Data Driven
Innovation

9:30–10:15 am

Beverage Break and *What's New*
Session in the Exhibit Hall

10:15 am–12:00 pm

Scientific Session 2

The Trajectory of Spinal
Surgery

12:00–1:00 pm

- Non-CME Sponsored Lunch
Symposia
- Lunch in the Exhibit Hall

1:00–2:30 pm

Scientific Session 3

Innovative Technology Special
Session: Operative Video
Segments

2:30–3:15 pm

Beverage Break and *What's New*
Session in the Exhibit Hall

2:30–4:30 pm

Case-based Approaches to
Peripheral Nerve Trauma and
Other Conditions

3:15–4:25 pm

- Top Abstracts Concurrent
Session 1
- Top Abstracts Concurrent
Session 2
- Top Abstracts Concurrent
Session 3
- Minimally Invasive/Motion
Preservation Abstract
Breakout Session

4:30–6:30 pm

Beer and Wine Happy Hour
Debates: Orthopedics versus
Neurosurgery

SATURDAY

MARCH 7, 2020

6:30 am–5:30 pm

Registration

6:30–7:30 am

Continental Breakfast

7:00–8:00 am

Challenging Cases 2

Oral Board-style Challenging
Cases: Lumbar Degenerative

8:00–9:30 am

Scientific Session 4

Opioids and Spine Surgery

9:30–10:15 am

Beverage Break and *What's New*
Session in the Exhibit Hall

10:15 am–12:15 pm

The Cahill Controversies

12:15–1:15 pm

- Non-CME Sponsored Lunch
Symposia
- Lunch in Exhibit Hall

1:30–3:30 pm

Special Course 5

Spine Summit Grand Rounds:
Difficult Cases- The Decision-
Making Dilemma

1:30–4:30 pm

Special Course 6

Treatment and Complication
Avoidance in the Management
of Spinal Tumors

1:30-3:30 pm

Special Course 7

Causes and Treatments for
Neurologic Loss Associated
with Spine Surgery

1:30–5:30 pm

Special Course 8

Spine Specialty Specific Oral
Board Review Course

1:30-5:30 pm

Non-CME Hands-on Cadaver
Lab

6:00–8:00 pm

Young Neurosurgeons'
Reception and Dinner

SUNDAY

MARCH 8, 2020

6:30 am–12:30 pm

Registration

6:30–7:30 am

Continental Breakfast

7:00-7:30 am

Challenging Cases 3

Oral Board-style Challenging
Cases: Peripheral Nerve

7:30–9:30 am

- General Spine Surgery 1
Breakout
- General Spine Surgery 2
Breakout
- Peripheral Nerve/Basic
Science/General Spine 3
Breakout
- Spinal Deformity Breakout

9:30–11:10 am

Scientific Session 5

A Focus on Innovation to
Improve Spine Care

11:15 am–12:15 pm

Special Session: Business of
Neurosurgery

12:15–12:30 pm

DSPN Business Meeting

12:30 pm

Meeting Adjourns

SPECIAL SPEAKERS

FRIDAY

11:30–11:50 am

Special Speaker: Data Driven Innovation

Irfan Essa

Irfan Essa is a Distinguished Professor in the School of Interactive Computing (iC) and an Associate Dean of Research in the College of Computing (CoC), at the Georgia Institute of Technology (GA Tech), in Atlanta, Georgia, USA. He is serving as the Director of the new Interdisciplinary Research Center for Machine Learning at Georgia Tech (ML@GT). He also serves as a Research Scientist at Google Inc. Professor Essa works in the areas of Computer Vision, Machine Learning, Computer Graphics, Computational Perception, Robotics, Computer Animation, and Social Computing, with potential impact on Autonomous Systems, Video Analysis, and Production (e.g., Computational Photography & Video, Image-based Modeling and Rendering, etc.) Human Computer Interaction, Artificial Intelligence, Computational Behavioral/Social Sciences, and Computational Journalism research. He has published over 150 scholarly articles in leading journals and conference venues on these topics and several of his papers have also won best paper awards. He has been awarded the NSF CAREER and was elected to the grade of IEEE Fellow. He has held extended research consulting positions with Disney Research and Google Research and also was an Adjunct Faculty Member at Carnegie Mellon's Robotics Institute. He joined GA Tech Faculty in 1996 after his earning his MS (1990), Ph.D. (1994), and holding research faculty position at the Massachusetts Institute of Technology (Media Lab) [1988-1996].



SATURDAY

8:57–9:27 am

Special Speaker: America's Opioid Dilemma: Responsible Pain Medicine During an Epidemic

Travis N. Rieder

Travis N. Rieder, PhD, is a bioethicist, philosopher and author, currently serving as Director of the Master of Bioethics degree program and a Research Scholar at the Johns Hopkins Berman Institute of Bioethics.

Travis has published widely in both the academic and popular literature on a variety of issues. In recent years, however, virtually all of his attention has turned to the ethical and policy issues raised by pain, opioids, and America's problem with the two. On this subject, he has written for the medical, health policy, and bioethics literature; he has co-authored a Special Publication by the National Academy of Medicine; he advises many hospitals and healthcare systems; and he speaks around the country to clinicians and various members of the public. His TED talk on opioid withdrawal and physician responsibility has been viewed well over two million times.

In 2019, Travis published *In Pain: A Bioethicist's Personal Struggle with Opioids*, in which he combines narrative from his own experience as a pain and opioid therapy patient with his expertise in philosophy and bioethics to identify, explain, and attempt to solve some of the most profound questions raised by pain and addiction medicine. *In Pain* has received significant positive attention, including a review in *Science* and an author interview by Terry Gross on NPR's *Fresh Air*.



MEETING AGENDA

THURSDAY | March 5, 2020

11:00 am–5:30 pm

Registration

12:30–1:30 pm

Pre-meeting Non-CME Sponsored Lunch Symposia

Seminar for APRN and PAs

1:30–3:30 pm

Complimentary for Registered Nurses & PAs

Course Directors: Megan Bellman, Eric A. Potts

Speakers: Robert Evans, Erin Harrison, Maria Ines Oliviera, Sara M. McEvoy, Emma Schulte, Andrea L. Strayer

Course Description: Neurosurgery Advanced Providers and Physician Assistants are the target audience for this course which will cover the preoperative evaluation, perioperative management and postoperative management of neurosurgical spine patients. Special emphasis will be on teamwork, non-narcotic pain control, communication and use of order sets.

Learning Objectives: Upon completion of this course, participants will be able to:

- Identify a differential diagnosis for leg and arm pain
- Identify the impact of comorbidities on patient outcomes
- Describe the impact of preoperative and postoperative patient communication and setting

1:30–1:44 pm

Overview of MRI Imaging Basics in the Cervical, Thoracic and Lumbar Spine

Eric A. Potts

1:45–1:59 pm

Management of Medical Comorbidities (DM, Anticoagulation, Nutrition)

Sara M. McEvoy

2:00 - 2:14 pm

Advanced Perioperative Management: Support Staff, Patient Education

Emma Schulte

2:15 - 2:29 pm

Intraoperative Challenges

Megan Bellman

2:30 - 2:44 pm

Post-operative Pain Management

Erin Harrison

2:45 - 2:59 pm

Essential Surgical Spine Anatomy for Advanced Providers: How to be the Ideal Surgical Assistant

Robert Evans

3:00–3:14 pm

Preoperative Optimization for Postoperative Success

Andrea L. Strayer

3:15–3:29 pm

The Future of Spine Surgery without Opioids: The ERAS Effect

Maria Ines Oliviera

3:30 pm

Seminar Concludes

Special Course 1

\$200

1:30–5:30 pm

Novel and Emerging Technologies in Spine Surgery

*Attendees to this course are offered discounted registration of \$300 (from \$500) for the Saturday Non-CME cadaver lab to apply the techniques described in this course

Course Directors: Paul Park, Juan S. Uribe

Speakers: Victor W. Chang, W. Christopher Fox, Roger Härtl, J. Patrick Johnson, Eric W. Nottmeier, Michael P. Steinmetz, William R. Taylor, Khoi D. Than, Jay D. Turner, Michael Y. Wang, David S. Xu

Course Description: This course will cover the latest technological advances in the field of spinal surgery including surface technology, new biologics for fusion, expandable cages, new applications for navigation, robotics, among others. Many of these innovations have the potential to improve surgical efficiency, safety, and outcomes. Attendees will gain a better understanding of the basis for the technology, its applications clinically, evidence for the technology, outcomes and costs.

Learning Objectives: Upon completion of this course, participants will be able to:

- Identify current evidence supporting newer technologies such as expandable cages and surface technology
- Identify the role of robotics and its integration into spinal surgery
- Identify new applications for spinal navigation in minimally invasive and deformity surgery
- Evaluate the potential benefits of new imaging technology such as exoscopes

1:30–1:35 pm

Introduction

Paul Park, Juan S. Uribe

1:36–1:45 pm

Navigation in Minimally Invasive Surgery

Roger Härtl

1:46–1:55 pm

Navigation–Spinal Deformity

J. Patrick Johnson

1:56–2:05 pm

Navigation–Lateral Applications

Paul Park

2:06–2:15 pm

Pitfalls and Complication Avoidance with Navigation

Juan S. Uribe

THURSDAY

MEETING AGENDA

THURSDAY

2:16–2:25 pm

Robot-assisted Pedicle Screw Placement

Jay D. Turner

2:26–2:35 pm

Future Robotic Applications in Spinal Surgery

Michael Y. Wang

2:36–2:45 pm

Cost Effectiveness of Navigation/Robotics

Eric W. Nottmeier

2:45–2:50 pm

Questions and Discussion

2:50–3:20 pm

Hands-on Workshop (Navigation)

3:20–3:40 pm

Break

3:41–3:50 pm

Expandable Cage Technology—Worth the Cost?

