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The 32nd NASS Annual Meeting will be October 25-28 at the Orange County Convention Center.

This year’s meeting has an extensive array of educational offerings including 19 symposia, 12 specialty section sessions, and 35 abstract sessions that encompass 274 abstracts with 21 best paper presentations. In addition, there are Poster Grand Rounds, ePosters, innovative technology presentations and international spine forums.

Prior to the start of the meeting, there will be two ticketed courses: a one-day hands-on cadaver course, Evaluation and Treatment of Adult Spinal Deformity, as well as the two-day course, Coding Update 2017: Conquering Your Coding Hurdles.

Some of this year’s symposia include: Cellular-based Allografts: Now, Why, Where?; Low Back Pain: Connections to Inflammation, Movement, Neuromuscular Control and Biopsychosocial Factors; Preventing Surgical Site Infections in Spine Surgery; Injections and Other Interventions: Controversies in Spine Injections and Interventional Spine; and From Gutenberg to Facebook: The Future of Scientific Communication.

And of course there is the world’s largest technical exhibition where companies will showcase a plethora of spine care devices, technologies and services. Within the technical exhibition there are surgical innovation labs where you can gain hands-on experience with the latest devices and systems, hear lectures, and see product demonstrations.

NASS' president F. Todd Wetzel, MD, has selected award-winning sociobiologist and business leader Rebecca Costa as the presidential guest speaker. An expert in adaptive management and technologies, Costa will present innovative tools and strategies now available to facilitate faster, more accurate decision making.

Hear the most current scientific research, gain knowledge during evidence-based presentations and discussions, peruse the latest devices/systems and new tech, connect with colleagues, and enjoy Orlando.

See You in October.

F. Todd Wetzel, MD
2016-2017 NASS President

Thomas E. (Ted) Dreisinger, PhD, FACSM
Jonathan N. Grauer, MD
Conor O’Neill, MD
2017 Program Co-chairs
"NASS does a great job every year. It is good to see progression in Annual Meeting content reaching across the spectrum of ALL spine care providers and researchers." - 2016 Meeting Attendee
NETWORKING EVENTS

WELCOME RECEPTION
Tuesday, October 24  •  6:00–7:30 p.m.
The Welcome Reception will be held at the Hyatt Regency Orlando, a great networking event to kick off the Annual Meeting. Enjoy food and libations in a comfortable setting with colleagues.

BEVERAGE STATIONS
Throughout the Week
Attendees will enjoy complimentary beverages during the breaks. Breaks will occur twice daily Wednesday, Thursday, Friday and Saturday morning.

SPINEPAC LUNCHEON FEATURING LAWRENCE KUDLOW
Wednesday, October 25  •  12:00–1:00 p.m.

NASS JOINT SECTIONS RECEPTION
Thursday, October 26  •  5:00–6:00 p.m.
This event provides a networking opportunity for all Section members and those interested in becoming involved in sections. Come enjoy and learn how NASS is supporting these specific sections of its membership.
- Biologics and Basic Research
- Interdisciplinary Spine
- Minimally Invasive Procedures
- Radiology
- Rehabilitation, Interventional and Medical Spine (RIMS)
- Robotics and Navigation
- Spine Motion Technology

RESIDENT, FELLOW AND PROGRAM DIRECTORS RECEPTION
Thursday, October 26  •  5:00–6:00 p.m.
Meet colleagues in your program, residents and fellows from around the country, program directors, and alums who have completed their residencies and fellowships at the 15th Annual Resident, Fellow and Program Directors Reception. The reception offers a casual environment to relax and enjoy a beverage and hors d’oeuvres after a day of education. It’s a great opportunity to socialize, discuss the day’s sessions and make new connections.

INTERNATIONAL RECEPTION
Friday, October 27  •  4:45–5:45 p.m.
Network with colleagues and meet Global Spine Forum presenters from around the world after the sessions have concluded. This reception is open to all attendees and exhibitors.
HEALTH CARE REFORM 2.0: EXAMINING THE CHALLENGES AND OPPORTUNITIES FOR SPINE CARE PROVIDERS IN A NEW HEALTH CARE SYSTEM

GUEST SPEAKER: LAWRENCE KUDLOW

Mr. Kudlow is a nationally syndicated columnist and contributing editor to National Review magazine, as well as a columnist and economics editor for National Review Online. He is the author of American Abundance: The New Economic and Moral Prosperity. He was formerly chief economist and senior managing director of Bear Stearns & Company. Mr. Kudlow started his professional career at the Federal Reserve Bank of New York where he worked in open market operations and bank supervision. Mr. Kudlow also served under President Reagan in his first term as the associate director for economics and planning, Office of Management and Budget, Executive Office of the President, where he was engaged in the development of the administration’s economic and budget policy.

He is the recipient of numerous awards, including Extraordinary Commitment Award from St. Patrick’s Church of Redding, CT; Bishop’s Humanitarian Award from the Catholic Charities of Brooklyn and Queens; Humanitarian Award from Pregnancy Care Center of New Rochelle, NY; Distinguished Communicator Award from the Brooklyn Diocese; Ambassadors for Mission Award from the Pontifical Mission Societies of the United States.

PRESIDENTIAL GUEST SPEAKER: REBECCA COSTA

American Sociobiologist, Expert in Adaptive Management and Technologies
Thursday, October 26
11:00 a.m.–12:00 p.m.

Every 48 hours we produce as much information as we once did from the dawn of humankind to the year 2003. This Cambrian-like explosion in data is crashing headfirst into the scientific revelation that the human brain has a limit to the rate at which it can metabolize new information and adapt. Enter award-winning sociobiologist and business leader, Rebecca Costa. In a fascinating journey of how we got to this point, and the innovative tools and strategies we now have to facilitate faster, more accurate decision making, Costa kicks open the door to a new era of smart leadership.

