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**Mid-Level Plenary Session**

- **9:45 AM – 1:00 PM**
- Rhoton Family Lecture
- Theodore Kurze Lecture
- Distinguished Service Award
- AANS International Lifetime Recognition Award
- Presidential Address
- Lunch Served in the AANS Exhibit Hall 1:00–2:00 PM

**Scientific Sessions**

- **2:00–4:30 PM**
  - Tumor, Spine, S&F, Peds, CV, Trauma
  - International Symposium I
  - History, Pain, Pediatric, Peripheral Nerve, Tumor I
  - International Symposium II

**Plenary Session I**

- 9:45 AM–1:00 PM
  - Rhoton Family Lecture
  - Theodore Kurze Lecture

**Plenary Session II**

- 9:45 AM–1:00 PM
  - Hunt-Wilson Lecture
  - Cushing Medal Presentation
  - Cushing Oration

**Joint Annual Business Meeting of the AANS and the American Association of Neurosurgeons**

- 5:30–6:30 PM

**AANS International Reception**

- 6:30–8:30 PM

**AANS History Section Dinner**

- 6:00–9:00 PM

**Dinner Symposia**

- **6:30–8:30 PM**

**Wine and Cheese Reception in the AANS Exhibit Hall**

- **4:30–5:30 PM**

**NREF Fundraiser Reception**

- 8:00–10:00 PM

**Lunch**

- Served in the AANS Exhibit Hall 1:00–2:00 PM

**Venue**

- AANS Exhibit Hall

**Tuesday May 1**

- **Beverage Break in AANS Exhibit Hall 9:00–9:45 AM**
- **Lunch**
  - Served in the AANS Exhibit Hall 1:00–2:00 PM
- **Dinner Symposia**
  - 6:30–8:30 PM
- **Wine and Cheese Reception in the AANS Exhibit Hall**
  - 4:30–5:30 PM
- **NREF Fundraiser Reception**
  - 8:00–10:00 PM
- **Lunch**
  - Served in the AANS Exhibit Hall 1:00–2:00 PM
- **Dinner Symposia**
  - 6:30–8:30 PM
Mitchell S. Berger, MD, FAANS, FACS
2012–2013 AANS President

Dr. Mitchel S. Berger is the Kathleen M. Plant Distinguished Professor and Chairman of the Department of Neurological Surgery at the University of California, San Francisco (UCSF). He also serves as Director of UCSF’s Brain Tumor Research Center.

A graduate of Harvard University, Dr. Berger earned his medical degree from the University of Miami School of Medicine, followed by a clinical fellowship in neurooncology at UCSF, a fellowship in pediatric neurosurgery at the Hospital for Sick Children of the University of Toronto and a neurosurgical residency at UCSF. In 1986, he became Assistant Professor of Neurosurgery at the University of Washington School of Medicine, after which he was named Associate Professor (1990) and Professor (1996).

A leader of translational research, Dr. Berger is Principal Investigator of the UCSF Brain Tumor Research Center’s Specialized Program of Research Excellence in neurooncology; and Principal Investigator of the Pediatric Brain Tumor Foundation Institute at UCSF. He has clinical expertise in treating adult and pediatric brain and spinal cord tumors, and is a pioneer of intraoperative brain mapping. His research interests include identifying molecular markers related to the progression and prognosis of glial tumors, and the development of small-molecule therapeutic agents administered to the brain via convection-enhanced drug delivery.

Dr. Berger is President of the American Association of Neurological Surgeons and a member of the Board of Directors of the American Board of Neurological Surgery. He also serves as Secretary of the American Academy of Neurological Surgery, and is as a member of NFL’s Neck and Spine Committee.

Dr. Berger has contributed more than 400 scientific articles to peer-reviewed journals, edited six textbooks, and written more than 80 chapters on various neurosurgical topics.

About AANS

Founded in 1931 as the Harvey Cushing Society, the American Association of Neurological Surgeons (AANS) is a scientific and educational association with over 8,100 members worldwide. The AANS is dedicated to advancing the specialty of neurological surgery in order to provide the highest quality of neurosurgical care to the public. All active members of the AANS are board certified by the American Board of Neurological Surgery, the Royal College of Physicians and Surgeons of Canada, or the Mexican Council of Neurological Surgery, A.C.

Neurosurgery is the medical specialty concerned with the prevention, diagnosis, treatment and rehabilitation of disorders that affect the spinal column, spinal cord, brain, nervous system and peripheral nerves. For more information on what neurosurgeons do, visit www.AANS.org and select Patient Information.

Cushing Cigarette Box

Each year at the Annual Scientific Meeting of the American Association of Neurological Surgeons (AANS), the outgoing president is presented with a special memento of his year in office the “Cushing Cigarette Box” representing more than a half century of neurosurgical tradition. The sterling silver Cushing Cigarette Box was originally presented to Harvey Cushing, MD, by the surgical staff at Peter Bent Brigham Hospital on April 14, 1931, commemorating Dr. Cushing’s 2000th verified intracranial tumor operation. Beginning with this cherished tradition back in 1959, Dr. Cushing’s nephew, E. H. Cushing, MD, presented the cigarette box to the AANS resident and asked that it be passed on to each succeeding president as a symbol of the Association’s highest office.
AANS Past Presidents
2011–12 Paul C. McCormick, MD
2010–11 James T. Rutka, MD, PhD
2009–10 Troy M. Tippett, MD
2008–09 James R. Bean, MD
2007–08 Jon H. Robertson, MD
2006–07 Donald O. Quest, MD
2005–06 Fremont P. Wirth Jr., MD
2004–05 Robert A. Ratcheson, MD
2003–04 A. John Popp, MD
2002–03 Roberto C. Heros, MD
2001–02 Stan Pelofsky, MD
2000–01 Stewart B. Dunsker, MD
1999–00 Martin H. Weiss, MD
1998–99 Russell L. Travis, MD
1997–98 Edward R. Laws Jr., MD
1996–97 J. Charles Rich Jr., MD
1995–96 Sidney Tolchin, MD
1994–95 Edward L. Seljeskog, MD, PhD
1993–94 Julian T. Hoff, MD
1992–93 Merwyn Bagan, MD
1991–92 James T. Robertson, MD
1990–91 David L. Kelly Jr., MD
1989–90 Albert L. Rhoton Jr., MD
1988–89 George T. Tindall, MD
1987–88 Henry D. Garrettson, MD
1986–87 Robert G. Ojemann, MD
1985–86 Russel H. Patterson Jr., MD
1984–85 Sidney Goldring, MD
1983–84 Byron C. Pevehouse, MD
1982–83 Frank R. Wrenn, MD
1981–82 W. Kemp Clark, MD
1980–81 Robert B. King, MD
1979–80 W. Eugene Stern, MD
1978–79 Donald F. Dohn, MD
1977–78 Charles G. Drake, MD
1976–77 Lester A. Mount, MD
1975–76 Richard L. De Saussure Jr., MD
1974–75 Richard C. Schneider, MD
1973–74 Lyle A. French, MD
1972–73 William F. Meacham, MD
1971–72 Guy L. Odom, MD
1970–71 Collin S. MacCarty, MD
1969–70 A. Earl Walker, MD
1968–69 Donald D. Matson, MD
1967–68 Henry G. Schwartz, MD
1966–67 Eben Alexander Jr., MD
1965–66 Francis Murphey, MD
1964–65 Frank H. Mayfield, MD
1963–64 Barnes Woodhall, MD
1962–63 David L. Reeves, MD
1961–62 Leonard T. Furlow, MD
1960–61 J. Grafton Love, MD
1959–60 James L. Poppen, MD
1958–59 Bronson S. Ray, MD
1957–58 Howard A. Brown, MD
1956–57 Leo M. Davidoff, MD
1955–56 Frederic Schreiber, MD
1954–55 Harry Wilkins, MD
1953–54 Edgar A. Kahn, MD
1952–53 William J. German, MD
1951–52 Paul C. Bucy, MD
1950–51 W. Edward Chamberlain, MD
1949–50 Frank Tumball, MD
1948–49 Winchell M.C. Craig, MD
1947–48 Cobb Pilcher, MD
1946–47 Frank R. Teachener, MD
1944–46 Franc D. Ingraham, MD
1943–44 Edgar. F. Fincher Jr., MD
1942–43 Eric Oldberg, MD
1941–42 Tracy J. Putnam, MD
1940–41 Cornelius Dyke, MD
1939–40 R. Eustace Semmes, MD
1938–39 Louise Eisenhardt, MD
1937–38 Temple Fay, MD
1936–37 Kenneth G. McKenzie, MD
1935–36 Merrill C. Sosman, MD
1934–35 R. Glen Spurling, MD
1933–34 John F. Fulton, PhD
1932–33 William P. Van Wagenen, MD
2013 Recognition

Don Berwick, MD, MPP
Rhoton Family Lecture
Plenary Session I
Monday, April 29

Ralph G. Dacey Jr., MD, FAANS
Distinguished Service Award
Plenary Session I
Monday, April 29

Johannes Schramm, MD
Theodore Kurze Lecture and AANS International Lifetime Recognition Award
Plenary Session I
Monday, April 29

Michael T. Lawton, MD, FAANS
Hunt-Wilson Lecture
Plenary Session II
Tuesday, April 30

Jon H. Robertson, MD, FAANS, FACS
Cushing Medalist
Plenary Session II
Tuesday, April 30

Chesley B. (Sully) Sullenberger III
Cushing Oration
Plenary Session II
Tuesday, April 30

Ennio Antonio Chiocca, MD, PhD, FAANS
Ronald L. Bittner Lecture
Scientific Session I—Tumor
Tuesday, April 30

Carolyn M. Clancy, MD
Louise Eisenhardt Lecture
Plenary Session III
Wednesday, May 1

Charles L. Branch Jr., MD, FAANS
Richard C. Schneider Lecture
Plenary Session III
Wednesday, May 1

Hughes Duffau, MD, PhD
Van Wagenen Lecture
Plenary Session III
Wednesday, May 1

Mark Bernstein, MD, FAANS, FRCSC
Humanitarian Award
Plenary Session III
Wednesday, May 1
Rhoton Family Lecture
Don Berwick, MD, MPP

Don Berwick, MD, MPP, served as Administrator of the Centers for Medicare and Medicaid Services (CMS) from July 2010 through December 2011. Prior to that, Dr. Berwick worked for 22 years as the founding CEO of the Institute for Healthcare Improvement.

Dr. Berwick holds a master of public policy degree from the Harvard John F. Kennedy School of Government and an MD cum laude from the Harvard Medical School. He is a clinical professor of pediatrics and healthcare policy at the Harvard Medical School; and professor of health policy and management at the Harvard School of Public Health.

Dr. Berwick has received numerous awards, and was named a Fellow of the Royal College of Physicians in London and Honorary Knight Commander of the Order of the British Empire for his role in helping redesign Britain's healthcare system.

Theodore Kurze Lecture
and AANS International Lifetime Recognition Award
Johannes Schramm, MD

Johannes Schramm, MD, is the retired chairman of the University of Bonn's Department of Neurosurgery in Bonn, Germany.

Dr. Schramm earned his medical degree from the University of Heidelberg in 1972 and went on to complete his neurosurgical residency at the Free University of Berlin in 1979.

Named for the internationally renowned neurosurgeon who pioneered the specialty's use of the microscope, the first Theodore Kurze Lecture was presented at the 2003 AANS Annual Scientific Meeting in San Diego, Calif.

Distinguished Service Award
Ralph G. Dacey Jr., MD

The American Association of Neurological Surgeons (AANS) Distinguished Service Award is one of the highest honors bestowed by the organization, recognizing exemplary service to the AANS and the field of neurosurgery. The award pays tribute to the contributions of remarkable people within their profession.

Ralph G. Dacey Jr., MD, FAANS, received his BA from Harvard University and his MD from the University of Virginia, the same school he served as a neurosurgical resident. Following his post-graduate training, he became an assistant professor of neurological surgery at the University of Washington in Seattle. He subsequently was appointed professor and chief of the division of neurosurgery at the University of North Carolina in Chapel Hill. Presently, he is the Henry G. and Edith R. Schwartz Professor and chairman of the department of neurological surgery at Washington University in St. Louis.

Dr. Dacey was awarded a Clinician Investigator Development Award by the National Institutes of Health and has been funded by NIH for many years. He has authored more than 190 pieces in the areas of neurosurgery and cerebrovascular physiology.

Dr. Dacey is the current president of the Society of Neurological Surgeons (SNS). He recently served as chairman of the Residency Review Committee for Neurosurgery and was a member of the ACGME Resident Duty Hours Task Force. He is the past president and treasurer of the American Academy of Neurological Surgery. He was the chairman and secretary of the American Board of Neurological Surgery as well as president and treasurer of the Congress of Neurological Surgeons. He currently serves as consultant neurosurgeon for the St. Louis Rams and the St. Louis Blues.
Plenary Session II Tuesday, April 30

**Hunt-Wilson Lecture**
**Michael T. Lawton, MD**

Michael Lawton, MD, FAANS is the Tong-Po Kan Endowed Chair, Professor of neurological surgery, and Vice-Chairman of the department of neurosurgery and the University of California, San Francisco (UCSF). He is chief of vascular neurosurgery, specializing in the surgical treatment of aneurysms, arteriovenous malformations (AVMs), arteriovenous fistulas, cavernous malformations and cerebral revascularization, including carotid endarterectomy. He has experience in surgically treating more than 3,000 brain aneurysms and more than 600 AVMs. He also is trained in the endovascular treatment of aneurysms.

**Cushing Medalist**
**Jon H. Robertson, MD**

Conferred since 1977, the Harvey Cushing Medal is the most prestigious award an American Association of Neurological Surgeons (AANS) member can receive. In 2013, Jon H. Robertson, MD, FAANS, FACS, will receive this noteworthy distinction for his significant contributions to the neurosurgical specialty through leadership, service and unwavering dedication.

For the past 33 years, Dr. Robertson has been a neurosurgeon at the Semmes-Murphy Neurologic and Spine Institute in Memphis, where his clinical focuses include the surgical management of tumors affecting the cranial base of the skull. In 1979, Dr. Robertson began a storied academic career as a faculty member at the University of Tennessee Center for Health Sciences’ Department of Neurosurgery. He climbed the ranks from assistant professor to chairman, a role in which he presided until his retirement from the university in 2011.

A past president of the AANS, Dr. Robertson’s volunteer service also includes presidencies for the North American Skull Base Society and the Society of University Neurosurgeons in 2002 and 2005 respectively.

**Cushing Oration**
**Chesley B. (Sully) Sullenberger III**

Captain Chesley B. “Sully” Sullenberger III is the pilot who masterfully landed US Airways Flight 1549 on the Hudson River on Jan. 15, 2009, saving the lives of 155 people in what has been dubbed the “Miracle on the Hudson.” An aviation safety expert and accident investigator who also is the founder and chief executive officer of Safety Reliability Methods, he has more than 40 years of flying experience. In addition to his bachelor’s degree in psychology from the U.S. Air Force Academy, Sullenberger has two master’s degrees, one in industrial psychology from Purdue University and one in public administration from the University of Northern Colorado.

Sullenberger authored The New York Times best-selling book, *Highest Duty: My Search for What Really Matters*, and was named one of *TIME* magazine’s 100 most influential people in 2009. He has received numerous awards, including the Medal of Valor from the Simon Wiesenthal Center and Harvard University’s Humanitarian Award.
Louise Eisenhardt Lecture
Carolyn M. Clancy, MD

Carolyn M. Clancy, MD, has served as Director of the Agency for Healthcare Research and Quality (AHRQ) since Feb. 5, 2003. She leads the organization in its effort to improve the quality, safety, efficiency and effectiveness of healthcare for Americans. She also holds an academic appointment at the George Washington University School of Medicine as Clinical Associate Professor, Department of Medicine.

A graduate of Boston College and the University of Massachusetts Medical School, Dr. Clancy is a general internist and health services researcher. Following clinical training in internal medicine, she was a Henry J. Kaiser Family Foundation Fellow at the University of Pennsylvania.

As Director of AHRQ, she launched the first annual report to Congress on health care disparities and healthcare quality.

Richard C. Schneider Lecture
Charles Branch Jr., MD

Charles Branch Jr., MD, FAANS, is the Eben Alexander Jr. Professor and Chairman of the Department of Neurosurgery at Wake Forest University School of Medicine in Winston-Salem, N.C. Dr. Branch serves on the governing board for Wake Forest University’s School of Biomedical Engineering and on the board of regents for Pepperdine University.

Dr. Branch received his medical degree from the University of Texas Southwestern Medical School in 1981, and completed his neurosurgical training at Wake Forest University in 1987.

Van Wagenen Lecture
Hughes Duffau, MD, PhD

Renowned neuroscientist Hugues Duffau, MD, PhD, has been named the American Association of Neurological Surgeons’ (AANS’) 2013 Van Wagenen Lecturer.

Dr. Duffau is professor and chairman of the Gui de Chauliac Hospital's Department of Neurosurgery at Montpellier University Medical Center in France. Among his clinical and research interests are the treatment of brain tumors, the management of low-grade gliomas and intraoperative functional brain mapping, which provided the basis for his 2011 book titled Brain Mapping: From Neural Basis of Cognition to Surgical Application. A native of Montauban, France, Dr. Duffau completed his neurosurgical residency at Paris’ Pitié-Salpêtrière Hospital in 1995, and he obtained his doctorate degree in neurosciences from the University of Paris VI in 2005.

Humanitarian Award
Mark Bernstein, MD

Since 1987, the American Association of Neurological Surgeons (AANS) has conferred its Humanitarian Award to members who have brought honor to the neurosurgical specialty through charitable service. The 2013 AANS Humanitarian Award will be presented to Mark Bernstein, MD, FAANS, FRCSC. Regular visits to the developing world signify Dr. Bernstein’s affinity for service and education. During travels to such locales as Ghana and Indonesia, he has introduced innovative and life-saving neurosurgical techniques, often with a team of residents, nurses and colleagues in tow.

In addition to his role as a neurosurgeon at Toronto Western Hospital, Dr. Bernstein is a professor of surgery at the University of Toronto.
David A. Wilson, MD, is the chief neurosurgery resident at the Barrow Neurological Institute in Phoenix, where he cultivates an interest in vascular neurosurgery and skull base approaches. Dr. Wilson, who completed a fellowship at the Center for Minimally Invasive Neurosurgery in Sydney, Australia, has operated in such international locales as Tanzania and Vietnam. While completing his medical degree program at the Columbia University College of Physicians and Surgeons, he worked in its Department of Neurosurgery as the Doris Duke Clinical Research Fellow, studying in the neurovascular lab of E. Sander Connolly Jr., MD, FAANS. Dr. Wilson’s additional research interests include improving the methods of definition and evaluation of clinical outcomes following aneurysmal subarachnoid hemorrhage.

Iakiv Fishchenko, MD, PhD is a neurosurgery research fellow in the Neurosurgery Research Laboratory working under Dr. Mark Preul at the Barrow Neurological Institute in Phoenix, Arizona on topics of cranial and spinal trauma. He graduated from Bogomolets National Medical University, Kiev, Ukraine in 2004 and at the end of his residency, he has been working at the Department of Spinal Pathology of the State Institute of Orthopedics and Traumatology of the Academy of Medical Sciences in Kiev, Ukraine. Currently his work focuses on spine deformities and spinal degenerative diseases. Dr. Fishchenko received his PhD degree in 2008 and was awarded the Laureate of the President of Ukraine’s Prize in the field of Science and Technique. He is the recipient of the Best Young Researcher Award from the Ministry of Ukraine (2012) and has received an award from the Academy of Medical Sciences of Ukraine (2010) for his works in the field of spinal pathology. His investigations into Russian medical history have shed new light on the events surrounding the cranial injuries of General Mikhail Kutuzov, and consequences that shaped the world during the winter of 1812.
Timothy Smith, MD, PhD, MPH, is a sixth-year neurosurgery resident at Northwestern University’s Feinberg School of Medicine in Chicago. A native of Tuscola, IL, Dr. Smith earned a Bachelor of Science degree in Human Physiology from the University of Illinois. He is a medical graduate of the University of California, Los Angeles and went on to obtain a PhD in Health Science and Policy from the University of California, Irvine, and a Master in Public Health Degree in Quantitative Methods from Harvard University. Dr. Smith, who currently is involved in an oncology and functional neurosurgery fellowship, has research interests include the socioeconomic facets of neurological surgery.

Jayant P. Menon, MD, is a physician at the University of California, San Diego’s (UCSD’s) Division of Neurosurgery, where he also completed his residency. In addition, Dr. Menon obtained a Master’s Degree in Biomedical Engineering from UCSD’s Jacob’s School of Engineering. His efforts to contribute to neurosurgical technologies include the invention of a ventricular catheter stylet modification designed to decrease catheter obstruction associated with implantation. This year, he will begin a fellowship in stereotactic and functional neurosurgery at Stanford University.

Caitlin Hoffman, MD, is a neurosurgical resident at New York Presbyterian Hospital. She is a 2007 graduate of Weill Cornell Medical College in New York, where under the guidance of Jeffrey P. Greenfield, MD, PhD, she assessed the involvement of bone-marrow derived cells in medulloblastoma recurrence and dissemination. Funding for this research was provided through the Children’s Cancer and Blood Foundation. She is a 2012 recipient of the Kenneth Shulman Award presented by the AANS/CNS Section on Pediatric Neurological Surgery.

Kristopher Thomas Kahle, MD, PhD is a sixth-year neurosurgery resident at the Massachusetts General Hospital, and a post-doctoral fellow in the laboratory of David Clapham at Harvard Medical School/HHMI. He received his undergraduate degree in philosophy from the University of Chicago. At Yale School of Medicine, he performed his Ph.D. training with Richard Lifton. Dr. Kahle is interested in using genome-wide sh/siRNA screens and chemical genetics to identify and characterize critical regulators of ion transport pathways relevant for neurodevelopment and neurologic disease. Dr. Kahle has clinical interests in pediatric neurosurgery.
Kristopher G. Hooten, MD, is a fourth-year neurosurgical resident at the University of Florida in Gainesville, Fla. Upon his 2005 graduation from Trinity University in San Antonio, Texas, Dr. Hooten was commissioned into the United States Army as a Second Lieutenant in its health professional scholarship program. In 2009, he graduated with a medical degree from the University of Texas Medical Branch in Galveston, Texas. He was promoted to the rank of Captain and now serves in the 187th Medical Battalion as a fully sponsored medical resident. For Dr. Hooten, who counts academic and military neurosurgery among his career plans, research interests include regenerative stem cell therapy and modifying the neuroinflammatory response for neurodegenerative diseases and spinal cord injury.

Jason P. Sheehan, MD received his doctorate in biophysics and medical degree at the University of Virginia. He completed his residency training at the University of Virginia and fellowships at the University of Auckland and the University of Pittsburgh. Dr. Sheehan returned to join the staff in the Department of Neurological Surgery at the University of Virginia. He is currently Vice Chair and Alumni Professor of Neurosurgery at the University of Virginia.

Jonathan P. Riley, MD, MS, a fourth-year neurosurgical resident at the Emory University Department of Neurological Surgery in Atlanta, has a clinical specialty interest in stereotactic, functional and epilepsy surgery. Amid his research pursuits is the safety validation of delivery approaches to intra-spinal sites. During his training at the Cleveland Clinic Lerner College of Medicine, Dr. Riley studied in the laboratory of Nicholas M. Boulis, MD, FAANS, where he focused on the development of surgical technologies and techniques for delivering biologic agents to the neuraxis. Additional research topics include the exploration of intrathecal and intraventricular vector delivery strategies and convection-enhanced delivery approached for intraparenchymal delivery.
Nicholas F. Marko, MD, is a neurosurgical oncology fellow at the MD Anderson Cancer Center in Houston. After completing his residency training at the Cleveland Clinic in Cleveland, Dr. Marko conducted research at Cambridge University in the United Kingdom as an American Association of Neurological Surgeons William P. Van Wagenen Fellow. While his clinical focus is on the management of primary malignant and metastatic tumors of the brain and spinal cord, Dr. Marko’s academic interests include the use of applied mathematics and large-scale databases to optimize the diagnosis and management of disease. Among his research studies are strategies to assess the costs and benefits of alternate management techniques in efforts to maintain high-quality care and optimize health-care delivery.

Jonathan G. Thomas, MD, is a fifth-year resident at the Baylor College of Medicine's Department of Neurosurgery in Houston. Dr. Thomas has developed an interest in neurosurgical oncology, namely novel therapies for glioma. With research support from the American Cancer Society and the Congress of Neurological Surgeons, he currently is investigating methods to treat glioma by enhancing tumor tropism of mesenchymal stem cells. Dr. Thomas is a graduate of Harvard College and the University of Michigan Medical School.

Phiroz E. Tarapore, MD, is a medical graduate of the University of California, San Francisco (UCSF), where he currently serves as a chief neurosurgical resident. He has developed a research interest in functional imaging and presurgical mapping with transcranial magnetic stimulation (TMS), and has established the first protocols for using navigated TMS for presurgical speech and motor mapping at UCSF. Dr. Tarapore’s current projects include the development of novel diagnostic and therapeutic strategies for treating patients with chronic traumatic brain injury.

Hideyuki Kano, MD, PhD, is a research assistant professor of neurological surgery at the University of Pittsburgh. A native of Osaka, Japan, Dr. Kano received his medical degree from Kyoto University in 1997, and completed his neurosurgical residency at the school in 2004. During his three-year tenure from 2004 to 2007 as neurosurgeon-in-chief at Kishiwada City Hospital in Kishiwada, Japan, he obtained his PhD in neuro-oncology from Kyoto University’s Graduate School of Medicine. Dr. Kano later worked as an image-guided neurosurgery fellow under the supervision of L. Dade Lunsford, MD, and Douglas S. Kondziolka, MD, at the University of Pittsburgh, where he later became a visiting research professor. Among his clinical and research interests are stereotactic radiosurgery for benign and malignant brain tumors, arteriovenous malformation, and functional disease. Dr. Kano is the 2012 recipient of the Integra Foundation Award from the AANS/CNS Section on Tumors.
AANS/CNS Section on Tumors
National Brain Tumor Foundation Mahaley Award
Andrew E. Sloan, MD

Andrew Sloan, MD, FAANS, FACS, is a neurosurgeon, physician-scientist and educator at the University Hospitals Case Medical Center in Cleveland. Additionally, he serves as the Director of the Brain Tumor and Neuro-Oncology Center at the Neurological Institute, Seidman Cancer Center and the Case Western Reserve University School of Medicine. Dr. Sloan's research on glioma vaccines and glioma stem cells has been funded by the National Cancer Institute, the American Society of Clinical Oncology and other organizations. As the author of more than 100 peer-reviewed articles and numerous editorials and book chapters, Dr. Sloan serves on the board of several neurosurgical and scientific journals. Dr. Sloan, whose clinical and research interests include the biology and treatment of brain and spinal tumors, currently is developing interactive neurosurgical simulators for training, education and collaborative surgery. He is a graduate of Yale University and Harvard Medical School, having completed a neurosurgical residency at the University of California, Los Angeles.

AANS/CNS Section on Tumors
Preuss Award
Michael C. Oh, MD, PhD

Michael C. Oh, MD, PhD, is a chief resident in neurosurgery at the University of California, San Francisco. During his residency, he has worked under the guidance of Andrew T. Parsa, MD, PhD, characterizing calcium-permeable glutamate receptors in glioblastoma tumor stem cells. A biochemistry and molecular biology graduate of Reed College in Portland, OR, Dr. Oh obtained his PhD from the Oregon Health and Science University and earned his medical degree from its School of Medicine in 2007. His clinical interests include gliomas, skull base surgery and spinal tumors.

AANS/CNS Section on Tumors
Ronald L. Bittner Award on Brain Tumor Research
Orin Bloch, MD

Orin Bloch, MD, is a clinical instructor at the University of California, San Francisco’s (UCSF’s) Department of Neurological Surgery. His laboratory research seeks to boost the efficacy of adaptive immunotherapy approaches for glioblastoma. Additionally, Dr. Bloch is active in clinical care and clinical trials for patients with brain tumors. During his residency training at UCSF, Dr. Bloch worked under the guidance for Andrew T. Parsa, MD, PhD, to study the mechanisms of glioma-induced immunosuppression and the implications for immunotherapy. Dr. Bloch then was awarded a K99/R00 grant from the National Institute of Neurological Disorders and Stroke to study the role of tumor-associated macrophages in modulating local and systemic immunity in glioblastoma. A Summa Cum Laude graduate of the University of Pennsylvania, Dr. Bloch earned his medical degree from the UCSF School of Medicine.

AANS/CNS Section on Tumors
Synthes Skull Base Award
Sergei Terterov, MD

Sergei Terterov, MD, is a third-year neurosurgical resident at the University of California, Los Angeles’ Department of Neurosurgery. A medical graduate of the Keck School of Medicine at the University of Southern California in Los Angeles, he earned a Bachelor of Science degree in Chemical Biology from the University of California, Berkeley. Under the tutelage of Isaac Yang, MD, and Marvin Bergsneider, MD, Dr. Terterov has developed clinical interests in skull base neurosurgery, with special focus on patient outcomes, quality improvement and cost reduction. After completing his residency, Dr. Terterov will complete a fellowship in skull base neurosurgery with hopes of practicing within the subspecialty.
Eric M. Thompson, MD, is a graduate of the University of Nebraska College of Medicine. Dr. Thompson earned a Bachelor of Science degree at Duke University, where he was awarded a Howard Hughes Fellowship and a Duke Undergraduate Research Support Grant for his work titled “A Yeast Functional Genomics Approach to Identify Novel Genetic Targets of BRCA1.” Currently a seventh-year resident at the Oregon Health and Science University, Dr. Thompson counts pediatric epilepsy and the treatment of malignant gliomas among his research and clinical interests. In 2011, the Medical Research Foundation of Oregon presented him with the Early Clinical Investigator Grant for the project titled “Characterizing the Role of Zona Occludens 1 and its Putative Modulators in Tumor-Related Vasogenic Edema.” Following the completion of a fellowship in pediatric neurosurgery at the Hospital for Sick Children in Toronto, Dr. Thompson plans to a career in academic pediatric neurosurgery, with clinical and research focuses on central nervous system tumors and cerebral metastases in children.

Nima Alan is a third-year medical student at Case Western Reserve University School of Medicine in Cleveland. He is a 2009 cum laude graduate of the University of British Columbia, where he completed a Bachelor of Science degree in physiology. He was named the Top Senior Student in Neurophysiology for his graduate thesis on vascular changes after spinal cord injury and its impact on autonomic dysreflexia. Alan, who counts translational domains of neurosurgical oncology and cerebrovascular neurosurgery among his research interests, currently conducts research under the guidance of Robert J. Weil, MD, chair of the Burkhardt Brain Tumor and Neuro-Oncology Center at the Cleveland Clinic Foundation.
International Awards

AANS International Lifetime Recognition Award
Johannes Schramm, MD

The AANS International Lifetime Service Award recognizes an international neurosurgeon or other international dignitary for his or her lifetime of contributions to advancing the field of neurosurgery in a country outside the United States and Canada.

International Travel Scholarship
Jun Zhong, MD, PhD

Jun Zhong, MD, PhD, is the vice-chief of the Xinhua Hospital's Department of Neurosurgery in Shanghai, China. He is the 2008 recipient of the Shanghai Medical Science and Technology Award for his performance of thousands of microvascular decompression procedures, a subject on which he has published two books. During postdoctoral fellowships at Wayne State University in Detroit and the University of Michigan in Ann Arbor, MI, Dr. Zhong conducted a number of studies on spinal cord stimulation, intracranial pressure monitoring and brain retraction injury. In addition to his service as the secretary-general of the Cranial Nerve Disease Center of Shanghai, he is the reviewer of several journals, including Acta Neurochirurgica, Clinical Neurology & Neurosurgery, and Chinese Journal of Medicine. Dr. Zhong, who also is a professor at the Shanghai Jiao Tong University School of Medicine, counts novel theories on the mechanism of hemifacial spasms among his research projects.

Best International Abstract Award
David Roytowski, MD

David Roytowski, MD is a resident in the Department of Neurosurgery at the University of Cape Town in South Africa, where he obtained his medical degree in 1999. In addition to his work as a general medical practitioner in South Africa and the United Kingdom, Dr. Roytowski has served as a strategy and management consultant for the Monitor Group, a consulting firm in Cambridge, MA. This role followed his Master of Business Administration studies at the Institut Européen d’Administration des Affaires (INSEAD). Dr. Roytowski believes that the future of neurosurgery in Africa is promising, noting that the scope for benefits in the field are enormous.
International Visiting Surgeons Fellowship

The AANS is committed to increasing its involvement in international neurosurgery, in particular furthering educational opportunities in developing countries. One meaningful offering is the AANS International Visiting Surgeons Fellowship. The AANS funds two observational fellowships per fiscal year to provide meaningful educational experiences in North America to international neurosurgeons who will practice and/or teach neurosurgery in their home countries. The 2012 AANS International Visiting Surgeon Fellowship Recipients are:

Vladyslav Buryk, MD

Vladyslav Buryk, MD, from Kiev, Ukraine, who will visit Stanford University under the observation of John R. Adler Jr., MD. Dr. Buryk would like to obtain advanced education and proficient training in neurosurgery according to world neurosurgical standards. His main goal is to gain experience in radiosurgery treatment of central nervous system ailments such as tumors, epilepsy and arteriovenous malformations.

Juan Bosco Gonzalez Torres, MD

Juan Bosco Gonzalez Torres, MD, from Masaya, Nicaragua, who will visit University of Texas Health Science Center and Children’s Memorial Hermann Hospital in Houston under the guidance of David I. Sandberg, MD. Dr. Torres will focus on developing and improving skills in the care of neurosurgical pathologies in children, with special emphasis on brain tumors, hydrocephalus, neural tube closure and epilepsy.
NREF

For 30 years, the Neurosurgery Research and Education Foundation (NREF) has successfully funded progressive scientific studies thanks to financial commitments from individuals, groups, academic/hospital practices and corporations. Demonstrate your commitment to the NREF and consider donating to the NREF when registering for the 2013 AANS Annual Scientific Meeting.