Victor W. Chang

3:51–4:00 pm

Surface Technology—Hype or Not?

Khoi D. Than

4:01–4:10 pm

Cellular Allograft—the next BMP?

William R. Taylor

4:11–4:20 pm

Novel Screw Technologies (“One-step MIS Pedicle Screw, Fenestrated Screws, Etc.)

David S. Xu

4:21–4:30 pm

Exoscopes and Virtual Reality: Moving Beyond Traditional Loupes and Microscopes

W. Christopher Fox

4:31–4:40 pm

How to Advocate for New Technology at Your Hospital

Michael P. Steinmetz

4:41–4:50 pm

Questions and Discussion

4:50–5:30 pm

Hands-on Workshop (Robotics)

Special Course 2

\$200

1:30–5:30 pm

Spinal Deformity: Applying Current Deformity Concepts to Your Practice, a Case Based Approach

*Attendees to this course are offered discounted registration of \$300 (from \$500) for the Saturday Non-CME cadaver lab to apply the techniques described in this course

Course Directors: Kai-Ming G. Fu, Praveen V. Mummaneni

Speakers: Shay Bess, Dean Chou, Adam S. Kanter, David W. Polly, Christopher I. Shaffrey, Juan S. Uribe, Michael S. Virk, Michael Y. Wang

Course Description: Through an interactive case-based format, this course will address deformity concerns commonly encountered by the practicing spine surgeon.

Learning Objectives: Upon completion of this course, participants will be able to:

- Identify deformity principles in regards to degenerative pathology
- Analyze the current state of less invasive techniques and deformity
- Identify the current operative options for managing deformity

1:30–1:35 pm

Welcome and Explanation of Course Format

Kai-Ming G. Fu, Praveen V. Mummaneni

1:36–1:57pm

Applying Deformity Principles to Patients with Degenerative Cervical Disease

Dean Chou

1:58–2:19pm

Indications for MIS versus Open Deformity Surgery: MISDEF2 Algorithm

Michael Y. Wang

2:20–2:41pm

Multi-rod Solutions for Deformity: When to Consider?

Christopher I. Shaffrey

2:42–3:03pm

Sacro-pelvic Considerations in Deformity Surgery

David W. Polly

3:04–3:19pm

Break

3:20–3:41pm

Using Navigation in Spinal Deformity

Michael S. Virk

3:42–4:03

Minimally Invasive Approach Selection in Adult Deformity (Anterior, Lateral, and Posterior)

Juan S. Uribe

4:04–4:25

Complication Avoidance and Optimizing Long Term Outcomes in MIS Adult Deformity Surgery

Adam S. Kanter

MEETING AGENDA

4:26–4:47

Complication Management in Open Adult Deformity Surgery

Shay Bess

4:48–5:09pm

Case Discussion

Steven Glassman

5:10–5:30 pm

Discussion and Participant Cases

Special Course 3

\$200

1:30–5:30 pm

Challenges in the Surgical Treatment of Pain

Course Directors: Steven M. Falowski, Line G. Jacques, Mark A. Mahan, Jason M. Schwalb, William S. Rosenberg

Speakers: Allan J. Belzberg, Nicholas M. Boulis, Justin M. Brown, Jonathan Miller, Zaman Mirzadeh, Konstantin V. Slavin, Robert J. Spinner, Jennifer A. Sweet, Christopher J. Winfree

Course Description: This course will explore the diverse surgical options for treatment of pain including decompression, neurologic reconstruction, ablative and stimulation procedures, including up-to-date research findings on clinical evaluation, patient reported outcomes, procedural options and outcomes. New and emerging technologies will be discussed, including the rational use and expectations of developing therapies, especially for the non-narcotic treatment of pain.

Learning Objectives: Upon completion of this course, participants will be able to:

- Define appropriate patient characteristics for surgical treatment of pain
- Discuss the differential benefits of treatment options within reconstructive, ablative, and stimulation surgeries, for the non-narcotic management of pain
- Describe risks and a tiered approach for salvage options

1:30–1:35 pm

Introduction

Mark A. Mahan, William S. Rosenberg

1:36–1:50 pm

Reconstruction for Pain: New Surgical Treatments for Neuromas

Mark A. Mahan

1:51–2:05 pm

Ablative Surgery: DREZotomy, Cordotomy

William S. Rosenberg

2:06–2:20 pm

Decompression Surgery: Can it Work for Pain?

Allan J. Belzberg

2:21–2:35 pm

Medical Management: Non-narcotic Regimens

Christopher J. Winfree

2:36–2:50 pm

Pre-operative Decisions: How to Manage the Psychiatric Difficulties

Jennifer A. Sweet

2:51–3:20 pm

Panel Discussion

Justin M. Brown, Nicholas M. Boulis, Robert J. Spinner

3:20–3:35 pm

Break

3:36–3:50 pm

Dorsal Root Ganglion Stimulation: When to Use

Line G. Jacques

3:51–4:05 pm

Epidural Stimulation: Update on Waveforms

4:06–4:20 pm

Peripheral Nerve Stimulation: Is it Successful

Konstantin V. Slavin

4:21–4:35 pm

Intrathecal Pumps: Who is the Right Patient

Zaman Mirzadeh

4:36–4:50 pm

Integrating Pain Treatments into your Spine Practice

Steven M. Falowski

4:51–5:20 pm

Panel Discussion

Steven M. Falowski, Jonathan Miller, Jason M. Schwalb

5:21–5:30 pm

Questions and Conclusion

Special Course 4

\$200

1:30–5:30 pm

Introduction to Spinal Coding: From Decompression to Deformity

Course Directors: Mark E. Oppenlander, John K. Ratliff

Speakers: Owoicho Adogwa, Kurt M. Eichholz, Kristopher T. Kimmell, Cheerag D. Upadhyaya, Anand Veeravagu

Course Description: What every graduation resident, spine fellow or young attending needs to know about coding spinal procedures in the first few years of practice. Origins of CPT and RVU will be presented along with the fundamentals of spinal coding. The course then transitions to case-based coding. The entire spectrum of spine cases from simple decompression to complex deformity will be presented and the correct coding reviewed.

Learning Objectives: Upon completion of this course, participants will be able to:

- Identify the origins of CPT, RVU and the RUC process
- Demonstrate knowledge in the correct application of CPT codes for a variety of spinal procedures
- Identify elements of practice management with an emphasis on spine

1:30–1:35 pm

Introduction

John K. Ratliff

MEETING AGENDA

THURSDAY

1:36–1:50 pm

Medicare, RVUs, CPT: How We Got Here

John K. Ratliff

1:51–2:05 pm

Basic Spine Coding: Cervical

Mark E. Oppenlander

2:06–2:20 pm

Basic Spine Coding: Lumbar

Owoicho Adogwa

2:21–2:35 pm

Case Based Spinal Coding: Cervical 1. Single Level ACDF 2. Single Level Arthroplasty 3. Multiple Level ACDF 4. Posterior Cervical Foraminotomy

Anand Veeravagu

2:36–2:50 pm

Case Based Spinal Coding: Lumbar 1. Lumbar Microdiscectomy 2. Lumbar Laminectomy 3. Single Level Lumbar Fusion Posterior 4. Single Level Lumbar Fusion Anterior

Kurt M. Eichholz

2:51–3:05 pm

Case Based Spinal Coding: Complex Cervical 1. Anterior Posterior Cervical Surgery 2. Revision ACDF 3. Posterior Cervical Decompression and Fusion

Cheerag D. Upadhyaya

3:06–3:30 pm

Case Based Spinal Coding: Complex Lumbar 1. Anterior Posterior lumbar fusion L5–S1 2. Multiple Level Fusion 3. Deformity Case I 4. Deformity Case II

Anand Veeravagu

3:30–3:45 pm

Break

3:46–4:00 pm

Case Based Spinal Deformity Coding

John K. Ratliff

4:01–4:20 pm

Case Based Cervical Trauma Coding

Anand Veeravagu

4:21–4:40 pm

Case Based Thoracolumbar Trauma Coding

Cheerag D. Upadhyaya

4:41–5:00 pm

Obtaining an Authorization for Surgery and the Peer to Peer Process

Kristopher T. Kimmell

5:01–5:15 pm

Survival Guide for Your First Year in Practice: ABNS, Running Clinic, Scheduling Surgery, Academics & Life Balance

Mark E. Oppenlander

5:16–5:30 pm

Questions and Conclusion

Opening Reception

6:30–8:30 pm

Thursday, March 5, 2020

**The Cosmopolitan of Las Vegas
Chelsea Pool**

Attend an unforgettable Opening Reception with dazzling Cirque-style entertainment, classic rock and roll music, and more, as we bring the best of Las Vegas entertainment straight to you.



MEETING AGENDA

Dinner Seminar (includes three-course dinner and beverages)

\$175

9:00–11:00 pm

Spine Summit Honored Guest Dinner Symposium: The Future of Spine Surgery: Predictions About Technology, Healthcare and the Evolution of Tomorrow's Spine Surgeon

Moderators: Domagoj Coric, Zoher Ghogawala

Faculty: Sigurd Berven, Yoon Ha, Jesus Lafuente, Daniel K. Resnick, K. Daniel Riew, Jeffrey C. Wang

Dinner held at Estiatorio Milos. Touted as one of North America's finest Greek restaurants, Estiatorio Milos features Mediterranean cuisine at its best and has a long-standing reputation for serving the freshest, most pristine seafood. This unique Greek restaurant spares no effort in finding the most delicious fish from around the world and preparing it in the subtlest, most flavorful ways.

Course Description: An opportunity to interact with the 2020 Spine Summit Honored Guests, Daniel K. Resnick and K. Daniel Riew and the president of the European Association of Neurological Surgeons, Jesus LaFuente will present the future of spine from a European perspective.