A provocative new voice in the mold of Thomas Friedman, Malcolm Gladwell and Jared Diamond, Rebecca Costa applies lessons learned from nature to the disruption many industries presently face: from health care, finance, manufacturing, food processing, energy and social services to education, governance, transportation, technology and retail. In addition to a successful track record of introducing new products for General Electric, Apple, 3M, etc., Costa’s book, The Watchman’s Rattle: A Radical New Theory of Collapse, has remained in the top 1% of Amazon book sales for five straight years. The book describes how accelerating complexity produces gridlock and a mass confusion between empirical facts and unproven beliefs—ultimately leading to irrational decision-making. According to Costa, there are many practical remedies for this condition.

She brings a futurist’s eye, a business executive’s savvy, and a broadcaster’s storytelling skills to shape an unforgettable presentation.

- Author of international bestseller, The Watchman’s Rattle
- Host of syndicated weekly radio news program, The Costa Report, 3+ million listeners
- Winner of Edward O. Wilson Biodiversity Technology Pioneer Award
- CEO and founder of Silicon Valley start-up sold to J. Walter Thompson
INSTRUCTIONAL COURSE

CODING UPDATE 2017: CONQUERING YOUR CODING HURDLES

Monday, October 23–Tuesday, October 24
7:30 a.m.–4:00 p.m.

Take the pain out of your practice and conquer your coding challenges by attending this timely and highly interactive course led by expert physician faculty who will provide comprehensive coding information you can immediately use to maximize your profits and minimize your losses. The Coding Update course will take you beyond the basics, covering the latest information on ICD-10, E&M coding and CPT-4 coding of surgical, medical and radiologic procedures.

Coding and reimbursement is the lifeblood of every practice, and attendees will leave this course with the necessary knowledge and critical tips on how to navigate through the pre-authorization and appeal process, identify nuances that affect proper billing and cause rejected/delayed claims, utilize Medicare NCCI edits, and properly document to receive reimbursement.

Additionally, participants will have the opportunity to:
- Meet one-on-one with physician faculty who lead NASS’ CPT, RUC and reimbursement efforts;
- Examine real life cases and perform operative note dissection in the hands-on coding sessions;
- Participate in an interactive panel discussion with leading experts in the spine coding industry.

New additions to the course include:
- What’s On Your Mind? Interactive breakout sessions with faculty to ensure that no stone is left unturned and all questions are addressed by the end of the course!
- Managing Denials and Appeals: During an interactive discussion on surgical denials and the appeals process, faculty will examine a payer policy on lumbar fusion and explain how to avoid unwanted denials, peer reviews and the murky appeals process. Both payer and provider perspectives will be presented, and the audience will then have time to ask questions to the panel and discuss issues relevant to their practice.

An additional fee is required for this two-day instructional course.

HANDS-ON COURSE

EVALUATION AND TREATMENT OF ADULT SPINAL DEFORMITY: SKULL TO SACRUM

Tuesday, October 24 • 7:30 a.m.–4:30 p.m.

This comprehensive adult spinal deformity course will provide in-depth coverage of all areas of the spinal column from the skull to the sacrum. Through expert lectures, moderated case discussions and cadaveric bioskills sessions, spine surgeons will gain practical knowledge and technical skills to improve the care they provide to their spinal deformity patients.

An additional fee is required for this full-day hands-on course.
Exploration into the importance of the progenitor cells, how they signal to the neighboring cells and how these cells are delivered (what carrier they are packaged in) will be the focus of this symposium and highlight what is important when deciding on the potential selection and use of a cell-based allograft.

The assembled faculty members are experts in the basic science of bone formation, and are clinically active surgeons.

Preventing Surgical Site Infections in Spine Surgery: The Use of Vancomycin Powder and Its Effects on SSI, Fusion, and Implants
3:40–5:10 p.m.

Surgical-site infections (SSIs) after spine surgery occur in 1-10% of patients, and are often associated with increased postoperative morbidity, mortality, health care costs and poor clinical outcomes. Risk factors have been identified that are associated with an increased risk of developing postoperative wound infections, which include smoking, obesity, diabetes, long-term steroid use, alcohol abuse, malnutrition, history of prior infection, and increased operative time and/or estimated blood loss.

The use of local vancomycin powder in spine surgery has been popularized over the past decade in an effort to minimize the risk of developing a SSI. The data behind its use are compelling, although there is uncertainty regarding potential “side effects or pitfalls,” such as developing microbial resistance, selecting out gram-negative bacteria, and/or adverse effects on osteoblast function and achieving spinal fusion. Furthermore, little is known about the adverse effects of SSI on bone graft substitutes or extenders, and the “ideal” treatment of SSI in the setting of spinal instrumentation remains unclear.

The purpose of this symposium is to review the evidence behind the use of vancomycin powder in spine surgery, discuss potential pitfalls of its use, and explore the potential interaction between spinal implants, including bone graft substitutes and infection.

Leadership Development
3:40–5:10 p.m.

The Leadership Development Program provides an opportunity for individuals to enhance their leadership skills within the ever changing health care environment and expand the pool of well-qualified candidates ready for advancement. Whether you’re looking to build your own skills, those of a committee or even an entire organization, look to this symposium to gain knowledge and expertise from highly qualified faculty.

Low Back Pain: Connections to Inflammation, Movement, Neuromuscular Control and Biopsychosocial Factors
3:40–5:10 p.m.
Spine Solutions from Orthofix

BioStim, SpinalStim™

Spine Fixation, CONSTRUX® Mini PTC

Biologics, Trinity ELITE® Allograft

Discover the full range of Orthofix® spine solutions at the NASS annual meeting. See how our innovative products and allografts directly improve the quality of patient lives.

Orthofix.com
Digital Health for Spine Providers
3:40–5:10 p.m.

**THURSDAY, OCTOBER 26**

Past Presidents Forum
7:00–8:30 a.m.