NREF Research Symposium and Reception

This year, the NREF will again host the annual Research Symposium & Donor Reception, on Tuesday, April 30 from 4:00PM–6:30PM at the New Orleans Marriott. This event will showcase research from past and current awardees. This invitation-only event affords Cushing Donor level supporters a chance to see the impact that their contributions have made on residents and young faculty members who received research grants.

To save your seat at the NREF Research Symposium and Donor Reception, make your donation to the NREF through the AANS Annual Scientific Meeting registration form, on the AANS website or stop by the AANS Resource Center in the AANS Exhibit Hall.

Neurosurgery Research & Education Foundation Awards

The NREF Research Fellowships and Young Clinician Investigator Awards are made possible thanks to the generous support of AANS members, group practices, hospitals, corporate supporters, the Sections and the public. The NREF funds grants in the areas of brain tumors, cerebrovascular disease, endovascular neurosurgery, pain management, pediatrics, spine and trauma.

Wael F. Asaad, MD, PhD
NREF/Codman Young Clinician Investigator
Alpert Medical School, Brown University
Project Title: Programmed Visual-Motor Associations in the Nonhuman Primate
Sponsor: John P. Donoghue, PhD

Katharine M. Cronk, MD
NREF/Biomet Microfixation Research Fellow
Barrow Neurological Institute
Project Title: Degradable Local Analgesic Devices for Targeted Pain Management and Improved Surgical Success
Sponsor: Nicholas Theodore, MD

Richard G. Everson, MD
NREF Research Fellow
University of California, Los Angeles
Project Title: Immunosensitization and Adoptive Transfer of NY-ESO-1 TCR Engineered Cells for Treatment of Glioblastoma
Sponsor: Linda M. Liau, MD, PhD

Fady Girgis, MD
NREF/Section on Pediatric Neurological Surgery
University of Calgary
Project Title: The Roles of the Dorsal Anterior Cingulate Cortex and Ventral Medial Prefrontal Cortex in Fear Conditioning and Extinction in the Non-Human Primate
Sponsor: Emad N. Eskandar, MD

Michael E. Ivan, MD
NREF/Section on Tumors Research Fellow
University of California, San Francisco Neurological Surgery
Project Title: The Role of EMR Proteins in Glioma Pathogenesis
Sponsor: Andrew T. Parsa, MD, PhD
Neil Raine Malhotra, MD  
NREF/Section on Disorders of the Spine and Peripheral Nerves Young Clinician Investigator  
University of Pennsylvania  
Project Title: Novel Bioactive Implants to Reverse Degenerative Disc Disease via Mechanical Support and Drug Delivery  
Sponsor: Dawn M. Elliott, PhD

Heather H. McCrea, MD  
NREF Research Fellow  
Weill Cornell Medical Center  
Project Title: Role of Angiocrine Expression of Notch Ligands in Glioma Progression  
Sponsor: Shahin Rafii, MD

Timothy Ryan Owens, MD  
NREF/American Academy of Neurological Surgery (AAcNS) Research Fellow  
Duke University Medical Center  
Project Title: Characterization of Transcriptional Targets of Brachyury in Chordoma  
Sponsor: Michael Kelley, MD

Matthew R. Reynolds, MD  
NREF/Cerebrovascular Section Research Fellow  
Washington University School of Medicine  
Project Title: Examining the Role of Heparin Sulfate Proteolycans in the Amyloid-Beta-Induced Cerebrovascular Dysfunction of Alzheimer's Disease  
Sponsor: Gregory J. Zipfel, MD

Adam M. Sonabend, MD  
NREF Research Fellow  
Columbia University Medical Center  
Project Title: Evolution Following Treatment in Glioblastoma: A Predictable Phenomenon or Pure Chaos  
Sponsor: Peter Canoll, MD, PhD; and Jeffrey N. Bruce, MD

Farshad Nassiri  
Medical Student Summer Research Fellowship 2012 Best Abstract  
University of Toronto Faculty of Medicine  
Project Title: Transplantation of Neural Precursor Cells Will Promote Regeneration and Repair in the Traumatically Injured Cervical Spinal Cord  
Sponsor: Michael G. Fehlings, MD, PhD

The American Association of Neurological Surgeons (AANS) through the Neurosurgery Research and Education Foundation (NREF) supports the AANS Medical Student Summer Research Fellowship (MSSRF) program. Each year twenty (20) fellowships in the amount of $2,500 are awarded and one medical student is selected as the Best Abstract to be presented at the AANS Scientific Annual Meeting.

David Ryan Ormond, MD  
2013–2014 William P. Van Wagenen Fellow  
New York Medical College  
Project Title: Cell Reprogramming: Stem Cell-Based Systems for Studying Nervous System Diseases and Repair  
Sponsor: Professor Dr. Oliver Brüstle, Institute of Reconstructive Neurobiology - Rheinische Friedrich Wilhelms Universität Bonn, Germany
The Midas Rex® of Microsaws

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The electric Midas Rex® Microsaws offer legendary performance with innovative features for neurosurgical, spinal, oral, plastics, ENT, craniofacial, and orthopedic procedures.

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Innovating for life.
Extend Your Meeting Experience: Connect With Colleagues Before And After The AANS Annual Scientific Meeting

The AANS has led the neurosurgical field in dynamic educational offerings and interactive opportunities of any major neurosurgical meeting. Meeting attendees and AANS members can extend their experience through AANS’ professional networking website, AANSConnect®.

- Interact with Presenters, Attendees & Colleagues through Online Discussions; since many presentations are being streamed live to AANSConnect®, you can discuss these with those attending the meeting virtually as well (see below).
- Select the Annual Meeting tab (2013) for discussions and news about speakers, presentations and annual meeting events. Discuss research, arrange to meet people or learn more about what others are saying about the meeting sessions.
- Remember the days when researchers stood by their posters tacked onto bulletin boards to talk about their research? Now there’s no set schedule. Electronic poster presentations are available for review and discussion. Post comments, ask the poster presenter questions or to discuss the poster with neurosurgical colleagues.
- Presenters are invited to translate their work into other languages and post those in AANSConnect® for AANS International Members.

Not sure how to use AANSConnect® to keep in touch with your colleagues? Try these ideas:
- Send colleague requests to people you meet so you can keep in touch after the meeting.
- Find people with similar research or subspecialty interests, or join groups around areas that interest you.
- Start a group for alumnae of your medical school or residency program; you and other alums can post news about reunions, jobs, moves or post photos from alumnae events.
• Post news about subspecialty section events or courses.
• Post a case study and benefit from input from other neurosurgeons in the community.
• Review or start discussions on areas that interest you.
• Create a blog for a topic in which you are an expert.

Not sure how to do any of these things? Start with the Community News & Tips blog for some “How To” guidance. A general AANSConnect® tutorial is available in the site at http://connect.aans.org/multimedia/video/26

Note: AANSConnect® is a benefit of AANS Membership. Non-member annual scientific meeting medical registrants receive temporary access to AANSConnect® as a benefit of attending the meeting.

Live Streaming AANS Annual Scientific Meeting Presentations

2013 AANS Annual Meeting Presentations that will be live streamed to AANSConnect® are in the following sessions:

**Monday, April 29**
9:45 AM–1:00 PM  
AANS Plenary Session I

**Monday, April 29**
2:00 PM–4:30 PM  
Scientific Session I—Tumor

**Tuesday, April 30**
9:45 AM–1:00 PM  
AANS Plenary Session II

**Tuesday, April 30**
2:00–4:30 PM  
AANS/CNS Section on Peripheral Nerves Section Session

**Wednesday, May 1**
9:45 AM–1:00 PM  
AANS Plenary Session III

To view live streaming, login to AANSConnect (see sidebar) and select the Annual Meeting tab, or go directly to http://connect.aans.org/annual-meeting and select the “Log in” text at the top right.

**Additional Live Streaming Opportunities**

Attendees can also participate in these streamed courses:

**Monday, April 29**
2:00–4:30 PM  
Nuances of Intracranial Surgery: An Interactive Video Presentation

**Tuesday, April 30**
2:00–4:30 PM  
Nuances of Cerebrovascular Surgery: An Interactive Video Presentation

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**AANSConnect® Login Information**

• Login to http://www.AANSconnect.org using your MyAANS username and password. Members enjoy AANSconnect® year round.

• Non-member medical registrants can login beginning April 12, 2013 and continue until May 10, 2013. However, you must have a log in for MyAANS.org before April 15, 2013. If you do not have a login, register at https://myaans.aans.org/myaans.aspx.

• If you’ve forgotten your username or password, use the “login help” option at https://myaans.aans.org/myaans.aspx: “If you forgot your login credentials, please click HERE”
All the resources an AANS Annual Scientific Meeting attendee needs will be in one place. Join us in the AANS Resource Center, booth #1439, for networking, learning, socializing or just a cup of coffee. Our publications, products and services will be available, along with the opportunity to speak with our education staff about CME, webinars and more. Also represented will be the *Journal of Neurosurgery*, NeuroPoint Alliance, the AANS Online Career Center and more.

**Maintenance of Certification**

Check out our educational programs, including Master Series On-Demand CME, self-study education and practice management courses which are integral tools for meeting the AANS MOC requirements.

**NeuroPoint Alliance (NPA)**

The AANS created the NeuroPoint Alliance (NPA) to develop a web-based national platform for the collection, analysis and reporting of neurosurgical clinical data. NPA is designed to meet the quality care and research needs of individual neurosurgeons and neurosurgical practices, national organizations (AANS, CNS, ABNS), health care plans, biomedical industry and government agencies.

The NPA’s largest initiative, the National Neurosurgery Quality and Outcomes Database (N2QOD) will allow any U.S. neurosurgeon, practice group or hospital system to contribute to and access aggregate quality and outcomes data through a centralized, nationally coordinated clinical registry. Learn more about the N2QOD in the January 2013 issue of *Neurosurgical Focus*, http://thejns.org/toc/foc/34/1.

Other NPA projects include data collection for the American Board of Neurological Surgeons, and the NeuroPoint-Spinal Disorders study. Projects coordinated by NPA include clinical trials, national and local registries, outcomes studies, surveys, data management, and comparative effectiveness research.

**The Latest Information**

**Journals of Neurosurgery**

Our highly acclaimed Journals of Neurosurgery can help advance your clinical knowledge. Visit us to learn more about the latest clinical articles, our new video supplement, and ways to make the online Journals more valuable to your practice. View the JNS mobile platform, talk with members of our staff, and find out how you can publish your articles in our Journals as well.

**AANS Publications**

Visit our booth for AANS and AANS/Thieme co-published titles as well as other valuable resources.

**Joining the AANS**

Not yet an AANS member? We can help! Complete an application today to take advantage of our many member benefits. Need to change your contact information? We can do that too!

Be sure to visit the AANS Resource Center, booth #1439.

**Member Benefits through AANS Partner Programs**

Members have the advantage of programs that are AANS-reviewed and often offer advantages such as preferred member pricing or exclusive services. The representatives of the following AANS Partner Programs will be in attendance on the exhibit floor:

**X-Plain Patient Education Institute**

Patient education is the most cost-effective measure healthcare organizations can take to enhance patient understanding, improve medical outcomes, boost patient satisfaction and reduce medical errors. The X-Plain Neurological Surgery Patient Education system is a computer-based system used by clinics and hospitals to:

- Inform patients about recommended treatments and procedures
Document patient education
Print patient education handouts

The Patient Education Institute has been developing, marketing and evaluating interactive multimedia health software since 1994 and has published over 650 interactive, multimedia modules for patient education in English and Spanish. Visit with representatives in the Resource Center or view demonstrations at their booth #1442 in the exhibit hall.

NextGen Healthcare
NextGen provides electronic health record (EHR) and health information exchange (HIE) solutions for hospitals, health systems, physician practices and other healthcare organizations. Visit with representatives at their booth #1743 in the exhibit hall.

Thieme
Thieme Medical Publishers is the official neurosurgical book publisher of the AANS and has assumed distribution of over 80 published titles. AANS members receive a 10 percent discount on AANS/Thieme co-published books. Visit their booth #1747 to see the latest releases.

2013 AANS Annual Scientific Meeting
Archived Presentations

Your Annual Scientific Meeting registration includes FREE online access to the full compilation of recorded meeting content—that’s nearly 250 presentations.

You can have 24/7, on-demand access to over 250 presentations from the 2013 AANS Annual Scientific Meeting in New Orleans.

- New and improved online location at http://aans.peachnewmedia.com
- All presentations will be available for downloading in MP4 formats
- MP3 audio files can be downloaded as a free additional feature
- Content archived for 2 years online; DVD option available
- Easy search options for subjects, titles, presenters and more

Presentations from prior meetings are available for purchase at http://aans.peachnewmedia.com.
Technology Pavilion

Technology Pavilion Sessions
Located within the AANS Resource Center, booth #1439.
All sessions are free to AANS medical attendees and their staff; first-come, first-serve seating. Come early to save your seat—sessions fill up fast!

Neurosurgery Survival Guide Demonstration
The Neurosurgery Survival Guide is a quick reference, high-yield guide that encompasses a massive breadth of knowledge and information necessary to care for neurosurgical patients. This is an ideal reference for all neurosurgical residents, interns, medical students, and all other mid-level practitioners that will encounter and care for neurosurgical patients. View a demonstration of this unique rapid reference app.

AANS Operative Grand Rounds
AANS Operative Grand Rounds provides an informative, educational forum of operative procedures, with an emphasis on increasing surgical safety, minimizing surgical complications and improving patient outcomes. Experts in the field offer thorough knowledge of cutting-edge surgical techniques, and evidence-based data serves as a reliable source of updated information on a variety of neurosurgical procedures.

The new AANS Grand Rounds app offers mobile users a comprehensive collection of videos providing an informative, educational forum of operative procedures, as well as in-depth discussions with experts on surgical techniques, approaches, pearls and pitfalls. View a demonstration and then download the app so that you can stay up-to-date with the latest AANS Operative Grand Round videos.

ICD-10: What Neurosurgeons Need to Know Now to Prepare
On October 1, 2014, the ICD-9 code sets used to report medical diagnoses and inpatient procedures will be replaced by ICD-10 code sets. It is important that you begin preparation now for the transition. Presented by Joseph S. Cheng, MD, AANS Coding Courses’ Director, and John K. Ratliff, MD, AANS Coding Courses’ Co-Director, this brief session will give you an overview of what you need to do to get your practice ICD-10 ready, including how your dictation will need to change.

From Data to Publication: Dos and Don’ts of Writing and Publishing a Neurosurgical Paper
You’ve got good data, but how do you get it published? The Journal of Neurosurgery Publishing Group offers advice on preparing your paper and navigating the circuitous path to publication.

AANS Rhoton Collection
The Rhoton Collection is a compilation of anatomy presentations developed by internationally renowned surgeon and educator Dr. Albert Rhoton Jr. These presentations are part of a life’s work to train neurosurgeons around the world and expand the knowledge of brain anatomy and microsurgical neurosurgery. Available in the Technology Pavilion, view the latest videos to be included in the Rhoton Collection series.
# Technology Pavilion Schedule

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<th>Time</th>
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<td>9:00–Noon</td>
<td>Rhoton Collection Presentations</td>
<td>AANS Operative Grand Rounds Demonstration</td>
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<td>1:00–2:00 PM</td>
<td>AANS Operative Grand Rounds Demonstration</td>
<td>From Data to Publication:</td>
<td>AANS Operative Grand Rounds Demonstration</td>
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<td>Dos and Don’ts of Writing and</td>
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<td>Publishing a Neurosurgical Paper</td>
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<td>2:30–3:00 PM</td>
<td>ICD-10: What Neurosurgeons Need to Know</td>
<td>Rhoton Collection Presentations</td>
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<td>Now to Prepare</td>
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<tr>
<td>3:15–5:30 PM</td>
<td>Rhoton Collection Presentations</td>
<td>Rhoton Collection Presentations</td>
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Contribute to the real time discussions by commenting on:

- Clinics and Seminars
- International Programs
- Special Lectures
- Dinners and Receptions
- The Sights and Sounds of the City

Be part of the conversation. Follow us! @AANSNeuro

#AANS2013

Live Tweet the 81st AANS Annual Scientific Meeting
Great deals, new technology, education, meals and more! As you know, the healthcare industry is dynamic, innovative and rapidly changing. Company participation in the AANS Exhibit Hall provides you an opportunity to view, discuss and evaluate the most current devices and services in the industry. Personnel are available at a moment’s notice to answer questions, provide specifications and conduct demonstrations to address specific requirements. Whatever your position in the industry; neurosurgeon, neurosurgical resident or neurosurgical nurse, the 81st AANS Annual Scientific Meeting is the best place to bring your questions and concerns regarding equipment, tools, products and services!

This year, more than 200 companies, occupying more than 750 booths, will showcase their products and services, several of them newly released, many tried and true and all valuable to the life of a neurosurgical practice. Booths will be conveniently located in halls H/I of the Ernest N. Morial Convention Center.

**AANS Exhibit Hall Hours**

- **Monday, April 29**
  9:00 AM–5:30 PM
- **Tuesday, April 30**
  9:00 AM–5:30 PM
- **Wednesday, May 1**
  9:00 AM–2:00 PM

**Beverage Breaks**

While you browse, be sure to enjoy the complimentary beverages offered throughout the AANS Exhibit Hall. The morning break will feature a beignets in addition to beverages.

- **Monday, April 29**
  9:00–9:45 AM
- **Tuesday, April 30**
  9:00–9:45 AM
- **Wednesday, May 1**
  9:00–9:45 AM

**Lunch in the Exhibit Hall**

Tired of the same old box lunches at meetings? Well due to last year’s success we will be offering a wide range of meal options with a Louisiana theme each day. Each medical attendee will be provided with a ticket for a complimentary lunch of their choice. Please be sure to join us in the AANS Exhibit Hall to have lunch and interact with your colleagues and exhibitors!

- **Monday, April 29**
  1:00–2:00 PM
- **Tuesday, April 30**
  1:00–2:00 PM
- **Wednesday, May 1**
  1:00–2:00 PM

**Lunch and Learn Seminars**

Attendees who want to learn more while having lunch in the Exhibit Hall during the Annual Scientific Meeting can stop by the Industry Learning Theater (Booth #751) in the Exhibit Hall on April 29–30, 2013, for short seminars presented by exhibiting companies. Two seminars will be offered each day during the lunch hour, and will occur from 1:15–2:00 p.m. Lunch will be provided and there is no registration required for the seminars, with seating available on a first-come, first-serve basis. For more details regarding each seminar please see page 29 and 30.

**Wine and Cheese Receptions**

Attendees are invited to join exhibitors for a Wine and Cheese Reception in the AANS Exhibit Hall on Monday and Tuesday afternoon beginning at 4:30 PM. This casual gathering not only provides time to network among peers, but also allows you an excellent opportunity to discuss the advances in products and the latest innovations in the field of neurosurgery with exhibitors.

- **Monday, April 29**
  4:30–5:30 PM
- **Tuesday, April 30**
  4:30–5:30 PM
Electronic Posters and Email Stations
Check email and view scientific posters in electronic format. Available Monday through Wednesday during exhibit hours.

Plan Your Visit to the AANS Exhibit Hall Now
For your convenience, the AANS will once again provide an online interactive exhibition tool. This software provides real-time viewing of the exhibit floor and denotes locations of exhibiting partners. Busy attendees can pre-plan their valuable time by searching exhibitor locations by company name, booth number, or product category. In addition you now will have the ability to email the exhibiting companies’ contact to set-up an appointment. To view the interactive exhibit hall, please visit http://www.aans.org/floorplans/aans13/default.html.

Acknowledgement
The AANS would like to thank our members for their continued support and interest in patronizing 2013 AANS Annual Scientific Meeting exhibitors. There is added value to the meeting experience when companies present quality products and services addressing the needs of neurosurgical professionals. The partnership is equally beneficial. Registration fees at the annual meeting would be considerably higher without the income generated from exhibitor participation. In return, exhibitors gain increased exposure to a highly targeted market. Please set aside dedicated time in New Orleans to visit with exhibitors and let them know you value the partnership.

June 14 and 15, 2013 • New York City

Advanced Endoscopic Skull Base and Pituitary Surgery

COURSE DIRECTORS:
Vijay K. Anand, MD, FACS
Theodore H. Schwartz, MD, FACS

GUEST FACULTY:
John Jane Jr, MD
Daniel F. Kelly, MD

2-DAY COURSE DESCRIPTION: This course is a comprehensive overview of the newly emerging field of endoscopic skull base surgery combining didactic sessions with hands-on cadaver dissection. At the completion of this course, participants should be well equipped to start utilizing these approaches in their own practices. Endoscopic instruments and surgical navigation equipment will be available to participants for use on fresh cadavers during laboratory sessions. Participants will have an opportunity to discuss difficult cases with the faculty during panel discussions. Early registration is highly recommended.

ACCREDITATION & CREDIT DESIGNATION STATEMENTS: Weill Cornell Medical College is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. Weill Cornell Medical College designates this live activity for a maximum of 17 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

LOCATION:
Weill Cornell Medical College
1300 York Avenue
New York, NY 10065

INFORMATION: Course Coordinator
Tel: 212-585-6800
email: nycme@nyp.org
www.cornellneurosurgery.org

Weill Cornell Medical College
NewYork-Presbyterian/Weill Cornell Medical Center
Exhibitor Information

New! Lunch-and-Learn Seminars

Up for a little learning during your lunch break? On Monday, April 29; and Tuesday, April 30, stop by the AANS Exhibit Hall, grab a free lunch, and hear our industry partners lead informative seminars on topics such as radiation safety, lumbar lordosis restoration, head injury management and perspectives on flow diversion. Two sessions will be held each afternoon from 1:15–2:00 PM.

Located in the AANS Exhibit Hall’s Industry Learning Theatre (Booth #751), these seminars are included in your conference registration. Seating will be available on a first-come, first-serve basis. CME is not available for these sessions. Seminar details are below.

Lumbar Lordosis Restoration and Clinical Implications

**Date and Time:** Monday, April 29, 1:15–2:00 PM

**Speakers:**
- Regis Haid, MD
- Christopher Shaffrey, MD
- Chad Prusmack, MD
- Paul Park, MD

**Description:**
The importance of establishing lumbar lordosis in patients with adult deformity is becoming well accepted. Join us for an engaging program tracing the evolution of targeting this key parameter and its importance in successful outcomes. We will provide insight into the application of various treatment methodologies for improving lordosis, from traditional approaches to new advances in MIS.

**Educational Provider:**

Armed and Dangerous:
Radiation Safety for the Neurosurgeon

**Date and Time:** Monday, April 29, 1:15–2:00 PM

**Speakers:**
- Adam Arthur, MD, MPH, FACS
- Eric W. Nottmeier, MD

**Description:**
This seminar will provide the spine and neurosurgeon a basic understanding of radiation safety for patients and staff. Discussions will be centered upon best practices for achieving the balance between low dose imaging and excellent image quality.

**Educational Provider:**

Evolving Perspectives on Flow Diversion

**Date and Time:** Tuesday, April 30, 1:15–2:00 PM

**Speakers:**
- Jacques J. Morcos, MD
- Howard Riina, MD
- Ricardo A. Hanel, MD

**Description:**
A discussion among clinical experts on the history of flow diversion, its results in clinical practice and its effectiveness compared to surgical treatment options.

**Educational Provider:**

Globus Medical
Current Controversies in Head Injury Management

Speakers:
Anil Nanda, MD, MPH, FACS
Jamie S. Ullman, MD
Daniel Michael, MD, PhD

Description:
The seminar will discuss the current concepts on the role of intracranial pressure monitoring and decompressive craniectomy in traumatic brain injury. Discussion will include current guidelines and recent advances in the management of head injury.

Educational Provider:

Click here for a map of the AANS Exhibit Hall floor to view the location of the Industry Learning Theatre.

Note: The information in these presentations is in no way sponsored or endorsed by the AANS. The educational content is developed and delivered by exhibiting companies and their experts. While the primary intent of this content is to provide detailed information about products, findings, and appropriate use of products, some content also may contain product- or company-specific marketing messages.
Pinnacle Partners

From scientific meetings and educational courses to communications vehicles and research fellowships, the Pinnacle Partners program offers the unique opportunity for corporate supporters to demonstrate a sustained commitment to the success of the neurosciences while increasing recognition and exposure to the neurosurgical community. Support of Pinnacle Partners in Neurosurgery program goes beyond traditional sponsorships; it is commitment to advancing the field of neurosurgery in important areas such as research, education, and training.

This corporate giving program affords recognition and benefits not only at the annual meeting but throughout the year, including involvement with key opinion leaders in the field and the chance to further neurosurgical research through the Neurosurgery Research and Education Foundation (NREF). The AANS is grateful to our Pinnacle Partners in Neurosurgery:

- Biomet
- Brainlab
- Carl Zeiss Meditec, Inc.
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- Covidien
- DePuy Synthes Companies of Johnson & Johnson
- Elekta
- Globus Medical
- Integra LifeSciences
- Leica Microsystems
- Medtronic
- MicroVention, Inc.
- NuVasive, Inc.
- Penumbra, Inc.
- Siemens Medical Systems
- Spine Wave, Inc.
- Varian Medical Systems

For information about these corporate supporters or the Pinnacle Partners in Neurosurgery program, please contact Kristen Weber, Director of Development at kaw@aans.org.
AANS Commercial Supporters

The AANS wishes to thank the following companies for their support of this year’s Annual Scientific Meeting.

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**Bronze Level Supporter $1,000–$24,999**

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Karl Storz Endoscopy-America, Inc.
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MicroVention, Inc.
MRI Interventions, Inc.
NeuroLogica Corporation
NuVasive, Inc.
Stryker
Varian Medical Systems
Zimmer Spine
Exhibitor Listing

Exhibitor listing as of Thursday, March 14th. For up-to-date information, please refer to the Mobile Meeting App.

American Association of Neurological Surgeons
5550 Meadowbrook Drive
Rolling Meadows, IL 60008
Phone: (847) 378-0500
Fax: (847) 378-0600
www.aans.org
Booth #1439
The AANS is pleased to present the 81st annual scientific meeting using multiplatform formats including Apple, Android, BlackBerry and website access. You will be able to access and integrate every aspect of the Miami New Orleans Annual Scientific Meeting. The AANS continually offers many benefits to its members including innovative educational programming, clinical and practice management publications, information on AANS meetings including coding and practice management courses, and alternate options to earn CME credit. Other benefits include the AANS Journals of Neurosurgery, AANS Online Career Center, information on EHR systems, patient education materials and more! Additional information on these programs may be found in the Products and Services area in the AANS Annual Scientific Meeting app. For assistance and/or charging stations for your iPod touch, please be sure to visit the AANS Resource Center, booth 1439, in the exhibit hall.

AANS/CNS Sections
5550 Meadowbrook Drive
Rolling Meadows, IL 60008
Phone: (847) 378-0500
Fax: (847) 378-0600
www.aans.org
Booth #1446
Visit the AANS/CNS Section booth 1446 for section news, membership application information and information on upcoming meetings.

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1240 Deming Way
Madison, WI 53717
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Fax: (608) 824-2991
www.accuray.com
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www.advancedbiologicscorp.com
Booth #1921
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Phone: (800) 258-1946
Fax: (610) 791-6880
www.aesculapusa.com
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Fax: (855) 639-6611
www.algeatherapies.com
Booth #926
Algea Therapies, a division of Globus Medical, was created to expand the continuum of care for people with back pain by developing innovative, minimally invasive interventional spine therapies that are effective, easy to use, and designed with the patient’s quality of life in mind.

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Fax: (801) 839-3605
www.amedica.com
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Lynn, MA 01902
Phone: (781) 592-7200
Fax: (781) 595-5460
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ASC (American Surgical Company; Lynn, MA; americansurgical.com) manufactures a broad line of cotton and synthetic sponges, patties, and specialty products. A range of neurosurgical needs are met across the product line, including absorption, pliability, visibility, non-adherence to tissue in drying conditions, and protection from surgical instruments.
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Fax: (715) 847-2742
www.aspirusprovideropps.org
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www.bafound.org
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Fax: (512) 340-1481
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Booth #1113
Pioneer Surgical is a progressive medical device firm with a comprehensive portfolio of industry-leading orthopedic, biologic and spine products. Pioneer is focused on creating innovative, cost-effective surgical solutions that benefit surgeons and provide better patient outcomes.

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Fax: (952) 470-0865
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Booth #1823
PMT Corporation is the premier supplier of an extensive line of neurosurgical products. Offering highend neck braces, including halo systems and orthotic vests for cervical, thoracic and lumbar spinal immobilization. PMT also offers Cortac, cortical surface electrodes and Depthalon, depth electrodes for epilepsy monitoring; microsurgical, irrigation and instruments.
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Phone: (973) 455-7150
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Precision Spine is spinal device company offering a full line of spinal pathology solutions to meet the needs of patients, surgeons and healthcare providers. Our objective is to positively affect patient recovery and overall surgical outcomes by providing quality spinal products, along with excellent customer service and competitive pricing.

Prescott’s, Inc.
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Fax: (888) 252-7124
www.pronerve.com
Booth #1816

Pro-Dex Inc.
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Irvine, CA 92614
Phone: (800) 562-6204
Fax: (949) 769-3280
www.pro-dex.com
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Pro-Dex, Inc. designs, manufactures and assembles highly reliable powered medical devices for leading Medical Device OEMs. As a FDA-registered, ISO 13485:2003-certified manufacturer, Pro-Dex offers turn-key solutions, including full regulatory support, to help OEMs get powered surgical products to market quickly and effectively.

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Fax: (949) 784-0311
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Fax: (757) 224-4515
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Fax: (716) 608-0006
www.rosemicrosolutions.com
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716-608-0009

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Phone: (216) 256-9020
Fax: (440) 247-2434
www.rosmansearch.com
Booth #1212
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Fax: (386) 462-1837
www.rtibiologics.com
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Davie, FL 33328
Phone: (800) 286-9155
www.safe-wire.com
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www.scanlaninternational.com
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Schaefer Medical manufactures and sells general and specialty surgical tables as well as a wide assortment of table accessories. The heavy duty Arcus is the latest release in the over 100 year history of Schaefer general surgery tables. The specialty product line includes tables for all disciplines. The Chick LP is the ultimate lower extremity fracture table. The Chick MIS Extension is specially designed for anterior approach hip replacement. The Chick 7300 multi-specialty table can turn into an orthopedic, urology, spine, or pain management tables with the simple addition of accessories. We are very pleased to introduce the Stille II imaging table and our new line of Spine Tables, Clear Access and spine surgery positioning products.

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www.selectmedical.com
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Select Medical's rehabilitation hospitals provide comprehensive physical medicine, as well as rehabilitation programs and services. We address the rehabilitation needs for individuals with brain injury, spinal cord injury, stroke, amputation, neurological disorders, orthopedic conditions and multiple traumas. From New Jersey to Texas, the Select Medical network of rehabilitation hospitals includes several care locations, including the nationally renowned Kessler Institute for Rehabilitation in NJ.

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SI-BONE, Inc. is the leading sacroiliac (SI) joint medical device company dedicated to the development of tools for diagnosing and treating patients with low back issues related to SI joint disorders. The company is manufacturing and marketing a minimally invasive surgical (MIS) technique for the treatment of SI joint pathology.
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www.sonowand.com
Booth #1413

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Phone: (303) 790-9411
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www.sontecinstruments.com
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Sophysa is focused on the design and manufacture of innovative CSF Management technologies and solutions. Sophysa’s pioneering research and development continues to expand the reach of the global neurosurgical community, focusing on Hydrocephalus, and related disorders of CSF dynamics.

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www.spiegelberg.de
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www.spinalelements.com
Booth #1220

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Spine Wave Inc.
3 Enterprise Drive, Suite 210
Shelton, CT 06484
Phone: (203) 944-9494
Fax: (203) 944-9493
www.spinewave.com
Booth #539

Spine Wave develops and markets clinical solutions for several market segments, including nuclear augmentation, tumor, trauma, and spinal fusion. The company’s product portfolio includes NuCore® Injectable Nucleus, StaXx® XD and XDL (Lateral) Expandable Devices, CapSure® PS3 Spine System, Sniper® Spine System, Cervical Plate and Spacer, and additional products.
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Fax: (978) 232-3991
www.spinefrontier.com
Booth #1820
SpineFrontier Inc., a medical device company that designs, develops, and markets implants and instruments used in the treatment of spinal diseases. It offers anterior cervical plates; FacetFuse MIS screw systems; interspinous fixation system; pedicle screw systems; MIS pedicle screw systems; spinal intervertebral body fusion (IBF) devices; lumbar IBF systems; anterior lumbar IBF systems; biologics materials; and retractor systems. SpineFrontier Inc. was founded in 2006 and is based in Beverly, Massachusetts.

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www.spineology.com
Booth #1428
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www.spineview.com
Booth #2043
SpineView™ is Revolutionizing MIS Spine Surgery. We are committed to the development and commercialization of novel, minimally invasive technologies designed to improve spinal decompression and fusion. SpineView consists of exciting products such as the enSpire™ product line (Interventional, Microdiscectomy, and Surgical Flex), and the MIS Decompression System with Direct Visualization.

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Phone: (415) 494-8150
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Booth #1842
SpineVision’s current products offer solutions for approximately 90% of spinal pathologies i.e. deformities, lumbar degenerative disc diseases, cervical disorders, trauma and tumors. SpineVision is now focusing its RandD efforts on Hybrid Stabilisation and Minimally Invasive technologies.