Learning Objectives: Upon completion of this course, participants will be able to:

- Identify the various trajectories that technology may lead the future of spinal surgery
- Recognize how the future of healthcare will affect the practice of spinal surgery in years to come
- Identify those characteristics needed to remain relevant in the future world of spine care.



FRIDAY | March 6, 2020

6:30 am–6:30 pm

Registration

6:30–7:30 am

Complimentary Continental Breakfast

Challenging Cases 1

7:00 am–7:45 am

Oral Board-style Challenging Cases: Cervical

Moderators: Marcus D. Mazur, Laura A. Snyder, Hesham M. Soliman

7:45–8:00 am

Opening Remarks

7:45–7:55 am

Welcome

Luis M. Tumialán

7:55–8:00 am

Introduction

Zoher Ghogawala

Scientific Session 1

8:00–9:30 am

Focus on Data Driven Innovation

Moderators: John J. Knightly, Michael Y. Wang

Floor Moderator: Regis W. Haid

Speakers: Steven D. Glassman, Roger Härtl, Praveen V. Mummaneni, Laurence D. Rhines, Christopher I. Shaffrey

Learning Objectives: Upon completion of this session, participants will be able to:

- Analyze critically the impact that data registries have on management of spinal conditions such as spondylolisthesis and adult deformity
- Describe the natural history of cervical myelopathy and the timing of intervention
- Describe how technological advances in spine surgery can positively impact patient care

8:00–8:10 am

Management of Metastatic Disease to the Spine in Community Settings: You Can Do Separation Surgery

Laurence D. Rhines

8:11–8:16 am

Discussion

8:17–8:27 am

Developing Competencies in Minimally Invasive Spinal Surgery

Roger Härtl

8:28–8:33 am

Discussion

8:34–8:44 am

The Data of Adult Deformity Correction: Age Appropriate Correction

Christopher I. Shaffrey

8:45–8:50 am

Discussion

MEETING AGENDA

FRIDAY

8:51–9:01 am

Spondylolisthesis and QOD: Data Driven Innovation in Clinical Decision Making

Praveen V. Mummaneni

9:02–9:07 am

Discussion

9:08–9:18 am

Evolution of Big Data in Spinal Surgery: The AANS/AAOS Spinal Registry

Steven D. Glassman

9:19–9:30 am

Discussion and Summary of Scientific Session 1

9:30–10:15 am

Beverage Break and What's New Session in the Exhibit Hall

Scientific Session 2

10:15 am–12:00 pm

The Trajectory of Spinal Surgery

Moderators: *Michael W. Groff, John K. Ratliff*

Floor Moderator: *Christopher E. Wolfla*

Speakers: *Edward C. Benzel, Michael S. Chang, Irfan Essa, Zoher Ghogawala, Daniel K. Resnick, K. Daniel Riew*

Learning Objectives: Upon completion of this session, participants will be able to:

- Identify the evolution of the management of lumbar degenerative disc disease
- Discuss the progress and current trajectory of the current management of the degenerating cervical spine
- Recognize the importance of big data in the realm of spinal surgery

10:15–10:18 am

Introduction of Neurosurgery Honored Guest

Zoher Ghogawala

10:19–10:34 am

Neurosurgery Honored Guest Presentation

Daniel K. Resnick

10:35–10:38 am

Introduction of Orthopedics Honored Guest

Michael S. Chang

10:39–10:54 am

Orthopedics Honored Guest Presentation

K. Daniel Riew

10:55–10:58 am

Introduction of DSPN Chair

Edward C. Benzel

10:59–11:14 am

DSPN Chair's Address

Zoher Ghogawala

11:15–11:25 am

Round Table Discussion with Zoher Ghogawala, Daniel K. Resnick, and K. Daniel Riew

11:26–11:29 am

Introduction of Irfan Essa–Google Medical Analytics

Zoher Ghogawala

11:30–11:50 am

Special Lecture: Data Driven Innovation

Irfan Essa

11:51 am–12:00 pm

Discussion and Summary of the Session

12:00–1:00 pm

Lunch with Exhibitors or Attend a Non-CME Sponsored Lunch

Scientific Session 3

1:00–2:30 pm

Innovative Technology Special Session : Operative Video Segments

Moderators: *Marjorie C. Wang, Michael P. Steinmetz*

Floor Moderator: *Praveen V. Mummaneni*

Speakers: *Giuseppe Barbagallo, Roger Härtl, Larry T. Khoo, Daniel K. Resnick, K. Daniel Riew, Christopher I. Shaffrey*

Learning Objectives: Upon completion of this session, participants will be able to:

- Express a greater understanding of a variety of surgical techniques for the management of the degenerating spine
- Identify those patients who are ideal candidates for minimally invasive cervical and lumbar procedures
- Discuss limitations of deformity correction in a particular age group

1:00–1:08 pm

Minimally Invasive Posterior Cervical Foraminotomy: Nuances of an Operative Technique

Roger Härtl

1:09–1:14 pm

Discussion

1:15–1:23 pm

Image Guided Minimally Invasive Lumbar Laminectomy: Anatomical Basis and Rationale

Larry T. Khoo

1:24–1:29 pm

Discussion

1:30–1:38 pm

The Pearls of the Lumbar Microdiscectomy

Daniel K. Resnick

1:39–1:44 pm

Discussion

1:45–1:53 pm

Operative Management of High-Grade Spondylolisthesis

Christopher I. Shaffrey

1:54–1:59 pm

Discussion

2:00–2:08 pm

Operative Nuances of C1–2 Fixation

Giuseppe Barbagallo

MEETING AGENDA

2:09–2:14 pm

Discussion

2:15–2:23 pm

Cervical Laminoplasty: Complication Avoidance

K. Daniel Riew

2:24–2:30 pm

Discussion and Summary of the Session

2:30–3:15 pm

Beverage Break and What's New Session in the Exhibit Hall

Peripheral Nerve Session

2:30–4:30 pm

Case-based Approaches to Peripheral Nerve Trauma and Other Conditions

Course Directors: *Line G. Jacques, Mark A. Mahan*

Speakers: *Zarina S. Ali, Allan J. Belzberg, Justin M. Brown, Holly Gilmer, Amgad S. Hanna, Allan D. Levi, Rajiv Midha, Wilson Z. Ray, Elias B. Rizk, Robert J. Spinner, Gregory R. Trost, Thomas J. Wilson, Christopher J. Winfree, Eric L. Zager*

Course Description: This course will cover management of various peripheral nerve disorders. Using a case-based format, faculty will review indications, timing of intervention, and surgical approaches. Relevant anatomy, clinical presentation, and outcomes will be discussed. This course is an excellent review for oral board and maintenance of certification.

Learning Objectives: Upon completion of this session, participants will be able to:

- Describe a systematic approach to patients with a wide range of peripheral nerve disorders
- Develop a non-operative or operative management strategy for these conditions
- Discuss advantages and disadvantages and expected outcomes of various surgical approaches

3:15–4:25 pm

Oral Abstract Presentations

Learning Objectives: Upon completion of this session, participants will be able to:

- Analyze the findings of contemporary neurosurgical studies, critically evaluate the design and methodology of these studies
- List areas of future research and critical investigation
- Compare indications, relative contraindications and clinical outcomes for various minimally invasive and motion preserving techniques

2:30–2:39 pm

Peripheral Nerve History and Physical Exam

Allan J. Belzberg

2:40–2:49 pm

Fundamentals of Nerve Injury and Regeneration

Rajiv Midha

2:50–2:59 pm

Brachial Plexus Trauma

Justin M. Brown

3:00–3:09 pm

Upper Extremity Nerve Trauma

Wilson Z. Ray

3:10–3:19 pm

Lower Extremity Nerve Trauma

Mark A. Mahan

3:20–3:39 pm

Panel Discussion: Nerve Trauma

Allan D. Levi, Robert J. Spinner, Gregory R. Trost, Eric L. Zager

3:40–3:49 pm

Upper Extremity Entrapment

Elias B. Rizk

3:50–3:59 pm

Lower Extremity Entrapment

Thomas J. Wilson

4:00–4:09 pm

Nerve Tumors

Zarina S. Ali

4:10–4:24 pm

Panel Discussion: Entrapments and Tumors

Holly Gilmer, Amgad S. Hanna, Line G. Jacques, Christopher J. Winfree

4:25–4:30 pm

Questions and Conclusion

Robert J. Spinner

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**Kuntz Scholar Oral Abstract Presentations
Concurrent Session 1**

Moderators: *Erica F. Bisson, Michael S. Virk*
.....

**Kuntz Scholar Oral Abstract Presentations
Concurrent Session 2**

Moderators: *Victor W. Chang, Yi Lu, Eve C. Tsai*
.....

**Kuntz Scholar Oral Abstract Presentations
Concurrent Session 3**

Moderators: *Sanjay S. Dhall, Kristen E. Jones, John H. Shin*
.....