SpineConnect Presentations
1:05–2:05 p.m.
Several top-rated cases have been chosen from those posted on SpineConnect in the past year. The physician who posted the case will present the history and diagnostic studies that stimulated responses from the nearly 9,000 members of SpineConnect and ask for additional input from the audience, focusing on providing the best outcome. This interactive session will address several procedures and provide information about how and why certain techniques were used and their outcomes. SpineConnect is a NASS members-only spine care community that allows participants to discuss cases in real time with colleagues.

Injections and Other Interventions: Controversies in Spine Injections and Interventional Spine
1:05–2:05 p.m.

**FRIDAY, OCTOBER 27**

Producing High-Value Care: The Fundamental Missing Piece
7:30–8:55 a.m.
Clinical decision-making and patient-centric spine care are significantly compromised by a single fundamental deficiency: the inability to make a “precise” diagnosis for most. The growing interest in delivering value-based, individualized care begs for more diagnostic precision and accuracy that in turn identifies standardized predictably-effective treatments for each individual. That’s a quality currently rarely found in spine care, yet employer and union purchasers, increasingly interested in value, now actively seek solutions that can assure that care delivery is appropriate, necessary, and effective.

This symposium will focus on the necessity of disrupting our conventional diagnostic methodologies, including our strong bias toward the need to identify an anatomic pain source that is often either inaccurate or of insufficient precision to direct standardized, predictably-effective treatments. One means of making a precise diagnosis for most will be presented.

A Broad Scope of Pain Management/Narcotic Issues (The Opioid Epidemic—Implications for Spine Physicians and Surgeons)
1:15–2:45 p.m.

**SATURDAY, OCTOBER 28**

From Gutenberg to Facebook: The Future of Scientific Communication
7:30–9:00 a.m.
The explosion of new technologies to disseminate scientific information has challenged the notion of a traditional academic journal. Spine care providers traditionally received new knowledge through scholarly publications on spine care. The advent of new digital technologies to disseminate information such as blogging and social media are forcing journals to question their role as the locus of scientific knowledge dissemination. This symposium will examine the future role of spine journals in this new digital era. Some issues that will be discussed include how are journals incorporating new digital technologies, what type of content should be made open access, and what is the role of print journalism vs. digital.

What Lurks Beneath: Understanding the Link between the Presence of Occult Pathogens and Failed Surgery: What is the Prevalence and What Should We Do?
10:30 a.m.–12:00 p.m.

Self-Management: Empowering Your Patient (10 x 25 Coalition)
10:30 a.m.–12:00 p.m.
This symposium will discuss why it is important for a patient to move from a passive role to an active role in their health care, specifically pain management, and the tools that are needed to achieve self-management of their health.

Appropriate Specialty Referrals for Low Back Pain (LBP): How to Increase Value
10:30 a.m.–12:00 p.m.
In the UK, LBP is seen by primary care doctors with specialist referrals only under specific conditions. Additionally, several groups are now investigating bypassing physicians and referring directly to physiotherapists. Aside from increasing specialist satisfaction, especially that of surgical specialists, significant cost savings have been realized.

This symposium will review the problem in a linear, non-hierarchical manner, beginning with the view from a primary care practitioner, and continuing to the view of a physical therapist, then a nonoperative spine specialist, and finally from a surgeon.
INTERDISCIPLINARY SPINE FORUM

Specialty educational sessions for physician assistants, nurse practitioners, nurses, chiropractors and other spine specialists.

WEDNESDAY, OCTOBER 25

**Tandem Spinal Stenosis: Evaluation and Management of Patients with Concurrent Lumbar and Cervical Spine Spondylotic Disease**

Data from current research indicate that stenosis in one part of the spine positively predicts for stenosis in another region of the spine. Tandem stenosis is an identifiable syndrome that results from canal narrowing of multiple areas of the spine, resulting in significant neurologic compression. Patients with symptomatic tandem stenosis may present with signs of neurogenic claudication, progressive gait disturbance, and findings of mixed myelopathy and radiculopathy. Patients who present with two sites of compressive stenosis may be misdiagnosed in clinical practice, as they exhibit an array of symptoms that could be caused by a variety of conditions including motor-neuron diseases.

This symposium will review the etiology, clinical presentation and management of patients with multiple sites of spinal stenosis. A multidisciplinary faculty will present the current literature on the relationship between cervical and lumbar spinal stenosis highlighting special considerations, examination techniques and treatment modalities in common conditions arising from concurrent cervical and lumbar spine stenosis. Indications for clinical examination techniques and treatment modalities in patients who present with tandem spinal stenosis will be addressed with an emphasis on the clinical reasoning behind the sequence of management of tandem spinal stenosis and the identification of other disorders that can mimic this condition.

THURSDAY, OCTOBER 26

**Restructuring and Integrating Spine Care**

Current management practices for low back and neck pain, irrespective of the approach taken, have largely failed to stem rising costs or improve clinical outcomes. Spine pain remains a diagnostic and management challenge, and low back and neck pain are now thought to be, respectively, the first and fourth leading causes of disability globally. Incremental solutions, such as eliminating fraud and conflicts of interest, prior authorization for services, care coordination, electronic health records, evidence-based guidelines and even the increase in multidisciplinary management, have been insufficient.

This session will explore how restructuring the delivery of spine care is necessary, as opposed to incremental improvements. Faculty will discuss why maximizing value is a fundamental goal for patients and how value is created in caring for a patient’s condition over the full cycle of care—not by a hospital, a care site, a specialty, an episode or an intervention. A panel, including a prominent health economist along with experienced spine clinicians and researchers, will review and discuss real-world case scenarios.

FRIDAY, OCTOBER 27

**Women’s Issues in Spine Care**

**Military Injury/Engineering/Biomechanics**

SECTION SPECIALTY TRACK

All sessions will be presented on Thursday, October 26, with symposia and/or abstract presentations focusing on various topics.