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Fax: (877) 506-8295
www.sjm.com
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Phone: (855) 267-5551
www.stabilitybio.com
Booth #653
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Fax: (608) 828-5268
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Phone: (713) 726-0886
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www.tedansurgical.com
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Fax: (630) 961-1401
www.thinkfirst.org
Booth #1216
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Fax: (231) 922-0174
www.thompsonsurgical.com
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www.vti-spine.com
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150 153rd Avenue N., Suite 201
St. Petersburg, FL 33708
Phone: (727) 565-1235
Fax: (727) 388-0227
www.vginnovations.com
Booth #1041
Founded in 2007, VG Innovations, LLC, (VGI) is a privately held medical device company headquartered in St. Petersburg, FL. VGI is focused on developing a broad range of minimally invasive spinal implants and surgical instrument systems through industry knowledge, creative thinking and engineering prowess.

Visionsense Corp.
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Whitehouse Station, NJ 8889
Phone: (845) 680-0233
Fax: (845) 503-2256
www.visionsense.com
Booth #1916
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Phone: (937) 847-8400
Fax: (937) 847-8410
www.x-spine.com

Booth #2330
X-spine is a next generation spinal implant company delivering intuitive technologies for the treatment of spinal disease worldwide. X-spine is committed to the highest standards of product quality in services of the patient and physician. Our spinal implants and instrumentation are made in the USA and exported worldwide.

Zimmer Spine
7375 Bush Lake Road
Minneapolis, MN 55439
Phone: (800) 655-2614
Fax: (952) 832-5620
www.zimmerspine.com

Booth #1013
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### Exhibitor Listing—Alphabetical

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Exhibitor Listing By Booth Number

313  TeDan Surgical Innovations
321  Neurosurgical Top Gun Competition
331  NuTech Spine
413  Carl Zeiss Meditec, Inc.
423  Varian Medical Systems
429  Stryker
439  Mazor Robotics
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1842     SpineVision
1845     NuVasive, Inc.
1846     CareFusion
1848     DiscGenics
1850     New World Rarities, Ltd.
1851     Congress of Neurological Surgeons
1852     Pinnacle Spine Group
1854     MicroAire Surgical Instruments
1855     Precision Spine
1856     Collaborative Spine Research Foundation
1857     TFM Publishing
1858     Visionsense Corp.
1859     Micromar
1860     Advanced Biologics
1861     Jackson & Coker
1862     LDR
1863     NovaBone Products LLC
1864     Joimax Inc.
1865     Nexus Spine, LLC
1866     InSightec Ltd.
1867     National Research Council of Canada
1868     Hans Biomed USA, Inc.
1869     Tissuenet
1870     IMRIS
1871     Medics & Menders Premium Performance Scrubs
1872     Schaefer Medical USA, Inc.
1873     Vertebral Technologies, Inc.
1874     Select Medical–Inpatient Rehabilitation Hospitals
1875     Infinite Therapeutics
1876     NICO Corp.
1877     Covidien
1878     Boston Engineering
1879     Aurora Spine
1880     Oakstone Medical Publishing
1881     Imedicom
1882     SpineView, Inc.
1883     Bioplate Inc.
1884     Mazur Marketing
1885     Surgical Theater, LLC
1886     St. Jude Medical
1887     OsteoSymbionics LLC
1888     MicroVention, Inc.
1889     NeuroLogica Corporation
1890     Siemens Medical Solutions USA Inc
1891     Alphatec Spine, Inc.
1892     Tap EMR LLC
1893     Safewire, LLC
2219     Esaote North America
2224     Arbor Pharmaceuticals, Inc.
2225     Arbor Pharmaceuticals, Inc.
2226     Cyberonics
2239     Elekta
2244     Alpha Omega
2330     X-Spine Systems
### Exhibitor Listing By Product and Service Category

#### Allografts/Human Tissue
- 1921 Advanced Biologics
- 2139 Alphatec Spine, Inc.
- 1724 Bacterin
- 748 BioD, LLC
- 1029 DePuy Synthes
- 1950 Hans Biomed USA, Inc.
- 1117 Harvest Technologies Corp.
- 1320 Innovasis
- 1839 K2M Inc.
- 613 Medtronic
- 331 NuTech Spine
- 1831 Orthofix, Inc.
- 1113 Pioneer Surgical
- 1913 Precision Spine
- 1519 RTI Biologics
- 1820 SpineFrontier, Inc.
- 1428 Spineology Inc
- 653 Stability Biologics
- 1041 VG Innovations, LLC

#### Anatomical Charts/Models
- 1239 Anatom-e Neuro Information Systems Ltd.

#### Aneurysm Clips & Accessories
- 1730 Aesculap Inc.
- 1438 Apex Medical, Inc.
- 839 Mizuho America, Inc.

#### Bone Growth Stimulators
- 913 Biomet Spine & Bone Healing Technologies
- 1831 Orthofix, Inc.

#### Bone Substitute
- 1921 Advanced Biologics
- 2139 Alphatec Spine, Inc.
- 1432 Amedica Corporation
- 1713 Baxter Healthcare Corporation
- 919 Biomet Microfixation
- 1217 Collagen Matrix, Inc.
- 1950 Hans Biomed USA, Inc.
- 1117 Harvest Technologies Corp.
- 1218 Kelyniam
- 1939 NovaBone Products LLC
- 945 Osteomed
- 1113 Pioneer Surgical
- 429 Stryker

#### Brain Retraction Systems
- 1515 G. Surgiwear Limited
- 839 Mizuho America, Inc.
- 1338 Pro Med Instruments, Inc.

#### Computer Hardware
- 1146 inomed
- 1414 Panasonic System Communications Company

#### Computer Software/Office
- 1743 NextGen Healthcare
- 1442 Patient Education Institute
- 2144 Tap EMR LLC

#### Computer Software/Surgical
- 1239 Anatom-e Neuro Information Systems Ltd.
- 2038 Boston Engineering Corporation
- 1812 COMPASS International, Inc.
- 1241 FHC, Inc. (Frederick Haer Co.)
- 1120 Monteris Medical Inc.
- 1947 National Research Council of Canada
- 1622 Renishaw plc
- 2120 Surgical Theater, LLC
- 423 Varian Medical Systems

#### Continuing Medical Education Courses
- 1446 AANS/CNS Sections
- 1730 Aesculap Inc.
- 1439 American Association of Neurological Surgeons
- 1815 Congress of Neurological Surgeons

#### Cranial Stabilization Systems
- 1320 Innovasis
- 1218 Kelyniam
- 1120 Monteris Medical Inc.
- 1338 Pro Med Instruments, Inc.

#### Craniotomes, Drills & Accessories
- 833 Acra Cut, Inc.
- 1730 Aesculap Inc.
- 919 Biomet Microfixation
- 1525 CMF Medicon Surgical, Inc.
- 1218 Kelyniam
- 933 Kirwan Surgical Products, Inc.
- 1120 Monteris Medical Inc.
- 1047 NSK Nakanishi, Inc.
- 945 Osteomed
- 1612 Pro Dex Inc.
- 429 Stryker

#### CSF Drainage Devices
- 1515 G. Surgiwear Limited
- 1349 InnerSpace, Inc.
- 1425 Raumedic
- 447 Sophysa USA Inc.

#### CT/MRI/Magnetic Source Imaging
- 2013 IMRIS
- 1120 Monteris Medical Inc.
- 2131 NeuroLogica Corporation
- 1413 Sonowand

#### Diagnostic Imaging
- 2244 Alpha Omega
- 1239 Anatom-e Neuro Information Systems Ltd.

#### Worldwide Association of Neurology & Neurosurgery Societies (AANS/CNS) Sections
- 2244 Alpha Omega
| 2219 | Esaote North America |
| 1515 | G. Surgiwear Limited |
| 1440 | IEEE Engineering in Medicine & Biology Society |
| 1615 | Nexstim, Inc. |
| 2120 | Surgical Theater, LLC |
| 2128 | Ziehm Imaging Inc. |

**Dura Substitute**
- 1217 Collagen Matrix, Inc.
- 1613 Medprin Biotech LLC
- 839 Mizuho America, Inc.
- 429 Stryker

**Endoscopy, Neurological**
- 1730 Aesculap Inc.
- 1438 Apex Medical, Inc.
- 1851 joimax Medical
- 928 Karl Storz Endoscopy America, Inc.
- 429 Stryker
- 1916 VisionSense Corp.

**Endovascular Devices**
- 1029 Codman
- 2130 MicroVention, Inc.
- 1139 Penumbra Inc.
- 429 Stryker

**Financial Advisement**
- 1850 New World Rarities, Ltd.

**Functional Devices**
- 1239 Anatom-e Neuro Information Systems Ltd.
- 1438 Apex Medical, Inc.
- 2039 Aurora Spine
- 1440 IEEE Engineering in Medicine & Biology Society
- 1146 inomed
- 1450 North American Neuromodulation Society
- 1612 Pro Dex Inc.

**Functional Stereotactic Surgery**
- 2244 Alpha Omega
- 1239 Anatom-e Neuro Information Systems Ltd.
- 1438 Apex Medical, Inc.
- 1812 COMPASS International, Inc.
- 1317 Cosman Medical
- 1146 inomed
- 1917 Micromar
- 1120 Monteris Medical Inc.
- 1221 MRI Interventions, Inc.
- 1622 Renishaw plc
- 1413 Sonowand
- 423 Varian Medical Systems

**Halo Systems/Spinal Orthosis**
- 931 Bremer Group Company
- 1029 DePuy Synthes
- 2119 PMT Corporation

**Headlights, Surgical**
- 746 ASSI Accurate Surgical Systems
- 1347 BFW, Inc.
- 1223 CUDA Surgical
- 1030 Designs For Vision Inc.
- 928 Karl Storz Endoscopy America, Inc.
- 845 KLS Martin , LP
- 1513 PeriOptix, Inc.
- 1312 QED Medical
- 1722 Rose Micro Solutions LLC
- 1343 Surgical Acuity

**Hemostats**
- 833 Acra Cut, Inc.
- 1713 Baxter Healthcare Corporation
- 1712 Scanlan International, Inc.

**Image Guided Navigation Systems**
- 1815 Accuray Inc.
- 2244 Alpha Omega
- 1239 Anatom-e Neuro Information Systems Ltd.
- 1812 COMPASS International, Inc.
- 1241 FHC, Inc. (Frederick Haer Co.)
- 613 Medtronic
- 1917 Micromar
- 1120 Monteris Medical Inc.
- 1221 MRI Interventions, Inc.
- 1615 Nexstim, Inc.
- 1622 Renishaw plc
- 1413 Sonowand
- 429 Stryker
- 2120 Surgical Theater, LLC

**Lasers**
- 1120 Monteris Medical Inc.

**Medical Devices**
- 833 Acra Cut, Inc.
- 1815 Accuray Inc.
- 1333 Ad Tech Medical Instrument Corporation
- 1921 Advanced Biologics
- 926 Algea Therapies
- 2139 Alphatec Spine, Inc.
- 1432 Amedica Corporation
- 1438 Apex Medical, Inc.
- 2039 Aurora Spine
- 1724 Bacterin
- 1420 Baxano, Inc.
- 1347 BFW, Inc.
- 913 Biomet Spine & Bone Healing Technologies
- 2046 Bioplate Inc.
- 1412 BK Medical
- 2038 Boston Engineering Corporation
- 1838 Boston Scientific Neuromodulation
- 1029 Codman
- 1217 Collagen Matrix, Inc.
- 1812 COMPASS International, Inc.
- 1317 Cosman Medical
- 2031 Covidien
- 2226 Cyberonics
- 1029 DePuy Synthes
- 1419 DiFine Inc.
- 1848 DiscGenics
- 1315 Electrical Geodesics, Inc. (EGI)
- 2239 Elekta
- 1039 Eliquence LLC
- 1241 FHC, Inc. (Frederick Haer Co.)
- 1515 G. Surgiwear Limited
- 925 Globus Medical
- 1117 Harvest Technologies Corp.
- 1518 Hensler Surgical Products Corp.
- 1440 IEEE Engineering in Medicine & Biology Society
- 2013 IMRIS
- 1320 Innovasis
- 1146 inomed
- 1946 InSightec Ltd.
- 1339 Invuity Inc.
- 1851 joimax Medical
| 1839 | K2M Inc.                          |
| 1218 | Kelyniam                          |
| 647  | Lanx Inc                          |
| 1931 | LDR                              |
| 439  | Mazor Robotics                    |
| 2016 | Medics & Menders Premium Performance Scrubs |
| 1613 | Medprin Biotech LLC               |
| 1329 | Medtech SAS                       |
| 1520 | Medtrak                           |
| 613  | Medtronic                         |
| 2130 | MicroVention, Inc.               |
| 839  | Mizuho America, Inc.              |
| 1120 | Monteris Medical Inc.             |
| 2131 | NeuroLogica Corporation           |
| 553  | Newport Surgical Instruments, Inc.|
| 1615 | Nexstim, Inc.                     |
| 1944 | Nexus Spine, LLC                  |
| 2029 | NICO Corp.                        |
| 1939 | NovaBone Products LLC             |
| 1423 | NSI Health Systems, LLC           |
| 331  | NuTech Spine                      |
| 1845 | NuVasive, Inc.                    |
| 945  | Osteomed                          |
| 2128 | OsteoSymbionics LLC               |
| 1414 | Panasonic System Communications Company |
| 546  | Paradigm Spine, LLC               |
| 548  | ParaMed Spine, LLC                |
| 1113 | Pioneer Surgical                  |
| 2119 | PMT Corporation                   |
| 1913 | Precision Spine                   |
| 1612 | Pro Dex Inc.                      |
| 551  | Quinn Medical                     |
| 1425 | Raumedic                          |
| 2145 | Safewire, LLC                     |
| 1712 | Scanlan International, Inc.       |
| 1142 | SI BONE, Inc.                     |
| 2138 | Siemens Medical Solutions USA Inc|
| 1521 | Spiegelberg GmbH & Co. KG         |
| 1220 | Spinal Elements                   |
| 539  | Spine Wave Inc.                   |
| 1820 | SpineFrontier, Inc.               |
| 1522 | SpineGuard                        |
| 1428 | Spineology Inc                    |
| 2043 | SpineView, Inc.                   |
| 1842 | SpineVision Inc.                  |
| 2125 | St. Jude Medical                  |
| 2120 | Surgical Theater, LLC             |
| 2213 | US Medical Innovations            |
| 2021 | Vertebral Technologies, Inc.      |
| 1041 | VG Innovations, LLC               |
| 2330 | X Spine Systems                   |
| 1013 | Zimmer Spine                      |

**Microscope Systems**

| 413  | Carl Zeiss Meditec, Inc.          |
| 1030 | Designs For Vision Inc.           |
| 1145 | Haag Streit Surgical GmbH        |
| 639  | Leica Microsystems               |
| 1513 | PeriOptix, Inc.                  |
| 1430 | Prescott's, Inc.                 |
| 1514 | Shanghai New Eyes Medical Co., Ltd. |

**Microsurgical Instrumentation**

| 1730 | Aesculap Inc.                    |
| 1438 | Apex Medical, Inc.               |
| 746  | ASSI Accurate Surgical           |
| 919  | Biomet Microfixation             |
| 1213 | BOSS Instruments Ltd.            |
| 1525 | CMF Medicon Surgical, Inc.       |
| 1019 | Fehling Surgical Instruments, Inc.|
| 1851 | FHC, Inc. (Frederick Haer Co.)   |
| 928  | Karl Storz Endoscopy America, Inc.|
| 933  | Kirwan Surgical Products, Inc.   |
| 1912 | MicroAire Surgical Instruments   |
| 839  | Mizuho America, Inc.             |
| 553  | Newport Surgical Instruments, Inc.|
| 1712 | Scanlan International, Inc.      |
| 1413 | Sonowand                         |

**Monitoring Systems**

| 1333 | Ad Tech Medical Instrument Corporation |
| 1241 | FHC, Inc. (Frederick Haer Co.)        |
| 1623 | Hemedex Inc.                         |
| 1349 | InnerSpace, Inc.                     |
| 1320 | Innvoasis                             |
| 1146 | inomed                                |
| 550  | NeuroAlert                            |
| 1414 | Panasonic System Communications Company |
| 1816 | ProNerve, LLC                        |

**Operating Tables, Accessories**

| 839  | Mizuho America, Inc.               |
| 939  | Mizuho OSI                          |
| 2020 | Schaefer Medical USA, Inc.          |
| 1514 | Shanghai New Eyes Medical Co., Ltd. |
| 1721 | UFSK International OSYS GmbH       |

**Other**

| 1815 | Accuray Inc.                       |
| 1713 | Baxter Healthcare Corporation      |
| 652  | Biotronic NeuroNetwork             |
| 1431 | Brainlab                            |
| 1741 | CCV                                |
| 1914 | Collaborative Spine Research Foundation |
| 1815 | Congress of Neurological Surgeons  |
| 650  | Evonik Degussa Corporation         |
| 1117 | Harvest Technologies Corp.         |
| 1440 | IEEE Engineering in Medicine & Biology Society |
| 451  | Immersive Touch                    |
| 2025 | Infinite Therapeutics              |
| 1146 | inomed                              |
| 629  | Integra                            |
| 1032 | Market Access Partners             |
| 439  | Mazor Robotics                     |
| 1523 | Medical Education & Research Institute |
| 2016 | Medics & Menders Premium Performance Scrubs |
| 939  | Mizuho OSI                          |
| 748  | National Institute of Neurological Disorders and Stroke (NINS) |
| 1753 | Neuro News/Biba Medical            |
| 1450 | North American Neuromodulation Society |
| 1512 | North American Spine Society       |
| 1722 | Rose Micro Solutions LLC           |
| 1712 | Scanlan International, Inc.        |

**Patient Education Information**

| 1446 | AANS/CNS Sections                  |
| 1439 | American Association of Neurological Surgeons |
| 651  | Brain Aneurysm Foundation (The)     |
| 1914 | Collaborative Spine Research Foundation |
| 1119 | Hydrocephalus Association           |

WWW.AANS.ORG
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<th>Select Medical Inpatient Rehabilitation Hospitals</th>
<th>Biomet Spine &amp; Bone Healing Technologies</th>
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1625  InTech Medical
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1839  K2M Inc.
928  Karl Storz Endoscopy America, Inc.
933  Kirwan Surgical Products, Inc.
845  KLS Martin, LP
1118  Kogent Surgical, LLC
1138  Koros USA, Inc.
647  Lanx Inc
827  Life Instrument Corporation
2050  Mazur Marketing
2016  Medics & Menders Premium Performance Scrubs
451  Medyssey Co
839  Mizuho America, Inc.
553  Newport Surgical Instruments, Inc.
1245  Novid Surgical, LLC
1852  Pinnacle Spine Group
1338  Pro Med Instruments, Inc.
1612  Pro Dex Inc.
1622  Renishaw plc
1722  Rose Micro Solutions LLC
1712  Scanlan International, Inc.
1047  SK Nakanishi, Inc.
1323  Sontec Instruments
2043  SpineView, Inc.
313  TeDan Surgical Innovations
2213  US Medical Innovations
1618  Wiggins Medical

Surgical Retractors
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1525  CMF Medicon Surgical, Inc.
1019  Fehling Surgical Instruments, Inc.
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1113  Pioneer Surgical
1712  Scanlan International, Inc.
313  TeDan Surgical Innovations
1121  Thompson Surgical Instruments, Inc.

Sutures/Sponges
750  American Surgical Company

Telescopes, Surgical (Loupes)
413  Carl Zeiss Meditec, Inc.
1030  Designs For Vision Inc.
1513  PeriOptix, Inc.
1323  Sontec Instruments
1343  Surgical Acuity
1023  SurgiTel/General Scientific Corporation

Ultrasound Equipment
1412  BK Medical
1725  Hitachi Aloka Medical Ltd.
1413  Sonowand

Video Equipment
1239  Anatome Neuro Information Systems Ltd.
1347  BFW, Inc.
1223  CUDA Surgical
1851  joimax Inc.
928  Karl Storz Endoscopy America, Inc.
639  Leica Microsystems
1414  Panasonic System Communications Company
1430  Prescott's, Inc.
1312  QED Medical
1514  Shanghai New Eyes Medical Co., Ltd.
1916  Visionsense Corp.
Exhibitor Floor Plan
Saturday, April 27

Day-At-A-Glance

Bus Information
The AANS will provide shuttle service at regular intervals between the Ernest N. Morial Convention Center and all AANS hotels starting at 6:30 AM. See page 153 for Shuttle schedule. A full schedule is available at all AANS hotels and the Ernest N. Morial Convention Center.

Registration Hours
6:30 AM–5:30 PM
Location: Lobby H/I, Ernest N. Morial Convention Center

Speaker Ready Room
7:00 AM–5:00 PM
Location: 283, Ernest N. Morial Convention Center

Practical Clinic Hours
8:00 AM–5:00 PM
8:00 AM–12:00 PM
1:00–5:00 PM

Morning Beverage Break
9:45–10:15 AM
Location: Foyers Outside 260, 283 and 383, Ernest N. Morial Convention Center

Practical Clinic Lunch*
12:00–1:00 PM
Location: 275/277, Ernest N. Morial Convention Center
*For attendees participating in an All Day Practical Clinic or in a morning AND afternoon Practical Clinic Only.

Afternoon Beverage Break
2:45–3:15 PM
Location: Foyers Outside 260, 283 and 383, Ernest N. Morial Convention Center
**Practical Clinics**

**8:00 AM–5:00 PM**

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**001 Disaster Management And Emergency Preparedness (DMEP)**

**Location:** 274, Ernest N. Morial Convention Center

**Director:** Leonard Weireter, MD

**Faculty**
Joyce Doucet, MD
Jorie Klein, RN
Glen Tinkoff, MD

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**002 Introduction To Cerebrovascular Neurosurgery For Residents**

**Hands-On Location:** 384/385, Ernest N. Morial Convention Center

**Lecture Location:** 391/392, Ernest N. Morial Convention Center

**Co-Directors:** J D. Mocco, MD, Erol Veznedaroglu, MD

**Faculty**
Adam S. Arthur, MD, MPH
Mandy Jo Binning, MD
Patrick P. Han, MD
Jay U. Howington, MD
Alexander A. Khalessi, MD
Louis J. Kim, MD
Matthew F. Lawson, MD
Elad I. Levy, MD
William J. Mack, MD
Christopher S. Ogilvy, MD
Aditya S. Pandey, MD
Howard A. Riina, MD
Andrew J. Ringer, MD
Adnan H. Siddiqui, MD, PhD
Raymond D. Turner IV, MD
Henry H. Woo, MD

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**003 Critical Care Procedures For The Neurosurgical Mid–Level Practitioner**

**Location:** 286/287, Ernest N. Morial Convention Center

**Co-Directors**
Tracey Anderson, CNRN, FNP-BC, ACNP-BC
Marianne E. Langlois

**Faculty**
Anu Bedi, PA–C
Kelli McKee, PA
Christopher I. Shaffrey, MD
Shelly D. Timmons, MD, PhD

This Practical Clinic is supported by an educational grant provided by

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**004 Thoracic And Lumbar Stabilization And Fusion: Indications And Complications**

**Location:** 291/292, Ernest N. Morial Convention Center

**Co-Directors**
Regis W. Haid Jr., MD, Christopher I. Shaffrey, MD

**Faculty**
Dean Chou, MD
Charles Kuntz, MD
Praveen V. Mummaneni, MD
Juan Santiago Uribe, MD
Michael Y. Wang, MD

This Practical Clinic is supported by an educational grant provided by

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WWW.AANS.ORG
006 Coding, Compliance And Revenue Issues in Spine Coding

Location: 293, Ernest N. Morial Convention Center
Director: Joseph S. Cheng, MD, MS
Faculty
R. Patrick Jacob, MD
Robert R. Johnson II, MD
Alexander M. Mason, MD
Kim Pollock, RN, MBA
John K. Ratliff, MD

007 Spinal Stabilization, Fusion And Instrumentations: Biomechanics And Techniques

Location: 294–296, Ernest N. Morial Convention Center
Co-Directors: Kaushik Das, MD, Langston T. Holly, MD
Faculty
Raul Jose Cardenas III, MD
Daniel K. Fahim, MD
Virany H. Hillard, MD
Adam S. Kanter, MD
Saad Abul Khairi, MD
Nicholas Theodore, MD
This Practical Clinic is supported by an educational grant provided by

DePuy Synthes
COMPANIES OF JOHNSON & JOHNSON

009 Update On Spine Trauma Management

Location: 284/285, Ernest N. Morial Convention Center
Co-Directors: Michael G. Fehlings, MD, PhD, James S. Harrop, MD
Faculty
Bizhan Aqrabi, MD
Richard G. Ellenbogen, MD
Haynes Harkey III, MD
Allan D. Levi, MD, PhD
Nicholas Theodore, MD
Joseph C. Zacko, MD

010 Update On Spinal Radiosurgery

Location: 393/394, Ernest N. Morial Convention Center
Co-Directors: Mark H. Bilsky, MD, Peter C. Gerszten, MD, MPH
Faculty
Lilyana Angelov, MD
Steven D. Chang, MD
James McInerney, MD
Jason P. Sheehan, MD, PhD
Jason Andrew Weaver, MD
Kevin C. Yao, MD
012 Microsurgical Management Of Intracranial Aneurysms: Site Specific Surgical Anatomy, Operation Intervention and Complication Management

Location: 288–290, Ernest N. Morial Convention Center
Director: Arthur L. Day, MD
Faculty
H. Hunt Batjer, MD
Ralph G. Dacey Jr., MD
Steven L. Giannotta, MD
This Practical Clinic is supported by an educational grant provided by CODMAN NEURO

1:00–5:00 PM

005 Advanced Strategies For Your Neurosurgical Practice

Location: 297, Ernest N. Morial Convention Center
Co-Directors: Gary M. Bloomgarden, MD, Scott A. Butler, CMPE
Faculty
Todd Barnes
David F. Jimenez, MD
Kristopher M. Webb, MD
Monica C. Wehby, MD

008 3D Anatomy And Approaches To The Posterior Fossa And Posterior Skull Base

Location: 395, Ernest N. Morial Convention Center
Director: Albert L. Rhoton Jr., MD

014 Practical Course In Neurostimulation For Residents

Location: 383, Ernest N. Morial Convention Center
Director: Christopher J. Winfree, MD
Faculty
Jeffrey E. Arle, MD, PhD
Andre Guelman Machado, MD, PhD
Parag G. Patil, MD, PhD
Julie G. Pilitsis, MD, PhD
Jason M. Schwalb, MD
Konstantin V. Slavin, MD

015 The Science Of Clinical Practice: Using Registries And Other Tools To Improve The Quality of Neurosurgical Care

Location: 386/387, Ernest N. Morial Convention Center
Director: Anthony L. Asher, MD; Zoher Ghogawala, MD
Faculty
Matthew Hanley, MD
Inga Himelright MD, MPH
Koryn Y. Rubin
Ted Speroff, PhD

016 Management Of Incidental Imaging Findings

Location: 297, Ernest N. Morial Convention Center
Co-Directors: Cormac O. Maher, MD, R. Michael Scott, MD
Faculty
John H. Chi, MD
William T. Coulwood, MD, PhD
Arthur L. Day, MD
Stephen J. Haines, MD
Mark R. Proctor, MD
Eric J. Woodard, MD
017 Brain Mapping And Awake Mapping Techniques

Location: 294–296, Ernest N. Morial Convention Center

Co-Directors: Gerald A. Grant, MD, Guy M. McKhann II, MD

Faculty
Nicholas M. Barbaro, MD
Gene H. Barnett, MD, MBA
Hugues Duffau, MD
Konstantinos N. Fountas, MD, PhD
Jorge Alvaro Gonzalez-Martinez, MD, PhD
Fernando L. Vale, MD

018 MIS: Direct Lateral Retroperitoneal Transpsoas Fusion

Location: 265–268, Ernest N. Morial Convention Center

Co-Directors: Adam S. Kanter, MD, Juan Santiago Uribe, MD

Faculty
Dean Chou, MD
Andrew T. Dailey, MD
Larry T. Khoo, MD
Allan D. Levi, MD, PhD
John C. Liu, MD
John E. O’Toole, MD
William R. Taylor, MD

019 Coding, Compliance And Revenue Issues In Cranial, Non-Spine And E&M Coding

Location: 293, Ernest N. Morial Convention Center

Director: Joseph S. Cheng, MD, MS

Faculty
R. Patrick Jacob, MD
Robert R. Johnson II, MD
Alexander M. Mason, MD
Kim Pollock, RN, MBA
John K. Ratliff, MD

036 Nuts And Bolts Of Posterior Fossa Surgery: How I Do It

Location: 270, Ernest N. Morial Convention Center

Director: Anil Nanda, MD, MPH

Faculty
Lissa C. Baird, MD
Mustafa Kemal Baskaya, MD
Peter J. Jannetta, MD
Michael T. Madison, MD
Sunil J. Patel, MD
Daniel Monte-Serrat Prevedello, MD

037 Concussion And Sports Injury: State-Of-The-Art

Location: 284/285, Ernest N. Morial Convention Center

Director: Richard G. Ellenbogen, MD

Faculty
Michael L. J. Apuzzo, MD
Julian E. Bailes Jr., MD
Meng Law, MD
Russ Romano, BS, MA
Allen K. Sills, MD
Dave C. Viano, MD, PhD
Sunday, April 28
Day-At-A-Glance

**Bus Information**
The AANS will provide shuttle service at regular intervals between the Ernest N. Morial Convention Center and all AANS hotels starting at 6:30 AM. See page 153 for Shuttle schedule. A full schedule is available at all AANS hotels and the Ernest N. Morial Convention Center.