**Minimally Invasive/Motion Preservation Abstract
Breakout Session**

Moderators: *Hesham M. Soliman, Neill M. Wright*

MEETING AGENDA

Beer and Wine Happy Hour Debates: Orthopedics versus Neurosurgery

4:30–6:30 pm

Moderators: Domagoj Coric, Luis M. Tumialán

Orthopedic Speakers: Neel Anand, Hyun Bae, Rolando Garcia, K. Daniel Riew, Alexander R. Vaccaro

Neurosurgery Speakers: Zoher Ghogawala, James S. Harrop, Daniel K. Resnick, Christopher I. Shaffrey, Juan S. Uribe, Michael Y. Wang

Learning Objectives: Upon completion of this session, participants will be able to:

- Demonstrate an understanding of the limitations of minimally invasive spinal surgery in the management of deformity
- Describe the advantages and limitations of available technology in the management of the post-operative spine patient
- Identify those patients who would be ideal candidates for lumbar arthroplasty and those patients who would benefit more from arthrodesis than motion preservation

4:30–5:00 pm

Topic 1: MIS for Deformity is Feasible, Cost Effective and Sustainable

4:30–4:38 pm

PRO: Minimally Invasive Deformity Results in a Lower Incidence of PJK

Neel Anand

4:39–4:47 pm

CON: MIS Deformity Surgery Under Corrects and Under Treats the Deformity

Christopher I. Shaffrey

4:48 pm–4:53 pm

Summary of Points Made by the Debaters and Questions from the Audience

Sigurd Berven

4:54–4:56 pm

PRO: Rebuttal

Neel Anand

4:57–4:59 pm

CON: Rebuttal

Christopher I. Shaffrey

5:00–5:30 pm

Topic 2: 21st Century Rounds for a 21st Century Surgeon

5:00–5:08 pm

PRO: Virtual Rounding on Spine Patients Improves Patient Care and Patient Experience

Alexander R. Vaccaro

5:09–5:17 pm

CON: Technology Will Only Take You so Far. Be a Doctor, Round on Your Patients in Person

James S. Harrop

5:18–5:23 pm

Summary of Points Made by the Debaters and Questions from the Audience

Zoher Ghogawala

5:24–5:26 pm

PRO: Rebuttal

Alexander R. Vaccaro

5:27–5:29 pm

Con: Rebuttal

James S. Harrop

5:30–6:00 pm

Topic 3: Preservation of Motion at the Lumbosacral Junction is a Good Thing

5:30–5:38 pm

PRO: Lumbar Arthroplasty is Alive and Well and Underutilized

Rolando Garcia

5:39–5:47 pm

CON: Fusion of the Lumbosacral Spine is Part of the Natural Aging Process, Just Fuse It

Juan S. Uribe

5:48–5:53 pm

Summary of Points Made by the Debaters and Questions from the Audience

Hyun Bae

5:54–5:56 pm

PRO: Rebuttal

Rolando Garcia

5:57–5:59 pm

CON: Rebuttal

Juan S. Uribe

6:00–6:30 pm

Topic 4: Spine Surgery Should Be Its Own Specialty

6:00–6:08 pm

PRO: Merge Orthopedic Spine and Neurosurgery Spine into One Spine

K. Daniel Riew

6:09–6:17 pm

CON: Neurosurgery and Orthopedic Surgery Are Better Off As They Are: Separate

Michael Y. Wang

6:18–6:23 pm

Summary of Points Made by the Debaters and Questions from the Audience

Daniel K. Resnick

6:24–6:26 pm

PRO: Rebuttal

K. Daniel Riew

6:27–6:29 pm

CON: Rebuttal

Michael Y. Wang

6:30 pm

Debates Conclude

MEETING AGENDA

SATURDAY | March 7, 2020

6:30 am–5:30 pm

Registration

6:30–7:30 am

Complimentary Continental Breakfast

Challenging Cases 2

7:00–8:00 am

Oral Board–style Challenging Cases: Lumbar Degenerative

Moderators: Oren N. Gottfried, Jeffrey P. Mullin, Corinna C. Zygourakis

Scientific Session 3

8:00–9:30 am

Opioids and Spine Surgery

Moderators: Praveen V. Mummaneni, Gerald E. Rodts

Speakers: Steven M. Falowski, Richard G. Fessler, Jean–Pierre Mobasser, Jennifer A. Sweet, Michael Y. Wang

Learning Objectives: Upon completion of this session, participants will be able to:

- Analyze the impact that data registries have on management of spinal conditions such as spondylolisthesis and adult deformity
- Describe the natural history of cervical myelopathy and the timing of intervention
- Describe how technological advances in spine surgery can positively impact patient care

8:00–8:10 am

Strategies for Spine Surgery Without Opioids

Jean–Pierre Mobasser

8:11–8:15 am

Discussion

8:16–8:26 am

ERAS and the Impact it has on Opioid Use in Spine Surgery

Michael Y. Wang

8:27–8:32 am

Discussion

8:33–8:36 am

Introduction of the Pain Section Address

Jennifer A. Sweet

8:37–8:52 am

Pain Section Chair's Address

Steven M. Falowski (Presented on Behalf of William S. Rosenberg)

8:53–8:56 am

Introduction of Guest Speaker Travis Rieder

Richard G. Fessler

8:57 - 9:27 am

America's Opioid Dilemma: Responsible Pain Medicine During an Epidemic

Travis N. Rieder

9:28–9:30 am

Discussion and Session Summary

10:15 am–12:15 pm

The Cahill Controversies

Moderators: Ziya L. Gokaslan, Robert F. Heary

Speakers: Edward C. Benzel, Mark H. Bilsky, Joseph S. Cheng, Domagoj Coric, Ziya L. Gokaslan, R. John Hurlbert, Bradley Jacobs, Adam S. Kanter, Praveen V. Mummaneni, Laurence D. Rhines, Gerald E. Rodts, Joshua M. Rosenow

Learning Objectives: Upon completion of this session, participants will be able to:

- Discuss the difference that a payor model has on the delivery of spine care in a country
- Identify the role and limitations of separation surgery in the management of metastatic disease
- Identify the benefits of a spine practice in academics as compared to private practice

10:15–10:45 am

Topic 1: Spinal Surgery is Superior in Canada Compared to the United States

10:15–10:22 am

PRO: Canadians Manage Spine Care Better in a Single Payer System

Bradley Jacobs

10:23–10:30 am

CON: The U.S. Healthcare System Fosters Competition, Competition Offers Innovation

Joseph S. Cheng

10:31–10:36 am

Summary of Points Made by the Debaters and Questions from the Audience

R. John Hurlbert

10:37–10:39 am

PRO: Rebuttal

Bradley Jacobs

10:40–10:42 am

CON: Rebuttal

Joseph S. Cheng

10:43–10:44 am

Vote and Summary

MEETING AGENDA

SATURDAY

10:45–11:15 am

Topic 2: The Data is Unequivocal: A Posterior Approach at L4–5 Has Less Risk and Better Outcomes than A Lateral Approach

10:45–10:52 am

PRO: The Decade of the Transposas is Over and the Decade of the MIS TLIF has Just Begun

Praveen V. Mummaneni

10:53–11:00 am

CON: The Decade of the Transposas Continues: The Data and the Lessons Learned

Adam S. Kanter

11:01–11:06 am

Summary of Points Made by the Debaters and Questions from the Audience

Edward C. Benzel

11:07–11:09 am

PRO: Rebuttal

Praveen V. Mummaneni

11:10–11:12 am

CON: Rebuttal

Adam S. Kanter

11:13–11:14 am

Vote and Summary

11:15–11:44 am

Topic 3: Thermal Ablation of Spinal Tumors

11:15 am–11:22 am

PRO: Newer Technology Promises to Decrease the Need for Surgery

Laurence D. Rhines

11:23–11:30 am

CON: Definitive Intervention Once and For All is Better for the Patient

Mark H. Bilsky

11:31–11:36 am

Summary of Points Made by the Debaters and Questions from the Audience

Ziya L. Gokaslan

11:37–11:39 am

PRO: Rebuttal

Laurence D. Rhines

11:40–11:42 am

CON: Rebuttal

Mark H. Bilsky

11:43–11:44 am

Vote and Summary

11:45 am–12:15 pm

Topic 4: Spinal Cord Stimulation versus Further Surgery

11:45–11:52 am

PRO: Addressing the Underlying Structural Issue Will Help the Patient the Most

Gerald E. Rodts

11:53 am–12:00 pm

CON: Enough Surgery, Spinal Cord Stimulation Offers the Greatest Relief at the Lowest Risk

Joshua M. Rosenow

12:01–12:06 pm

Summary of Points Made by the Debaters and Questions from the Audience

Domagoj Coric

12:07–12:09 pm

PRO: Rebuttal

Gerald E. Rodts

12:10–12:12 pm

CON: Rebuttal

Joshua M. Rosenow

12:13–12:15 pm

Vote and Summary

12:15–1:15 pm

Lunch with Exhibitors or Attend a Non-CME Sponsored Lunch

Special Course 5

1:30–3:30 pm

\$150

Spine Summit Grand Rounds: Difficult Cases– The Decision-Making Dilemma

Course Directors: *John H. Chi, Langston T. Holly, Shekar N. Kurpad*

Speakers: *Sigurd Berven, Daniel K. Resnick, Alexander R. Vaccaro,*

Jeffrey C. Wang

Discussants: *Domagoj Coric, Zohar Ghogawala, Jesus Lafuente*

Course Description: Spine Summit Grand Rounds is a new course with the focus on Spine Section member participation. Spine Section members are encouraged to submit their cases through the Spine Section portal. The course is intended for audience members to bring difficult cases they have managed or are currently managing, where they would like to seek an opinion from the panel of experts. Attendees who submit a case that is accepted for the course will be refunded \$200 from their registration. The refund will be made available for the six cases discussed that will

be presented. Submitted cases will be reviewed by the course directors who will make the final selection.