- Section on Biologics and Basic Research
- Section on Minimally Invasive Procedures
- Section on Radiology
- Section on Rehabilitation, Interventional and Medical Spine
- Section on Robotics and Navigation
- Section on Spine Motion Technology
MEETING-AT-A-GLANCE

ABSTRACT PRESENTATIONS
Topic-specific abstract presentations highlighting detailed research with discussion to follow. Session topics include:
- Best Papers
- Resident/Fellow Research Awards
- Value Awards
- Cervical Deformity
- Psychosocial Factors
- Lumbar Discectomy and Arthroplasty
- Spine and Lower Extremity Interactions
- Pediatric Deformity I
- Value
- Cervical Biomechanics
- Pediatric Deformity II
- Patient Satisfaction
- Cervical Trauma/Instability
- Interventional Spine
- Complications
- Bone Biology and Fusion
- Adult Deformity I
- Cervical Myelopathy
- Patient Optimization
- Alignment
- Infection
- Adult Deformity II
- Proximal Junction Kyphosis
- Preoperative Lumbar Spine Considerations
- Operating Room Management
- Cervical Spine
- Thoracolumbar Fusion and Trauma
- Thoracolumbar Osteotomies and Lumbosacral Fixation
- Operative Lumbar Spine Considerations
- Spine Tumors

NEW RESEARCH GRANT AND FELLOWSHIP AWARDS ABSTRACT PRESENTATIONS
Previous Research winners will present at the end of selected topical abstract sessions throughout the week.

8TH ANNUAL GLOBAL SPINE FORUM
The Global Spine Forum will feature programming from international organizations. These sessions will highlight the state of spine care around the world.

EPOSTER STATIONS
ePosters can be viewed in The Learning Place in the Technical Exhibition.

POSTER GRAND ROUNDS
During the morning and afternoon networking breaks, attendees will have the opportunity to meet with and ask questions of ePoster authors.

PRACTICAL THEATER
Connect with practical topics of interest to you and your practice as presented by selected speakers. Located in the Red Theater in the Technical Exhibition, presentations will occur during breaks throughout the day. NASS research and clinical resources also can be found in the Practical Theater, including information on the NASS Registry, grant funding, clinical practice guidelines, appropriateness use criteria, and patient safety and performance measurement initiatives.

INNOVATIVE TECHNOLOGY PRESENTATIONS (NON-CME)
NASS 2017 exhibitors are invited to submit abstracts on new and innovative technologies. Reviewed by the Program Committee, the highest graded abstracts will be chosen as posters or for presentation during these non-CME sessions. Each presentation will be approximately six minutes and presented by an MD, DO or PhD. The submission deadline is June 30, 2017.

MONDAY, OCTOBER 23, 2017
7:30 a.m.–4:00 p.m. Instructional Course • Coding Update 2017: Conquering Your Coding Hurdles
8:00 a.m.–5:00 p.m. Exhibitor Registration

TUESDAY, OCTOBER 24, 2017
6:30 a.m.–4:30 p.m. Attendee Registration
7:30 a.m.–4:00 p.m. Instructional Course • Coding Update: Conquering Your Coding Hurdles
7:30 a.m.–4:30 p.m. Hands-on Course • Evaluation and Treatment of Adult Spinal Deformity: Skull to Sacrum
8:00 a.m.–6:00 p.m. Exhibitor Registration
6:00–7:30 p.m. Welcome Reception