**Registration Hours**
6:30 AM–6:30 PM
*Location*: Lobby H/I, Ernest N. Morial Convention Center

**Speaker Ready Room**
7:00 AM–5:00 PM
*Location*: 283, Ernest N. Morial Convention Center

**Practical Clinic Hours**
7:30 AM–4:30 PM
7:30 AM–11:30 AM
12:30–4:30 PM

**Mid-Level Plenary Session**
9:00–12:00 PM
*Location*: 392, Ernest N. Morial Convention Center

**Morning Beverage Break**
9:45–10:15 AM
*Location*: Foyers outside 260, 283 and 383, Ernest N. Morial Convention Center

**Practical Clinic Lunch***
12:00–1:00 PM
*Location*: 275–277, Ernest N. Morial Convention Center
*For attendees participating in an All Day Practical Clinic or in a morning AND afternoon Practical Clinic Only.*

**Afternoon Beverage Break**
2:45–3:15 PM
*Location*: Foyers outside 260, 283 and 383, Ernest N. Morial Convention Center

**AANS Opening Ceremonies**
5:00–6:40 PM
*Location*: The New Orleans Theater, Ernest N. Morial Convention Center

**Opening Reception**
6:30–8:30 PM
*Location*: Mardi Gras World and Grand Oaks Mansion
Mid-Level Plenary Session

9:00 AM–12:00 PM

Location: 392, Ernest N. Morial Convention Center

Moderators
Twyla Lay, NP, MS; Joshua J Beardsley, PA-C; Linda Littlejohns, RN MSN

9:00–9:05 AM
Address from the AANN President
Linda Littlejohns, RN, MSN

9:06–9:11 AM
Address from the ANSPA President
Joshua J Beardsley, PA-C

9:12–9:52 AM
Professional Liability and Patient Safety
Richard Murphy, PA-C

9:53–10:02 AM
A Prospective Study of Postoperative Symptoms in Sinonasal Quality-of-Life Following Endoscopic Skull Base Surgery
Olga A Akselrod, PA-C; Theodore Schwartz, MD; Vijay Anand, MD; Roheen Raithantha, MD; Jeff Bedrosian, MD

10:03–10:12 AM
The Impact of a Standardized, Technician-Assisted EVD Site Preparation Protocol on EVD Infection Rate
David J. Fusco, MD; Virginia Prendergast; David Wilson, MD; Joseph Zabramski, MD; Adib Abla, MD; Peter Nakaji, MD

10:13–10:53 AM
Neurosurgical Anatomy
Jeffrey M. Sorenson, MD

10:54–11:03 AM
Lower Back Pain: Functional Anatomy Considerations
Augusto Cianciabella, PA-C; Ara Deukmedjian, MD; Jason Cutright

11:04–11:13 AM
The Impact of Treatment Decisions on The Outcome of Brain Abscess Patients—A United States Nationwide Inpatient Sample Database Study (2005–2009)
Tabitha Ward, RN, CNRN, Ashish Sonig, Alice Edwards

11:14–11:54 AM
Proven Aviation Safety Concepts—What Medicine Can Learn From Aviation
Lieutenant Colonel Gary W. Cooke

11:55–12:00PM
Closing Comments/Award Presentation
Anil Nanda, MD, MPH

Learning Objectives
After completing this educational activity, participants should be able to:

- Discuss the Institute of Medicine’s Report on the Future of Nursing Practice
- Identify ways in which the new Patient Protection and Affordable Care Act will affect the Neurosurgical Care you currently provide
- Discuss the importance and critical components of obtaining a Malpractice Plan
- Demonstrate the vascular anatomy and distribution throughout the central nervous system.
- Recognize the effects of symptoms on overall quality of life following skull base surgery
- Discuss impact of standardized site preparation protocols on rate of EVD infection
- Discuss how functional spine anatomy contributes to the development of chronic low back pain
- Evaluate the outcomes for various brain abscess treatment options
- Identify components of the Flight Safety check and describe how they may be incorporated into patient safety goals
Practical Clinics

7:30 AM–4:30 PM

021 Head Trauma: Current Treatments And Controversies With Hands-On Practical Session In Brain Monitoring

Location: 284/285, Ernest N. Morial Convention Center
Co-Directors: David O. Okonkwo, MD, PhD, Shelly D. Timmons, MD, PhD
Faculty
Gregory Hawryluk, MD
Jack I. Jallo, MD, PhD
Peter D. Le Roux, MD
Joshua E. Medow, MD
Daniel B. Michael, MD, PhD
Julie G. Pilitsis, MD, PhD
Jonathan R. Slotkin, MD

022 Invention And Innovation In Neurosurgery

Location: 270, Ernest N. Morial Convention Center
Director: T Forcht Dagi, MD, MPH, MBA, DMedSc, Charles J. Prestigiacomo, MD
Faculty
Edward C. Benzel, MD
Ron Ginor, MD
Joseph R. Madsen, MD
Fredric B. Meyer, MD

7:30–11:30 AM

011 Practical And Technical Aspects Of Transsphenoidal Surgery

Location: 286/287, Ernest N. Morial Convention Center
Co-Directors: William T. Couldwell, MD, PhD, Gail L. Rosseau, MD
Faculty
David S. Baskin, MD
Stephen P. Becker, MD
William F. Chandler, MD
Antonio A. F. DeSalles, MD, PhD
Matthew G. Ewend, MD
John A. Jane Jr., MD
Daniel F. Kelly, MD
Edward R. Laws Jr.
Ian E. McCutcheon, MD
Edward H. Oldfield, MD
Jean Regis, MDs
Theodore H. Schwartz, MD
Jason P. Sheehan, MD, PhD

023 Cranial Endoscopy: State-Of-The-Art

Location: 260–262, Ernest N. Morial Convention Center
Director: Alan R. Cohen, MD
Faculty
Johnathan A. Engh, MD
Michael R. Gaab, MD, PhD
Daniel J. Guillaume, MD
J. Andre Grotenhuis, MD, PhD
Costas G. Hadjipanayis, MD, PhD
Carl B. Heilman, MD
Tenoch Herrada–Pineda, MD
Ning Lin, MD
Subash Lohani, MD
Henry W. S. Schroeder, MD, PhD
Theodore H. Schwartz, MD
Mark M. Souweidane, MD
024 Brain Neoplasms: Updates On Diagnostics Through Therapeutics

Location: 386/387, Ernest N. Morial Convention Center
Co-Directors: Christi DeLemos, RN, Nader Sanai, MD
Faculty
Felipe C. Albuquerque, MD
Albert Lai, MD, PhD
Mary P. Lovely, RN, PhD
Michael W. McDermott, MD
Nader Sanai, MD
Theodore H. Schwartz, MD

028 Deep Brain Stimulation: Update And New Directions

Location: 383–385, Ernest N. Morial Convention Center
Co-Directors: Aviva Abosch, MD, PhD, Parag G. Patil, MD, PhD
Faculty
Roy A. E. Bakay, MD
Nicholas M. Boulis, MD
Kelly D. Foote, MD
Michael G. Kaplitt, MD
Peter E. Konrad, MD, PhD
Brian H. Kopell, MD
Paul S. Larson, MD
Joshua M. Rosenow, MD
Donald M. Whiting, MD

029 Cranio-Cervical And C1C2 Stabilization Techniques, Surgical Approaches

Location: 291/292, Ernest N. Morial Convention Center
Co-Directors: Arnold H. Menezes, MD, Vincent C. Traynelis, MD
Faculty
Richard C. E. Anderson, MD
Marc E. Eichler, MD
Noel I. Perin, MD
Arnold H. Menezes, MD
Charles Sansur, MD, MHSc
Rick C. Sasso, MD
Nicholas Theodore, MD
Vincent C. Traynelis, MD

030 Spinal Image Guidance And Advanced Intraoperative Imaging Techniques

Location: 271–273, Ernest N. Morial Convention Center
Co-Directors: Eric W. Nottmeier, MD, Eric A. Potts, MD
Faculty
Roger Hartl, MD
R. Patrick Jacob, MD
Iain H. Kalfas, MD
Dean G. Karahalios, MD
Jean-Pierre Mobasser, MD
Stephen M. Pirris, MD
Thomas B. Scully, MD
Nicholas Theodore, MD

031 3D Anatomy and Approaches To The Supratentorial Area and Anterior Skull Base

Location: 395, Ernest N. Morial Convention Center
Director: Albert L. Rhoton Jr., MD
013 Update On Malignant Brain Tumors For The General Neurosurgeon

Location: 297, Ernest N. Morial Convention Center

Co-Directors: Andrew T. Parsa, MD, PhD, Michael W. Weaver, MD

Faculty
Manish K. Aghi, MD
Richard W. Byrne, MD
Alexandra J. Golby, MD
Linda M. Liau, MD, PhD
Russell R. Lonser, MD
Charles L. Rosen, MD, PhD
Mark L. Rosenblum, MD
L. Gerard Toussaint III, MD
Isaac Yang, MD

020 Peripheral Nerve Injuries, Entrapments And Tumors: Examination And Evaluation

Location: 294–296, Ernest N. Morial Convention Center

Co-Directors: Line Jacques, MD, Robert J. Spinner, MD

Faculty
Allan H. Friedman, MD
Allen H. Maniker, MD
Rajiv Midha, MD, MS
Nader Pouratian, MD, PhD
Olawale A. R. Sulaiman, MD
Eric L. Zager, MD

025 Incorporation Of Electronic Technology To Improve Clinical Practice: Current Uses And Future Directions

Location: 288–290, Ernest N. Morial Convention Center

Director: Richard C. E. Anderson, MD, Neil A. Feldstein, MD

Faculty
Aaron A. Cohen-Gadol, MD
Harel Deutsch, MD
Christopher P. Kellner, MD
Bob Matsuoka
Clemens M. Schirmer, MD
Nicholas J. Szerlip, MD
Ashraf Samy Youssef, MD

026 How To Tackle Difficult Cranial Cases: A Step-By-Step 3D Case-Based Presentation

Location: 396, Ernest N. Morial Convention Center

Co-Directors: Aaron A. Cohen-Gadol, MD, R. Shane Tubbs, PhD

Faculty
Johnny B. Delashaw Jr., MD
Troy D. Payner, MD
B. Gregory Thompson Jr., MD
Harry R. van Loveren, MD
027 Techniques For Adult Spinal Deformity Surgery: A Hands-On Course For Neurosurgeons

**Location:** 265–268, Ernest N. Morial Convention Center

**Co-Directors:** Peter D. Angevine, MD, MPH, Praveen V. Mummaneni, MD

**Faculty**

Kai-Ming Fu, MD
Robert F. Heary, MD
Tyler R. Koski, MD
Charles Kuntz, MD
Frank La Marca, MD
Christopher I. Shaffrey, MD
Justin S. Smith, MD, PhD
Juan Santiago Uribe, MD

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032 Update Of General Neurosurgery For Practicing Neurosurgeon

**Location:** 293, Ernest N. Morial Convention Center

**Director:** Thomas J. Leipzig, MD

**Faculty**

Frank Culicchia, MD
Herbert E. Fuchs, MD, PhD
Ganesh Rao, MD
John H. Sampson, MD, PhD
Roland Torres, MD

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033 Negotiating Strategies In Neurosurgery

**Location:** 274, Ernest N. Morial Convention Center

**Co-Directors:** E. Hunter Dyer, MD, M. Sean Grady, MD

**Faculty**

Dong H. Kim, MD
Troy D. Payner, MD
Ann R. Stroink, MD
Clarence B. Watridge, MD

---

034 Neurotrauma Critical Care Review And Update For Practicing Neurosurgeon

**Location:** 386/387, Ernest N. Morial Convention Center

**Co-Directors:** M. Ross Bullock, MD, PhD, Patricia B. Raksin, MD

**Faculty**

Perry A. Ball, MD
William M. Coplin, MD
Robert M. Friedlander, MD
Joshua E. Medow, MD
David O. Okonkwo, MD, PhD
Sherry L. Taylor, MD, PhD
Philip A. Villanueva, MD

This Practical Clinic is supported by an educational grant provided by CODMAN NEURO

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035 Transfacet Technology: An Alternative To Pedicle Screw Fixation With Interbody Techniques

**Location:** 388–390, Ernest N. Morial Convention Center

**Co-Directors:** Edward C. Benzel, MD, Neil R. Malhotra, MD

**Faculty**

Marc E. Eichler, MD
Richard G. Fessler, MD, PhD
Bruce M. Frankel, MD
Larry T. Khoo, MD
Rick C. Sasso, MD
Jean-Marc Voyadzis, MD
AANS Opening Ceremonies

5:00–6:40 PM

**Location:** New Orleans Theater, Ernest N. Morial Convention Center

Starting off the educational week, best-selling author and New Orleans native Walter Isaacson will discuss how Apple founder Steve Jobs changed the culture of our modern society with his innovative concepts. As part of the Opening Ceremonies, AANS will bestow the AANS Medal of Courage upon former Congresswoman Gabrielle Giffords (formerly D-AZ). We will also honor Edward H. Oldfield, MD with the AANS Cushing Award for Technical Excellence and Innovation in Neurosurgery. The program will conclude with an entertaining tribute to the heritage of New Orleans and the Deep South, followed by a Mardi Gras-style parade from the AANS Opening Ceremonies to the finale for Sunday’s program, the AANS Opening Reception.

5:00–5:04 PM

**Welcome**

Mitchel S. Berger, MD

5:05–5:09 PM

**AANS Cushing Award For Technical Excellence and Innovation In Neurosurgery**

*Introduced By:* Mitchel S. Berger, MD

*Recipient:* Edward H. Oldfield, MD

5:10–5:39 PM

**Invited Speaker**

*Introduced By:* Mitchel S. Berger, MD

*Speaker:* Walter Isaacson, Author of *Steve Jobs*

5:40–6:09 PM

**AANS Medal Of Courage Award**

*Introduced By:* Mitchel S. Berger, MD

*Recipient:* Gabrielle Giffords, Accepting on Her Behalf, Mark Kelly

*Attending Physician:* G. Michael Lemole Jr., MD

6:10–6:39 PM

**Sounds Of The South**

*Presented By:* Preservation Hall Jazz Band

6:40–6:45 PM

**New Orleans Welcome By Special Guest**

Parade To Opening Reception At Mardi Gras World

Opening Reception

6:30–8:30 PM

**Location:** Mardi Gras World and Grand Oakes Mansion

The South is famous for its warmth and hospitality. New Orleans cherishes those qualities and embellishes them with a flair for celebration. You’ll enjoy hospitality, celebration, and much more at Mardi Gras World and the Grand Oaks Mansion.

You’ll enjoy the best of New Orleans’ music, food and drink while reconnecting with friends and colleagues.

One ticket to the AANS Opening Reception is included with each medical attendee and guest registration.
Monday, April 29

Day-At-A-Glance

Bus Information
The AANS will provide shuttle service at regular intervals between the Ernest N. Morial Convention Center and all AANS hotels starting at 6:15 AM. See page 153 for Shuttle bus schedule. A full schedule is available at all AANS hotels and the Ernest N. Morial Convention Center.

Registration Hours
6:30 AM–4:00 PM
Location: Lobby H/I, Ernest N. Morial Convention Center

Speaker Ready Room
6:30 AM–5:00 PM
Location: 283, Ernest N. Morial Convention Center

Breakfast For Breakfast Seminar Attendees
6:45 AM–7:15 AM
Location: Foyers Outside 260, 283, and 383, Ernest N. Morial Convention Center

Breakfast Seminars (Additional Fee Required)
7:00–9:00 AM

AANS Exhibit Hall
9:00 AM–5:30 PM
Location: Exhibit Halls H/I, Ernest N. Morial Convention Center

Morning Beverage Break In The Exhibit Hall
9:00–9:45 AM
Location: Exhibit Hall H/I

The Morning Beverage Break is provided by a generous grant from

WIGGINS MEDICAL
Home of the Original Black Kressin

Plenary Session I
9:45 AM–1:00 PM
Location: Hall J, Ernest N. Morial Convention Center

Lunch In The AANS Exhibit Hall
1:00–2:00 PM
Location: AANS Exhibit Halls H/I, Ernest N. Morial Convention Center

Wine And Cheese Reception
In The AANS Exhibit Hall
4:30–5:30 PM
Location: AANS Exhibit Halls H/I

The Wine and Cheese Reception is provided in part by a generous grant from

arbor
PHARMACEUTICALS, INC

Joint Annual Business Meeting Of The American Association of Neurological Surgeons (AANS) and The American Association of Neurosurgeons
5:30–7:00 PM
Location: 286–287, Ernest N. Morial Convention Center

AANS International Reception
6:30–8:00 PM
Location: The Van Benthuyzen-Elms Mansion

Dinner Symposia (Additional Fee Required)
6:30–8:30 PM
Location: Commander’s Palace

NREF Fundraiser Reception (Additional Fee Required)
8:00–10:00 PM
Location: House of Blues
## Breakfast Seminars

7:00–9:00 AM

### 101 Getting The Most Out Of Your Residency

| Location: 266, Ernest N. Morial Convention Center |
| Moderator: Lawrence S. Chin, MD |
| **Panelists** |
| John S. Kuo, MD, PhD |
| N. Scott Litofsky, MD |
| David J. Padalino, MD |
| Jon H. Robertson, MD |

### 102 Comparative Effectiveness Research: Why You Need to Care About This Topic

| Location: 277, Ernest N. Morial Convention Center |
| Moderator: Daniel K. Resnick, MD |
| **Panelists** |
| Anthony L. Asher, MD |
| Zoher Ghogawala, MD |
| Matthew J. McGirt, MD |
| Stephen L. Ondra, MD |

### 103 Employment Or Not: What Are The Options?

| Location: 262, Ernest N. Morial Convention Center |
| Moderator: James I. Ausman, MD, PhD |
| **Panelists** |
| Fernando G. Diaz, MD, PhD |
| Gregory B. Lanford, MD |
| Troy D. Payner, MD |
| Richard N. Wohns, MD |

### 104 New Innovations In Epilepsy Surgery

| Location: 263, Ernest N. Morial Convention Center |
| Moderator: Nicholas M. Barbaro, MD |
| **Panelists** |
| P. David Adelson, MD |
| Jean Regis, MD |
| Ashwini D. Sharan, MD |
| Matthew D. Smyth, MD |

### 105 Spinal Motion Preservation Using The Posterior Column Implants

| Location: 264, Ernest N. Morial Convention Center |
| Moderator: M. Samy Abdou, MD |
| **Panelists** |
| Jean-Valery C. E. Coumans, MD |
| Harel Deutsch, MD |
| Gabriel C. Tender, MD |
| William C. Welch, MD |

### 106 Cerebral Venous System: Surgical Considerations

| Location: 265, Ernest N. Morial Convention Center |
| Moderator: Albert L. Rhoton Jr., MD |
| **Panelists** |
| Ossama Al-Mefty, MD |
| Ashok R. Asthagiri, MD |
| Turker Kilic, MD, PhD |
| Jeffrey M. Sorenson, MD |
107 Accountable Care Organizations And The Affordability Of Patient Care Act

Location: 260, Ernest N. Morial Convention Center
Moderator: Monica C. Wehby, MD
Panelists
Peter W. Carmel, MD
Fernando G. Diaz, MD, PhD
Kevin J. Gibbons, MD
Mick J. Perez-Cruet, MD

108 Contemporary Management For Adult Hydrocephalus

Location: 267, Ernest N. Morial Convention Center
Moderator: Guy M. McKhann II, MD
Panelists
Feridun Acar, MD
Marvin Bergsneider, MD
Petra M. Klinge, MD, PhD
Daniele Rigamonti, MD

109 Principles And Techniques Of Deformity Correction In Adolescents And Young Adults

Location: 268, Ernest N. Morial Convention Center
Moderator: David W. Pincus, MD, PhD
Panelists
Peter D. Angevine, MD, MPH
Steven W. Hwang, MD
Amer F. Samdani, MD
Anthony H. Sin, MD

110 Management Of Acute Spinal Cord Injury

Location: 271, Ernest N. Morial Convention Center
Moderator: Michael G. Fehlings, MD, PhD
Panelists
Richard C. E. Anderson, MD
Barth A. Green, MD
Ann M. Parr, MD
Andrea L. Strayer, MS, NP, CNRN

111 Intracranial Endoscopy

Location: 272, Ernest N. Morial Convention Center
Moderator: Alan R. Cohen, MD
Panelists
Luiz Carlos de Alencastro, MD
James M. Drake, MD, MSc
David F. Jimenez, MD
Henry W. S. Schroeder, MD, PhD

112 Functional Mapping Of The Cerebral Cortex: Advantages And Limitations

Location: 273, Ernest N. Morial Convention Center
Moderator: Richard W. Byrne, MD
Panelists
Edward F. Chang, MD
Isabelle M. Germano, MD
Hiroto Kawasaki, MD
Daniel L. Silbergeld, MD
113 How I Do It: Acoustic Tumors

**Location:** 275, Ernest N. Morial Convention Center

**Moderator:** Frederick G. Barker II, MD

**Panelists**
- Michael J. Link, MD
- L. Dade Lunsford, MD
- Daniel R. Pieper, MD
- Marc S. Schwartz, MD

114 Lumbar Spine Fusion Indications And Complications

**Location:** 276, Ernest N. Morial Convention Center

**Moderator:** Joan F. O'Shea, MD

**Panelists**
- Joseph S. Cheng, MD
- Andrew T. Dailey, MD
- Russ Knockles, MD
- Eric M. Massicotte, MD, MSc

115 Controversies In The Management Of Intracerebral Hematomas

**Location:** 261, Ernest N. Morial Convention Center

**Moderator:** David W. Newell, MD

**Panelists**
- E. Sander Connolly Jr., MD
- Neil D. Kitchen, MD
- Stephen J. Monteith, MD
- Reid C. Thompson, MD

116 Advances In Treating Carotid Artery Disease: Surgery And Endovascular Therapy

**Location:** 284, Ernest N. Morial Convention Center

**Moderator:** Robert E. Harbaugh, MD

**Panelists**
- Felipe C. Albuquerque, MD
- Sean D. Lavine, MD
- Fredric B. Meyer, MD
- John A. Wilson, MD

117 Minimally Invasive Spinal Neurosurgery: Indications, Techniques And Complications

**Location:** 285, Ernest N. Morial Convention Center

**Moderator:** Charles L. Branch Jr., MD

**Panelists**
- Kevin T. Foley, MD
- William R. Taylor, MD
- Juan Santiago Uribe, MD
- David A. Vincent, MD

118 Current Use Of Biologic Graft Extenders For Spinal Fusion

**Location:** 270, Ernest N. Morial Convention Center

**Moderator:** James S. Harrop, MD

**Panelists**
- Muwaffak M. Abdulhax, MD
- Allan D. Levi, MD, PhD
- Srinivas K. Prasad, MD
119 Chiari Malformations: Diagnosis Treatments And Failures

**Location:** 290, Ernest N. Morial Convention Center

**Moderator:** Edward H. Oldfield, MD

**Panelists**
- Ulrich Batzdorf, MD
- Timothy B. Mapstone, MD
- Karin M. Muraszko, MD
- W. Jerry Oakes, MD

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120 Malignant Brain Tumors: State-Of-The-Art Treatment

**Location:** 293, Ernest N. Morial Convention Center

**Moderator:** Joseph M. Piepmeier, MD

**Panelists**
- Ian F. Dunn, MD
- Philip H. Gutin, MD
- Andrew T. Parsa, MD, PhD
- John H. Sampson, MD, PhD

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121 Cavernous Malformation: Current Controversies In Management

**Location:** 297, Ernest N. Morial Convention Center

**Moderator:** Murat Gunel, MD

**Panelists**
- Michael T. Lawton, MD
- R. Michael Scott, MD
- Robert F. Spetzler, MD
- Gary K. Steinberg, MD, PhD

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122 Update On Lumbar Stenosis

**Location:** 383, Ernest N. Morial Convention Center

**Moderator:** Robert E. Isaacs, MD

**Panelists**
- Christopher H. Comey, MD
- Carl Lauryssen, MD
- John E. O'Toole, MD
- Claudius Thome, MD

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123 Pituitary Tumors

**Location:** 384/385, Ernest N. Morial Convention Center

**Moderator:** Daniel F. Kelly, MD

**Panelists**
- David S. Baskin, MD
- Griffith R. Harsh IV, MD
- John A. Jane Jr., MD
- Kevin O. Lillehei, MD

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124 Management Of Spinal Axis Trauma

**Location:** 396, Ernest N. Morial Convention Center

**Moderator:** Gregory R. Trost, MD

**Panelists**
- Bizhan Aarabi, MD
- Steven Casha, MD, PhD
- Sean M. Lew, MD
- Charles Sanur, MD
125 Business Of Neurosurgery I–Billing And Accounts Receivable

**Location:** 386, Ernest N. Morial Convention Center

**Moderator:** Gregory J. Przybylski, MD

**Panelists**
Lisa Beebe
John K. Ratliff, MD
Craig A. Van Der Veer, MD
Luis Manuel Tumialan, MD

126 Bypass Graft Indications And Techniques

**Location:** 387, Ernest N. Morial Convention Center

**Moderator:** Gregory J. Zipfel, MD

**Panelists**
Fady T. Charbel, MD
Edward Robert Smith, MD
Yong-Kwang Tu, MD

127 How To Write And Publish A Successful Neurosurgical Manuscript

**Location:** 397, Ernest N. Morial Convention Center

**Moderator:** Anil Nanda, MD, MPH

**Panelists**
Michael L. J. Apuzzo, MD
Ennio Antonio Chiocca, MD, PhD
Michael Glantz, MD
Nelson M. Oyesiku, MD, PhD

128 Professionalism In Practice Transition: Considerations For The Adoption Of New Technology Or Procedures In Your Practice

**Location:** 398, Ernest N. Morial Convention Center

**Moderator:** William T. Couldwell, MD, PhD

**Panelists**
David B. Clarke, MD
Jonathan P. Fryer, MD
Regis W. Haid Jr., MD
Elizabeth Winter, JD

9:00 AM–5:30 PM

**AANS Exhibit Hall**

**Location:** Exhibit Halls H/I, Ernest N. Morial Convention Center

9:00–9:45 AM

**Morning Beverage Break In The AANS Exhibit Hall**

**Authors:** Exhibit Halls H/I, Ernest N. Morial Convention Center

The Morning Beverage Break is provided by a generous grant from Wiggins Medical Home of the Original Black Kerrison
Plenary Session I

9:45 AM–1:00 PM

Location: Hall J, Ernest N. Morial Convention Center

Moderators
Mitchel S. Berger, MD; Nicholas M. Barbaro, MD

9:45–9:49 AM
Welcome
Speaker: Nicholas M. Barbaro, MD

9:50–9:52 AM
Introduction Of The Rhoton Family Lecture
Introduced By: Mitchel S. Berger, MD

9:53–10:23 AM
Rhoton Family Lecture
Speaker: Donald Berwick, MD

10:24–10:35 AM
Philip L. Gildenberg S&F Resident Award
600 Intraspinal Stem Cell Transplantation in ALS, A Phase I Trial: Cervical Microinjection Safety Outcomes
Authors: Jonathan Patrick Riley, MD; Jonathan Glass, MD, PhD; Karl Johe, PhD; Meraida Polak, RN; Thais Federici, PhD; Eva Feldman, MD, PhD; Nicholas Boulis, MD

10:36–10:39 AM
Discussant: Robert M. Friedlander, MD

10:40–10:51 AM
WINS Louise Eisenhardt Award
601 Comparative Effectiveness And Cost-Benefit Analysis of Antibiotic-Impregnated Shunt Catheters in The Treatment of Hydrocephalus: Analysis of 12,589 Consecutive Cases from 287 Hospital Systems
Authors: Scott Parker, MD; Jeffrey Murphy, MS; Luella Engelhart, PhD; Matthew McGirt, MD

10:52–10:55 AM
Discussant: Stephen J. Haines, MD

10:56–10:58 AM
Introduction Of The Theodore Kurze Lecture
Introduced By: Mitchel S. Berger, MD

10:59–11:19 AM
Theodore Kurze Lecture
The Changing World of Epilepsy Surgery
Speaker: Johannes Schramm, MD

11:20–11:22 AM
Introduction Of The Distinguished Service Award
Introduced By: Mitchel S. Berger, MD

11:23–11:24 AM
Distinguished Service Award
Recipient: Ralph G. Dacey Jr., MD

11:25–11:36 AM
602 Peri-Procedural Complications of Endovascular Treatment For Acute Stroke in SWIFT Trial
Authors: Arun Paul Amar, MD; Paul Akins, MD, PhD; Jeremy Fields, MD; Sean Pakbaz, MD

11:37–11:40 AM
Discussant: B. Gregory Thompson Jr., MD

11:41–11:52 AM
603 Development of an MRI-Guided Delivery And Molecular Targeting System For Glioblastoma Multiforme Theranostics Based on Surface Enhanced Raman Scattering Nanoparticles
Authors: Roberto Jose Diaz, MD; Patrick McVeigh, BS; Meaghan O’Reilly, MSC; Matthew Bebenek, Christian Smith, PhD; Kullervo Hynynen, PhD; Brian Wilson, PhD; James Rutka, MD, PhD

11:53–11:56 AM
Discussant: Henry Brem, MD

11:57 AM–12:08 PM
604 Anterior vs. Posterior Surgical Approaches to Treat Cervical Spondylotic Myelopathy: Outcomes of The Prospective Multicenter AOSpine North America CSM Study in 278 patients
Authors: Sean Barry, MD, Michael Fehlings, MD, PhD; Branko Kopjar, MD, PhD; Sangwook Yoon, MD; Paul Arnold, MD; Eric Massicotte, MD; Alexander Vaccaro, MD; Darrel Brodke, MD; Christopher Shaffrey, MD; Justin Smith, MD; Eric Woodard, MD; Robert Banco, MD; Jens Chapman, MD; Michael Janssen, DO; Christopher Bono, MD; Rick Sasso, MD; Mark Dekutoski, MD; Ziya Gokaslan, MD

12:09–12:12 AM
Discussant: Mark N. Hadley, MD

12:13–12:15 PM
Introduction Of The AANS International Lifetime Recognition Award
Introduced By: Mitchel S. Berger, MD

12:16–12:17 PM
AANS International Lifetime Recognition Award
Recipient: Johannes Schramm, MD

12:18–12:22 PM
Introduction Of The AANS Presidential Address
Introduced By: James Rutka, MD, PhD

12:23–1:03 PM
AANS Presidential Address
Speaker: Mitchel S. Berger, MD
1:00–2:00 PM
**Lunch In The AANS Exhibit Hall**
**Location:** Exhibit Halls H/I, Ernest N. Morial Convention Center

1:15–2:00 PM
**NEW! Lunch-and-Learn Seminars**
**Location:** Booth #751, Exhibit Halls H/I, Ernest N. Morial Convention Center
See page 29 for details on these informative seminars.

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**Don’t Miss These 3D Sessions**

**Monday, April 29**
2:00–4:30 PM
**Nuances of Intracranial Surgery: An Interactive 3D Video Presentation**
**Location:** Hall J, Ernest N. Morial Convention Center

**Tuesday, April 30**
2:00–4:30 PM
**Nuances of Cerebrovascular Surgery: An Interactive 3D Video Presentation**
**Location:** Hall J, Ernest N. Morial Convention Center

Both presentations are also available through live streaming over the Internet.

Those attending the course in person will be given instructions during the meeting on how to submit questions to the moderators or participate in polling.

Those attending the meeting via webcast will visit cohen.omnovia.com/room. Login as an “attendee” then click “enter room” and type in your name. The chat function is available at the bottom of the video windows.
Scientific Session I—Tumor
2:00–4:30 PM
Location: 294–296, Ernest N. Morial Convention Center

This session will focus on innovations in the diagnosis, management and treatment of tumor neurosurgery. Innovations developed in the last twelve months will be presented.

**Moderator**
Frederick F. Lang Jr., MD

2:00–2:30 PM
**Ronald L. Bittner Lecture**
**Viruses: Causes or Treatment of Malignant Glioma?**
Invited Speaker: Ennio Antonio Chiocca, MD, PhD

2:31–2:39 PM
**National Brain Tumor Foundation Mahaley Award**
605 **Targeting Glioma Stem Cells in GBM: A Phase 0/II Study of Hedgehog Pathway Inhibitor GDC-0449**
Authors: Andrew E. Sloan, MD; Charles Nock, MD; Amber Kerstetter, PhD; John Pink, PhD; Jeremy Rich, MD, PhD; Naoko Takebe, MD, PhD; Robert Miller, PhD; Michael Prados, MD; Stuart Grossman, MD

2:40–2:48 PM
**Integra Foundation Award**
606 **Ionizing Radiation Augments Glioma Tropism of Mesenchymal Stem Cells**
Authors: Jonathan G. Thomas, MD; Anwar Hossain, PhD; Naoki Shinojima, MD, PhD; Joy Gumin, MS; Felix Nwajei, MD; Rave Ezhilarasan, PhD; Patrice Love, MS; Erik Sulman, MD, PhD; Frederick Lang, MD

2:49–2:57 PM
**Stryker Neuro-Oncology Award**
607 **Inhibition of SUR1 Decreases the Vascular Permeability of Cerebral Metastases**
Authors: Eric M. Thompson, MD; Gregory Pishko, PhD; Leslie Muldoon, PhD; Edward Neuwelt, MD

2:58–3:06 PM
**Brainlab Community Neurosurgery Award**
608 **Gamma Knife Radiosurgery for the Management of Nonfunctioning Pituitary Adenomas: A Multicenter Study**
Authors: Jason P. Sheehan, MD, PhD; Robert Starke, David Mathieu, Byron Young, Penny Snead, Veronica Chiang, John Lee, Hideyuki Kano, Kyung-jae Park, Ajay Niranj, Douglas Kondziolka, Gene Barnett, Stephen Rush, John Golfinos, L. Dade Lunsford

3:07–3:15
609 **Factors Predicting Postoperative Hyponatremia and Efficacy of Hyponatremia Management Strategies After 1152 Pituitary Operations**
Authors: Manish K. Aghi, MD; Arman Jahangiri, BS; Liane Miller, BS; Mai Tran, Maxwell Tom, BS; Jeffrey Wagner, BS; Sandeep Kunwar, MD; Lewis Blevins, MD

3:16–3:24 PM
610 **Medical And Surgical Complications and Co-Morbidities in Long Term GBM Survivors**
Authors: Mohammed Hamood Alsaidi, MD; David Nerenz, PhD; Mark Rosenblum, MD; Steven Kalkanis, MD; Tobias Walbert, MD; Ian Lee, MD

3:25–3:33 PM
611 **Fluorescence-Guided Surgery With 5-Aminolevulinic Acid: Experience in 400 Cases With Different Brain Tumors**
Authors: Georg Wichhelm; Barbara Kiesel, MD; Adelheid Wührer, MD; Engelbert Knosp, MD; Stefan Wolfsberger, MD

3:34–3:42 PM
612 **Gross Total Resection Rates in Glioblastoma Surgery: Combining 5-ALA Intraoperative Fluorescence Imaging and Brain Mapping**
Authors: Philippe Schucht; Juergen Beck, MD, PhD; Janine Abu-Isa, MD; Lukas Anderegg, MD; Michael Murek, MD; Kathleen Seidel, MD; Lennart Stieglitz, MD; Andreas Raabe, MD, PhD

Neurosurgical Face–Off
**Acoustic Neuromas, Radiosurgery vs. Surgical Resection**

3:43–3:58 PM
**Acoustic Neuromas, Radiosurgery**
Speaker: Jason S. Sheehan, MD

3:59–4:14 PM
**Surgical Resection**
Speaker: John G. Golfinos, MD

4:15–4:25 PM
**Case Discussion**
Co-Moderator: Frederick F. Lang Jr., MD; Michael J. Link, MD

4:26–4:30 PM
**Q&A**
Scientific Session II—Spine/Peripheral Nerve

2:00–4:30 PM

Location: 393–395, Ernest N. Morial Convention Center

This session will focus on innovations in the diagnosis, management and treatment of spinal neurosurgery. Innovations developed in the last twelve months will be presented.

Moderator
Joseph S. Cheng, MD, MS

2:00–2:30 PM

Spino Pelvic Parameters, Why it Matters
Invited Speaker: Christopher I. Shaffrey, MD

2:31–2:39 PM

613 Adult Intramedullary Spinal Cord Tumors: A 12-Year Institutional Experience
Authors: Daniel Lubelski, MS; Michael Steinmetz, MD; Ajit Krishnaney, MD; Thomas Mroz, MD; John Shin, MD; Edward Benzel, MD

2:40–2:48 PM

614 Does Bone Morphogenic Protein Change the Operative Nonunion Rates in Spine Fusions?
Authors: Kern H. Guppy, MD, PhD; Johannes Bernbeck, MD; Jessica Harris, MS; Christopher Ake, PhD; Liz Paxton, Kim Phan, BA

2:49–2:57 PM

615 Riluzole For The Treatment of Spinal Cord Injury: A Phase 1 Trial and Future Directions
Authors: Michael G. Fehlings, MD, PhD; Robert Grossman, MD; Jefferson Wilson, MD; Ralph Frankowski, PhD; Keith Burau, PhD; Diana Chow, PhD; Yang Teng, BS; Elizabeth Toups, MS; James Harrop, MD; Bizhan Aarabi, MD; Christopher Shaffrey, MD; Susan Harkema, PhD; Michele Johnson, MD; James Guest, MD, PhD

Neurosurgical Face–Off
Closed Minimally Invasive TLIF Vs. Open Minimally Invasive TLIF

2:58–3:13 PM

Closed Minimally Invasive TLIF
Speaker: Richard G. Fessler, MD, PhD

3:14–3:29 PM

Open Minimally Invasive TLIF
Speaker: Charles Kuntz, MD

3:30–3:40 PM

Case Discussion
Co-Moderator: Joseph S. Cheng, MD, MS; Neil Malhotra, MD

3:41–3:49 PM

Byron Cone Pevehouse, MD Award

616 Comparative Effectiveness, Cost Utility and Cost Benefit Analysis of Intra-Operative Neuromonitoring in Cervical Spine Surgery: Where is the Value?
Authors: Saniya S. Godil, MD; Scott L. Zuckerman, MD; Scott L. Parker, MD; Oran Aaronson, MD; Clinton J. Devin, MD; Matthew J. McGirt, MD

3:50–3:58 PM

617 5-Aminolevulinic Acid Fluorescence-Guided Resection of Intramedullary Ependymoma
Authors: Toshiki Endo; Tomoko Inoue, MD, PhD; Mika Watanabe, MD, PhD; Kenichi Nagamatsu, MD, PhD; Teiji Tominaga, MD, PhD

3:59–4:07 PM

618 Pulmonary Function Following Adult Spinal Deformity Surgery: Minimum Two Year Follow-Up
Authors: Robert Tracey; Ronald Lehman, MD; Daniel Kang, MD; John Cody, MD; Lawrence Lenke, MD; Jeremy Stallbaumer, MD; Brenda Sides, MS

4:08–4:16 PM

619 Economic Value of ACDF—Analysis of a 5 Year Follow-up Cohort From FDA Trials
Authors: Praveen V. Mummaneni, MD; Paul Anderson, MD; Vincent Traynelis, MD; Steven Glassman, Leah Carreon, MD, MSC

4:17–4:25 PM

620 Neural Stem Cells Clonally Selected From Embryonic Stem Cells Promote Recovery After Spinal Cord Injury
Authors: Robert Mitchell; Ryan Salewski; Michael Fehlings

4:26–4:30 PM

Q&A

This Scientific Session is supported by an educational grant provided by DePuySynthes
Scientific Session III—
Stereotactic & Functional Surgery

2:00–4:30 PM
Location: 288/289, Ernest N. Morial Convention Center

This session will focus on innovations in the diagnosis, management and treatment of stereotactic and functional neurosurgery. Innovations developed in the last twelve months will be presented.