Learning Objectives: Upon completion of this course, participants will be able to:

- Describe a variety of decision-making approaches in the complex case
- Demonstrate knowledge base in complication management in cervical and lumbar operations
- Discuss complication avoidance strategies for management of complex lumbar and cervical conditions

1:30–1:35 pm

Introduction

John H. Chi, Langston T. Holly, Shekar N. Kurpad

1:36–1:46 pm

Medicolegal

Alexander R. Vaccaro

1:47–1:57 pm

The Difficult Anterior Cervical Case

Jeffrey C. Wang

1:58–2:08 pm

The Difficult Lumbar Case

Daniel K. Resnick

MEETING AGENDA

2:09-2:19pm

The Difficult Deformity Case

Sigurd Berven

2:20-3:05pm

Case Discussion

Domagoj Coric, Zoher Ghogawala, Jesus Lafuente

3:06-3:30pm

Questions and Conclusion

Special Course 6

1:30-4:30 pm **\$150**

Treatment and Complication Avoidance in the Management of Spinal Tumors

Course Directors: *John E. O’Toole, Daniel M. Sciubba*
Speakers: *Mark H. Bilsky, Dean Chou, Nicolas Dea, Ziya L. Gokaslan, Ilya Laufer, Paul C. McCormick, Ehud Mendel, Laurence D. Rhines, John H. Shin, Ganesh Rao*

Course Description: This seminar is designed to review the myriad presentations of spinal tumors and to discuss the multi-disciplinary management options involving medical, radiation and surgical treatments.

- Learning Objectives:** Upon completion of this course, participants will be able to:
- Analyze various treatment approaches to address spinal tumor pathologies
 - Discuss incorporating innovative technologies to facilitate avoidance in spinal tumor surgery
 - Discuss multi modal treatment of spinal tumors

1:30-1:34 pm

Introduction

John E. O’Toole, Daniel M. Sciubba

1:35-2:26 pm

Management of Vertebral Column Tumor Metastasis

1:35 - 1:47 pm

Nuances in Surgical Management of Metastatic Epidural Cord Compression (When You’re Not Practicing at an Academic Cancer Center!)

Ilya Laufer

1:48-2:00 pm

When do Metastatic Spine Tumor Patients Require Stabilization (and When Should You Not Instrument)?

John H. Shin

2:01 pm-2:13 pm

Selecting Patients for Surgery for Metastatic Spine Disease Based on Overall Prognosis

Nicolas Dea

2:14-2:26 pm

Complication Avoidance/Management in Metastatic Spine Tumor Surgery

Daniel M. Sciubba

2:27-3:05 pm

Management of Solitary Primary Malignant Lesion of the Mobile Spine

2:27-2:39 pm

Pitfalls in the Initial Management of Isolated Spinal Tumors

Laurence D. Rhines

2:40-2:52 pm

For Which Patients is En Bloc Resection and Instrumented Fusion Appropriate?

Ziya L. Gokaslan

2:53-3:05 pm

For Which Patients is Separation Surgery with SRS/SBRT Appropriate?

Mark H. Bilsky

Desert Pines Golf Club Outing

Desert Pines offers a taste of the Carolina Pines in the middle of the desert! With numerous bunkers and water hazards, Desert Pines rewards a player with good course management skills. Narrow tee shots will challenge you, but find the fairway and you will be rewarded. Not too long by modern standards, Desert Pines is a 2nd shot course with undulating beautiful putting surfaces. The Desert Pines Practice Center is a 20,000 square foot state-of-the-art driving range. The two-tiered, climate-controlled facility includes target greens that are modeled after some famous par 3’s throughout the country.

The outing is on Saturday afternoon. Shuttles will depart the hotel at 12:30pm, and will return at approximately 5:30pm. The cost to play is \$99 per player, which includes roundtrip shuttle transportation.

**Buses depart at 12:30 pm.
\$99 per round of golf.
Rental clubs are \$45.**



MEETING AGENDA

SATURDAY

3:05–3:20 pm

Break

3:21–3:46 pm

Management of Primary Giant Cell Tumor of the Sacrum

3:21–3:33 pm

Modern Management of Giant Cell Tumor of the Sacrum (Medical, Embolization, Radiation and Surgery)

Dean Chou

3:34–3:46 pm

Complication Avoidance/Management in Surgery for Primary Sacral Tumors

Ehud Mendel

3:47–4:25 pm

Management of Intradural Spinal Tumors

3:47–3:59 pm

Surgical Approaches to Intradural Extramedullary Spinal Cord Tumors

John E. O'Toole

4:00–4:12 pm

Patient Selection and Complication Avoidance in Intramedullary Spinal Cord Tumor Resection

Paul C. McCormick

4:13–4:25 pm

Case Presentation: Resection of Intradural Extramedullary Lesion: How I Do It.

Ganesh Rao

4:26–4:30 pm

Questions and Discussion

Special Course 7

1:30–3:30 pm

\$150

Causes and Treatments for Neurologic Loss Associated with Spine Surgery

Course Directors: Justin M. Brown, Mark A. Mahan

Speakers: Andrew T. Dailey, Wilson Z. Ray, Robert J. Spinner, Nicholas Theodore, Gregory R. Trost, Juan S. Uribe

Course description: New weakness, either before or after spine surgery, is a vexing problem and many not have a causal relationship with spine pathology. It is crucial to understand non-spinal causes, intraoperative considerations and potential treatments for these problems. This course will explore the potential causes and remedies for neurologic loss associated with spine surgery. The course will focus on alternative causes of weakness—particularly when the degree of weakness or atrophy is out of proportion to spinal stenosis, intraoperative complication avoidance and algorithmic steps for the management and treatment of post-operative weakness. Newer techniques on neurologic reconstruction for remedy of weakness will be reviewed.

Learning objectives: Upon completion of this course, participants will be able to:

- Describe the differential diagnosis of new onset weakness, clinical patterns, and natural histories
- Discuss the intraoperative surgical strategies for complication avoidance, including appropriate use of neurophysiologic studies
- Define the surgical treatment options for neurologic loss and the considerations on timing for neurologic reconstruction

1:30 pm

Introduction

Mark A. Mahan

1:30–1:39 pm

Clinical Work-up of Weakness—Is it a Radiculopathy or Not?

Robert J. Spinner

1:40–1:49 pm

Electrodiagnostic Work-up of Weakness

Justin M. Brown

1:50–1:59 pm

Weakness after Cervical Spine Surgery—Avoidance

Nicholas Theodore

2:00–2:09 pm

Weakness after Cervical Spine Surgery—Evaluation and Management

Gregory R. Trost

2:10–2:19 pm

Weakness after Cervical Spine Surgery—Treatment Options and Outcomes

Wilson Z. Ray

2:20–2:34 pm

Case Discussion: Post-operative C5 Palsy

Justin M. Brown, Wilson Z. Ray, Gregory R. Trost

2:35–2:44 pm

Weakness after Direct Lateral Approach to Lumbar Spine—Avoidance

Juan S. Uribe

2:45–2:54 pm

Weakness after Posterior Approach to Lumbar Spine—Avoidance

Nicholas Theodore

2:55–3:04 pm

Weakness after Lumbar Surgery—Evaluation and Management

Andrew T. Dailey

3:05–3:14 pm

Weakness after Lumbar Surgery—Treatment Options and Outcomes

Mark A. Mahan

3:15–3:29 pm

Case Discussion: Post-operative Foot Drop

Andrew T. Dailey, Mark A. Mahan, Nicholas Theodore, Juan S. Uribe

3:30 pm

Course Conclusion

MEETING AGENDA

Special Course 8

1:30–5:30 pm **\$150**
Spine Specialty Specific Oral Board Review Course

Course Directors: Wilson Z. Ray, Yakov Gologorsky

Faculty: Marc Arginteanu, Anthony L. Asher, Mohamad Bydon, John M. Caridi, John H. Chi, Nader S. Dahdaleh, Ian G. Dorward, Richard D. Fessler, Aruna Ganju, Daniel J. Hoh, R. John Hurlbert, Adam S. Kanter, Isaac O. Karikari, John J. Knightly, Shekar N. Kurpad, Allan D. Levi, Daniel C. Lu, Yi Lu, Scott A. Meyer, Adetokunbo A. Oyelese, Srinivas K. Prasad, Alexander E. Ropper, Charles A. Sansur, Mark E. Shaffrey, Khoi D. Than

Course Description: This is an interactive case-based format designed to prepare recent graduates or fellow level participants for the new spine specialty specific oral boards. Enrollment will be limited to the first 20 registrants. Limited enrollment allows for dedicated one-on-one mock oral board sessions along with feedback using both submitted cases and cases prepared by the faculty.

Learning Objectives: Upon completion of this course, participants will be able to:

- Identify the more recent format of the ABNS oral boards
- Demonstrate knowledge base across an array of spine related scenarios
- Describe conveying diagnosis, surgical options and complication management to an examiner

1:30–1:49 pm

Introduction

John J. Knightly

1:50–3:30 pm

All Faculty—1:1 Oral Boards Style Case Presentations

3:30–3:50 pm

Break

3:50–5:30 pm

All Faculty—1:1 Oral Boards Style Case Presentations

Non-CME Cadaver Lab

1:30–5:30 pm **\$500**
Hands-on Cadaver Session with the Masters (Non-CME)

Course Directors: Ajit A. Krishnaney, Mark A. Mahan

Course Description: Participants will engage in hands-on learning of innovative new technologies in spine and peripheral nerve surgery. In this four-hour cadaver lab, participants will learn advanced techniques in minimally invasive deformity spine surgery and peripheral nerve repair. Rotations will include various MIS and deformity approaches and instrumentation, as well as peripheral nerve grafting. One-on-one instruction will be performed with experienced faculty using the latest state-of-the-art devices. Surgeons with limited prior experience will learn practical techniques to introduce into their clinical practice. Those with advanced experience will have the opportunity to share surgical technique refinement with expert faculty, and to survey a variety of new technologies.

Young Neurosurgeons' Reception and Dinner

6:00–8:00 pm

Description: All residents, fellows, and young neurosurgeons are invited to enjoy a delicious dinner with Neurosurgery Honored Guest, Daniel K. Resnick. RSVP is required, to RSVP please email meetings@cns.org.

Register for Spine and Pain and save \$200!

Same Dates, Same Location, More Learning!