Requires separate registration fee
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<td>Interdisciplinary Spine Forum Tandem Spinal Stenosis: Evaluation</td>
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<td>• Health Care Reform 2.0: Examining the Challenges and Opportunities</td>
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<td>• Exercise Management Controversy of Neck Pain without Radiculopathy</td>
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<td>• Cellular-Based Allografts: Now, Why, Where?</td>
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<td>SpinePAC Luncheon</td>
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<td>Daniel K. Resnick, MD, MS and F. Todd Wetzel, MD</td>
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<td>• Section on Robotics and Navigation</td>
</tr>
<tr>
<td></td>
<td>• Section on Rehabilitation, Interventional and Medical Spine (RIMS)</td>
</tr>
<tr>
<td>3:10–3:40 p.m.</td>
<td>Networking Break Beverage Service</td>
</tr>
<tr>
<td>3:40–5:10 p.m.</td>
<td>Section Specialty Track</td>
</tr>
<tr>
<td></td>
<td>• Section on Radiology</td>
</tr>
<tr>
<td></td>
<td>• Section on Spine Motion Technology</td>
</tr>
<tr>
<td></td>
<td>• Section on Minimally Invasive Procedures</td>
</tr>
<tr>
<td></td>
<td>• Section on Biologics and Basic Research: Biomaterials of Structural Cages</td>
</tr>
<tr>
<td></td>
<td>• Section on Robotics and Navigation</td>
</tr>
<tr>
<td></td>
<td>• Section on Rehabilitation, Interventional and Medical Spine (RIMS)</td>
</tr>
<tr>
<td>4:00–5:00 p.m.</td>
<td>Committee Orientation Program</td>
</tr>
<tr>
<td>5:00–6:00 p.m.</td>
<td>Resident, Fellow and Program Directors Reception</td>
</tr>
<tr>
<td>5:00–8:00 p.m.</td>
<td>Joint Sections of NASS Reception</td>
</tr>
<tr>
<td></td>
<td>Surgical Innovation Lab Workshops</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>6:30–8:00 a.m.</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>7:00 a.m.–5:00 p.m.</td>
<td>Attendee Registration</td>
</tr>
<tr>
<td>7:20–7:25 a.m.</td>
<td>Announcements</td>
</tr>
<tr>
<td>7:25–7:30 a.m.</td>
<td>NASS Working for You</td>
</tr>
<tr>
<td>7:30–8:55 a.m.</td>
<td>Interdisciplinary Symposium Producing High-Value Care: The Fundamental Missing Piece</td>
</tr>
<tr>
<td>7:30–10:00 a.m.</td>
<td>Young Spine Surgeons Forum</td>
</tr>
<tr>
<td>7:30 a.m.–4:30 p.m.</td>
<td>Global Spine Forum</td>
</tr>
<tr>
<td>8:00–9:00 a.m.</td>
<td>Interdisciplinary Spine Forum Section on Interdisciplinary Spine Abstract Presentations</td>
</tr>
<tr>
<td>8:00 a.m.–1:00 p.m.</td>
<td>Exhibitor Registration</td>
</tr>
<tr>
<td>8:55–9:00 a.m.</td>
<td>NASS Working for You</td>
</tr>
<tr>
<td>9:00–10:00 a.m.</td>
<td>Best Papers</td>
</tr>
<tr>
<td>9:00 a.m.–12:00 p.m.</td>
<td>Interdisciplinary Spine Forum Women’s Issues in Spine Care</td>
</tr>
<tr>
<td>9:00 a.m.–1:30 p.m.</td>
<td>Technical Exhibition</td>
</tr>
<tr>
<td></td>
<td>ePosters</td>
</tr>
<tr>
<td>10:00–10:30 a.m.</td>
<td>Networking Break Beverage Service</td>
</tr>
<tr>
<td></td>
<td>Exercise Demonstrations</td>
</tr>
<tr>
<td></td>
<td>Poster Grand Rounds</td>
</tr>
<tr>
<td>10:30–10:45 a.m.</td>
<td>Awards</td>
</tr>
<tr>
<td></td>
<td>• 10:30–10:40 a.m.: NASS Recognition Awards Presentation</td>
</tr>
<tr>
<td></td>
<td>• 10:40–10:45 a.m.: NASS Research Grant and Fellowship Awards Presentation</td>
</tr>
<tr>
<td>10:30 a.m.–12:00 p.m.</td>
<td>Abstract Presentations</td>
</tr>
<tr>
<td></td>
<td>• Adult Deformity I</td>
</tr>
<tr>
<td></td>
<td>• Cervical Myelopathy</td>
</tr>
<tr>
<td></td>
<td>• Patient Optimization</td>
</tr>
<tr>
<td></td>
<td>• Alignment</td>
</tr>
<tr>
<td>10:45 a.m.–12:00 p.m.</td>
<td>Abstract Presentations</td>
</tr>
<tr>
<td></td>
<td>• Proximal Junction Kyphosis</td>
</tr>
<tr>
<td></td>
<td>• Preoperative Lumbar Spine Considerations</td>
</tr>
<tr>
<td></td>
<td>• Operating Room Management</td>
</tr>
<tr>
<td></td>
<td>• Cervical Spine</td>
</tr>
<tr>
<td></td>
<td>• Thoracolumbar Fusion and Trauma</td>
</tr>
<tr>
<td>11:00 a.m.–1:30 p.m.</td>
<td>NASS Bistro</td>
</tr>
<tr>
<td>12:00–1:00 p.m.</td>
<td>Complimentary Box Lunch Medical Attendees Only</td>
</tr>
<tr>
<td></td>
<td>Solution Showcase</td>
</tr>
<tr>
<td>1:00–2:45 p.m.</td>
<td>Interdisciplinary Spine Forum</td>
</tr>
<tr>
<td>1:15–2:45 p.m.</td>
<td>Symposia</td>
</tr>
<tr>
<td></td>
<td>• Collaborative Modeling in Chronic Low Back Pain</td>
</tr>
<tr>
<td></td>
<td>• Preoperative Risk Stratification: Frailty and Predictive Modeling and Their Importance</td>
</tr>
<tr>
<td></td>
<td>• A Broad Scope of Pain Management and Narcotic Issues (The Opioid Epidemic—Implications for Spine Physicians and Surgeons)</td>
</tr>
<tr>
<td></td>
<td>Abstract Presentations</td>
</tr>
<tr>
<td></td>
<td>• Infection</td>
</tr>
<tr>
<td></td>
<td>• Adult Deformity II</td>
</tr>
<tr>
<td>2:45–3:15 p.m.</td>
<td>Networking Break Beverage Service</td>
</tr>
<tr>
<td>3:15–3:20 p.m.</td>
<td>NASS Working for You</td>
</tr>
<tr>
<td>3:15–4:45 p.m.</td>
<td>Interdisciplinary Spine Forum Military Injury/Engineering/Biomechanics</td>
</tr>
<tr>
<td>3:20–3:50 p.m.</td>
<td>Value Abstract Awards Presentations</td>
</tr>
<tr>
<td>3:50–4:50 p.m.</td>
<td>Abstract Presentations</td>
</tr>
<tr>
<td>4:45–5:45 p.m.</td>
<td>International Reception</td>
</tr>
</tbody>
</table>
### SATURDAY, OCTOBER 28

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00–9:00 a.m.</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>7:00 a.m.–12:00 p.m.</td>
<td>Attendee Registration</td>
</tr>
<tr>
<td>7:25–7:30 a.m.</td>
<td>Announcements</td>
</tr>
<tr>
<td>7:30–9:00 a.m.</td>
<td>Symposium From Gutenberg to Facebook: The Future of Scientific Communication</td>
</tr>
<tr>
<td>9:00–10:00 a.m.</td>
<td>Abstract Presentations</td>
</tr>
<tr>
<td>10:00–10:30 a.m.</td>
<td>Networking Break Beverage Service</td>
</tr>
<tr>
<td>10:30 a.m.–12:00 p.m.</td>
<td>Symposia</td>
</tr>
<tr>
<td>9:00–10:00 a.m.</td>
<td>• Thoracolumbar Osteotomies and Lumbosacral Fixation</td>
</tr>
<tr>
<td></td>
<td>• Operative Lumbar Spine Considerations</td>
</tr>
<tr>
<td></td>
<td>• Spine Tumors</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>Meeting Adjourns</td>
</tr>
</tbody>
</table>

### SESSION RECORDINGS ON DEMAND

Free access for members attending the meeting

Approximately 58 AMA PRA Category 1 Credits™ are available for recorded symposia.