Moderator
Konstantin V. Slavin, MD

2:00–2:30 PM
High-Field Imaging And Surgery For DBS
Invited Speaker: Aviva Abosch, MD, PhD

2:31–2:39 PM
621 The One Year Results of a Phase 1 Study of Transcranial MR Guided Focused Ultrasound Thalamotomy for the Treatment of Medication Refractory Essential Tremor
Authors: William Jeffrey Elias, MD; Diane Huss, PhD; Johanna Loomba, BS; Mohammad Khaled, MD; Eyal Zadicario, MSC; Scott Sperling, PhD; Robert Frysinger, PhD; Binit Shah, MD; Madaline Harrison, MD; Max Wintermark, MD

2:40–2:48 PM
622 Stereotactic Laser Thermal Amygdalohippocampotomy for Mesial Temporal Lobe Epilepsy: Preliminary Outcomes of Multicenter Experience
Authors: Robert E. Gross, MD, PhD; Jon Wille, MD, PhD; Ashesh Mehta, MD, PhD; Richard Marsh, MD; Shabbar Danish, MD; Daniel Curry, MD; Ashwini Sharan, MD; Martin Weinand, MD; Daniel Couture, MD; Alexandra Golby, MD; Nitim Tandon, MD; Michael Schulder, MD; Sherif Nour, MD; Robert Watson, MD; Stephen Wong, MD; Angus Wilfong, MD; Michael Sperling, MD; J. Langevin, MD; David Labiner, MD; Gimrithdar Kalamangalam, MD; Ashok Gowda, PhD

2:49–2:57 PM
623 Chronic Microstimulation of V1 in a Behaving Macaque
Authors: Paul A. House, MD; Tyler Davis, MD; Rebecca Parker, BS; Richard Normann, PhD; Bradley Greger, PhD

2:58–3:06 PM
624 Creating Visual Percepts With Electrical Stimulation of Human Visual Cortex: Comparison With Receptive Fields Mapped With Local Field Potentials
Authors: Daniel Yoshor, MD; Daniel Yoshor, MD; Xiaomei Pei, PhD; Inge Schepers, PhD; Ping Sun, MS; Michael Beauchamp, PhD

3:07–3:15 PM
International Travel Scholarship
625 The Role of Autonomic Nervous System in the Mechanism of Hemifacial Spasm
Authors: Jun Zhong; Shi-Ting Li, MD, PhD; Jin Zhong, MD, MS

3:16–3:24 PM
626 Quantitative Determination of Sequential Activity in Human Motor Areas During Cued Finger Movement Using Electrocorticography (ECoG)
Authors: Hai Sun, MD; Jeremiah Wande, BS; Andrew Ko, MD; J Miller, MD, PhD; Tim Blakely, MS; Kim Burchiel, MD; Jeffery Ojemann, MD

3:25–3:33 PM
627 Unilateral High Frequency Stimulation of the Nucleus Accumbens Shell Reduces Oral EtOH Consumption in Alcohol-Preferring (P) Rats
Authors: Jessica Wilden, MD; Sheketha Hauser, PhD; Kurt Qing, MS; Pedro Irazoqui, PhD; William McBride, PhD; Zachary Rodd, PhD

3:34–3:42 PM
628 Differentiation of Induced Pluripotent Stem Cells to Microglia for Treatment of CNS Diseases
Authors: John K. Park, MD, PhD; Michael Shen, BS; Yong Choi, PhD; Hetal Pandya, PhD

3:43–3:51 PM
629 Accuracy in Staged Bilateral Deep Brain Stimulation Surgery
Authors: David Levine; Jennifer Durphy, MD; Peter Novak, MD, PhD; Eric Molho, MD; Adolfo Ramirez-Zamora, MD; Julie Piilitsis, MD, PhD

3:52–4:00 PM
630 Spatio-Temporal Dissociations of Auditory and Visual Naming Networks in Human Cortex
Authors: Christopher Conner, Kiefer Forsyth, Nitin Tandon, MD

4:01–4:09 PM
631 Mapping Neuronal Connectivity in the Epileptic Brain by Simultaneous Intracranial Electrical Stimulation and fMRI
Authors: Jorge Alvaro Gonzalez-Martinez, MD, PhD; Stephen Jones, MD, PhD; Myron Zhang, MS; Juan Bulacio, MD; Rei Enatsu, MD, PhD; William Bingham, MD
4:10–4:18 PM
632 Category- and Entity-Specific Activation of Neuronal Populations in the Temporal Pole in Response to Naming Proper Nouns
Authors: Taylor John Abel, MD; Oliver Flouty, MD; Hiroto Kawasaki, MD; Hiroyuki Oya, Matthew Howard, Daniel Tranel, PhD

4:19–4:27 PM
633 African-Americans With Parkinson’s Disease Receive Disproportionately Fewer Deep Brain Stimulators (DBS) Regardless of Access to Neurological Surgeons
Authors: Andrew K Chan; Robert McGovern, MD; John Sheehy, MS; Guy McKhann II, MD

4:28–4:30 PM
Q&A
Scientific Session IV—Pediatrics

2:00–4:30 PM

Location: 391/392, Ernest N. Morial Convention Center

This session will focus on innovations in the diagnosis, management and treatment of pediatric neurosurgery. Innovations developed in the last twelve months will be presented.

Moderator
Alan R. Cohen, MD

2:00–2:30 PM
Lessons From Hydrocephalus Clinical Trials
Invited Speaker: John R. W. Kestle, MD

2:31–2:39 PM
634 The Role of Endoscopic Third Ventriculostomy in the Treatment of Hydrocephalus
Authors: Timothy W. Vogel, MD; Biji Bahuleyan, MD; Shenandoah Robinson, MD; Alan Cohen, MD

2:40–2:48 PM
635 The Distribution of Cerebellar Tonsil Position: Implications for Understanding The Chiari Malformation
Authors: Cormac O. Maher, MD; Jennifer Strahle, MD; Hugh Garton, MD; Karin Muraszko, MD; Brandon Smith, MSC

2:49–2:57 PM
636 Epilepsy Surgery in Infants Under One Year of Age
Authors: Brent Randle O’Neill, MD; Susan Koh, MD; Pramote Laoprasert, MD; Kelly Knupp, MD; Michael Handler, MD

2:58–3:06 PM
637 Microstructural and Functional Connectivity in Adolescents With Corrected Sagittal Craniosynostosis
Authors: Joel Beckett; Cheryl Lacadie, Roger Jou, MD, MPH; Todd Constable, PhD; Charles Duncan, MD; John Persing, MD; Kevin Pelphrey, PhD

3:07–3:15 PM
638 Preliminary Experience With Quick-Spine Magnetic Resonance Imaging for Evaluation of Cervical Spine Trauma in Children
Authors: Brian Thomas Farrell, MD; Jeffrey Pollock, MD; Louis Riccielli, MD; James Anderson, MD; Dianna Bardo, MD; Daniel Guillame, MD, MSC

3:16–3:24 PM
639 Prognostic Indicators Regarding Pain Outcome After Chiari Decompression
Authors: David M. Frim, MD, PhD; Katherine Hekman, PhD

3:25–3:33 PM
640 Using a Novel Myelin Imaging Technique to Identify Previously Occult Seizure Foci
Authors: Heather Stevens Spader, MD; Sean Deoni, PhD; Doug Dean, PhD; Jonathan O’Muircheartaigh, PhD; Jerrold Boxerman, MD, PhD; John Gaitanis, MD; Molly Tracy, MD; Rees Cosgrove, MD

3:34–3:42 PM
641 Radiation Exposure to Patients During Neurointerventional Procedures in Children: A Warning
Authors: Darren B. Orbach; Ning Lin, MD; Jodi Manchester, BS; R. Michael Scott, MD; Edward Smith, MD

Neurosurgical Face–Off
Chiari Malformation, Durotomy And Duraplasty Vs. Chiari Malformation, No Durotomy or Duraplasty

3:43–3:58 PM
Chiari Malformation, Durotomy and Duraplasty
Speaker: John C. Wellons III, MD

3:59–4:14 PM
Chiari Malformation, No Durotomy or Duraplasty
Speaker: Matthew D. Smyth, MD

4:15–4:25 PM
Case Discussion
Co-Moderator: Alan R. Cohen, MD; W. Jerry Oakes, MD

4:26–4:30 PM
Q&A
Scientific Session V—Cerebrovascular

2:00–4:30 PM

Location: 291/292, Ernest N. Morial Convention Center

This session will focus on innovations in the diagnosis, management and treatment of cerebrovascular neurosurgery. Innovations developed in the last twelve months will be presented.

Moderator
Sepideh Amin-Hanjani, MD

2:00–2:30 PM
Subspecialty Recognition In Cerebrovascular Surgery
Invited Speaker: Daniel Louis Barrow, MD

Neurosurgical Face–Off
Clipping Vs. Coiling

2:31–2:46 PM
Clipping
Speaker: Robert F. Spetzler, MD

2:47– 3:02 PM
Coiling
Speaker: Nick Hopkins, MD

3:03–3:13 PM
Case Discussion
Co-Moderators: Sepideh Amin-Hanjani, MD; Sean D. Lavine, MD

3:14–3:22 PM
DePuySynthes Award

642 Time-Course of Recovery Following Poor Grade SAH: The Incidence of Delayed Improvement
Authors: David Aaron Wilson, MD; Adib Abla, MD; Richard Williamson, MD; Peter Nakaji, MD; Joseph Zabramski, MD; Felipe Albuquerque, MD; Cameron McDougall, MD; Robert Spetzler, MD

3:23–3:31 PM
643 Stereotactic Radiosurgery For Spetzler-Martin Grade III Arteriovenous Malformations: The University of Pittsburgh Experience in 472 Consecutive Patients
Authors: L. Dade Lunsford, MD; Hideyuki Kano, MD, PhD; Douglas Kondziolka, MD, MSC; John Flickinger, MD; Huai-che Yang, MD; Kyung-Jae Park, MD, PhD; Thomas Flannery, MD, PhD; Daniel Tonetti, MS; Ajay Niranjan, MD

3:32–3:40 PM
644 The Role of Cigarette Smoke and Cerebral Vascular Smooth Muscle Phenotypic Modulation in Cerebral Aneurysm Pathogenesis
Authors: Robert M. Starke, MD; Muhammad Ali, MD; Pascal Jabbour, MD; Stavropola Tjoumakaris, MD; L. Fernando Gonzalez, MD; Robert Rosenwasser, MD; Gary Owens, PhD; Walter Koch, PhD; Nigel Greig, PhD; Aaron Dumont, MD

3:41–3:49 PM
645 A Practical Grading Scale to Predict Radiosurgery Outcome in Arteriovenous Malformations: Analysis of 1,012 Treated Patients
Authors: Robert M. Starke, MD; Chun-Po Yen, MD; Dale Ding, MD; Jason Sheehan, MD, PhD

3:50–3:58 PM
646 Analysis of Outcomes for the Surgical Treatment of Spontaneous Intracerebral Hemorrhage: Large Craniectomy vs. Craniotomy
Authors: Seth B. Hayes, MD; Ronald Benveniste, MD, PhD

3:59–4:29 PM
Yasargil Lecture
Speaker: Juha Hernesniemi, MD

4:30–4:35 PM
Q&A

4:35–5:00 PM
AANS/CNS Cerebrovascular Section Business Meeting

This Scientific Session is supported by an educational grant provided by

CODMAN NEURO

DePuySynthes
Scientific Session VI—Neurotrauma

2:00–4:30 PM

Location: 388–390, Ernest N. Morial Convention Center

This session will focus on innovations in the diagnosis, management and treatment of neurotrauma neurosurgery. Innovations developed in the last twelve months will be presented.

Moderator
Geoffrey T. Manley, MD, PhD

2:00–2:30 PM

Decompressive Craniectomy: Where We Have Been And Where We Are Going
Invited Speaker: Jamie S. Ullman, MD

2:31–2:39 PM

Synthes Resident Craniofacial Award
647 A Novel Mechanism and Therapeutic Target for Intraventricular Hemorrhage-Associated Communicating Hydrocephalus
Authors: Kristopher Thomas Kahle, MD, PhD; Philippe Simard; Brian Walcott, MD; Volodymyr Gerzanich, PhD; J. Marc Simard, MD, PhD

2:40–2:48 PM

648 Delayed Postinjury Administration of Riluzole is Neuroprotective in a Preclinical Rodent Model of Cervical Spinal Cord Injury
Authors: Kajana Satkunendararajah; Yongchao Wu, MD; Josef Buttigieg, PhD; Yang Teng, BS; Diana Chow, PhD; Michael Fehlings, MD, MSC

2:49–2:57 PM

649 Effectiveness of Antifibrinolytic Therapy After Surgery For Chronic Subdural Hematoma
Authors: Kazunari Oka, MD; Terushige Toyooka, MD; Hiroshi Kageyama, MD; Nobusuke Tsuchida, MD

2:58–3:06 PM

650 Gliarial Fibrillary Acidic Protein Breakdown Products For The Diagnosis of Intracranial Injury
Authors: David Panczykowski, MD; John Yue, BS; Ava Puccio, PhD; Inoue Tomoo, PhD; Geoffrey Manley, MD, PhD; David Okonkwo, MD, PhD

3:07–3:15 PM

651 Improving Quality: Establishing Standard Performance Measures For Cervical Spine Trauma With And Without Spinal Cord Injury
Authors: Daniel Jin Hoh, MD; Sanjay Dhall, MD; Dan Neal, PhD; Brian Hoh, MD

3:16–3:24 PM

652 A New Model for Dura Mater Healing—Human Dural Fibroblast Culture
Authors: Ezequiel Goldschmidt; Santiago Hem, MD; Pablo Ajler, MD; Claudio Yampolsky, MD; Antonio Carrizo, MD, PhD; Monica Loresi, MD; Marcelo Ielpi, PhD; Diego Giunta, MD, MPH; Pablo Argibay, MD, PhD

3:25–3:33 PM

653 Is it Safe Undergoing Cranioplasty With Venticuloperitoneal Shunt at the Same Time in Patients With Cranial Defect and Hydrocephalus?
Authors: Sukh Que Park; Juneyoung Heo, MD; Hyung-ki Park, MD, PhD; Sungjin Cho, MD, PhD; Jaechil Chang, MD, PhD

3:34–3:42 PM

654 Tight Glycemic Control is Associated With Increased Cerebral Glycolysis Following Traumatic Brain Injury
Authors: Stephanie M Wolahan; David McArthur, PhD; Paul Vespa, MD; Neil Martin, MD; Thomas Glenn, PhD

3:43–3:51 PM

655 The Head Injury Transportation Straight to Neurosurgery (HITS-NS) Trial: Introduction to The Study, Challenges of the Set-Up Phase And Progress
Authors: Damian Holliman, PhD, MRCS; Wanda Russell, PhD; Gordon Fuller, PhD; A David Mendelow, MBBS; Kyee Han, MBBS; Kevin Mackway-Jones, MBBS; Timothy Coats, MBBS; Steve Goodacre, MBBS; Suzanne Mason, MBBS; Andrew Curran, MBBS; Fiona Lecky, MBBS

3:52–4:00 PM

656 Activation of the Smad Signaling Pathway by Eotaxin-3 in the Outer Membrane of Chronic Subdural Hematomas
Authors: Koji Osuka, MD; Masakazu Takayasu, MD, PhD

4:01–4:09 PM

657 The Effect of Riluzole on Mental Disorders and Histo-pathologic Changes in The Rat Concussion Model
Authors: Mohammadreza Ehsaei, MD; Gholamreza Bahadorkhan, MD

4:10–4:18 PM

658 Mild Traumatic Brain Injury (TBI): How Much Radiation is Necessary?
Authors: Walter Paul Jacobsen, DO; Alexandra Paul, MD; John German

4:19–4:27 PM

659 The Effect of Alcohol Use on Coagulation and Progression of Intracranial Hemorrhage in Trauma Patients
Authors: Abigail Justine Rao, MD; Katherine Watson, MS; Tori Lennox, Ronald Barbosa, MD; Jerome Differding, MS; Brian Ragel, MD; Martin Schreiber, MD; Susan Rowell, MD

4:28–4:30 PM

Q&A
International Symposium I
Global Symposium On Safety And Excellence With European Association Of Neurosurgical Societies
2:00–4:30 PM

**Moderators**
Vladimir Beneš, MD; Jacques Morcos, MD

2:00–2:05 PM
**Introduction**
Jacques Morcos, MD

2:06–2:15 PM
**Brain Hodotopy And Plasticity As New Concepts In Surgery For Diffuse Low Grade Gliomas: Towards A Functional Neuro-oncology**
Speaker: Hugues Duffau, MD

2:16–2:25 PM
**Pros And Cons Of Endoscopic Colloid Cyst Removal**
Speaker: J. Andre Grotenhuis, MD, PhD

2:26–2:35 PM
**Rescuing The Injured Brain**
Speaker: Peter J. Hutchinson, MD

2:36–2:45 PM
**Management of Acoustic Neuroma: A Balanced Approach**
Speaker: Basant K. Misra, MD

2:46–2:55 PM
**Cognitive Preservation in Brain Tumor Surgery**
Speaker: Zvi Ram, MD

3:06–3:15 PM
**Endoscopic Endonasal Approach To Craniopharyngiomas**
Speaker: Paolo Cappabianca, MD

3:16–3:25 PM
**Modulative Manipulation Of Pain In The Failed Back Syndrome**
Speaker: Claudio G. Yampolsky, MD

3:26–3:35 PM
**Surgery For The Brainstem Cavernous Malformation—With Special Reference To Surgical Approach, Intraoperative Monitoring And Outcome**
Speaker: Kazuhiro Hongo, MD

3:36–3:45 PM
**Bypass Surgery For Treating Giant And Complex Intracranial Aneurysms**
Speaker: Yong-Kwang Tu, MD

3:46–3:55 PM
**Clipping X Coiling In Aneurysm Surgery: How do The High Mental Functions React?**
Speaker: Hildo R. C. Azevedo-Filho, MD

3:56–4:05 PM
**Management Of Intracerebral Hematomas**
Speaker: Neil D. Kitchen, MD

4:06–4:15 PM
**Monitoring The Competition: Feast And Famine**
Speaker: Anthony G. Fieggen, MD

4:16–4:30 PM
**Q&A**
3D Session
2:00–4:30 PM

Nuances Of Intracranial Surgery:
An Interactive 3D Video Presentation
Also available through live streaming over the Internet

Location: Hall J, Ernest N. Morial Convention Center
Moderator: Cormac O. Maher, MD

Panelists
William T. Couldwell, MD, PhD
Aaron A. Cohen-Gadol, MD
Frederick A. Boop, MD
Mitesh Shah, MD
Anil Nanda MD, MPH

Course Description
This session will review important technical nuances for improving patient outcome and avoiding complications during cranial cases. Detailed surgical videos of procedures by the expert panel will be reviewed in high definition 3D to maximize the learning experience for the viewers. The discussion will be targeted to all neurosurgeons that practice cranial surgery as well as trainees at all levels.

This session will be interactive through live streaming over the Internet, and the audience—both in the room and those watching the stream—will have the chance to ask the faculty questions. Those in the session will be able to access the panel with direct texting. Those attending the meeting via webcast will access the panel via an internet connection. Visit cohen.omnovia.com/room1. Choose the attendee option, “enter the room” and type in your name. The chat function is available at the bottom of the video windows.

4:30–5:30 PM

Wine And Cheese Reception
In The AANS Exhibit Hall

Location: Halls H/I, Ernest N. Morial Convention Center

The Wine and Cheese Reception is provided in part by a generous grant from

arbor®
PHARMACEUTICALS, INC.

5:30–7:00 PM

Joint Annual Business Meeting Of The American Association Of Neurological Surgeons And The American Association Of Neurosurgeons

Location: 286/287, Ernest N. Morial Convention Center

WWW.AANS.ORG
6:30–8:30 PM

AANS International Reception

Location: The Van Benthuyzen-Elms Mansion

Join leaders from the AANS, international neurosurgical organizations, and special dignitaries during this year’s AANS International Reception. In addition to connecting with colleagues from around the globe, attendees may also meet this year’s International Lifetime Recognition Award recipient: Johannes Schramm, MD. This prestigious award honors Dr. Schramm for his lifetime of invaluable contributions to neurosurgery, as well as his activity in international neurosurgery.

The Van Benthuyzen-Elms Mansion is a beautiful example of Italianate style architecture, providing exquisite grandeur to St. Charles Avenue and the Garden District of New Orleans. The historical Elms Mansion features elegant touches such as an imported mantel of hand carved marble, ornamental cornices, 24-karat gold sconces, and a 48-foot grand ballroom lined with jeweled windows. A tour of the mansion will unveil a window into the antebellum past. Southern hospitality at its best!

There is no fee to attend; however a ticket is required which may be obtained at Registration in Lobby H/I at the Ernest N. Morial Convention Center. The AANS welcomes all Annual Scientific Meeting registered attendees—especially our colleagues from outside the United States.

Attire for the event is Business. Shuttle buses to the AANS International Reception will depart at 6:15 pm to Van Benthuyzen-Elms Mansion from New Orleans Marriott (AANS Headquarters Hotel) at the Canal Street Entrance.
Dinner Symposia

6:30–8:30 PM

SE129 Stereotactic Radiosurgery And Resection Of Tumors

Location: Commander’s Palace
A quiet revolution bubbles inside the aqua blue fantasy-like Victorian architecture where inventive modern New Orleans cooking coexists with Haute Creole. Chef Tory McPhail mines the depths of Creole cooking. His fascination with Creole and Louisiana cuisine inspires his menus and he strives for 90% of his ingredients to come from within 100 miles of the restaurant. Shuttle bus will be provided from the New Orleans Marriott Hotel, Canal Street entrance departing at 6:15 PM.

Panelists
Gene Barnett, MD
Steven N. Kalkanis, MD
L. Dade Lundsford, MD
Zvi Ram, MD

This Evening Symposium was supported by an educational grant provided by

VARIAN medical systems

8:00–10:00 PM

NREF Fundraiser Reception
The NREF Honors the Career of John A. Jane Sr., MD, PhD

Location: House of Blues
Shuttle buses will depart at 7:45 PM from the New Orleans Marriott Canal Street entrance.

Join us in a celebration of the career of Journal of Neurosurgery Editor John A. Jane Sr., MD, PhD, FAANS(L). The evening includes hors d’oevres, an open bar, dancing and musical entertainment.

Dr. Jane, who graduated from the University of Chicago with a BA, cum laude in 1951 and received his Doctor of Medicine from the University of Chicago in 1956, completed his neurosurgical training in 1964 at the University of Illinois Research and Educational Hospital and the Illinois Neuropsychiatric Institute. In 1965 he was the Senior Instructor in Neurosurgery at Case Western Reserve University, and two years later Dr. Jane was awarded a PhD from the University of Chicago, Division of Biological Sciences, Section of Biopsychology. From 1969–2006, Dr. Jane served as the Professor and Chairman of the Department of Neurosurgery at the University of Virginia School of Medicine in Charlottesville, Va. He currently is professor and director of the school’s neurosurgical training program.

Dr. Jane became a member of the Editorial Board of the Journal of Neurosurgery in 1984; Chairman of the Editorial Board in 1990; Associate Editor in 1991; and in 1992 was elected Editor. He is also the Editor and founder of Journal of Neurosurgery: Spine and Journal of Neurosurgery: Pediatrics. Not surprisingly, his clinical interests include cranial and spine surgery, as well as pediatric neurosurgery, with a special interest in craniofacial surgery.
Industry Supported Satellite Symposium

These symposia are educational programs relating to neurosurgery that are planned and implemented by an organization outside of the AANS. The information in these presentations is in no way sponsored or endorsed by the AANS. The educational content is developed and delivered by exhibiting companies and their experts. While the primary intent of this content is to provide detailed information about products, findings, and appropriate use of products, some content also may contain product- or company-specific marketing messages.

6:30–9:30 PM

Race Against The Clock: Overcoming Challenges In The Management Of Anticoagulant-Associated Intracerebral Hemorrhage—CSL Behring

Location: New Orleans Marriott—Bissonet

Speakers
Peter Le Roux, MD, FACS (Chair)
Charles V. Pollack Jr., MA, MD, FACEP

Course Description
This free CME satellite symposium and complimentary dinner will be led by specialists in Neurosurgery and Emergency Medicine, who together manage the anticoagulated patient who presents to the ED with an intracerebral hemorrhage (ICH). Management requires correction of coagulopathy and emergent assessment for surgical intervention. This case-based and interactive presentation will include a review of oral anticoagulants, warfarin and an assessment of the newer agents, a presentation of anticoagulation reversal strategies, and a thorough discussion of the factors that impact surgical decision making in patients with ICH.

This CME activity is supported by an educational grant from CSL Behring.

Please visit www.paradigmmc.com/race13 to register.

6:30–9:30 PM

Progesterone: A Pleiotropic Approach To Treating Moderate To Severe Traumatic Brain Injury An Update On The SyNAPSe And ProTECT III Phase III Clinical Studies

Location: New Orleans Marriott—Studio Two

Speakers
David O. Okonkwo, MD, PhD
David W. Wright, MD, FACEP

Course Description
Besins Critical Care cordially invites you to attend a satellite symposium and cocktail reception.

Despite more than 75 clinical trials in the past 20 years, there is no approved treatment for traumatic brain injury (TBI). All current TBI therapy is supportive rather than restorative. As a result, the vast majority of moderate to severe TBI victims still face challenging, life-changing outcomes.

Progesterone, a potent neurosteroid produced in both male and female brains, has been shown to exert neuroprotective effects by protecting or rebuilding the blood-brain barrier, decreasing development of cerebral edema, down-regulating the inflammatory cascade and limiting cellular necrosis and apoptosis. Two large-scale, double-blind, placebo-controlled Phase III clinical trials are nearing completion and poised to prove that progesterone may well be the elusive solution for improving TBI outcomes. Principal Investigators involved in SyNAPSe and PROTECT III will present updates on their respective trials and discuss how progesterone’s pleiotropic effects could lead to the world’s first approved TBI treatment when so many other have failed.

Please visit www.besincriticalcare.com/aans-symposium-registration to register.
6:00–9:00 PM

**Globus Medical SECURE® -C Training**

**Location:** New Orleans Marriott—Galerie 3

**Course Description**
SECURE® -C training lab is designed to teach a step-by-step surgical approach and reproducible process. A small, concentrated faculty-to-student teaching ratio provides for a focused learning environment. Upon completion of this program, attendees will have a firm understanding of the SECURE® -C procedure; received many “tips & pearls” that may be applied to clinical practice and will understand the proper use and application of Globus Medical technology.

The Program is open to attending neurosurgeons, orthopaedic spine surgeons and those in Fellowship training.
Tuesday, April 30
Day-At-A-Glance

Bus Information
The AANS will provide shuttle service at regular intervals between the Ernest N. Morial Convention Center and all AANS hotels starting at 6:30 AM. See page 153 for Shuttle bus schedule. A full schedule is available at all AANS hotels and the Ernest N. Morial Convention Center.