Attend the 2020 Joint Section on Pain Annual Meeting

March 5-7, 2020

Join the Joint Section on Pain for their 2020 Annual Meeting, "The Science of Pain Meets Everyday Practice," held in conjunction with Spine Summit 2020.

This meeting provides continuing medical education to neurosurgeons, orthopedic surgeons, pain physicians, fellows, residents, physician extenders, and nurse clinicians involved in the practice of surgery for pain including spine and peripheral nerve surgery. Education is provided in the form of didactic lectures, case presentations and debates, exhibits presenting the newest instruments and techniques, and oral and print poster presentations providing the latest information regarding clinical advances in surgery for pain.

Learning Objectives: Upon completion of this meeting, participants will be able to:

- Adapt one or more pain management/neuromodulation therapies into your spine practice
- Identify strategies to help build your pain practice
- Explain the principles behind patient selection for neuromodulation
- Demonstrate various surgical techniques used in neuromodulation



MEETING AGENDA

SUNDAY

SUNDAY | March 8, 2020

6:30 am - 12:30 pm

Registration

6:30–7:30 am

Complimentary Continental Breakfast

Challenging Cases 3

7:00–7:30 am

Board-style Challenging Cases: Peripheral Nerve

Moderators: *Line G. Jacques, Robert J. Spinner*

Abstract Breakout Sessions

7:30–9:30 am

Learning Objectives: Upon completion of this session, participants will be able to:

- Identify the importance of the spinopelvic parameters in planning surgical interventions
- Describe the science behind surface technology in attempting to achieve an arthrodesis in lumbar and cervical spine surgeries
- Explain the biomechanical principles in fixation and stabilization for long segment constructs

General Spine Surgery 1/Trauma

Moderators: *Christopher M. Bonfield, Kee D. Kim, Alexander E. Ropper*

General Spine Surgery 2

Moderators: *Christopher M. Holland, Charles A. Sansur, Alexander S. Taghva*

Peripheral Nerve/Basic Science/General Spine 3

Moderators: *Kee D. Kim, Bryan S. Lee, Eve C. Tsai*

Spinal Deformity Breakout

Moderators: *Kai-Ming G. Fu, Tyler R. Koski, Hasan Aqdas Zaidi*

Scientific Session 5

9:30–11:15 am

A Focus on Innovation to Improve Spine Care

Moderators: *Daniel J. Hoh, Michael P. Steinmetz*

Speakers: *Marie-Noelle Hebert-Blouin, Wilson Z. Ray, Volker K. H. Sonntag, Robert J. Spinner, Nicholas Theodore*

Learning Objectives: Upon completion of this session, participants will be able to:

- Analyze the design, methodology, and content of basic science and clinical spine studies
- Describe the impact of innovative technologies on the field of spine surgery
- Describe how technological advances in spine surgery can positively impact patient care

9:30–9:35 am

Recognition of Kuntz Scholars and Introduction of J.A.N.E. and Mayfield Award Winners

Wilson Z. Ray

9:36–9:59 am

J.A.N.E. and Mayfield Award Presentations

10:00–10:05 am

Introduction of the DSPN Historian

Nicholas Theodore

10:06–10:16 am

Combining Forces: Orthopedics and Neurosurgery in the Battle for the Pedicle Screw

Volker K. H. Sonntag

10:17–10:20 am

Introduction of the Peripheral Nerve Meritorious Award Winner

Mari-Noelle Hebert-Blouin

10:21–10:33 am

Peripheral Nerve Meritorious Award Winner

Robert J. Spinner

10:34–10:42 am

NFL Update

Nicholas Theodore

10:43 - 10:46 am

WFNS Introduction

Praveen V. Mummaneni

10:47 - 10:55 am

Changing Outcome Using Prognostic Factors for Cervical Trauma

Salman Y. Sharif

10:56 - 11:04 am

Anterior and Posterior Approach to Complex Cervical Diseases

Maurizio Fornari

11:05 - 11:13 am

Should we Correct Geriatric Deformities?

Mehmet Zileli

11:14 - 11:15 am

Discussion and Questions

MEETING AGENDA

Special Session

11:15 am–12:15 pm
Business of Neurosurgery

Moderators: *Joseph S. Cheng, Kurt M. Eichholz*

Speakers: *Owoicho Adogwa, Mohamad Bydon, Kristopher T. Kimmell, Cheerag D. Upadhyaya, Anand Veeravagu*

Learning Objectives: Upon completion of this session, participants will be able to:

- Demonstrate an understanding the socioeconomic policies under consideration and the effect that those legislative efforts will have on the practice of spine surgery
- Discuss the recent activity of the Washington Committee with regards to spinal surgery
- Identify the changes in the E&M structure and the impact it has on a neurosurgery practice that focuses on spine

11:15–11:22 am

The Possibility of Medicare for All: The Effect on Spine Surgery
Cheerag D. Upadhyaya

11:23–11:30 am

Ambulatory Surgical Centers: Spine Surgeons Need Them Now More Than Ever
Kurt M. Eichholz

11:31–11:38 am

Washington Update
Mohamad Bydon

11:39–11:46 am

Is the Spine Bundle Our Inevitable Future?
Owoicho Adogwa

11:47–11:54 am

Malpractice in Neurosurgery: Understanding its Origins
Anand Veeravagu

11:55 am–12:02 pm

The Status of Legislation: Addressing the Preauthorization Conundrum
Kristopher T. Kimmell

12:03–12:10 pm

The Changes in E&M Coding Effecting Your Practice
Joseph S. Cheng

12:11–12:15 pm

Questions and Summary of Session

DSPN Business Meeting

12:15–12:30 pm

Moderator: *Luis M. Tumialán*

Speakers: *Steven N. Kalkanis, Adam S. Kanter, Eric A. Potts, Christopher I. Shaffrey, Michael Y. Wang, Christopher E. Wolfla*

12:15–12:16 pm

Treasurer's Report
Eric A. Potts

12:17–12:19 pm

Secretary's Report
Adam S. Kanter

12:20–12:22 pm

Nominating Committee Report
Michael Y. Wang

12:23–12:25 pm

CNS Board Report
Steven N. Kalkanis

12:26–12:28 pm

AANS Board Report
Christopher I. Shaffrey

12:29–12:30 pm

Future Sites Committee Report
Christopher E. Wolfla

12:30 pm

Meeting Adjourns

**All speakers and topics are subject to change*

Enjoy an unforgettable night at our Cirque-themed **OPENING RECEPTION!**



Thursday, March 5, 2020 | The Cosmopolitan of Las Vegas | Chelsea Pool



- Enjoy classic rock and roll music and an unforgettable performance by an Elvis tribute artist.
- Experience an electrifying dance sensation as trained dancers and gymnasts get the crowd energized with a choreographed dance performance on land and water.
- Gaze up at the Las Vegas skyline, and 20 feet in the air as gymnasts delight the audience from above via an aerial hoop.
- Enjoy a view of the beautiful Chelsea Pool, inhabited by magical mermaids and rotating performances via multiple floating stages.
- Take a picture with the glamorous, statuesque Tower Showgirls.
- See amazing feats of strength as contortionists perform mind and body-bending.
- Grab a cocktail from our champagne servers, outfitted in self-serve cocktail dispensing apparatus.
- Stay on the edge of your seat as you watch chair balancers stack chairs up to 20 feet high.

You've never seen a neurosurgery event like this, and you won't want to miss out!

One entry ticket included with registration, additional tickets can be purchased in advance.

ACCREDITATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Congress of Neurological Surgeons and the Section on Disorders of the Spine and Peripheral Nerves. The Congress of Neurological Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA Credit Designation Statement

The CNS designates this live activity for a maximum of *28 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity. This activity meets the criteria for opioid education. Attendees will receive a maximum of *1.5 AMA PRA Category 1 Credits™* for the eligible Scientific Session.

Several states have similar requirements. Please check with your Board to determine if this activity will fulfill your state's specific requirements.

CME Credit

*A maximum of *18.5 AMA PRA Category 1 Credits™* may be earned for Scientific Sessions only.

Additional CME Credits can be earned by attending the following:

Special Courses

Attendees will receive a maximum of *3.75 AMA PRA Category 1 Credits™* for an eligible half-day Thursday Special Course. Attendees will earn an additional *2 AMA PRA Category 1 Credits™* for attending the Thursday Evening Dinner Seminar. Attendees will receive a maximum of *3.75 AMA PRA Category 1 Credits™* for an eligible Saturday afternoon Special Course. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nursing Credit

This continuing nursing education activity was submitted to the American Association of Neuroscience Nurses, an accredited approver by the American Nursing Credentialing Center Commission on Accreditation.



Physician's Assistant Credit

This program is being reviewed for a maximum of *28 AMA PRA Category 1 Credits™* by the AAPA Review Panel. PAs should claim only the credit commensurate with the extent of their participation in the activity.

This program was planned in accordance with AAPA CME Standards for Live Programs and for Commercial Support of Live Programs.

Join us at Spine Summit 2020 to honor our Honored Guests and Meritorious Awardee!

Neurosurgery
Honored Guest



Daniel K. Resnick

Orthopedics
Honored Guest



K. Daniel Riew

Peripheral Nerve
Meritorious Award



Robert J. Spinner

GENERAL INFORMATION



Who Should Attend

Educational sessions are geared toward neurosurgeons, orthopedic surgeons, spine care specialists, fellows, residents, physician assistants/physician extenders, and nurse clinicians and are applicable to the practice of spine and peripheral nerve surgery.

Meeting Purpose

The purpose of the 2020 Section on Disorders of the Spine & Peripheral Nerves Annual Meeting is to provide continuing medical education to neurosurgeons, orthopedic surgeons, spine care specialists, fellows, residents, physician extenders and nurse clinicians involved in the practice of spine and peripheral nerve surgery. Education is provided in the form of didactic lectures, special courses demonstrating neurosurgical techniques, exhibits presenting the newest instruments and information, and digital posters providing the latest information regarding clinical advances in neurological surgery.