This recording includes abstract presentations, symposia and ePosters. These web-based, fully synchronized audio, video and slide presentations are available anywhere you can access the Internet. CME credit is available for recorded symposia and Interdisciplinary Spine Forum sessions. Don’t miss your chance to view the archived online compilations!

### NASS 2017 APP: YOUR COMPREHENSIVE TOOL FOR NAVIGATING THE MEETING

- Build your personal planner, plan your itinerary, add personal notes, tag your favorite sessions and exhibitors.
- View the meeting schedule, search for and rate sessions, add and email session notes and view handouts.
- Review the exhibitor list, search for exhibitors, mark exhibitors with visited tags, request meetings and add personal notes. Map booth locations on the interactive floor plan and download a personalized walking map.
- Tap into local Orlando attractions, restaurants and more.
- Read, follow and comment using Twitter.

Available in June at spine.org/mobile
HOUSING INFORMATION

HOW TO RESERVE YOUR ACCOMMODATIONS VIA ONPEAK|GES

Meeting registration MUST be completed in order to secure housing for the Annual Meeting. Participants will not be permitted hotel reservations until their meeting registration is complete. NASS will monitor the housing reservations list to make sure that all individuals with reservations also are officially registered for the Annual Meeting. NASS reserves the right to cancel reservations that do not meet these criteria. Attendees are required to make hotel reservations through onPeak, the NASS Housing Bureau, using any of the following options:

ONLINE
nassannualmeeting.org
IN CONJUNCTION WITH MEETING REGISTRATION

PHONE
800-545-1773
US/CANADA
800-545-1773
INTERNATIONAL
9:00 a.m.–6:00 p.m. ET

FAX
888-726-9290
US/CANADA
404-393-3172
INTERNATIONAL

Hotels will not and cannot accept reservations directly. The only hotel rooms that can be reserved are the hotels that are in the NASS Housing Block list. The cutoff date for reservations is September 21, 2017; discounted rates may not apply after this date. Reservations are made on a first-come, first-served basis and are subject to room availability. If the room blocks sell out prior to the cutoff date, NASS will secure another hotel for attendees. This is not a guarantee as it is based on rates and availability within the city of Orlando over our meeting dates.

HOTEL CANCELLATION/CHANGE POLICY VIA ONPEAK|GES

Changes may be made to existing reservations online with the confirmation number and password listed on your confirmation; by e-mail to nassannualmeeting@onpeak.co or by calling 800-545-1773 Monday through Friday, 9:00 a.m.–6:00 p.m. (ET). You must have the onPeak ID of the reservation you wish to change in order to make any changes. Changes can be submitted up to Tuesday, October 10 for the Rosen Centre and Rosen Plaza and Tuesday, October 17 for the Hyatt Regency Orlando, Hilton Orlando, DoubleTree at SeaWorld and Renaissance at SeaWorld. After those dates, changes need to be communicated directly with the hotel. Cancellations to existing reservations must be made according to the individual hotel’s cancellation policy, which is noted on your confirmation. Failure to cancel your reservation according to the hotel cancellation policy will result in a charge to your credit card.

The official housing providers for the 2017 Annual Meeting are onPeak|GES and NASS International Housing.

When booking through onPeak|GES and NASS International Housing, you will have housing support staff to assist you prior to your arrival as well as on-site staff to support you should you have any housing issue while in Orlando. Other companies may attempt to present themselves as affiliates NASS. OnPeak|GES and NASS International Housing are the only housing providers for the Annual Meeting.
### Official Hotels & Rates:

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Address (Distance to CC)</th>
<th>Shuttle Service</th>
<th>Nightly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>DoubleTree by Hilton Hotel Orlando at SeaWorld</td>
<td>10100 International Drive (1.3 mi)</td>
<td>🚌</td>
<td>$159 Single/Double</td>
</tr>
<tr>
<td>Hilton Orlando</td>
<td>6001 Destination Parkway (0.9 mi)</td>
<td>🚌</td>
<td>$281 Single/Double</td>
</tr>
<tr>
<td>Hyatt Regency Orlando - HQ</td>
<td>9801 International Drive (0.2 mi)</td>
<td>🚌</td>
<td>$294 Single/Double</td>
</tr>
<tr>
<td>Renaissance Orlando at SeaWorld</td>
<td>6677 Sea Harbor Drive (1.9 mi)</td>
<td>🚌</td>
<td>$199 Single/Double</td>
</tr>
<tr>
<td>Rosen Centre Hotel</td>
<td>9840 International Drive (0.3 mi)</td>
<td>🚌</td>
<td>$225 Single/Double</td>
</tr>
<tr>
<td>Rosen Plaza Hotel</td>
<td>9700 International Drive (0.4 mi)</td>
<td>🚌</td>
<td>$209 Single/Double</td>
</tr>
</tbody>
</table>

### WHY YOU SHOULD STAY IN NASS CONTRACTED HOUSING

- **Dedicated staff** will assist with hotel selection and city information.
- **Preferred rate guarantee**: NASS matches the prices of online hotel room providers. Go to www.nassannualmeeting.org for details.
- **Convenient deposit policy**: Secure your individual hotel reservation or block of rooms with a credit card guarantee with no automatic prepayments.
- **Shuttles**: Access shuttle bus transportation from most official NASS hotels.
- **Overbooking protection**: Booking through the NASS official room block provides added protection from relocation to another property.
- **On-site assistance**: Receive support should you have any housing issue while in Orlando.
## REGISTRATION