Registration Hours
6:30 AM–4:00 PM
Location: Lobby H/I, Ernest N. Morial Convention Center

Speaker Ready Room
6:30 AM–5:00 PM
Location: 283, Ernest N. Morial Convention Center

Breakfast For Breakfast Seminar Attendees
6:45 AM–7:15 AM
Location: Foyers Outside 260, 283, and 383, Ernest N. Morial Convention Center

Breakfast Seminars (Additional Fee Required)
7:00–9:00 AM

AANS Exhibit Hall
9:00 AM–5:30 PM
Location: Exhibit Halls H/I, Ernest N. Morial Convention Center

Morning Beverage Break
In The AANS Exhibit Hall
9:00–9:45 AM
Location: Exhibit Halls H/I, Ernest N. Morial Convention Center

The Morning Beverage Break is provided by a generous grant from

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Plenary Session I
9:45 AM–1:00 PM
Location: Hall J
Cushing Orator: Chesley B. (Sully) Sullenberger III

Lunch In The AANS Exhibit Hall
1:00–2:00 PM
Location: AANS Exhibit Halls H/I, Ernest N. Morial Convention Center

Wine And Cheese Reception
In The AANS Exhibit Hall
4:30–5:30 PM
Location: AANS Exhibit Halls H/I

History Section Dinner (Additional Fee Required)
6:00–9:00 PM
Location: The Court of Two Sisters

Dinner Symposia (Additional Fee Required)
6:30–8:30 PM
Location: Muriel's
# Breakfast Seminars

## 201 New And Evolving Technologies For Minimally Invasive Lumbar Disc Surgery

*Location: 260, Ernest N. Morial Convention Center*

*Moderator: Richard G. Fessler, MD, PhD*

*Panelists*

- Charles L. Branch Jr., MD
- Dean Chou, MD
- Larry T. Khoo, MD
- Jean-Pierre Mobasser, MD

## 202 Challenging Spinal Cases: Pearls And Pitfalls

*Location: 266, Ernest N. Morial Convention Center*

*Moderator: Edward C. Benzel, MD*

*Panelists*

- Michael W. Groff, MD
- Haynes L. Harkey III, MD
- R. Patrick Jacob, MD
- George T. Reiter, MD

## 203 Building A Comprehensive Spine Center

*Location: 386, Ernest N. Morial Convention Center*

*Moderator: E. Hunter Dyer, MD*

*Panelists*

- Juan C. Bartolomei, MD
- David Cavanaugh, MD
- Mark D. D’Alise, MD
- H. Francis Farhadi, MD

## 204 Low-Grade Gliomas

*Location: 263, Ernest N. Morial Convention Center*

*Moderator: Linda M. Liau, MD, PhD*

*Panelists*

- Susan M. Chang, MD
- Hugues Duffau, MD
- Manfred Westphal, MD
- Jeffrey H. Wisoff, MD

## 205 The Spectrum Of Adjuvant Therapy For Brain Tumors

*Location: 264, Ernest N. Morial Convention Center*

*Moderator: Frederick F. Lang Jr., MD*

*Panelists*

- Jeffrey N. Bruce, MD
- Elizabeth B. Claus, MD, PhD
- Randy L. Jensen, MD, PhD
- James M. Markert, MD

## 206 If I Could Do That Case Over Again: Discussion Of Complications Of Spine Surgery

*Location: 265, Ernest N. Morial Convention Center*

*Moderator: Michael G. Kaiser, MD*

*Panelists*

- Iain H. Kalfas, MD
- Howard Morgan, MD
- Sergey Neckyrsh, MD
- Gerald E. Rodts Jr., MD
207 Cerebral Trauma
State-Of-The-Art Treatment

Location: 261, Ernest N. Morial Convention Center
Moderator: Alex B. Valadka, MD
Panelists
Austin R. Colohan, MD
Joshua Eric Medow, MD
Raj K. Narayan, MD
Jeffrey V. Rosenfeld, MD, MS

208 Controversies In Cerebrovascular
And Endovascular Neurosurgery

Location: 267, Ernest N. Morial Convention Center
Moderator: Erol Veznedaroglu, MD
Panelists
Aclan Dogan, MD
Michael T. Lawton, MD
Elad I. Levy, MD
Christopher S. Ogilvy, MD

209 Management Of Adult Scoliosis

Location: 268, Ernest N. Morial Convention Center
Moderator: Christopher I. Shaffrey, MD
Panelists
Peter D. Angevine, MD, MPH
Tyler R. Koski, MD
Brian A. O'Shaughnessy, MD
Daniel M. Sciubba, MD

210 Neurosurgical Management
Of Intractable Pain

Location: 271, Ernest N. Morial Convention Center
Moderator: Robert M. Levy, MD, PhD
Panelists
Kim J. Burchiel, MD
Konstantin V. Slavin, MD
Michael S. Turner, MD
Christopher J. Winfree, MD

211 Physician Autonomy In Business
Enterprises: Profits And Pitfalls

Location: 272, Ernest N. Morial Convention Center
Moderator: James R. Bean, MD
Panelists
Gregory B. Lanford, MD
Richard A. Roski, MD
Richard N. Wohns, MD
Edie E. Zusman, MD

212 Multidisciplinary Management
Of Cerebral AVMs

Location: 273, Ernest N. Morial Convention Center
Moderator: Warren R. Selman, MD
Panelists
Arun Paul Amar, MD
David M. Hasan, MD
Ajay Niranjan, MD
Gary K. Steinberg, MD, PhD
**213 Intramedullary Spinal Cord Tumors**

*Location:* 275, Ernest N. Morial Convention Center  
*Moderator:* Paul C. McCormick, MD  
*Panelists:*  
Lawrence F. Borges, MD  
Jacques Brotchi, MD, PhD  
George I. Jallo, MD  
Russell R. Lonser, MD

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**214 History Seminar: Analysis Of Hughlings Jackson's Foundational Paper, “A Study Of Convulsions” (1870)**

*Location:* 276, Ernest N. Morial Convention Center  
*Moderator:* Samuel H. Greenblatt, MD  
*Panelists:*  
Peter E. Konrad, MD, PhD  
Mark C. Preul, MD  
Michael E. Sughrue, MD

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**215 Current And Future Treatments For Pediatric Hydrocephalus**

*Location:* 277, Ernest N. Morial Convention Center  
*Moderator:* Mark G. Luciano, MD, PhD  
*Panelists:*  
Samuel R. Browd, MD, PhD  
Abhaya V. Kulkarni, MD  
Joseph R. Madsen, MD  
Steven J. Schiff, MD, PhD

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**216 ABNS Board Preparation: What You Must Know**

*Location:* 284, Ernest N. Morial Convention Center  
*Moderator:* Daniel Louis Barrow, MD  
*Panelists:*  
Alan R. Cohen, MD  
Mark N. Hadley, MD  
Nelson M. Oyesiku, MD, PhD  
Craig A. Van Der Veer, MD

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**217 Lumbar Interbody Fusion: Direct Lateral Retroperitoneal Transpsoas Fusion**

*Location:* 285, Ernest N. Morial Convention Center  
*Moderator:* Regis W. Haid Jr., MD  
*Panelists:*  
John C. Liu, MD  
John E. O'Toole, MD  
William D. Tobler, MD  
Juan Santiago Uribe, MD

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**218 Suprasellar And Juxtasellar Tumors: Complications And Avoidance**

*Location:* 270, Ernest N. Morial Convention Center  
*Moderator:* Michael W. McDermott, MD  
*Panelists:*  
Khaled M. A. Aziz, MD, PhD  
Sebastien Froelich, MD  
Theodore H. Schwartz, MD  
Harry R. van Loveren, MD
219 Management Of Cerebrovascular And Endovascular Complications: A Case Based Approach

Location: 290, Ernest N. Morial Convention Center
Moderator: Charles J. Prestigiacomo, MD
Panelists
Felipe C. Albuquerque, MD
Brian L. Hoh, MD
J D. Mocco, MD
B. Gregory Thompson Jr., MD

220 Management Of Vasospasm

Location: 293, Ernest N. Morial Convention Center
Moderator: Peter David Le Roux, MD
Panelists
Rose Du, MD, PhD
Aaron S. Dumont, MD
R. Loch Macdonald, MD, PhD
Jonathan A. White, MD

221 Surgical Treatment Of Parkinson's Disease

Location: 297, Ernest N. Morial Convention Center
Moderator: Philip A. Starr, MD, PhD
Panelists
Robert R. Goodman, MD, PhD
Paul A. House, MD
Andre G. Machado, MD, PhD
Julie G. Pliitsis, MD, PhD

222 Foraminal And Far Lateral Lumbar Disc Herniations

Location: 383, Ernest N. Morial Convention Center
Moderator: William R. Taylor, MD
Panelists
Benoit Goulet, MD
Patrick W. Hitchon, MD
Noel I. Perin, MD
Paul D. Sawin, MD

223 Return To Play After Sports Injury I—Concussion

Location: 384/385, Ernest N. Morial Convention Center
Moderator: Mark D. Krieger, MD
Panelists
Julian E. Bailes Jr., MD
H. Hunt Batjer, MD
Richard G. Ellenbogen, MD
Mark R. Proctor, MD

224 Business Of Neurosurgery II—Growth And Management Of Neurosurgical Practices

Location: 396, Ernest N. Morial Convention Center
Moderator: Troy M. Tippett, MD
Panelists
Perry A. Ball, MD
Mark E. Linskey, MD
Steven A. Toms, MD, MPH
Clarence B. Watridge, MD
225 Shoulder Vs. Spine–Differentiating Shoulder And Cervical Spine Pathology

**Location:** 262, Ernest N. Morial Convention Center  
**Moderator:** Paul Kraemer, MD  
**Panelists**  
Nathaniel P. Brooks, MD  
Dennis J. Maiman, MD, PhD  
Michael L. Smith, MD

226 Stem Cell Therapeutics In Neurosurgery

**Location:** 387, Ernest N. Morial Convention Center  
**Moderator:** Nathan R. Selden, MD, PhD  
**Panelists**  
Nicholas C. Bambakidis, MD  
John A. Boockvar, MD  
Doug Kondziolka, MD  
Dimitris G. Placantonakis, MD, PhD

227 Getting Your Neurosurgery Research Career Up And Running In Three Easy Steps

**Location:** 397, Ernest N. Morial Convention Center  
**Moderator:** Aviva Abosch, MD, PhD  
**Panelists**  
Emad N. Eskandar, MD  
Robert F. Heary, MD  
Michael G. Kaplitt, MD, PhD  
Nicholas M. Boulis, MD

228 Spinal Cord Stimulation In The Neurosurgery Practice

**Location:** 398, Ernest N. Morial Convention Center  
**Moderator:** Jason M. Highsmith, MD  
**Panelists**  
Jay V. Howington, MD  
Joshua M. Rosenow, MD  
Steven Vanni, DO  
Ildemaro Jose Volcan, MD

9:00 AM–5:30 PM  
**AANS Exhibit Hall**  
**Location:** Exhibit Halls H/I, Ernest N. Morial Convention Center

9:00–9:45 AM  
**Morning Beverage Break In The AANS Exhibit Hall**  
**Authors:** Exhibit Halls H/I, Ernest N. Morial Convention Center

The Morning Beverage Break is provided by a generous grant from Wiggins Medical
**Plenary Session II**

9:45 AM–1:00 PM  
**Location:** Hall J, Ernest N. Morial Convention Center

**Moderators**  
William T. Couldwell, MD, PhD; Anil Nanda, MD

**9:45–9:55 AM**  
**A Piece of My Mind—**  
Neurosurgeons Are Neurocritical Care Specialists  
**Speaker:** Robert E. Harbaugh, MD

**9:56–10:07 AM**  
**700 10 Degree-of-Freedom Neuroprosthetic Control by an Individual With Tetraplegia**  
**Authors:** Elizabeth C. Tyler-Kabara, MD, PhD, Jennifer Collinger, PhD; Brian Widlinger, PhD; John Downey, BS; Wei Wang, PhD; Douglas Weber, PhD; Angus McMorland, PhD; Meel Velliste, PhD; Michael Boninger, MD; Andrew Schwartz, PhD

**10:08–10:11 AM**  
**Discussant:** Jeffrey G. Ojemann, MD

**10:12–10:23 AM**  
**International Abstract Award**  
701 Intracranial Pressure Monitoring as an Early Predictor of Third Ventriculostomy Outcome  
**Authors:** David Roytowski, Patrick Semple, MD, PhD; Llewellyn Padayachy, MD; Henri Carara, MSC

**10:24–10:27 AM**  
**Discussant:** John Ragheb, MD

**10:28–10:30 AM**  
**Introduction Of The Hunt–Wilson Lecture**  
**Introduced By:** Mitchel S. Berger, MD

**10:31–10:51 AM**  
**Hunt–Wilson Lecture**  
**The Vascular Manifesto**  
**Speaker:** Michael T. Lawton, MD

**10:52–11:03 AM**  
**702 Treatment of Traumatic Brain Injury With Marrow Stromal Cells Induces Axonal Sprouting in Denervated Spinal Cord**  
**Authors:** Asim Mahmood, MD, Hongtao Wu, MD; Changsheng Qu, MD; Ye Xiong, MD

**11:04–11:07 AM**  
**Discussant:** Barth A. Green, MD

**11:08–11:19 AM**  
703 10-year Experience With Nerve Transfers for Restoration of Elbow Function in Patients With Traumatic Brachial Plexus Injuries  
**Authors:** Julia Oberhoffer, Gregor Antoniadiis, PhD; Ralph König, MD; Christian Heinen, MD; Thomas Kretschmer, PhD; Christian Wirtz, PhD; Maria Pedro, MD

**11:20–11:23 AM**  
**Discussant:** Robert J. Spinner, MD

**11:24–11:34 AM**  
**National Neurosurgery Quality and Outcomes Database at One Year: Preliminary Data and Progress Report**  
**Speaker:** Anthony L. Asher, MD

**11:35–11:46 AM**  
704 Proteomic Analysis of Diffuse Intrinsic Pontine Glioma (DIPG) Tissue Reveals Distinct Tumor Subtypes  
**Authors:** Amanda Muhs Saratsis, MD, Madhuri Kambhampati, Kendall Snyder, Jordan Hall, Sridevi Yadavilli, MD, PhD; Jennifer Perez, Suresh Magge, MD; Javad Nazarian, PhD

**11:47–11:50 AM**  
**Discussant:** Frederick A. Boop, MD

**11:51 AM–12:02 PM**  
705 Early Change in Ferumoxytol-Enhanced Magnetic Resonance Imaging Signal Suggests Unstable Human Cerebral Aneurysm. A Pilot Study  
**Authors:** David M. Hasan, MD; Nohra Chalouhi, MD; Pascal Jabbour, Aaron Dumont, David Kung, Vincent Magnotta, William Young, Tomoki Hashimoto, H. Richard Winn, Donald Hesitad

**12:03–12:06 AM**  
**Discussant:** Adel M. Malek, MD, PhD

**12:07–12:12 PM**  
**Cushing Medalist**  
**Introduced By:** Mitchel S. Berger, MD  
**Recipient:** Jon H. Robertson, MD

**12:13–1:00 PM**  
**Cushing Orator**  
**Introduced by:** Mitchel S. Berger, MD  
**Speaker:** Chesley B. (Sully) Sullenberger III
1:00–2:00 PM
Lunch In The AANS Exhibit Hall
Location: Exhibit Halls H/I, Ernest N. Morial Convention Center

1:15–2:00 PM
NEW! Lunch-and-Learn Seminars
Location: Booth #751, Exhibit Halls H/I, Ernest N. Morial Convention Center
See pages 29 and 30 for details on these informative seminars.

Monday, April 29
2:00–4:30 PM
Nuances of Intracranial Surgery: An Interactive 3D Video Presentation
Location: Hall J, Ernest N. Morial Convention Center

Tuesday, April 30
2:00–4:30 PM
Nuances of Cerebrovascular Surgery: An Interactive 3D Video Presentation
Location: Hall J, Ernest N. Morial Convention Center

Both presentations are also available through live streaming over the Internet.

Don’t Miss These 3D Sessions

Those attending the course in person will be given instructions during the meeting on how to submit questions to the moderators or participate in polling.

Those attending the meeting via webcast will visit cohen.omnovia.com/room. Login as an “attendee” then click “enter room” and type in your name. The chat function is available at the bottom of the video windows.
AANS History Section Session

2:00–4:30 PM
Location: 388–390, Ernest N. Morial Convention Center

Moderator
Larry V. Carson, MD

2:00–2:30 PM
Historical Contributions Of Neurosurgeons To Athletics And Athletic Neurological Injuries
Speaker: Julian E. Bailes Jr., MD

Abstract Presentations

2:31–2:38 PM
Vesalius Award
706 Two Bullets to The Head And a Cold Winter: Fate Allows Kutuzov to Defeat Napoleon at Moscow
Authors: Yakiv Fischenko, MD, PhD; Mark C. Preul, MD; Sergiy Kushchayevev, MD, PhD; Julia Zemskova, BS

2:39–2:46 PM
707 From the Cell of “Schwann” to “Schwannoma”— A Historical Perspective
Authors: Benjamin Brown, MD; Ashish Sonig, MD; Viraj Gandhi; Sudheer Ambekar, MD; Anil Nanda, MD, MPH

2:47–2:54 PM
708 Anatomy of The Spine as Known in Ancient Egypt
Authors: Ali M. Elhadi; M. Yashar S. Kalani, MD, PhD; Nikolay L. Martirosyan, MD; George A.C. Mendes, MD; Mahmoud Abbassy, MD; Nicholas Theodore, MD; Mark C. Preul, MD

2:55–3:06 PM
709 Franc D. Ingraham And The Genesis of Pediatric Neurosurgery
Authors: Subash Lohani, MD; Alan Cohen, MD

3:07–3:14 PM
710 Harvey Cushing And Dimitru Bagdasar—Founder of Romanian Neurosurgery
Authors: James L. Stone, MD; Madelina Mindrut, MD

3:15–3:22 PM
711 Nervous System Injuries (NSI) and Military Specialization During The American Civil War
Author: William C. Hanigan, MD, PhD

3:23–3:30 PM
712 The History of External Ventricular Drainage (EVD)
Authors: Vishish Srinivasan; Brent O’Neill, MD; Diana Jho, MD, MS; Donald Whiting, MD; Michael Oh, MD

3:31–3:38 PM
713 Bengt Liliequist: Life And Accomplishments of a True Renaissance Man
Authors: David Edward Connor, DO; Anil Nanda, MD, MPH

3:39–3:46 PM
714 Private Practice And The Evolution of Academic Neurosurgery in Louisiana
Author: David G. Kline, MD

Neurosurgical Face–Off
Changing Our Culture To Advance Patient Safety From A Historical Perspective

3:47–4:02 PM
How Dandy Changed The Culture of Safety Presented
Speaker: James T. Goodrich, MD, PhD

4:03–4:18 PM
Harvey Cushing And His Efforts To Change The Culture of Safety in Neurosurgery
Speaker: Edward R. Laws Jr., MD

4:19–4:29 PM
Case Discussion
Co-Moderator: Larry V. Carson, MD; Mark C. Preul, MD
AANS/CNS Section on Pain Section Session

2:00–4:30 PM
Location: 288/289, Ernest N. Morial Convention Center

Moderator
Christopher J. Winfree, MD

2:00–2:59 PM
John Loeser Lecture
The Strain In Pain Lies Mainly In The Brain:
Lessons Learned From The Neuroimaging Of Pain
Speaker: Sean MacKey, MD, PhD

Abstract Presentations

3:00–3:08 PM
William Sweet Award
716 Survey Of The Current State of Neurosurgical Chronic Pain Care And Education
Authors: Timothy Richard Smith, MD, PhD; Anne Park, MD; Divaker Mithal, MD, PhD; Alon Mogiler, MD, PhD; Julie Pilitsis, MD; Chris Winfree, MD; Joshua Rosenow, MD

3:09–3:17 PM
717 Trigeminal Neuralgia Occurs And Recurs in The Absence of Vascular Compression
Authors: Kim J. Burchiel, MD; Stephen Griffith, MD; Benedict Taw, MD

3:18–3:26 PM
718 Pain And Function in Syringomyelia And Chiari I Malformation
Authors: Juan Carlos Vera; Akanksha Saxena, Jessica Mack, MSC; John Heiss, MD

3:27–3:35 PM
719 Cortical Responses to Intra- And Extra-Dural Electrical Stimulation of Mammalian Spinal Cord
Authors: Taylor John Abel, MD; Oliver Flouty, MD; Hiroyuki Oya, MD; Hiroto Kawasaki, MD; Chandan Reddy, MD; Matthew Howard, MD

3:36–3:44 PM
720 An Outcome Comparison of Three Distinct Paddle Electrode Configurations of Thoracic Spinal Cord Stimulators For Chronic Neuropathic Pain
Authors: Chengyuan Wu, MD; Angud Mehdi, MS; David Penn, BS; Ashwini Sharan, MD

Neurosurgical Face–Off
Trigeminal Neuralgia

3:45–4:00 PM
Surgical Management Of Trigeminal Neuralgia
Speaker: Kim J. Burchiel, MD

4:01–4:16 PM
Radiosurgery Management Of Trigeminal Neuralgia
Speaker: Douglas S. Kondziolka, MD

4:17–4:27 PM
Case Discussion
Co-Moderator: Christopher J. Winfree, MD; Raymond F. Sekula Jr., MD

4:28–4:30 PM
Q&A
AANS/CNS Section on Pediatrics

Section Session

2:00–4:30 PM

Location: 391/392, Ernest N. Morial Convention Center

Moderator
Alan R. Cohen, MD

2:00–3:00 PM

Matson Lecture
Brain Injury In The Premature Infant:
More than Just “Injury?”
Speaker: Joseph Volpe, MD

Abstract Presentations

3:01–3:11 PM

721 Paediatric CNS Tumours In The UK Versus US:
Long-Term (1-, 5-, 10-year) Mortality
Authors: Ryan K. Mathew, MBBCh, MRCS; Roddy O’Kane, MBBS;
Roger Parslow, Charles Stiller, Tom Kenny, Sue Picton, Paul Chumas, MD

3:12–3:22 PM

722 Neonatal Microglial Response to Late Gestation
Combined Hypoxic-Ischemic And Inflammatory Insult:
Implications For Interventions
Authors: Shenandoah Robinson, MD; Lauren Jantzie, PhD; Daniel Firl, BS

3:23–3:33 PM

723 Observed Changes in CSF Flow During Posterior
Fossa Decompression for Chiari Malformations Using
an Intraoperative MRI
Authors: Aaron E Bond, MD, PhD; John Jane, MD, PhD;
Kenneth Liu, MD; Edward Oldfield, MD

3:34–3:44 PM

724 Functional Hemispherectomy in Infants:
Safety, Technical Considerations And Results
Authors: Mary E. Dunn, MD; Michael Frost, MD; Frank Ritter, MD

3:45–3:55 PM

725 The Impact of Socioeconomics on
Pediatric Ventriculoperitoneal Shunting
Authors: Corey Tyler Walker; Jonathan Stone, MD; Valerie Phillips, PA-C;
Maxwell Jacobson, BS; Howard Silberstein, MD

3:56–4:06 PM

726 Normative Values of Anthropometric
Cranial Indices During Infancy
Authors: Jonathan A. Pindrik, MD; Joseph Molenda, BS; Edward Ahn, MD

4:07–4:17 PM

727 National Audit of Ventriculoperitoneal Shunt Survival
in Children in The United Kingdom: 30-Day Failure Rate
Authors: Yahia Al-Tamimi, MD; Priyank Sinha, MBBS; Ryan Mathew, Darach
Crimmins, John Thorne, Richard Hayward, Guirish Solanki, Simon Thomson,
Paul Chumas

4:18–4:28 PM

728 Effect of Surgical Debulking on
Post-Operative Cerebellar Mutism
Authors: Anthony Myint; Yasser Jeelani, MD; Jessica Ashford, MSC;
Stephanie Da Silva, MS; J. Gordon McComb, MD; Mark Krieger, MD

4:29–4:30 PM

Q&A
AANS/CNS Peripheral Nerve Section Session

2:00–4:30 PM

Location: 291/292, Ernest N. Morial Convention Center

Moderator
Allan J. Belzberg, MD

2:00–2:02 PM
Introduction Of Kline Lecture
Introduction: Rajiv Midha, MD, MS

2:03–2:40 PM
Kline Lecture
The Clinical Translation Of Short Gap Entubulation Nerve Repair
Speaker: Simon J. Archibald, PhD

2:41–2:45 PM
Concluding Remarks: David G. Kline, MD

2:46–3:20 PM
Peripheral Nerve Tumor Case Presentations
Presenters: Michael J. Dorsi, MD; Amgad Saddik Hanna, MD
Panel: Line Jacques, MD; Michel Kliot, MD; Allan D. Levi, MD, PhD; Robert J. Spinner, MD

3:21–3:50 PM
Peripheral Nerve Entrapment: Failed Surgery Case Presentations
Presenters: Abhay Varma, MD; Shaun T. O’Leary, MD, PhD
Panel: Aaron G. Filler, MD, PhD; Leo T. Happel, PhD; Allen H. Maniker, MD; Christopher J. Winfree, MD; Eric L. Zager, MD

Abstract Presentations

Moderators: Jason Huang, MD; Justin Brown, MD

3:51–3:58 PM
729 A Molecular, Histopathological And Clinico-Radiological Analysis of Invasive Spinal Schwannomas
Authors: Joshi George, MD; Nesrin Sabha, Sameer Agnihotri, Boris Krischek, Gelareh Zadeh, Michael Fehlings

3:59–4:06 PM
730 Tractography of The Human Cervical Spine Nerve Roots
Authors: Brian Hill; Matthew Kang, MD; Christophe Lenglet, PhD; Jutta Ellermann, MD; Leah Hanson, PhD

4:07–4:14 PM
731 Peripheral Nerve Tractography Using MR DTI
Authors: Michel Kliot, MD; Jared Narvid, MD; Roger Noss, PhD; Cynthia Chin, MD

4:15–4:22 PM
732 In Vivo Survival And Neuronal Differentiation of Human Inducible Pluripotent Stem Cell-Derived Neural Precursors
Authors: David Weingarten, MD; Jana Juhasova, Stefan Juhas, PhD; Jan Motlik, PhD; Shauna Yuan, MD; Sylvia Marsala, Joseph Ciacci, MD; Martin Marsala, MD

4:23–4:30 PM
733 Does G-CSF Have a Regenerative Influence on Traumatic Lesions of The Sciatic Nerve in Rats?
Authors: Doertke Keiner; Harald von Pein, MD; Clemens Sommer, MD, PhD; Axel Heimann, MD; Oliver Kempski, MD, PhD; Joachim Oertel, MD, PhD
AANS/CNS Section on Tumors I
Section Session

2:00–4:30 PM
Location: 294–296, Ernest N. Morial Convention Center

Moderators
Christopher M. McPherson, MD; Michael W. McDermott, MD

Symposium Presentation
Management Of Challenging Brain Tumors
2:00–2:15 PM
Insular Tumors
Speaker: Frederick F. Lang Jr., MD
2:16–2:20 PM
Q&A
2:20–2:35 PM
Pineal Region Tumors
Speaker: Jeffrey N. Bruce, MD
2:36–2:40 PM
Q&A
2:40–2:55 PM
Lateral Ventricular And Thalamic Tumors
Speaker: Alessandro Olivi, MD
2:56–3:00 PM
Q&A
3:00–3:15 PM
Fourth Ventricular And Brainstem Tumors
Speaker: James T. Rutka, MD, PhD
3:16–3:22
Q&A

Abstract Presentations

Moderators: Christopher M. McPherson, MD; Ricardo J. Komotar, MD
3:23–3:32 PM
Journal of Neuro-Oncology Award
734 Magnetoencephalographic Imaging of Resting-State Functional Connectivity Predicts Postsurgical Neurological Outcome in Brain Gliomas
Authors: Phiroz Erach Tarapore, MD; Juan Martino, MD; Adrian Guggisberg, MD; Julia Owen, PhD; Susanne Honma, BS; Anne Findlay, MS; Mitchell Berger, MD; Heidi Kirsch, MD; Srikanthi Nagarajan, PhD
3:33–3:42 PM
American Brain Tumor Association Young Investigator Award
735 Personalized, Probabilistic Prediction of Postoperative Complication Risks for Craniotomy
Authors: Nicholas F. Marko, MD; Johannes Hjorth, PhD; Andrea Seicean, MS; Simon Tavare, PhD; Robert Weil, MD
3:43–3:52 PM
736 Predictors And Implications of Facial Nerve Dysfunction After Acoustic Neuroma Resection: A National Study
Authors: Jacob Bagley; Ranjith Babu, MS; Timothy Owens, MD; Cory Adamson, MD, PhD; Shivanand Lad, MD, PhD
3:53–4:02 PM
737 Age-Associated Practice Patterns And Survival Benefit of Gross Total Resection in Patients With Glioblastoma Multiforme
Authors: Abraham Noorbakhsh; Brandon McCutcheon; Logan Marcus, MS; Craig Schallhorn, David Chang, PhD; Bob Carter, MD, PhD; Clark Chen, MD, PhD
4:03–4:15 PM
738 Lost and Found: Therapeutic Implications of Bone Marrow as Harbor For Missing T-Cells in Glioma
Authors: Peter E. Fecci, MD; Shohei Koyama, MD, PhD; Christina Chen, BS; Tooba Cheema, PhD; Glenn Dranoff, MD; Robert Martuza, MD; William Curry, MD
4:16–4:25 PM
739 Impact of Intra-operative MRI And Multimodal Neuronavigation on Health Related Quality of Life And Survival in Adults With High-Grade Gliomas: A Prospective Controlled Study
Authors: Xiaolei Chen, MD; Fangye Li, MD; Gang Zheng, MD; Jingjiang Li, MD; Sheng Hu, MD; Ting Zhang, MD; Jiashu Zhang, MD, PhD; Bai-nan Xu, MD, PhD
4:26–4:30 PM
Q&A
Moderator
Alfredo Quinones Hinojosa, MD

Introduction
Alfredo Quinones Hinojosa, MD

Approaches To The Cavernous Sinus
Gerardo Guinto-Balanzar, MD

Brain Tumors: Experience At “Hospital Infantil de Mexico, S.S.”
Fernando Chico, MD

Superior Cerebellar Artery Aneurysms
Jorge A. Santos-Franco, MD

Cushing Disease: Middle-Term Outcome In A Small Serie
Blas E. Lopez Felix MD

Understanding And Targeting Migratory Brain Cancer Cells
Alfredo Quinones Hinojosa, MD

Neurosysticercosis Update
Jaime Gerardo Torres-Corzo, MD

Surgical Treatments
Rogelio Revuella Gutierrez, MD

Total Cervical Disk Replacement 10-Year Experience
Guy Gilbert Broc Haro, MD

Giant Aneurysms Issue
Noe Santiago, MD

Vascular Neurosurgery
Edgar Nathal, MD, DMSc

Obamacare: Fallacies
Fernando G. Diaz, MD, PhD

Surgical Treatment Outcome For Traumatic Braquial Plexus
Miguel Antonio Sandoval Balanzario, MD

Q&A
**3D Session**

2:00–4:30 PM

**Nuances Of Cerebrovascular Surgery: An Interactive 3D Video Presentation**
Also available through live streaming over the Internet

Location: Hall J, Ernest N. Morial Convention Center

Moderator: Aaron A. Cohen-Gadol, MD

Panelists
Robert F. Spetzler MD
Michael T. Lawton, MD

Course Description
This session will review the important technical nuances for improving patient outcome during cerebrovascular cases. The faculty will review 3D surgical videos of intracranial vascular procedures to demonstrate technical nuances to avoid complication and advance patient safety.

This session will be interactive through live streaming over the Internet, and the audience—both in the room and those watching the stream—will have the chance to ask the faculty questions. Those in the session will be able to access the panel with direct texting. Those attending the meeting via webcast will access the panel via an internet connection.

Visit cohen.omnovia.com/room1. Choose the attendee option, “enter the room” and type in your name. The chat function is available at the bottom of the video windows.

**Wine And Cheese Reception**

4:30–5:30 PM

In The AANS Exhibit Hall

Location: Exhibit Halls H/I,
Ernest N. Morial Convention Center

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**AANS History Section Dinner**

6:00–9:00 PM

Location: The Court of Two Sisters

Fee: $150

Invited Speaker: William J. Cooper, PhD
Boyd Professor, Louisiana State University

Dr. William J. Cooper, a Boyd Professor at Louisiana State University (LSU), has spent his entire professional career at LSU, where he served as dean of the school’s graduate school from 1982–1989. Dr. Cooper, who received his BA degree from Princeton University and his doctorate from Johns Hopkins University, has held fellowships from the Institute of Southern History at Johns Hopkins, the Charles Warren Center at Harvard University, the Guggenheim Foundation, and the National Endowment for the Humanities. He also is a past president of the Southern Historical Association and a Fellow of the Society of American Historians.

Dr. Cooper has authored numerous novels on Southern politics and history, including *The South and the Politics of Slavery, 1828–1856,* *Liberty and Slavery: Southern Politics to 1860,* *Jefferson Davis, American,* which received the Los Angeles Times Book Prize for Biography and the Jefferson Davis Award from the Museum of the Confederacy, and *We Have the War Upon Us: The Onset of the Civil War, November 1860–April 1861.* In addition, he is the co-author of *The American South, A History,* and also has edited or co-edited five books and numerous articles.

**The Code: The Concept of Honor in the Antebellum South**

Dr. Cooper will speak to dinner guest about the concept of honor and its place in society within the antebellum South. Honor was seen as a cardinal virtue within southern white society—from wealthy plantation owners to everyday farmers—and paired with liberty, formed the twin god of southern mores. This combination held a powerful role in a slave society, where the divide between liberty and slavery was so dramatic. Dr. Cooper also will look at how honor impacted different personal aspects of southern culture, such as the duel, as well as how a society imbued with this sense of honor and liberty could feel compelled to display it when it appeared threatened.
Dinner Symposia

6:30–8:30 PM

SE130 Biologics And Spine Fusion

Location: Muriel's

Fee: $195

Enjoy delicious Creole cuisine with historic ambiance located at Jackson Square, the heart of the New Orleans French Quarter. Muriel's reflects southern hospitality, historical character, and creative revelry—always New Orleans at its finest. Within Muriel's historic walls, the city of New Orleans was built by citizens that passed through. Today that savory energy for life can be felt by patrons in the award winning Contemporary Creole Cuisine served. Shuttle bus will be provided from the New Orleans Marriott Hotel, Canal Street entrance, departing at 6:15 PM.

Panelists
Peter D. Angevine. MD
Allan D. Levi, MD, PhD
Justin S. Smith, MD, PhD
Michael Y. Wang, MD
Wednesday, May 1

Day-At-A-Glance

Bus Schedule Information
The AANS will provide shuttle service at regular intervals between the Ernest N. Morial Convention Center and all AANS hotels starting at 6:30 AM. See page 153 for the Shuttle. A full schedule is available at all AANS hotels and the Ernest N. Morial Convention Center.