Hotel Information

Enjoy residential styled living spaces with breathtaking skyline views. Explore one of a kind restaurants featuring the Las Vegas debuts of world-class chefs. The eclectic mix of hand-selected boutiques, and unrivaled pool district, 100,000 square foot casino, and serene Sahra Spa, Salon & Hammam complete an unforgettable luxury experience.

Your ideal destination escape includes three distinct Las Vegas hotel pool experiences, all with views unlike any others. After a day in the sun, experience shows and nightlife that make Las Vegas fabulous. The Cosmopolitan of Las Vegas showcases both artists at the forefront of the touring world, and emerging artists that will inspire the next musical movements, all presented in spectacularly designed, technology drive venues. The Cosmopolitan offers guests the opportunity to see world-class performances of Las Vegas and some of the best shows in Las Vegas, all under one fabulous roof.

Child Care Services

For guests who are interested in Child Care, the Cosmopolitan of Las Vegas offers a variety of options. Guest are able to book these services directly with the Concierge calling 702-698-7475. For more information on services you can also visit <https://nahusa.com>.

Evaluations

The evaluation process is a key component in providing cutting-edge programming at the Section on Disorders of the Spine and Peripheral Nerves Annual Meeting. Your feedback on the quality and diversity of the program helps to determine future Annual Meeting programming. Your voice is important and your opinions are valued!

Speaker Ready Room

The Speaker Ready Room will be available Thursday, March 5 through Sunday, March 8. All speakers and abstract presenters should visit the Speaker Ready Room at least one hour prior to their presentations.

No Smoking Policy

Smoking is not permitted at any official Section on Disorders of the Spine and Peripheral Nerve Annual Meeting event. Smoking is allowed at the Cosmopolitan of Las Vegas in designated areas only.

Airline Discounts

The Section on Disorders of the Spine & Peripheral Nerves is pleased to offer discounts with the below airlines. Discount codes can only be used when booking directly through the airline website.

Discount Codes

American Airlines
March 2–12, 2020
2930DU

United Airlines
March 2-11
ZHQC

Delta Airlines
Date
Code

HOUSING AND TRAVEL INFORMATION

HOUSING DEADLINE FEB. 7, 2020



Hotel Accommodations

The Cosmopolitan of Las Vegas offers luxury accommodations and amenities your whole family is sure to enjoy, from fine dining to a host of recreation activities. Smoking is allowed in designated outdoor areas only.

Resort Amenities

- Luxurious on-site spa
- 3 Distinct pool experiences
- 100,000 square foot casino

Hotel Room Rates

	Single	Double	Triple	Quad
Standard Room	\$293.65	\$293.65	\$333.34	\$373.02

* Above rates include applicable state and local taxes. A portion of the room rate will be utilized to cover the cost of registration and housing services.

*The above rates do not include an additional \$25 per room per night mandatory resort fee

These special rates are only available until the February 7, 2020 cut-off date. The Section on Disorders of the Spine and Peripheral Nerves cannot guarantee the availability of this rate after the cut-off date. Rates are based on availability 3 days prior to and 3 days after the official meeting dates of March 5-8, 2020. Confirmation for dates other than official meeting dates, made prior to the cut-off date, will be based on availability.

Reservations can be made online or via fax, phone or mail. Visit www.spinesection.org to make your reservation today!

Hotel Reservation Information and Deadlines

Hotel reservations are only available to registered Section on Disorders of the Spine and Peripheral Nerves attendees. You must first register for the Spine Summit before making your hotel arrangements. Rooms are subject to availability. Reserve your room by February 7, 2020.

Deposit

A deposit equal to one night's room and tax is required to hold each guest's reservation. This payment must be submitted with your registration fees. Credit cards will be charged in mid-February. Please make checks payable to the DSPN Housing Center and mail checks to: DSPN Registration and Housing Center, 6100 W. Plano Parkway, Suite 3500, Plano, TX 75093. All rooms are subject to applicable state and local taxes. Hotel reservations requested without deposit will not be accepted.

Hotel Confirmations, Cancellations, or Changes

Through February 21

- All changes and cancellations must be made through the Section on Disorders of the Spine and Peripheral Nerves Registration and Housing Center.
- Rooms are not transferable.
- Refunds for deposits will be issued by the Section on Disorders of the Spine and Peripheral Nerves Registration and Housing Center if registration is cancelled.

Beginning February 22

- All changes and cancellations must be made directly with the hotel.
- If cancellation notice is not received according to the hotel policy, the deposit may be forfeited.
- Check your hotel confirmation and contact the hotel directly for information.

Support the Section on Disorders of the Spine and Peripheral Nerves by booking your hotel room for the Annual Meeting by using one of the methods listed on the housing form. In order to obtain the necessary meeting and exhibit space at the hotel, the Section on Disorders of the Spine and Peripheral Nerves must commit to a minimum number of guest rooms. If that commitment is not fulfilled, the Section will incur significant financial penalties and have difficulty obtaining sufficient meeting space in the future. Unfortunately, this can have a major impact on the member services and programs that the Section is able to offer in the future. We appreciate your commitment to the Section by staying at the Cosmopolitan of Las Vegas.

Transportation to the Hotel

The Cosmopolitan of Las Vegas is conveniently located less than three miles from McCarran International airport.

- \$15 - \$20 average costs for Uber or Lyft
- \$25 approximate taxi fare each way
- \$100 for a private sedan through the Cosmopolitan's preferred transportation company, ODS limo. For more information and to make a reservation visit <https://www.odslimo.com> or calling 702-688-7353

REGISTRATION INFORMATION

ADVANCE REGISTRATION DEADLINE FEB. 7, 2020



REGISTER TODAY USING ONE OF THESE THREE METHODS:

ONLINE:

WWW.SPINESECTION.ORG

FAX:

(972) 349-7715 US & Canada

MAIL:

DSPN Registration and Housing
6100 W. Plano Parkway,
Suite 3500
Plano, TX 75093

Allow five business days for Registration and Housing Confirmations when submitting by fax or mail. The Section on Disorders of the Spine and Peripheral Nerves Registration and Housing Center is not responsible for faxes or e-mails not received due to circumstances beyond their control.

Credit Card Payments

- US dollars and drawn on a US bank
- Visa
- MasterCard
- American Express

What's Included in the Registration Fee?

Medical registration includes the following:

- Daily Continental Breakfast
- Daily Beverage Breaks
- Daily Scientific Sessions
- Entrance to the Exhibit Hall
- One ticket to Thursday Opening Reception
- Entry to Friday Lunch with Exhibitors
- Entry to Saturday Lunch with Exhibitors

Spouse/Guest Registration Includes the Following:

- Daily Continental Breakfast
- Daily Scientific Sessions
- Entrance to the Exhibit Hall
- One ticket to Thursday Opening Reception

Child Registration

Although there is no registration fee, children under 18 years of age should register for the 2020 Spine Summit to receive a badge, which includes access to:

- One ticket to Thursday Opening Reception
- Daily Continental Breakfast

Special Note: Children under the age of 18 are not allowed on the exhibit hall floor.

Speaker Registration

Complimentary registration will not be provided for one-day speakers. All speakers must register at the applicable registration rate.

Onsite Registration Hours

Thursday, March 5
11:00 am–5:30 pm

Friday, March 6
6:30 am–6:30 pm

Saturday, March 7
6:30 am–5:30 pm

Sunday, March 8
6:30 am–12:30 pm

Registration Cancellation/Refund Policy

All refund requests must be received in writing by February 17

Requests accepted via:

E-mail: dspn@mcievents.com

Fax: (972) 349-7715

Mail: DSPN Registration and Housing
6100 W. Plano Parkway, Suite 3500
Plano, TX 75093

Cancellation Date Schedule

Before February 17

Registration = Full Refund less \$100 processing fee. Special Courses, Dinner Seminar and Social Events will be refunded in full until this date.

After February 17 and No Shows

Absolutely no refunds will be issued after this date for Registration, Special Courses, Dinner Seminar, and Social Events regardless of cause.

Americans with Disabilities Act/ Special Needs and Requests

The Section on Disorders of the Spine and Peripheral Nerves wishes to take the necessary steps to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids and services. Please let us know if, under the ADA, you require special accommodations or services in order to attend the Section on Disorders of the Spine and Peripheral Nerves Annual Meeting.

Your requirements should be sent directly to the Section on Disorders of the Spine and Peripheral Nerves Housing and Registration Center by emailing dspn@mcievents.com or calling (866) 931-9543. Please provide any requests at least 30 days prior to the Spine Summit to guarantee accommodation. Scooter and wheelchair rentals are available by contacting ScootAround, Inc. at their toll-free hotline: (888) 441-7575. You can also submit a rental inquiry on the web at www.scootaround.com.

ADVANCE REGISTRATION AND HOUSING FORM

FRIDAY, FEBRUARY 7, 2020 — ALL MEETING CONFIRMATIONS WILL BE SENT VIA E-MAIL

FOUR WAYS TO REGISTER IN ADVANCE:

- 1. Online:** (Credit card only) www.spinesection.org
- 2. Phone:** (800) 931-9543 or (972) 349-5539
- 3. Fax:** (972) 349-7715 (credit card only)
- 4. Mail: DSPN REGISTRATION AND HOUSING CENTER**
6100 W. Plano Parkway, Suite 3500
Plano, TX 75093

REGISTRATION INFORMATION

Please print or type legibly using one form per person. The name and address entered below will be used for CME Certificate.