### ANNUAL MEETING REGISTRATION FEES

<table>
<thead>
<tr>
<th>Role</th>
<th>By July 18</th>
<th>July 19–Sept. 21</th>
<th>Sept. 22–Oct. 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member Physician</td>
<td>$699</td>
<td>$899</td>
<td>$999</td>
</tr>
<tr>
<td>Member Affiliate Health</td>
<td>$399</td>
<td>$599</td>
<td>$699</td>
</tr>
<tr>
<td>Member Emeritus</td>
<td>$299</td>
<td>$499</td>
<td>$599</td>
</tr>
<tr>
<td>Member Resident/Fellow</td>
<td>$159</td>
<td>$259</td>
<td>$359</td>
</tr>
<tr>
<td>Member Commercial Affiliate</td>
<td>$699</td>
<td>$899</td>
<td>$999</td>
</tr>
<tr>
<td>Nonmember Physician</td>
<td>$999</td>
<td>$1199</td>
<td>$1299</td>
</tr>
<tr>
<td>Nonmember Affiliate Health¹</td>
<td>$549</td>
<td>$749</td>
<td>$849</td>
</tr>
<tr>
<td>Nonmember Resident/Fellow²</td>
<td>$229</td>
<td>$329</td>
<td>$429</td>
</tr>
<tr>
<td>Commercial Business³</td>
<td>$999</td>
<td>$1199</td>
<td>$1299</td>
</tr>
<tr>
<td>Guest⁴</td>
<td>$279</td>
<td>$379</td>
<td>$379</td>
</tr>
</tbody>
</table>

**Nonmember Affiliate Health**: Limited to individuals directly employed by a hospital, healthcare network, university, or freestanding facility administering to patients (e.g., DC, PA, NP, RN, PT).

**Nonmember Resident/Fellow**: Must provide a letter on letterhead from your program director.

**Commercial Business**: Interest in spine field but does not treat patients. Not permitted to purchase guest registrations.

**Guest**: Includes Welcome Reception, breakfast (Wed.-Sat.) and lunch (Wed.-Fri.).

### ON-DEMAND RECORDINGS

<table>
<thead>
<tr>
<th>Role</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>$0*</td>
</tr>
<tr>
<td>Nonmember</td>
<td>$75</td>
</tr>
</tbody>
</table>

*With general meeting registration

### CODING UPDATE 2017

**Monday, October 23 and Tuesday, October 24**

<table>
<thead>
<tr>
<th>Role</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member Physician</td>
<td>$700</td>
</tr>
<tr>
<td>Member Affiliate Health</td>
<td>$550</td>
</tr>
<tr>
<td>Member Resident/Fellow</td>
<td>$350</td>
</tr>
<tr>
<td>Member Commercial Affiliate</td>
<td>$700</td>
</tr>
<tr>
<td>Nonmember Physician</td>
<td>$800</td>
</tr>
<tr>
<td>Nonmember Affiliate Health</td>
<td>$600</td>
</tr>
<tr>
<td>Nonmember Resident/Fellow</td>
<td>$400</td>
</tr>
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</table>

### VIRTUAL MEETING REGISTRATION

Access to live stream and recordings of all education sessions.

<table>
<thead>
<tr>
<th>Role</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>$495</td>
</tr>
<tr>
<td>Nonmember</td>
<td>$729</td>
</tr>
</tbody>
</table>

### HANDS-ON COURSE: EVALUATION AND TREATMENT OF ADULT SPINAL DEFORMITY

**Tuesday, October 24**

<table>
<thead>
<tr>
<th>Role</th>
<th>By July 18</th>
<th>July 19–Oct. 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member Physician</td>
<td>$895</td>
<td>$995</td>
</tr>
<tr>
<td>Nonmember Physician</td>
<td>$995</td>
<td>$1095</td>
</tr>
</tbody>
</table>
REGISTRATION

REGISTRATION FEE DETAILS
Fees are designated in U.S. currency. NASS accepts Visa, MasterCard and American Express.

Conference registration fees include:
• All education sessions beginning on Wednesday, October 25 through Saturday, October 28;
• Continental breakfasts and beverage breaks (Wednesday through Saturday);
• Box lunches (Wednesday through Friday);
• Welcome reception (Tuesday evening).

Additional fees apply for Instructional and Hands-on Courses. All ticketed courses will be held at the Orange County Convention Center.

QUESTIONS?
Call NASS at 866-960-6277 or 630-230-3600.

For full registration instructions, policies and to register, visit nassannualmeeting.org.

NASS MEMBERSHIP DISCOUNTS AND REWARDS
All attendees registering for the Annual Meeting are encouraged to become members and to join the over 8,000 spine care providers worldwide who rely on NASS to provide the resources needed to advance their careers. With a diverse membership of surgeons, physiatrists, pain specialists, researchers, allied health professionals and others, NASS fosters an atmosphere of multidisciplinary collaboration unmatched by other professional societies.

If you are not already a member, join prior to registering to receive a discount of at least $300 on your registration fees as well as all of the other benefits of membership.

Included with membership are subscriptions to the #1 rated spine journal, The Spine Journal and the bi-monthly magazine, SpineLine, significant discounts on all educational events and resources, increased opportunities to collaborate with colleagues, patient referral resources including a listing on our online Spine Care Provider Search and much more.

Detailed information about benefits, qualifications for membership and an online application can be found at www.spine.org. You can also join by completing the membership section of the Annual Meeting registration form or the application on page 26 and sending a copy of your current curriculum vitae (CV) or résumé to membership@spine.org. Questions regarding membership can be directed to the membership department by sending an email to membership@spine.org or calling 866-960-NASS (6277) or 630-230-3600.

ALREADY A MEMBER?
Earn $25 in NASS Store credit and be entered into a drawing for a free 2018 membership for every colleague you refer through the 2017 Member-Get-A-Member program; full details about this program can be found at www.spine.org.
TECHNICAL EXHIBITION

Experience the industry’s largest display of spine care products and services.

See and touch countless spine care products. Take advantage of hands-on learning experiences with an in-booth demonstration while talking to the designers and engineers. Make the most of your time by enjoying lunch in the exhibit hall.

SURGICAL INNOVATION LABS

See the latest surgical innovations in action! Come see industry demonstrate their latest products or join one of their surgical training workshops in the evening. These cadaveric demonstrations and workshops will run Wednesday through Friday. Check www.nassannualmeeting.org for schedules.