Registration Hours
6:30 AM–3:30 PM
Location: Lobby H/I, Ernest N. Morial Convention Center

Speaker Ready Room
6:30 AM–5:00 PM
Location: 283, Ernest N. Morial Convention Center

Breakfast For Seminar Attendees
6:45 AM–7:15 PM
Location: Foyers Outside 260, 283, and 383, Ernest N. Morial Convention Center

Breakfast Seminars (Additional Fee Required)
7:00 AM–9:00 AM

AANS Exhibit Hall
9:00 AM–5:30 PM
Location: Exhibit Halls H/I, Ernest N. Morial Convention Center

Morning Beverage Break
In The AANS Exhibit Hall
9:00–9:45 AM
Location: Exhibit Hall H/I, Ernest N. Morial Convention Center

Plenary Session I
9:45 AM–1:00 PM
Location: Hall J

Lunch In The AANS Exhibit Hall
1:00–2:00 PM
Location: Exhibit Hall H/I, Ernest N. Morial Convention Center
Breakfast Seminars
7:00–9:00 AM

301 Max Out The Web To Improve Your Practice

Location: 271, Ernest N. Morial Convention Center
Moderator: Chaim B. Colen, MD, PhD
Panelists
J. Bradley Bellotte, MD
Jonathan E. Hodes, MD, MS
Brian T. Ragel, MD
Ann R. Stroink, MD

302 Return To Play After Sports Injury II—Body Injury For Spine

Location: 261, Ernest N. Morial Convention Center
Moderator: Joseph C. Maroon, MD
Panelists
Michael W. Groff, MD
Daniel C. Lu, MD, PhD
Christina M. Notarianni, MD
Srinivas Prasad, MD

303 Vertebral Column Tumors

Location: 262, Ernest N. Morial Convention Center
Moderator: Mark H. Bilsky, MD
Panelists
Peter C. Gerszten, MD, MPH
Ehud Mendel, MD
Laurence D. Rhines, MD
Daniel M. Sciubba, MD

304 If I Could Do That Case Over Again: Discussion Of Complications Of Cranial Surgery

Location: 263, Ernest N. Morial Convention Center
Moderator: Anil Nanda, MD, MPH
Panelists
Giovanni Braggi, MD
John Diaz Day, MD
Steven L. Giannotta, MD
Peter Nakaji, MD

305 Intraoperative Imaging: State-Of-The-Art And Future Directions

Location: 264, Ernest N. Morial Convention Center
Moderator: Adam S. Arthur, MD, MPH
Panelists
Philip H. Gutin, MD
Roger Hartl, MD
Mitesh V. Shah, MD
Gregory J. Zipfel, MD

306 Surgical Approaches To The Lateral Skull Base

Location: 265, Ernest N. Morial Convention Center
Moderator: Jeffrey J. Olson, MD
Panelists
Jeremy N. Ciporen, MD
John G. Golfinos, MD
Joung H. Lee, MD
Laligam N. Sekhar, MD
307 Developing New Technology: Bringing Device To Market

Location: 266, Ernest N. Morial Convention Center
Moderator: Matthew A. Howard III, MD
Panelists
John R. Adler Jr., MD
Richard D. Bucholz, MD
Kevin T. Foley, MD
Michael W. McDermott, MD

308 Contemporary Stereotactic Radiosurgery

Location: 267, Ernest N. Morial Convention Center
Moderator: Jason P. Sheehan, MD, PhD
Panelists
John Buatti, MD
Douglas S. Kondziolka, MD
Jean Regis, MD
John H. Shin, MD

309 Osteoporosis And Spinal Fusion Surgery

Location: 268, Ernest N. Morial Convention Center
Moderator: Deborah L. Benzil, MD
Panelists
Bharat Guthikonda, MD
Frank La Marca, MD
John C. Steck, MD
Gregory R. Trost, MD

310 Anticoagulation For The Neurosurgeon And Hemostasis In Neurosurgery

Location: 260, Ernest N. Morial Convention Center
Moderator: Christopher M. Loftus, MD
Panelists
Bob S. Carter, MD, PhD
Craig H. Rabb, MD
Christopher D. Roark, MD
Bruce Tranmer, MD

311 Peripheral Nerve Entrapment Syndromes

Location: 272, Ernest N. Morial Convention Center
Moderator: Eric L. Zager, MD
Panelists
Allan J. Belzberg, MD
Line Jacques, MD
Robert J. Spinner, MD
Lynda Jun-san Yang, MD, PhD

312 How to Get Into And Out Of The Skull—A Historical Review

Location: 273, Ernest N. Morial Convention Center
Moderator: James T. Goodrich, MD, PhD
Panelist
Larry Van Carson, MD, MBA
313 Resective Strategies For Epilepsy

**Location:** 275, Ernest N. Morial Convention Center

**Moderator:** Gerald A. Grant, MD

**Panelists**
Frederick A. Boop, MD
David W. Roberts, MD
Dennis D. Spencer, MD
Nitin Tandon, MD

314 Functional Neurosurgery For Psychiatric Illness

**Location:** 276, Ernest N. Morial Convention Center

**Moderator:** Michael Y. Oh, MD

**Panelists**
Aviva Abosch, MD, PhD
Emad N. Eskandar, MD
Paul S. Larson, MD
Parag G. Patil, MD, PhD

315 Beginning Your Academic Career: Answers To Your Questions

**Location:** 277, Ernest N. Morial Convention Center

**Moderator:** Robert J. Dempsey, MD

**Panelists**
Peter J. Jannetta, MD, DSc
Jeffrey R. Leonard, MD
Jon H. Robertson, MD
Shenandoah Robinson, MD

316 Complications Of Complex Spinal Surgery: Lessons Learned

**Location:** 284, Ernest N. Morial Convention Center

**Moderator:** Ziya L. Gokaslan, MD

**Panelists**
Anthony K. Frempong-Boadu, MD
Anthony H. Sin, MD
Brian R. Subach, MD
Kevin C. Yao, MD

317 Professional Issues: Strategies To Demonstrate The Financial Viability Of The Advance Practice Provider

**Location:** 285, Ernest N. Morial Convention Center

**Moderator:** Twyila Lay, ACNP-BC

**Panelists**
Marianne Langlois PA-C
Julia Galletly ACNP-BC
Tracey Anderson ACNP-BC

318 Improving The Culture Of Safety And Complication Avoidance In Vascular Neurosurgery

**Location:** 270, Ernest N. Morial Convention Center

**Moderator:** Charles J. Prestigiacomo, MD

**Panelists**
Robert H. Rosenwasser, MD
Philip E. Stieg, PhD, MD
Cargill H. Alleyne Jr., MD
Basant Kumar Misra, MD
319 Endovascular Versus Microsurgical Techniques For The Optimal Treatment Of Intracranial Aneurysms

Location: 290, Ernest N. Morial Convention Center
Moderator: Adel M. Malek, MD, PhD
Panelists
Rocco A. Armonda, MD
C. Michael Cawley, MD
David M. Hasan, MD
Demetrius K. Lopes, MD

320 Spondylolisthesis: Controversies In Management

Location: 293, Ernest N. Morial Convention Center
Moderator: Philip R. Weinstein, MD
Panelists
John M. Caridi, MD
Harel Deutsch, MD
Amer F. Samdani, MD
Luis Manuel Tumialan, MD

321 Open Versus Endoscopic Approaches To The Anterior Skull Base

Location: 297, Ernest N. Morial Convention Center
Moderator: Chandranath Sen, MD
Panelists
Ossama Al-Mefty, MD
Carlos A. David, MD
James J. Evans, MD
Fred Gentili, MD, MSc

322 Cervical Spondylotic Myelopathy

Location: 383, Ernest N. Morial Convention Center
Moderator: Iain H. Kalfas, MD
Panelists
Michael G. Kaiser, MD
Praveen V. Mummaneni, MD
Hiroshi Nakagawa, MD
Eric J. Woodard, MD

323 Improving The Culture Of Safety And Complication Avoidance In Spinal Surgery

Location: 384/385, Ernest N. Morial Convention Center
Moderator: Neil M. Malhotra, MD
Panelists
Farbod Asgarzadie, MD
Patrick C. Hsieh, MD
Peter J. Lennarson, MD
Najeeb M. Thomas, MD

324 Humanitarian Neurosurgery

Location: 396, Ernest N. Morial Convention Center
Moderator: Merwyn Bagan, MD, MPH
Panelists
A. Leland Albright, MD
Peter M. Black, MD, PhD
Anthony G. Fieggen, MD
Barth A. Green, MD
325 Measuring Outcomes And Safety In Neurosurgery

**Location:** 386, Ernest N. Morial Convention Center

**Moderator:** Philip V. Theodosopoulos, MD

**Panelists**
- Alan S. Boulos, MD
- Paul Joseph Camarata, MD
- James P. Chandler, MD
- Thomas C. Origitano, MD, PhD

326 So You Want To Be An Expert Witness

**Location:** 387, Ernest N. Morial Convention Center

**Moderator**
- James R. Bean, MD

**Panelists**
- W. Ben Blackett, MD, JD
- Stan Pelofsky, MD
- Russell M. Pelton, JD
- Edie E. Zusman, MD

327 The Culture Of Safety And Complication Prevention In Stereotactic And Functional Neurosurgery

**Location:** 397, Ernest N. Morial Convention Center

**Moderator:** Charles Y. Liu, MD, PhD

**Panelists**
- Erich O. Richter, MD
- Kenneth A. Follett, MD, PhD
- Michael Y. Oh, MD
- Daniel Yoshor, MD

9:00 AM–9:45 AM

**Morning Beverage Break In The AANS Exhibit Hall**

**Location:** Exhibit Halls H/I, Ernest N. Morial Convention Center
Plenary Session III

9:45 AM–1:00 PM

Location: Hall J, Ernest N. Morial Convention Center

Moderators
Regis W. Haid Jr., MD; P. David Adelson, MD

9:45–9:48 AM
Introduction Of The Louise Eisenhardt Lecture
Introduced By: Julie G. Pilitsis, MD, PhD

9:49–10:19 AM
Louise Eisenhardt Lecture
Putting Patients First:
Promoting A Culture Of Patient-Centered Care
Speaker: Carolyn M. Clancy, MD

10:20–10:31 AM
Ronald L. Bittner Award On Brain Tumor Research
801 Glioma-Induced Immunosuppression Shortens
Progression-Free Survival in a Trial of Immunotherapy
For Glioblastoma
Authors: Orin Bloch, MD; Rajwant Kaur, BS; Manish Aghi, MD, PhD;
Michael McDermott, MD; Mitchel Berger, MD; Andrew Parsa, MD, PhD

10:32–10:35 PM
Discussant: James M. Markert Jr., MD

10:38–10:39 AM
Introduction Of The Richard C. Schneider Lecture
Introduced By: Mitchel S. Berger, MD

10:40–11:00 AM
Richard C. Schneider Lecture
Safe At Any Speed—
Advancing The Culture of Safety in Spine Surgery
Speaker: Charles L. Branch Jr., MD

11:01–11:12 AM
802 Complications in a Consecutive Unselected Series of 83 Patients Undergoing Pipeline Flow Diversion For Intracranial Aneurysms
Authors: Anthony Burrows, MD, David Kallmes, MD; Harry Cloft, MD, PhD;
Giuseppe Lanzino, MD

11:13–11:17 PM
Discussant: Jacques J. Morcos, MD

11:18–11:29 AM
Medical Student Summer Research Fellowship
803 Riluzole Mediated Plasticity Results in Locomotor
Recovery After High Cervical Hemilesion
Author: Farshad Nassiri

11:30–11:33 PM
Discussant: Nicholas M. Boulis, MD

11:34–11:37 AM
Young Neurosurgery Update
Speaker: Charles J. Prestigiacomo, MD

11:38–11:49 AM
804 Neural Stem Cell Transplantation And Myelination:
Results of a Phase I Trial in Pelizaeus-Merzbacher Disease
Authors: Nalin Gupta, MD, PhD; Roland Henry, PhD; Jonathan Strober, MD;
Sang-Mo Kang, MD; Daniel Lim, MD, PhD; Monica Bucci, MD; Eduardo
Caverzasi, MD; Laura Gaetano, PhD; Maria Mandelli, PhD; Tamara Ryan, RN;
Rachel Perry, RN; Jody Farrell, RN; Rita Jeremy, PhD; Mary Ulman, RN;
Stephen Huhn, MD; James Barkovich, MD; David Rowitch, MD, PhD

11:50–11:53 AM
Discussant: Gary K. Steinberg, MD, PhD

11:54 AM–12:05 PM
805 Non-Invasive Urinary Biomarkers Can Detect The
Presence of Intracranial Arteriovenous Malformations
Authors: Edward Robert Smith, MD; Brendan McNeish, MS; Michael Raber, MD;
Xuezhe Han, MD, PhD; Darren Orbach, MD, PhD

12:06–12:09 PM
Discussant: Rafael J. Tamargo, MD

12:10–12:21 PM
806 High-Resolution Diffusion MRI of The Trigeminal Nerve Using 7T MRI
Authors: Andrew Grande, MD; Christophe Lenglet; Julien Sein, PhD; Julian
Tokarev; Bharathi Jagadeesan, MD; Pierre-François Van de Moortele, MD, PhD

12:22–12:25 PM
Discussant: Nicholas M. Barbaro, MD

12:26–12:29 PM
Introduction Of The Van Wagenen Lecture
Introduced By: William F. Chandler, MD
12:30–12:50 PM
**Van Wagenen Lecture**
The Brain Connectome Revisited: Lessons From Awake Mapping In Glioma Surgery
**Speaker:** Hugues Duffau, MD, PhD

12:51–12:55 PM
**Humanitarian Award**
**Introduced By:** Mitchel S. Berger, MD
**Recipient:** Mark Bernstein, MD

12:56–1:00 PM
**Introduction Of The 2013–2014 AANS President**
**Speaker:** Mitchel S. Berger, MD
**Incoming President:** William T. Couldwell, MD

1:00–2:00 PM
**Lunch In The AANS Exhibit Hall**
**Location:** Exhibit Halls H/I, Ernest N. Morial Convention Center

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- The Sights and Sounds of the City

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AANS/CNS Cerebrovascular Section Session

2:00–4:30 PM

Location: 291/292, Ernest N. Morial Convention Center

Moderators
Nicholas C. Bambakidis, MD; J D. Mocco, MD

2:00–2:35 PM

Donaghy Lecturer
Speaker: Fady T. Charbel, MD

2:36–2:51 PM

Measuring Patient Outcomes In Cerebrovascular Surgery—How, Why, When?
Speaker: Kevin M. Cockroft, MD

2:52–3:07 PM

Tracking Our Patient Outcomes—The N2QOD And Its Value to Cerebrovascular Surgery
Speaker: E. Sander Connolly Jr., MD

Abstract Presentations

3:08–3:15 PM

807 The Discordance Between Neurocognitive And Traditional Neurological Outcomes 1-Year Following SAH
Authors: Adib Abla, MD; David A. Wilson, MD; Richard Williamson, MD; George Prigatano, MD; Felipe Albuquerque, MD; Cameron McDougall, MD; Joseph Zabramski, MD; Peter Nakaji, MD; Robert Spetzler, MD

3:16–3:23 PM

808 A Prospective Quality Initiative to Maximize Dysphagia Screening Prevents Stroke Associated Pneumonia
Authors: William L. Titsworth, MD; Justine Abram, MSN, CNRN; Amy Fullerton, MS; Jeanette Hester, MSN, CNRN; Peggy Guin, PhD; Michael Waters, MD; PhD; J Mocco, MD, MS

3:24–3:31 PM

809 Multimodal Treatment of Arteriovenous Malformations of The Basal Ganglia, Thalamus, And Insula
Authors: Matthew B. Potts, MD; Arman Jahangiri, BS; Maxwell Jen, MD; Penny Sneed, MD; Steven Hetts, MD; William Young, MD; Michael Lawton, MD

3:32–3:39 PM

810 Incidence of Acute Embolism And Significance of Platelet Aggregation Testing With The Pipeline Embolization Device
Authors: Adel M. Malek, MD, PhD; Robert Heller, BS; Venkata Dandamudi, MD; Michael Lanfranchi, MD

3:40–3:47 PM

811 An Update to The Raymond Classification of Intracranial Aneurysms
Authors: Justin R. Mascitelli, MD; Maritsa Polykarpou, BS; Henry Moyle, MD, PhD; Michael Chary, Yakov Gologensky, MD; Aanand Patel, Ashwin Kamath, MD; Amish Doshi, MD; Aman Patel, MD

3:48–3:55 PM

812 Revascularization in Patients With Moyamoya Decreases Abnormally High Posterior Circulation Arterial Flows Measured by Quantitative Magnetic Resonance Angiography
Authors: Ramon Navarro; Robert Lober, MD, PhD; Abdullah Feroze, MS; Nadia Khan, MD; Gary Steinberg, MD, PhD

3:56–4:03 PM

813 Clinical Features, Surgical Treatment, And Long-Term Outcome in Adult Patients With Moyamoya Disease in China
Authors: Lian Duan

4:04–4:11 PM

814 A Nonsense Mutation in THSD1, Encoding Thrombospondin Type-1 Domain-Containing Protein, Causes Autosomal-Dominant Intracranial Aneurysms
Authors: Dong H. Kim, MD; Teresa Sim, PhD

4:12–4:19 PM

815 Socioeconomic Disparities in Outcome After Subarachnoid Hemorrhage: Evidence From a Nation-Wide in-Hospital Data
Authors: R. Loch Macdonald, MD, PhD; Blessing Jaja, MBBS

4:20–4:27 PM

816 Diagnostically Negative Spontaneous Subarachnoid Hemorrhages: Clinical Course, Outcome And Long-Term Angiographic Follow-up
Authors: Joseph M. Zabramski, MD; Ali M. Elhadi; George A.C. Mendes, MD; Keith Atmelty, MD; Mark C. Preul, MD; Robert F. Spetzler, MD
AANS/CNS Neurotrauma & Critical Care Section Session

2:00–4:30 PM

Location: 388–390, Ernest N. Morial Convention Center

**Moderator**
Shelly D. Timmons, MD, PhD

**Neurosurgical Face–Off**
**Conservative Management On Head Injury Vs. Decompressive Cranietomy**
2:00–2:15 PM
**Conservative Management On Head Injury**
Speaker: Jeffrey V. Rosenfeld, MD

2:16–2:31 PM
**Decompressive Cranietomy**
Speaker: Howard M. Eisenberg, MD

2:32–2:42 PM
**Case Discussion**
Co-Moderator: Shelly D. Timmons, MD, PhD

2:43–2:48 PM
Announcement of 2012 Codman Recipient

2:49–3:13 PM
2013 Codman Presentation

3:14–3:19 PM
Q&A

**Abstract Presentations**

3:20–3:30 PM
**817 The Impact of Age on Functional Outcomes After Traumatic Spinal Cord Injury: Analysis of a Prospective Multicenter Dataset**
Authors: Jefferson Wilson, MD; Abhaya Kulkarni, MD, PhD; Ralph Frankowski, PhD; Robert Grossman, MD; Michael Fehlings, MD, PhD

3:31–3:41 PM
**DePuy Synthes Spinal Cord Resident Award**

Authors: Kristopher Gray Hooten, MD; Gregory Murad, MD

3:51–4:01 PM
**819 Quantifying The Stiffness of White Matter Structures Using High Resolution MR Elastography**
Authors: Curtis L Johnson, Matthew McGarry, John Weaver, Keith Paulsen, Bradley Sutton, John Georgiadis, Huan Wang, William Olivero

4:02–4:12 PM
**820 Measurement of Mitochondrial Aerobic Metabolism During Normobaric Hyperoxia Following Traumatic Brain Injury And Subarachnoid Haemorrhage**
Authors: Arnab Ghosh; Christina Kolyva, PhD; David Highton, MBBS; Ilias Tachtsidis, PhD; Neil Kitchen, MD; Clare Elwell, PhD; Martin Smith, MBBS

4:13–4:23 PM
**821 Telemonitoring of Neurosurgical Patients: 4 Years Experience**
Authors: Kathryn Ko, MD; Lynn Kemp, RN; Yuriy Ivanov, DO

4:24–4:30 PM
Q&A
**AANS/CNS Socioeconomic Section Session**

2:00–4:30 PM  
**Location:** 391/392, Ernest N. Morial Convention Center

**Moderator**  
Deborah L. Benzil, MD

2:00–2:31 PM  
**Up-To-Date Affordable Patient Care Act And Health Care Reform**  
**Speaker:** Katie Orrico, JD

2:32–2:47 PM  
**Pro Affordable Patient Care Act**  
**Speaker:** Stephen L. Ondra, MD

2:48–3:03 PM  
**Con Affordable Patient Care Act**  
**Speaker:** Troy M. Tippett, MD

3:04–3:14 PM  
**Case Discussion**  
**Co-Moderator:** Deborah L. Benzil, MD; Mark E. Linskey, MD

**Abstract Presentations**

3:15–3:24 PM  
**822 Risk Associated With Preoperative Anemia in Non-Emergency Cranial Surgery**  
**Authors:** Nima Alan; Andreea Seicean, MS; Sinziana Seicean, MD, PhD; Nicholas Schultz, PhD; Paul Jones, PhD; Duncan Neuhauser, PhD; Robert Weil, MD

3:25–3:34 PM  
**823 Endoscopic Transsphenoidal Surgery Versus Medical Therapy For The Treatment of Microprolactinoma: A Cost-Effectiveness Analysis**  
**Authors:** Pinakin R. Jethwa, MD; Tapan Patel, BS; Aaron Hajart, MS; Jean Eloy, MD; James Liu, MD

3:35–3:44 PM  
**Cone Pevehouse Young Neurosurgeon Award**  
**824 Differences in Neurosurgical Knowledge Gaps Between Spine Focused And General Neurosurgeons**  
**Authors:** Zach Litvack; Jason P. Sheehan, MD, PhD; Robert Starke, MD; Nader Pouratian, MD, PhD

3:45–3:54 PM  
**825 Predicting Rehospitalization Following Craniotomy For Meningioma: A Novel Longitudinal Multiple Database Study**  
**Authors:** Paul Kalanithi, MD; Robert Arrigo, BS

3:55–4:04 PM  
**826 Variation in Unit Cost Calculation in Spine Cost Effectiveness Research**  
**Author:** Vincent Wang, MD PhD

4:05–4:14 PM  
**827 Tracking And Sustaining Improvement Initiatives: Leveraging Quality Dashboards to Lead Change in a Neurosurgical Department**  
**Authors:** Nancy McLaughlin, MD; Nasim Afsar-Manesh, MD; Farzad Buxey, Victoria Ragland, Christine Bartels, RN; Neil Martin, MD

4:15–4:24 PM  
**828 Use of The Electronic Medical Record to Track Continuity of Care in Neurosurgical Residency**  
**Authors:** N. Scott Litofsky; Rylan Brantl, MD; Tomoko Tanaka, MD; Thorkild Norregaard, MD

4:25–4:30 PM  
**Q&A**
AANS/CNS Section Disorders of the Spine Section Session

2:00–4:30 PM
Location: 393–395, Ernest N. Morial Convention Center

Moderators
Daniel M. Sciubba, MD; Robert F. Heary, MD

Symposium
MIS Surgery: Where We Are And Where We Are Going
2:00–2:15 PM
Review of Current Clinical Evidence for MIS Fusion (TLIF, LLIF, AxiaLIF, Radiation Exposure Data)
Speaker: Paul Park, MD

2:16–2:31 PM
Cost Effectiveness Of MIS Vs. Open Procedures
Speaker: Matthew J. McGirt, MD

2:32–2:47 PM
Less Invasive (Hybrid – Mini–Open And Percutaneous) Approaches To Complex Spinal Disorders (Including Tumors And Obese Patients)
Speaker: Michael Y. Wang, MD

2:48–3:03 PM
MIS Deformity
Speaker: Praveen V. Mummaneni, MD

3:04–3:19 PM
MIS Deformity

3:20–3:26 PM
Abstract Presentations

829 The Natural History of Filum Terminale Lipomas
Authors: Wajd N. Al-Holou, MD; Michael Cools, BS; William Steller Jr, MD; Thomas Wilson, MD; Mohannad Ibrahim, MD; Cormac Maher, MD

3:27–3:33 PM
830 Impact of Global Sagittal Alignment on Health-Related Quality of Life in Lumbosacral Spondylolisthesis
Authors: Adil Harroud; Hubert Labelle, MD; Julie Joncas, RN; Jean-Marc: Mac-Thiong, MD, PhD

3:34–3:40 PM
831 Pedicle Screw Hubbing in The Adult And Immature Thoracic Spine: A Biomechanical And Micro-Computed Tomography Evaluation
Authors: Robert W. Tracey; Daniel Kang, MD; Ronald Lehman, MD; Adam Bevevino, MD; Rachel Gaume, BS; Haines Paik, MD; Anton Dmitriev, PhD; Lawrence Lenke, MD; John Cody, MD

3:41–3:47 PM
832 Withdrew

3:48–3:54 PM
833 Likelihood of Reaching Minimal Clinically Important Difference (MCID) in Health Related Quality of Life (HRQOL) Measures: Prospective Analysis of Operative And Non-operative Treatment of Adult Spinal Deformity (ASD)
Authors: Virginie Lafage; Justin Smith, MD, PhD; Frank Schwab, MD; Christopher Shaffrey, MD; Eric Klineberg, MD; Christopher Ames, MD; Richard Hostin, MD; Kai-Ming Fu, MD, PhD; Khaled Kebaish, MD; Praveen Mummaneni, MD; Vedat Deviren, MD; Oheneba Boachie-Adjei, MD; Robert Hart, MD; Shay Bess, MD; International Spine Study Group

3:55–4:01 PM
834 Health Impact Comparison of Different Disease States And Population Norms to Adult Spinal Deformity (ASD): A Call for Medical Attention
Authors: Kai-Ming Fu, MD; Shay Bess, MD; Frank Schwab, MD; Christopher Shaffrey, MD; Virginie Lafage, PhD; Justin Smith, MD, PhD; Christopher Ames, MD; Oheneba Boachie-Adjei, MD; Douglas Burton, MD; Robert Hart, MD; Eric Klineberg, MD; Richard Hostin, MD; Gregory Mundis, MD; Praveen Mummaneni, MD; International Spine Study Group

4:02–4:08 PM
835 Multilevel Fusion Surgery Outcomes And Hospitalization-Cost at Academic Centers- Analysis of a National Estimate of 950,780 Cases Across United States (US)
Authors: Ashish Sonig, MD; Anil Nanda, MD, MPH

4:09–4:15 PM
836 Incidence of Vitamin D Deficiency in Patients Undergoing Elective Spinal Fusion
Authors: Vijay M. Ravindra, MD; Wilson Ray, MD; Andrew Dailey, MD
4:16–4:22 PM
837 The Impact of Obesity on Resource Utilization Following Decompressive Surgery For Degenerative Spine Disease
Authors: Grant William Mallory, MD; Jeffrey Jacob, MD; Timothy Curry, MD; Daryl Kor, MD; Jeremy Wetzel, MS; Michelle Clarke

4:23–4:30 PM
838 Treatment of Intraspinal Abscess: Comparison of Outcomes Following Surgical And Conservative Management
Authors: Kevin Huang; Ranjith Babu; Steven Thomas, MS; Matthew Hazzard, MD; Jacob Bagley, BS; Isaac Karikari, MD; Carlos Bagley, MD; Oren Gottfried, MD; Robert Isaacs, MD; Chirag Patil, MD; Maxwell Boakye, MD; Shivanand Lad, MD, PhD
AANS/CNS Stereotactic & Functional Surgery Section Session

2:00–4:30 PM
Location: 288/289, Ernest N. Morial Convention Center

Moderators
Aviva Abosch, MD, PhD; Emad N. Eskandar, MD

2:00–2:08 PM
Intraoperative MRI—Clearpoint And iMRI
Speaker: Paul S. Larson, MD

2:09–2:17 PM
Optical Imaging For Epilepsy Surgery
Speaker: Theodore H. Schwartz, MD

2:18–2:26 PM
CCF—Stereo EEG For Epilepsy Resections
Speaker: Jorge Alvaro Gonzalez-Martinez, MD, PhD

2:27–2:35 PM
Intraoperative CT—O-Arm And iCT
Speaker: Brian H. Kopell, MD

2:36–2:44 PM
3D Operative Atlases
Speaker: Peter E. Konrad, MD, PhD

2:45–2:53 PM
iCT For Trigeminal Neuralgia
Speaker: Aaron A. Cohen-Gadol, MD

Neurosurgical Face–Off
Ablation Versus Stimulation In Movement And Psychiatric Disorders

2:54–3:09 PM
Ablation
Speaker: G. Rees Cosgrove, MD

3:10–3:25 PM
Stimulation
Speaker: Robert E. Gross, MD, PhD

3:26–3:37 PM
Case Discussion
Co-Moderators: Michael G. Kaplitt, MD, PhD; Aviva Abosch, MD, PhD

Abstract Presentations

3:38–3:44 PM
839 Regional Striatal Variation in The DBS Amelioration of Binge Eating in Mice: Choosing a Target For Obesity
Authors: Casey Halpern, MD; Andy Tekrwal; Tracy Bale, PhD

3:45–3:51 PM
840 Do Brain Rhythms Play a Role in Cortical Processing During Language Production?
Authors: Kai Joshua Miller, MD; Dora Hermes, PhD; Mariska Vansteensel, PhD; Cyrille Ferrier, MD; Erik Aarnoutse, PhD; Nick Ramsey, PhD

3:52–3:58 PM
841 Resting State Functional Connectivity Analysis Can Distinguish Normal Pressure Hydrocephalus (NPH) From Parkinson’s Disease (PD)
Authors: Blake Eaton; Samuel Taylor; Robert McGovern, MD; Chuck Mikell, MD; Andrew Chan, BS; Teresa Wojtasiewicz, BS; Guy McKhann II, MD

3:59–4:05 PM
842 STN Local Field Potential Characteristics in Patients With Primary Cranio-cervical Dystonia, Primary Generalized Dystonia, And Severe Rigid-Akinetic Parkinson’s Disease
Authors: Doris Du Wang, MD; Elena Ryapolova, BS; Jill Ostrem, MD; Philip Starr, MD, PhD

4:06–4:12 PM
843 Improved Seizure Outcomes in Resections Involving The Orbito-Frontal Cortex: Evidence For “Orbito-Frontal-Plus” Epilepsy
Authors: Demitre Serletis, MD, PhD; Jorge Gonzalez-Martinez, MD, PhD; Juan Bulacio, MD; Imad Najm, MD; William Bingham, MD

4:13–4:19 PM
844 Reinstatement of Oscillatory Power And Phase Synchrony During Memory Recall
Authors: Kareem Zaghoul, MD PhD

4:20–4:26 PM
845 Establishing Safe Parameters For Radiofrequency Lesioning Through DBS Electrodes: A Pilot Study of Lesion Geometry And Temperature Characteristics
Authors: Ben Strickland; Anish Sen, MD; Jason Stafford, PhD; Ashwin Viswanathan, MD

4:27–4:30 PM
Q&A
AANS/CNS Section On Tumors II
Section Session

2:00–4:30 PM
Location: 294–296, Ernest N. Morial Convention Center

**Moderators**
Nicholas Levine, MD; James Evans, MD

**Symposium**
The Future Of Skull Base Surgery

2:00–2:14 PM
Skull Base Surgery: Past, Present And Future
Harry van Loveren, MD

2:15–2:29 PM
Minimally Invasive Surgery: Surgery In The Era Of Multimodality Therapy
Theodore H. Schwartz, MD

2:30–2:44 PM
The Role For Open Skull Base Surgery
Franco Demonte, MD

2:45–2:59 PM
Molecular Targets On The Skull Base Horizon
Randi L. Jensen, MD, PhD

3:00–3:05 PM
Q&A

**Abstract Presentations**

**Moderators:** Nicholas Levine, MD; John A. Boockvar, MD

3:06–3:14 PM
Synthes Skull Base Award

846 Long Term Outcomes And Survival Analysis for Intracranial Chordoma
Authors: Sergei Teterov, MD; Andy Trang, BS; William Yong, MD; Yinncher Ooi, MD; Linda Liao, MD, PhD; Neil Martin, MD; Marvin Bergsneider, MD; Isaac Yang, MD

3:15–3:23 PM
847 Gefitinib Selectively Inhibits Tumor Cell Migration in EGFR-Amplified Human Glioblastoma
Authors: Jonathon Parker; Kalen Dionne, Peter Canoll, MD, PhD; B.K. Kleinschmidt-DeMasters, MD; Ali Waziri, MD

3:24–3:32 PM
848 The Impact of Adjuvant Radiotherapy on Atypical Meningioma Recurrence Following Aggressive Microsurgical Resection
Authors: Douglas Hardesty, MD; Andrew Wolf, MS; David Brachman, MD; Heyoung McBride, MD; Emad Youssef, MD; Peter Nakaji, MD; Randall Porter, MD; Kris Smith, MD; Robert Spetzler, MD; Nader Sanai, MD

3:33–3:41 PM
849 Spatiotemporal Regulation of GBM Neo-Vascularization
Authors: Gelareh M. Zadeh, MD; Kelly Burrell, MS; Richard Hill, PhD

3:42–3:50 PM
850 Outcomes And Patterns of Care in Adult Skull Base Chondomas From The Surveillance, Epidemiology, And End Results (SEER) Database
Authors: Pamela Stuart Jones, MD; Pamela Jones, MD, MS; Frederick Barker, MD; William Curry, MD

3:51–3:59 PM
851 Effect of Hospital Volume on Mortality And Morbidity After Craniotomy For Brain Tumor: an Italian Nationwide Study
Authors: Francesco DiMeco, MD; Chiara Falcone, BS; Cecilia Casali, MD; Prakash Sampath, MD; Federico Legnani, MD; Donatella Barus, PhD; Antonio Silvani, MD; Andrea Salmaggi, MD; Alessandro Olivi, Mariangela Farinotti, MD; Grazia Filippini, MD

4:00–4:08 PM
Leksell Radiosurgery Award

852 The Role of Stereotactic Radiosurgery For Intracranial Hemangioblastomas: an International Multicenter Study
Authors: Hideyuki Kano, MD PhD; Jason Sheehan, MD, PhD; Masaaki Yamamoto, MD, PhD; Byron Young, MD; Christopher Duma, MD; David Mathieu, MD; Heyoung McBride, MD; Takashi Shuto, MD, PhD; Yoshiyasu Iwai, MD, PhD; Gillian Harrison, MS; Douglas Kondziolka, MD, MSC; L. Dade Lunsford, MD
4:09–4:17 PM
853 Efficacy of Post-Operative Seizure Prophylaxis in Trans-Cortical Tumor Resections
Authors: Shaheryar Ansari; Bradley Bohnstedt, MD; James Miller, MD

4:18–4:26 PM
Preuss Award
854 Overexpression of Functional Calcium-Permeable Glutamate Receptors in Glioblastoma Derived Brain Tumor Initiating Cells
Authors: Michael C. Oh, MD; Joseph Kim, MS; Michael Safaee, BS; Gurvinder Kaur, BS; Matthew Sun, BS; Rajwant Kaur, BS; Anna Celli, PhD; Theodora Mauro, MD; Andrew Parsa, MD, PhD

4:27–4:30 PM
Q&A
Candidate (Resident/Fellow) And Medical Student Activities

C&MS

Watch for this icon throughout the Final Program. It indicates sessions that were designed with you in mind.

Resident’s Note

Neurosurgical residents and fellows in North America receive free Candidate membership in the AANS! Visit the AANS Resource Center, Booth #1439 in the Exhibit Hall H/I to learn more about membership benefits.

International Candidate (Resident/Fellow)

This membership category offers membership to residents or fellows who are enrolled in a verifiable non-North American neurosurgical training program. International Candidate Members may request transfer to International member status with the submission of a copy of their certification documentation following training. For more information, please visit the AANS Resource Center, AANS Booth #1439 in the Exhibit Hall H/I.

Marshals Program/Office

For those already signed up to Marshal, please report to the AANS Office at least 30 minutes prior to your scheduled time.

Location: 279/280, Ernest N. Morial Convention Center
Phone: 504-670-4909

Hours

Saturday, April 27  6:30 AM–6:00 PM
Sunday, April 28   6:30 AM–5:00 PM
Monday, April 29   6:30 AM–5:00 PM
Tuesday, April 30  6:30 AM–5:00 PM
Wednesday, May 1   6:30 AM–5:00 PM

If you are interested in volunteering to serve as a Marshal onsite, please stop by the AANS Office in Room 279/280 at any time during the above hours to check availability for open sessions.

Sessions for Candidates and Medical Students

Sixteen exclusive Practical Clinics and Nineteen Breakfast Seminars are being offered complimentary to candidates and medical students.