Last Name		First Name		Credentials	
Institution/Hospital/Office/Company					
Address		City	State/Province	Country	Zip/Postal Code
Telephone (if international please include country code)		Fax		E-mail	
Spouse/Guest Name (if applicable: please print name as it will appear on badge)					
Child Name(s) and age					

HOTEL RESERVATIONS

Individuals requiring hotel reservations must first register for the Section on Disorders of the Spine and Peripheral Nerves Annual Meeting.

Arrival Date: _____ Departure Date: _____ No Room Required Staying at/with: _____

Room Preference (check one)* Standard Room Single/Double \$293.65 Standard Room Triple \$333.34
 Standard Room Quad \$373.02

* Above rates include applicable state and local taxes. A portion of the room rate will be utilized to cover the cost of registration and housing services.

*The above rates do not include a mandatory \$25 per room per night Resort Fee

The Cosmopolitan of Las Vegas will make every effort to honor specific requests; however, they reserve the right to provide alternative accommodations when necessary. zz

Special Requests Handicap Accessible Room Crib (additional fee may apply) Rollaway bed (additional fee of \$45 + tax per day applies)
 Special requests are subject to availability upon arrival at the hotel.

Please check this box if you are interested in reserving a room type not listed above. (Section on Disorders of the Spine and Peripheral Nerves Registration and Housing Center representative will contact you regarding availability and rates. In the meantime, a standard room will be assigned.)

HOTEL CHANGE/CANCELLATION POLICY

Through February 21 – Through February 21 - All changes are subject to availability and cancellations may be made online at www.spinesection.org or via e-mail at dspn@mcievents.com.

Beginning February 22 to 72 Hours Prior to Your Scheduled Arrival Date – Please contact the Cosmopolitan of Las Vegas directly with all changes or cancellations. The hotel will retain the deposit for cancellations not made at least 72 hours prior to your confirmed arrival date. This cancellation policy is strictly enforced and no exceptions will be made. Please retain the cancellation information from the Section on Disorders of the Spine and Peripheral Nerves Registration and Housing Center as the hotel cancellation number is proof of the cancellation. This number will be required to resolve any disputes.

MEETING REGISTRATION FEES

Registration Category	Received on or before February 7, 2020	Received after February 7, 2020
	Advance Rates	Post Advance Registration Rates
Spine Section Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
NASS Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
Orthopedic Surgeon/ACOS*	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
SRS Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
SMISS Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
ISASS Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
AO Spine Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
CSRS Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
ACSR Member	<input type="checkbox"/> \$600	<input type="checkbox"/> \$800
Non-Member	<input type="checkbox"/> \$750	<input type="checkbox"/> \$950
Non-Physician, Non-Member	<input type="checkbox"/> \$750	<input type="checkbox"/> \$950
Resident	<input type="checkbox"/> \$50	<input type="checkbox"/> \$100
Resident Non-Member	<input type="checkbox"/> \$75	<input type="checkbox"/> \$125
Medical Student	<input type="checkbox"/> \$50	<input type="checkbox"/> \$100
Nurse	<input type="checkbox"/> \$250	<input type="checkbox"/> \$400
Physician Assistant	<input type="checkbox"/> \$250	<input type="checkbox"/> \$400
Spouse/Guest	<input type="checkbox"/> \$100	<input type="checkbox"/> \$130
Child	<input type="checkbox"/> \$0	<input type="checkbox"/> \$0

*Orthopedic Surgeon/ACOS Member Registration Includes One-Year Complimentary Adjunct Membership

Subtotal for Registration Fee Section \$ _____

SPECIAL COURSES TICKET ORDER

Thursday, March 5

1:30–5:30 pm

SPECIAL COURSES 1–4

- Special Course 1: Novel and Emerging Technologies in Spine Surgery** \$200
- Special Course 2: Spinal Deformity: Applying Current Deformity Concepts to Your Practice, a Case Based Approach** \$200
- Special Course 3: Challenges in the Surgical Treatment of Pain** \$200
- Special Course 4: Introduction to Spinal Coding: From Decompression to Deformity** \$200

DINNER SEMINAR

- Dinner Seminar/9:00-11:00 pm**
\$175

Saturday, March 7

SPECIAL COURSES 5–8

- Special Course 5: Spine Summit Grand Rounds: Difficult Cases–The Decision–Making Dilemma/1:30–3:30 pm**
\$150
- Special Course 6: Treatment and Complication Avoidance in the Management of Spinal Tumors/1:30–4:30 pm**
\$150
- Special Course 7: Causes and Treatments for Neurologic Loss Associated with Spine Surgery/1:30–3:30 pm**
\$150
- Special Course 8: Spine Specialty Specific Oral Board Review Course/1:30 - 5:30 pm**

CADAVER LAB

- Hands on Cadaver Session with the Masters (Non-CME)**
1:30 - 5:30 pm
\$500

DESERT PINES GOLF CLUB OUTING

- Desert Pines Golf Outing**
The outing is on Saturday afternoon. Shuttles will depart the hotel at 12:30pm, and will return at approximately 5:30pm. The cost to play is \$99 per player, which includes roundtrip shuttle transportation.

Names of players you wish to golf with:

PAYMENT

HOTEL TOTAL \$ _____

REGISTRATION TOTAL \$ _____

GRAND TOTAL \$ _____

Check: Full payment must accompany your registration form. Please make REGISTRATION check payable to the DSPN Registration Center. Please make HOUSING check payable to the DSPN Housing Center.

Please send both of your checks to: DSPN Registration and Housing Center, 6100 W. Plano Parkway, Suite 3500, Plano, TX 75093. (Any checks received from an overseas bank will be returned. Any checks returned for insufficient funds are subject to additional charges.)

Credit Card Authorization: Credit card will be charged immediately.

Visa **MasterCard** **American Express**

Credit card number

Expiration date

CCV code

Name of Cardholder (print)

Signature (I agree to pay according to the credit card issuer agreement)

By signing this form: I authorize the Joint Section on Disorders of the Spine and Peripheral Nerves Registration and Housing Center to charge my credit card for the total payment due, acknowledge that the Joint Section on Disorders of the Spine and Peripheral Nerves registration cancellation policies are in effect and grant the Joint Section on Disorders of the Spine and Peripheral Nerves the right to use photos and video's taken at the Joint Section on Disorders of the Spine and Peripheral Nerves Annual Meeting which include me in promotional materials for future meetings.

These fees are subject to audit in case of error, the Joint Section on Disorders of the Spine and Peripheral Nerves Registration and Housing Center reserves the right to correct the error and charge the appropriate fees.

Registration Cancellation Policy—Full registration refunds, less a \$100 processing fee, will be granted if written requests for cancellation are received by February 17, 2020. No refunds of any kind will be given after this date. Refunds will not be given for no shows. Written requests may be e-mailed to dspn@mcievents.com, faxed to (972) 349-7715 or mailed to DSPN Registration and Housing Center, 6100 W. Plano Parkway, Suite 3500, Plano, TX 75093

By submitting this form, you agree that the CNS can retain this information for the purposes of communication and service support set out in our Privacy Policy, which can be viewed at <https://www.cns.org/privacy-policy>. If you do not want your information retained, please email privacy@cns.org.

REGISTER TODAY AT [CNS.ORG/SPINE](https://www.cns.org/spine)

EXHIBIT PRODUCTS & SERVICES

Find the latest spine and peripheral nerve technology in the Exhibit Hall. Take time to explore the hall and enjoy one-on-one discussions and hands-on demonstrations with our exhibitors. Learn about the devices and new technologies that can advance your practice.

Exhibit Hall Features

- Discover state-of-the-art equipment, products, and services.
- Enjoy lunch in the exhibit hall or a corporate sponsored lunch. Corporate partners present the latest cutting-edge technology while providing lunch.
- Participate in *What's New* sessions. Join the crowd during daily beverage breaks on Friday and Saturday, as speakers share the latest in cutting-edge research and technology.

Exhibit Hours

Friday, March 6	9:00 am–4:30 pm
Saturday, March 7	9:00 am–1:15 pm

What's New and Beverage Break Schedule

	Morning	Afternoon
Friday, March 6	9:30–10:15 am	2:30–3:15 pm
Saturday, March 7	9:30–10:15 am	

Corporate Sponsored Lunch Schedule

	Afternoon
Thursday, March 5	12:30–1:30 pm
Friday, March 6	12:00–1:00 pm
Saturday, March 7	12:15–1:15 pm

2019 EXHIBITORS

4WEB Medical

7D Surgical

Additive Implants

Aesculap

Alphatec Spine

Amplify Surgical

Anchor Orthopedics

Augmedics

Baxter Healthcare

Benvenue Medical

Biedermann Motech

Biologica Technologies

Bioventus

Brainlab

Cerapedics

ChoiceSpine

CTL Amedica

DePuy Synthes

DJO

Globus Medical

Hans Biomed

Integrity Implants

Intrinsic Therapeutics

Joimax, Inc

K2M, Inc.

Life Instrument Corporation

Medtech International Group

Medtronic

MiRus

Misonix

Neuraxis

NeuroPoint Alliance

NuVasive

Olympus America

Orthofix

ORTHOREBIRTH USA
Providence Medical
Technology

RIWO Spine – A Richard
Wolf Company

RTI Surgical

SeaSpine

SI-BONE

Simplify Medical

SpineCraft

Spineology

Spine Wave

Stimwave

Stryker

Surgentec

Synaptive Medical

Thompson Surgical
Products

Titan Spine

Tobra Medical

Zimmer Biomet

AANS/CNS Section on Disorders of the Spine and Peripheral Nerves
10 N. Martingale Road, Suite 190
Schaumburg, IL 60173-2294

JOIN US!

The Cosmopolitan of Las Vegas

LASVEGAS
MARCH 5-8

SPINE
SUMMIT 2020



The 36th Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves

ADVANCE REGISTRATION DEADLINE: FRIDAY, FEBRUARY 7, 2020