THE LEARNING PLACE

Tired of sitting in a lecture hall? Continue your education in the Technical Exhibition! Come to The Learning Place. Settle down with a cup of coffee and view the ePosters. Get up to date on the latest techniques and get your heart rate up at the Exercise Demonstration area. During the morning and afternoon networking breaks, meet with and ask questions of selected ePoster authors in addition to viewing all ePosters.

NASS BISTRO

The NASS Bistro is a great food option that saves time, allows attendees and exhibitors to purchase a hot lunch, and provides the largest variety and best value for lunch at the Convention Center. Please note: A box lunch is included in the attendee registration fee for Wednesday, Thursday and Friday. The NASS Bistro is an added lunch option at the Annual Meeting. Please visit spine.org for updated pricing and meal options during summer 2017.

SOLUTION SHOWCASE

Lunch ‘n’ Learn in the Solution Showcase. Use your lunchtime to learn more about specific products and solutions to help you provide your professional care. The theater presentation schedule will be posted at nassannualmeeting.org in June.

Want to exhibit or know a company that should be exhibiting? Go to www.exhibitnass.org for information.
WHO SHOULD ATTEND?
Join the leading authorities in spine care, representing a multidisciplinary community that includes: orthopedic surgeons, neurosurgeons, neurologists, radiologists, physiatrists, pain management specialists, anesthesiologists, psychologists, chiropractors, physician assistants, nurse practitioners, nurses, rehabilitation professionals, researchers, administrators and all other health care professionals with an abiding interest in spine.

LEARNING OBJECTIVES
Upon completion of this meeting, participants should gain strategies to:
- Promote discussion of new scientific developments and best practices in spine care.
- Demonstrate the application of current techniques, procedures and research.
- Practice evidence-based medicine relative to spine care.

CONTINUING MEDICAL EDUCATION (CME) CREDIT
This activity has been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education (ACCME). The North American Spine Society is accredited by the ACCME to provide continuing medical education for physicians and takes responsibility for the content, quality and scientific integrity of this CME activity.

The North American Spine Society designates this live activity for a maximum of 23.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Medical Association has determined that physicians not licensed in the U.S. to participate in this CME activity are eligible for AMA PRA Category 1 Credits™.

Additional credit may be obtained by attending:
- Hands-on course: Evaluation and Treatment of Adult Spinal Deformity: Skull to Sacrum
- Coding Update 2017: Conquering Your Coding Hurdles

Physician Assistants: The American Academy of Physician Assistants (AAPA) accepts Category 1 credit from AOACCME, prescribed credit from the American Academy of Family Physicians (AAFP) and AMA PRA Category 1 CME Credit™ for the Physician’s Recognition Award from organizations, such as NASS, accredited by the ACCME.

Nurses:
Accreditation Statement: In support of improving patient care, this activity has been planned and implemented by AXIS Medical Education and the North American Spine Society. AXIS Medical Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the health care team.

Credit Designation for Nursing: AXIS Medical Education designates this continuing nursing education activity for 23.5 contact hours.

Learners are advised that accredited status does not imply endorsement by the provider or ANCC of any commercial products displayed in conjunction with an activity.

AXIS Contact Information: For information about the accreditation of this program please contact AXIS at 954-281-7524 or info@axismeded.org.

Nurse Practitioners: The American Association of Nurse Practitioners (AANP) accepts AMA PRA Category 1 Credit™ from organizations accredited by the ACCME.

Requirements vary for other allied health and advanced practice providers; please contact your licensing organization for their requirements.

CME/CEU CERTIFICATES
After the meeting, evaluations will be submitted electronically and CME certificates will be printed directly from our website. Visit www.spine.org/CME to claim education credit and to print CME certificates. Contact education@spine.org with questions.
2016-2017 BOARD OF DIRECTORS

NASS thanks the following Board members for their leadership and guidance throughout the year:

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First Vice President

Jeffrey C. Wang, MD
Second Vice President

William J. Sullivan, MD
Secretary

Eeric Truumees, MD
Treasurer

Christopher M. Bono, MD
Past President

Edward J. Dohring, MD
Education Council Director

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Education Publishing Chair

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Evidence Compilation & Analysis Chair

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Chutkan, Norman B.: Other Office: AANS/CNS (Recording Secretary: AANS/CNS Council of State Neurosurgical Societies), North American Spine Society (Section Development Chair).

Cho, Charles H.: Board of Directors: North American Spine Society (Education Council Director); Research Support - Staff and/or Materials: Medtronic (B, Paid directly to institution/employer), VertiFlex (B), Paid directly to institution/employer).


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APPLICATION FOR MEMBERSHIP

Full Name (including degrees): 

Date of Birth (mm/dd/yy): _____________________ Gender: □ Male □ Female

Preferred Mailing Address: □ Professional □ Home

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Office Manager Email (to contact regarding membership information): ________________________________

Home Address

Address: __________________________________________

City: _______________ State/Province: ___________ Postal Code: ___________ Country: _______________

Mobile Phone: _______________ Email: _______________

Professional Information

Specialty: ____________________________

MDs and DOs (or international equivalent): Are you board certified? □ Yes □ No

Name of Board providing your certification (required if applying for Active or Associate membership):

Percentage of professional activities dedicated to spine: □ Less than 50% □ 50% or Greater

My professional activities are primarily (choose one): □ Clinical □ Academic/Teaching □ Research □ Business

Primary Employer: □ Hospital □ Private Practice □ Academic Institution □ Other: ____________________________

Have you ever had a license to practice medicine revoked or suspended in any jurisdiction, past or present? □ No □ Yes (If yes, please attach an explanation)

Have you ever been censured/sanctioned by another professional medical association or organization? □ No □ Yes (If yes, please attach an explanation of the circumstances and specify the sanction enforced)

Application Requirements

Curriculum Vitae/Résumé

Please submit a copy of your most recent curriculum vitae (CV) or résumé with this application. Your membership will remain inactive until a copy of this document is received.

Please provide your primary reason for applying for membership.

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□ To network with colleagues

□ To support and contribute to the field

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