Practical Clinics

002  Introduction To Cerebrovascular Neurosurgery For Residents
005  Advanced Practices For Your Neurosurgical Practice
007  Spinal Stabilization, Fusion And Instrumentations: Biomechanics And Techniques
008  3D Anatomy And Approaches To The Posterior Fossa And Posterior Skull Base
010  Update On Spinal Radiosurgery
011  Practical And Technical Aspects Of Transsphenoidal Surgery
012  Microsurgical Management Of Intracranial Aneurysms: Site Specific Surgical Anatomy, Operation Intervention And Complication Management
013  Update On Malignant Brain Tumors For The General Neurosurgeon
014  Practical Course In Neurostimulation For Residents
016  Management Of Incidental Imaging Findings
017  Brain Mapping And Awake Mapping Techniques
020  Peripheral Nerve Injuries, Entrapments And Tumors: Examination And Evaluation
022  Invention And Innovation In Neurosurgery
026  How to Tackle Difficult Cranial Cases: A Step-By-Step Case-Based Presentation
031  3D Anatomy And Approaches To The Supratentorial Area And Anterior Skull Base
034  Neurotrauma Critical Care Review And Update For Practicing Neurosurgeon
Neurosurgical Top Gun Competition

For the eighth consecutive year, the Young Neurosurgeons Committee will host a competition for neurosurgical residents and fellows, to take place at the AANS Top Gun Booth #321 in Exhibit Hall H/I of the Ernest N. Morial Convention Center. This three-day event will include stations such as an image guided lumbar pedicle screw placement, thoracic deformity correction, endovascular aneurysms occlusion, and ventriculostomy. Each participant has one opportunity at each intricate and demanding surgical station, and is scored on his or her performance.

The resident or fellow with the best combined score will earn the distinct honor of being named the Neurosurgical Top Gun as well as a prize of $1,000, plus $1,500 for his or her residency program. Top scorers at individual stations also will win a prize of $200 each.

The first 50 participants will receive a Top Gun t-shirt!

Supporters of this year’s innovative competition are
New This Year!
Mid-Level Plenary Session

Date and Time: Sunday, April 28, 9:00 AM–12:00 PM
Location: 392, Ernest N. Morial Convention Center

The session will feature a broad array of presenters on safety, anatomy and liability issues with featured presentations from Richard Murphy, PA-C, Chairman Board of Registration of Physician Assistants Commonwealth of Massachusetts and Lieutenant Colonel Gary W. Cooke, Flight Safety Officer US Air Force Reserve Corps. See page 82 for full schedule.

N&PE

Watch for this icon throughout the Preliminary Program. It indicates sessions that were designed with you in mind.

Neuroscience Nurse, Nurse Practitioner and Physician Assistant Activities

The Scientific Program Committee has organized a comprehensive selection of scientific topics that will be presented. All registered nurses, nurse practitioners, and physician assistants are encouraged to attend any of the Practical Clinics on Saturday and Sunday and the Breakfast Seminars that are offered each morning, Monday through Wednesday.

Practical Clinics

003 Critical Care Procedures For The Neurosurgical Mid-Level Practitioner
004 Thoracic And Lumbar Stabilization And Fusion: Indications And Complications
006 Coding, Compliance And Revenue Issues In Spine Coding
007 Spinal Stabilization, Fusion And Instrumentations: Biomechanics And Techniques

Breakfast Seminars

110 Management Of Acute Spinal Cord Injury
220 Management Of Vasospasm
221 Surgical Treatment Of Parkinson’s Disease
223 Return To Play After Sports Injury I–Concussion
302 Return To Play After Sports Injury II–Body Injury
317 Professional Issues: Challenges And Opportunities For The Neurosurgical Mid-Level Practitioner

Optional Sessions for Nurse and Physician Extenders

SE126 Mid-Level Practitioner Luncheon
Date and Time: Monday, April 29, 1:00–2:45 PM
Location: 271–273, Ernest N. Morial Convention Center
Moderator: Twyila Lay, NP, MS
Speaker: Cindy Sullivan, NP

Changing Culture:
Chronicles Of Neurosurgical Spine Care
SE123 Advancements In Neurotrauma Care

Date and Time: Tuesday, April 30, 2:00–4:30 PM
Location: 270, Ernest N. Morial Convention Center
Moderator: Twyila Lay, NP, MS
Speakers:
Peter J. Hutchinson, MD
Josh E. Medow, MD
David O. Okonkwo, MD, PhD
Richard B. Rodgers, MD

Not A Member of AANS?
RNs, NPs, and PAs are encouraged to become AANS members in the Associate category. Benefits include members registration and product discounts as well as free online CME (that can be converted to CEUs for nurses). Requirements include proof of certification and letters of recommendation from three AANS voting members. For a list of member benefits and access to the online application, please go to AANS Membership at http://www.aans.org/en/Members/Membership%20Requirements.aspx.
Section Activities

**AANS/CNS Cerebrovascular Section**

**Monday, April 29**
Scientific Session V—Cerebrovascular
2:00–4:30 PM

**Tuesday, April 30**
Section Session
2:00–4:30 PM

Business Meeting
4:30–5:00 PM

**AANS/CNS Section on Disorders of the Spine and Peripheral Nerves**

**Monday, April 29**
Scientific Session II—Spine
2:00–4:30 PM

**Wednesday, May 1**
Section Session
2:00–4:30 PM

**AANS/CNS Section on Neurotrauma & Critical Care**

**Monday, April 29**
Scientific Session VI—Neurotrauma & Critical Care
2:00–4:30 PM

**Wednesday, May 1**
Section Session
2:00–4:30 PM

**AANS/CNS Section on Pain**

**Tuesday, April 30**
Section Session
2:00–4:30 PM

**AANS/CNS Section on Pediatric Neurological Surgery**

**Monday, April 29**
Scientific Session IV—Pediatrics
2:00–4:30 PM

**Tuesday, April 30**
Section Session
2:00–4:30 PM

Matson Lecture
2:00–3:00 PM

**AANS/CNS Section on Stereotactic and Functional Surgery**

**Monday, April 29**
Scientific Session III—Stereotactic and Functional Surgery
2:00–4:30 PM

**Wednesday, May 1**
Section Session
2:00–4:30 PM

**AANS/CNS Section on Tumors**

**Monday, April 29**
Scientific Session—Tumor
2:00–4:30 PM

**Tuesday, April 30**
Section Session (Tumor I)
2:00–4:30 PM

**Wednesday, May 1**
Section Session (Tumor II)
2:00–4:30 PM

**AANS Section on History**

**Tuesday, April 30**
Section Session
2:00–4:30 PM

AANS History Section Dinner
6:00–9:00 PM

**AANS Socioeconomic Section**

**Wednesday, May 1**
Section Session
2:00–4:30 PM

**Women in Neurosurgery**

**Wednesday, May 1**
WINS Breakfast
7:30–9:00 AM
AANS And Ancillary Meetings

AANS And Ancillary Meetings listing as of Monday, April 8. For up-to-date information, please refer to the Mobile Meeting App.

Thursday, April 25, 2013

AANS Finance Committee Breakfast
7:00–8:00 AM
Galerie 1
New Orleans Marriott

AANS Finance Committee
7:30–10:00 AM
Galerie 1
New Orleans Marriott

ThinkFirst Conference Day 2
8:00 AM–5:00 PM
New Orleans Marriott at Convention Center

AANS Strategic Planning Committee
10:00 AM–12:00 PM
Galerie 1
New Orleans Marriott

AANS Executive Committee Lunch
12:00–1:00 PM
Galerie 1
New Orleans Marriott

AANS Executive Committee
12:00–5:00 PM
Galerie 1
New Orleans Marriott

CSNS Long Range Planning Committee
7:00–10:00 PM
Balcony J
New Orleans Marriott

Friday, April 26, 2013

CSNS Officer Briefing
7:00–7:15 AM
Audubon
New Orleans Marriott

CSNS Communications and Education Committee
7:00–8:30 AM
Studio 6
New Orleans Marriott
WWW.AANS.ORG

CSNS Information Conference for New/Alternative Delegates
8:00–8:30 AM
Studio 10
New Orleans Marriott

AANS Board of Directors Breakfast
7:30–8:30 AM
Bissonet
New Orleans Marriott

AANS Board of Directors
8:00 AM–4:00 PM
Bissonet
New Orleans Marriott

CSNS Young Neurosurgeons
8:30–9:30 AM
Studio 7
New Orleans Marriott

CSNS Executive Committee
8:45–10:00 AM
Studio 9
New Orleans Marriott

CSNS Finance Committee
10:00–11:00 AM
Audubon
New Orleans Marriott

CSNS Membership State Societies Committee
10:00–11:00 AM
Studio 7
New Orleans Marriott

CSNS Publications Committee
10:00–11:00 AM
Studio 10
New Orleans Marriott

CSNS Resident Fellowship, Leadership Development and Mentoring Committee
10:00–11:00 AM
Studio 8
New Orleans Marriott

CSNS Website Committee
10:00–11:00 AM
Studio 5
New Orleans Marriott

CSNS Coding & Reimbursement Committee and Coding & Reimbursement Committee of the AANS/CNS
11:00 AM–12:15 PM
Studio 9
New Orleans Marriott

CSNS Medical Legal Committee
11:00 AM–12:15 PM
Studio 6
New Orleans Marriott

CSNS Neurotrauma Emergency Neurosurgery Committee
11:00 AM–12:15 PM
Galerie 6
New Orleans Marriott

CSNS Medical Practices Committee
11:00 AM–12:15 PM
Galerie 5
New Orleans Marriott

CSNS Workforce Committee
11:00 AM–12:15 PM
Galerie 4
New Orleans Marriott

CSNS Plenary Session
12:30–5:15 PM
Acadia
New Orleans Marriott

Society for Neuro-Oncology Foundation Meeting
2:00–7:00 PM
Hilton New Orleans Riverside

CSNS Reference Committee
3:00–5:15 PM
Studio 10
New Orleans Marriott
<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td><strong>AANS Voting Board</strong></td>
<td>4:00–5:30 PM</td>
<td>Bissonet</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>CSNS Reception</strong></td>
<td>5:15–6:15 PM</td>
<td>Galerie 1</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>Saturday, April 27, 2013</strong></td>
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<tr>
<td><strong>CSNS/AANS Caucus</strong></td>
<td>6:45–9:15 AM</td>
<td>Studio 7</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>CSNS/CNS Caucus</strong></td>
<td>6:45–9:15 AM</td>
<td>Studio 6</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>CSNS Northeast Quadrant</strong></td>
<td>6:45–9:15 AM</td>
<td>Studio 9</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>CSNS Northwest Quadrant</strong></td>
<td>6:45–9:15 AM</td>
<td>Studio 8</td>
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<tr>
<td><strong>CSNS Southeast Quadrant</strong></td>
<td>6:45–9:15 AM</td>
<td>Galerie 5</td>
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<tr>
<td><strong>CSNS Southwest Quadrant</strong></td>
<td>6:45–9:15 AM</td>
<td>Galerie 6</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>ANSPA Meeting</strong></td>
<td>7:00 AM–5:30 PM</td>
<td>Studio 1 &amp; 2</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>ANSPA Exhibits</strong></td>
<td>7:00 AM–5:30 PM</td>
<td>Studio 3 &amp; 4</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>CSF Think Tank Meeting</strong></td>
<td>8:00 AM–5:00 PM</td>
<td>New Orleans Marriott at Convention Center</td>
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<tr>
<td><strong>CSNS Plenary Session</strong></td>
<td>9:30 AM–12:30 PM</td>
<td>Acadia</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>Mayo Neurosurgery Specialty Council</strong></td>
<td>12:00–6:00 PM</td>
<td>Mardi Gras Ballroom A</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>CSNS Lunch</strong></td>
<td>12:30–1:30 PM</td>
<td>Bissonet</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>AANS/CNS Joint Officers Meeting</strong></td>
<td>1:30–2:30 PM</td>
<td>Galerie 4</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>CSNS Executive Committee</strong></td>
<td>1:30–3:00 PM</td>
<td>Galerie 1</td>
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<td>New Orleans Marriott</td>
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<td><strong>N2QOD Business Committee</strong></td>
<td>2:00–3:30 PM</td>
<td>Studio 9</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>AANS Subspeciality MOC Educational Materials Editorial Board</strong></td>
<td>2:30–4:30 PM</td>
<td>Galerie 6</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>AANS/CNS Communications &amp; Public Relations Committee</strong></td>
<td>3:30–4:30 PM</td>
<td>Galerie 5</td>
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<td>New Orleans Marriott</td>
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<td><strong>AANS Neurosurgeon Editorial Board</strong></td>
<td>4:00–5:30 PM</td>
<td>Studio 10</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>NeurosurgeryPAC Board of Directors</strong></td>
<td>4:30–5:30 PM</td>
<td>Galerie 5</td>
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<td>New Orleans Marriott</td>
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**Sunday, April 28, 2013**

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<th>Location</th>
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<tr>
<td><strong>AANS Leadership Orientation</strong></td>
<td>8:00–9:30 AM</td>
<td>Galerie 2</td>
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<tr>
<td><strong>Mayo Clinic Lumbar Spine Meeting</strong></td>
<td>8:00–10:00 AM</td>
<td>Mardi Gras Ballroom A</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>N2QOD Data Coordinator Meeting</strong></td>
<td>8:00–9:30 AM</td>
<td>Studio 9</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>ThinkFirst Committee Meetings</strong></td>
<td>8:00 AM–4:00 PM</td>
<td>Bonaparte</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>Journal of Neurosurgery Publishing Group Finance Committee</strong></td>
<td>8:30–10:00 AM</td>
<td>Mardi Gras Ballroom D</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>SNS Summit Meeting</strong></td>
<td>9:00 AM–12:00 PM</td>
<td>Galerie 6</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>AANS Maintenance of Certification/Continuing Medical Education Committee</strong></td>
<td>10:00–11:30 AM</td>
<td>Studio 1</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>AANS Information Technology Committee</strong></td>
<td>10:00–11:30 AM</td>
<td>Studio 8</td>
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<td>New Orleans Marriott</td>
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<tr>
<td><strong>Journal of Neurosurgery Publishing Group Editorial Board Meeting</strong></td>
<td>10:00 AM–5:00 PM</td>
<td>Mardi Gras Ballroom D</td>
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<tr>
<td><strong>WINS Executive Committee</strong></td>
<td>10:30 AM–12:30 PM</td>
<td>Studio 10</td>
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AANS/CNS Quality Improvement Workgroup
11:00 AM–12:30 PM
Studio 9
New Orleans Marriott

AANS Van Wagenen Collegium And Luncheon
12:00–1:30 PM
Mardi Gras Ballroom B
New Orleans Marriott

AANS Stereotactic Radiosurgery Registry
12:00–1:00 PM
Galerie 1
New Orleans Marriott

AANS Education and Practice Management Committee
12:00–1:30 PM
Studio 1
New Orleans Marriott

American Academy of Neurological Surgery Interim Executive Committee
12:00–2:00 PM
Galerie 4
New Orleans Marriott

SNS Web Portal Group Meeting
12:00–2:00 PM
Galerie 6
New Orleans Marriott

AANS/CNS Section on Stereotactic and Functional Neurosurgery Executive Board Meeting
12:00–4:00 PM
Room 399
Ernest N. Morial Convention Center

AANS/CNS Joint Guidelines Committee
1:00–2:00 PM
Studio 2
New Orleans Marriott

AANS History Section Executive Committee
1:00–3:00 PM
Balcony I
New Orleans Marriott

ABNS Extra-Mural Subspecialty Item Writing Committee Luncheon Seminar
1:30–3:30 PM
Studio 7
New Orleans Marriott

Society of Latin American Neurosurgeons (SLAN) Annual Working Session
2:00–3:00 PM
Studio 4
New Orleans Marriott

SNS Bootcamp Meeting
2:00–3:00 PM
Galerie 6
New Orleans Marriott

AANS Joint Sponsorship Council
2:00–3:00 PM
Studio 8
New Orleans Marriott

AANS Van Wagenen Committee
2:00–3:00 PM
Studio 5
New Orleans Marriott

N2QOD Operations Committee
2:00–3:30 PM
Studio 9
New Orleans Marriott

NREF Executive Council Meeting
2:00–4:00 PM
Galerie 1
New Orleans Marriott

ACS Advisory Council for Neurological Surgery
2:30–4:30 PM
Studio 1
New Orleans Marriott

AANS/CNS Section on Cerebrovascular Executive Committee
2:30 PM–4:30 PM
Mardi Gras Ballroom FGH
New Orleans Marriott

AANS/CNS Section on Pain Executive Committee
2:30–4:30 PM
Balcony N
New Orleans Marriott

SNS Core Subcommittee Meeting
3:00–4:00 PM
Galerie 6
New Orleans Marriott

AANS Membership Committee
3:00–4:00 PM
Studio 10
New Orleans Marriott

AANS Member Benefit Development Committee
3:00–4:30 PM
Galerie 4
New Orleans Marriott

WFNS Taskforce
3:30–4:30 PM
Balcony J
New Orleans Marriott

North American Gamma Knife Consortium Meeting
3:30–4:30 PM
Studio 2
New Orleans Marriott

AANS Resident Mentoring Reception
4:00–5:00 PM
Mardi Gras Ballroom C
New Orleans Marriott

Monday, April 29, 2013

AANS/CNS Section on Tumor Executive Committee
6:00–7:30 AM
Galerie 3
New Orleans Marriott

ThinkFirst Board of Directors Meeting
6:00–8:00 AM
Studio 2
New Orleans Marriott

AANS Development Committee
6:15–7:30 AM
Galerie 1
New Orleans Marriott

FIENS Executive Committee
6:30–7:30 AM
Mardi Gras Ballroom A
New Orleans Marriott
AANS International Outreach Committee
7:00–8:00 AM
Studio 7
New Orleans Marriott

Collaborative Spine Research Foundation
7:30 – 8:45 AM
Galerie 6
New Orleans Marriott

AANS/CNS DSPN Executive Committee Meeting
1:00–4:00 PM
Studio 9
New Orleans Marriott

AANS Public Relations Committee
1:00–2:00 PM
Room 274
Ernest N. Morial Convention Center

Accreditation Council for Pediatric Neurosurgical Fellowships
1:00–2:30 PM
Mardi Gras Ballroom A
New Orleans Marriott

AANS/CNS Section on Neurotrauma And Critical Care Executive Committee
1:00–2:30 PM
Galerie 6
New Orleans Marriott

ABNS Advisory Council Luncheon Meeting
1:30–3:30 PM
Galerie 4
New Orleans Marriott

AANS/CNS DSPN Scientific Program Committee
4:00–5:00 PM
Studio 9
New Orleans Marriott

AANS/CNS Joint Military Committee
4:30–6:30 PM
Galerie 6
New Orleans Marriott

AANS Young Neurosurgeons Committee
5:00–7:00 PM
Galerie 2
New Orleans Marriott

Joint Annual Business Meeting of the American Association of Neurological Surgeons and the American Association of Neurosurgeons
5:30–7:30 PM
Room 286/287
Ernest N. Morial Convention Center

American Association of South Asian Neurosurgeons Meeting
5:30–7:30 PM
Studio 6
New Orleans Marriott

Tuesday, April 30

AANS/CNS Drugs and Devices Committee
6:00–7:00 AM
Galerie 4
New Orleans Marriott

Carotid Investigator's Meeting
7:00–8:00 AM
Mardi Gras Ballroom A
New Orleans Marriott

WFNS International Initiatives and Fundraising
1:00–2:00 PM
Room 277
Ernest N. Morial Convention Center

AANS Ethics Committee
1:00–2:00 PM
Room 274
Ernest N. Morial Convention Center

AANS/CNS Pediatric Section Executive Committee
1:00–2:00 PM
Room 399
Ernest N. Morial Convention Center

NPA Board of Directors
1:30–2:30 PM
Room 287
Ernest N. Morial Convention Center

NREF Research Symposium
4:00–5:30 PM
Galerie 1
New Orleans Marriott

NREF Awardee And Donor Reception
5:30–6:30 PM
St. Charles Suite
New Orleans Marriott

AANS/CNS Section on Tumor Young Neurosurgeons Reception
5:30 – 7:30 PM
Riverview
New Orleans Marriott

AANS/CNS Section on Pediatrics Matson Reception
6:00 – 7:30 PM
Napoleon Suite
New Orleans Marriott

AANS History Section Annual Dinner
6:00–9:00 PM
The Court of Two Sisters

Wednesday, May 01, 2013

CSM Investigator's Meeting
7:00–8:00 AM
Mardi Gras Ballroom A
New Orleans Marriott

WINS Breakfast
7:30–9:00 AM
Mardi Gras Ballroom D
New Orleans Marriott

AANS Exhibitor Advisory Committee
12:00–1:30 PM
Room 274
Ernest N. Morial Convention Center

2013/2014 AANS Annual Meeting Planning Committee and Scientific Program Committee Debriefing
1:30–2:30 PM
Mardi Gras Ballroom AB
New Orleans Marriott
**General Information**

**AANS Office at Convention Center**  
**Location:** 279/280, Ernest N. Morial Convention Center  
**Phone:** 504-670-4908  
**Hours:**  
- Saturday, April 27: 6:30 AM–6:00 PM  
- Sunday, April 28: 6:30 AM–5:00 PM  
- Monday, April 29: 6:30 AM–5:00 PM  
- Tuesday, April 30: 6:30 AM–5:00 PM  
- Wednesday, May 1: 6:30 AM–5:00 PM

**AANS Office at Headquarters Hotel**  
**Location:** Regent, New Orleans Marriott  
**Phone:** 504-533-5571  
**Hours:**  
- Thursday, April 25: 7:00 AM–5:00 PM  
- Friday, April 26: 7:00 AM–5:00 PM  
- Saturday, April 27: 7:00 AM–5:00 PM  
- Sunday, April 28: 7:00 AM–5:00 PM  
- Monday, April 29: 7:00 AM–5:00 PM  
- Tuesday, April 30: 7:00 AM–5:00 PM  
- Wednesday, May 1: 7:00 AM–5:00 PM

**AANS Mobile Meeting App Lounge**  
Available in Lobby H/I, Ernest N. Morial Convention Center.

**AANS Press Room**  
**Location:** 282, Ernest N. Morial Convention Center  
**Hours:**  
- Monday, April 29: 8:30 AM–5:00 PM  
- Tuesday, April 30: 8:30 AM–5:00 PM  
- Wednesday, May 1: 8:30 AM–5:00 PM

**AANS Speaker Ready Room**  
**Location:** 283, Ernest N. Morial Convention Center  
**Hours:**  
- Saturday, April 27: 7:00 AM–5:00 PM  
- Sunday, April 28: 7:00 AM–5:00 PM  
- Monday, April 29: 6:30 AM–5:00 PM  
- Tuesday, April 30: 6:30 AM–5:00 PM  
- Wednesday, May 1: 6:30 AM–5:00 PM

**Accessibility**  
The Ernest N. Morial Convention Center is committed to accommodating the needs of individuals with disabilities in accordance with the Americans with Disabilities Act. All areas are wheelchair accessible. TDD phones are located in Lobby H/I. These telephones adhere to ADA code height requirements. All elevators are equipped with Braille signage. Additionally, restrooms and drinking fountains are ADA accessible.

To reserve scooters call The UPS Store at the Ernest N, Morial Convention Center at 504-670-8941 or visit their website at theupsstorelocal.com/6216. Please note: there is a minimum of a one week rental. Rates include delivery and pickup to and from your hotel or the convention center.

**Admission To Sessions/Exhibits**  
Badges are required to enter all scientific sessions and the exhibit hall. Badges are distributed at the time of registration. Badges must be worn at all times. Participants of 81st AANS Annual Scientific Meeting are identified by the following badge colors:

- Physician Attendees: Green
- Candidates/Medical Student: Brown
- Physician Extenders: (RNs, PAs and Allied) Purple
- Staff: Red
- Exhibitors: Blue
- Spouse/Guests: Orange
- Media: Yellow
Americans With Disabilities Act
AANS wishes to take those 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. If you require any of the auxiliary aids or services identified in the Americans with Disabilities Act in order to attend any AANS program, please contact the AANS Office at the Convention Center, Room 279/280, 2nd Level of the Ernest N. Morial Convention Center.

Attendee Onsite Registration Hours
**Location:** Lobby H/I, Ernest N. Morial Convention Center
- **Friday, April 26:** 5:00–7:00 PM
- **Saturday, April 27:** 6:30 AM–5:30 PM
- **Sunday, April 28:** 6:30 AM–6:30 PM
- **Monday, April 29:** 6:30 AM–6:00 PM
- **Tuesday, April 30:** 6:30 AM–4:00 PM
- **Wednesday, May 1:** 6:30 AM–3:30 PM

Attire
Attire for the 81st AANS Annual Scientific Meeting is business or business casual depending on the nature of the event or unless otherwise indicated.

Morning Beverage Breaks in the AANS Exhibit Hall
**Location:** Exhibit Halls H/I, Ernest N. Morial Convention Center
- **Monday, April 29:** 9:00–9:45 AM
- **Tuesday, April 30:** 9:00–9:45 AM
- **Wednesday, May 1:** 9:00–9:45 AM

Lunch in the AANS Exhibit Hall
**Location:** AANS Resource Center Booth #1439 and Lobby Registration Area in H/I of the Ernest N. Morial Convention Center
- **Monday, April 29:** 1:00–2:00 PM
- **Tuesday, April 30:** 1:00–2:00 PM
- **Wednesday, May 1:** 1:00–2:00 PM

Wine and Cheese in the AANS Exhibit Hall
**Monday, April 29:** 4:30–5:30 PM
**Tuesday, April 30:** 4:30–5:30 PM

No Smoking Policy
Smoking is not permitted at any official AANS events, the Ernest N. Morial Convention Center, or the majority of the official AANS hotels.

Boarding Pass
Print your boarding pass before you leave for the airport! The Boarding Pass Kiosk will be available in the Lobby H/I Registration area of the Ernest N. Morial Convention Center.

Cell Phones And Pagers
As a courtesy to other attendees and speakers, the AANS asks that you silence your cell phone or pager during all scientific sessions. If you must make a call, please step outside the meeting room.

Child Care Services
Please check with the concierge at your hotel.

Climate/Time Zone
New Orleans has a subtropical climate with pleasant year-round temperatures. Temperatures range from the mid 40's in winter to upper 90's in the summer. The average high in April is 79 degrees Fahrenheit, with the low averaging 59 degrees Fahrenheit. The average rainfall in April is 4.5” with an average of 65% sunshine. New Orleans is located in the Central Standard Time Zone.

CME Self-Reporting Stations
**Location:** AANS Resource Center Booth #1439 and Lobby Registration Area in H/I of the Ernest N. Morial Convention Center.
**E-Mail Stations**

**Location:** AANS Resource Center Booth #1439 and Lobby Registration Area in H/I of the Ernest N. Morial Convention Center.

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**AANS Exhibit Hours**

<table>
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<td>Wednesday, May 1</td>
<td>9:00 AM–2:00 PM</td>
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**First Aid Room**

**Location:** Lobby H at Entrance to AANS Exhibit Hall of the Ernest N. Morial Convention Center.

**Phone:** Ext 2390

<table>
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**Future Meetings**

- **82nd AANS Annual Scientific Meeting**
  San Francisco, CA
  April 5–9, 2014

- **83rd AANS Annual Scientific Meeting**
  Washington, DC
  May 2–5, 2015

- **84th AANS Annual Scientific Meeting**
  Chicago, IL
  April 30–May 4, 2016

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**Headquarters Hotel**

- **New Orleans Marriott**
  555 Canal Street
  New Orleans, Louisiana 70130
  Phone: 504-581-1000
  www.neworleansmarriott.com

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**AANS Information Booth**

**Location:** Lobby H/I, Ernest N. Morial Convention Center

**Phone:** 504-670-4900 (General Information)

**Phone:** 504-670-4923 (Restaurants and Reservations)

For general information about the 81st AANS Annual Scientific Meeting, surrounding area or restaurant recommendations, visit the AANS Information Booth located in Lobby H/I area of the Ernest N. Morial Convention Center.

**Hours:**

<table>
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<tr>
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<td>6:00 AM–7:00 PM</td>
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</tbody>
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**Lost And Found**

**Phone:** 504-670-4919

Security Office located in H117 on the first level of the Ernest N. Morial Convention Center

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**AANS Luggage and Coat Check**

**Location:** Coat Check IV in Lobby J, Ernest N. Morial Convention Center

<table>
<thead>
<tr>
<th>Date</th>
<th>Hours</th>
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<tr>
<td>Tuesday, April 30</td>
<td>6:30 AM – 4:45 PM</td>
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<tr>
<td>Wednesday, May 1</td>
<td>6:30 AM–4:45 PM</td>
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</table>

There will be a charge is $3.00 per bag and $2.00 per coat

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**Meeting Location**

Ernest N. Morial Convention Center
900 Convention Center Blvd
New Orleans, LA 70130
http://www.mccno.com/

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**No Smoking Policy**

Smoking is not permitted at any official AANS events, the Ernest N. Morial Convention Center, or the majority of the official AANS hotels.
Safety

For your safety, the AANS recommends removing your badge when walking outside of the convention center. In addition, please refrain from walking by yourself in the city streets at night.

Shuttle Bus Schedule

The AANS will provide shuttle service at regular intervals between the Ernest N. Morial Convention Center and all hotels.

Shuttle Bus Schedule

Four shuttle routes will run to and from the Ernest N. Morial Convention Center, Hall I Entrance and the Official AANS Housing Partners. The Embassy Suites New Orleans—Convention Center, Hilton Garden Inn New Orleans Convention Center and Marriott Downtown at the Convention Center are within walking distance.

Friday, April 26

4:30–7:15 PM*
Every 24–30 minutes

Saturday, April 27

6:30 AM–5:30 PM*
Every 24–30 minutes

Sunday, April 28

6:30–9:00 AM
Every 12–15 minutes
9:00 AM–3:30 PM
Every 24–30 minutes
3:30–6:00 PM
Every 8-12 minutes

AANS Opening Reception

6:00–7:00 PM
Every 8–12 minutes
7:00–9:00 PM
Service from Mardi Gras World to official hotels every 10 minutes

Monday, April 29

6:30–10:00 AM
Every 8–12 minutes
10:00 AM–3:30 PM
Every 24–30 minutes
3:30–7:00 PM*
Every 8–12 minutes

Tuesday, April 30

6:30–10:00 AM
Every 8–12 minutes
10:00 AM–4:00 PM
Every 24–30 minutes
4:00–6:00 PM*
Every 8–12 minutes

Wednesday, May 1

6:30–10:00 AM
Every 8–12 minutes
10:00 AM–5:00 PM
Every 24–30 minutes
5:00–6:00 PM*
Every 12–15 minutes

*Denotes last shuttle bus from the convention Center

2013 AANS Annual Scientific Meeting Shuttle Routes between Official Housing Partners and the Ernest N. Morial Convention Center

Route A—Pink
New Orleans Marriott—AANS Headquarters Hotel

Route B—Green
Westin New Orleans Canal Place
DoubleTree Hotel
Windsor Court
Renaissance Arts Hotel

Route C—Blue
Astor Crowne Plaza
Ritz-Carlton
Sheraton New Orleans

Route D—Orange
Hilton New Orleans Riverside

Taping and Photography Prohibited
Audio-taping, videotaping or photography by individuals is strictly prohibited in all scientific sessions.

Ticketed Events

Tickets for the Practical Clinics, AANS Opening Reception, Breakfast Seminars, Dinner Symposia, AANS History Section Dinner, AANS International Reception (No Charge), Mid-level Practitioner Luncheon, NREF Fundraiser Reception, Women In Neurosurgery Breakfast and Young Neurosurgeons Luncheon (No Charge), are available for purchase (if applicable) at registration in Lobby H/I, Ernest N. Morial Convention Center.
Tour Desk
Location: Preservation Hall Foyer, New Orleans Marriott
Phone: 504-553-5572

Transportation

Car Rental
AANS is pleased to provide members the opportunity for car rental savings through Alamo Rent-a-Car in conjunction with the 81st AANS Annual Scientific Meeting. Alamo provides AANS members year-round discounts off car rentals at 138 locations in North America and 275 overseas locations. In addition, members are given the opportunity to earn valuable miles, credits or points with airlines and hotels through Alamo’s partnership with most major airlines and hotel partners. To request your year-round discount, call Alamo toll-free at the number listed below or visit online at www.alamo.com. At the time of reservation, don’t forget to identify yourself as an AANS member and provide the identification information below:

For Reservations Call:
Alamo Rent-a-Car
Toll Free: 800-462-5266 or visit www.alamo.com
Please mention or enter ID# 706768
You can potentially receive up to 10% off your car rental.

Return Airport Service
AANS will provide direct-to-airport service available from the Ernest N. Morial Convention Center on Wednesday, May 1, 2013 from 11:15 AM–5:15 PM with continuous departures every ½ hour. The cost for this direct service is $20 which includes luggage handling. Due to limited seating, you are strongly encouraged to make your reservation well in advance once you arrive at the convention center. Keep in mind that the Louis Armstrong New Orleans International Airport is approximately 15 miles from the convention center, so allow yourself an ample amount of time before your flight. All reservations must be paid in cash onsite in New Orleans at the AANS Shuttle Information Center located on the sidewalk just outside Hall I prior to your shuttle departure.

WiFi
Complimentary in the Ernest N. Morial Convention Center and in meeting rooms at the New Orleans Marriott, Headquarter Hotel.
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  - Aggressively advocating for medical liability reform
  - Actively campaigning to maximize Medicare and other physician reimbursement and achieve Medicare reform
  - Working to implement beneficial CPT coding changes and policies
  - Educating the general public and other medical specialists about neurosurgery.

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- **Fellow of the American Association of Neurological Surgeons (FAANS)** category is for neurosurgeons who are American Board of Neurological Surgery (ABNS), Royal College of Physicians and Surgeons of Canada (RCPSC), or Mexican Council of Neurological Surgeons (MCNS) certified and residing in North America.
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- **Affiliate** membership is for neurosurgeons who are practicing in North America who were trained outside of North America.
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Continuing Medical Education (CME)

CME

The main goals of the American Association of Neurological Surgeons’ Annual Scientific Meeting are to serve as a primary source of continuing medical education tailored specifically to our specialty; to advance neuroscience research; integrate the patient safety movement into neurosurgical practice; and to promote a climate conducive to excellence in clinical practice. The Annual Scientific Meeting Committee is dedicated to meeting these goals. The AANS Annual Scientific Meeting is the principal mechanism for the transfer of scientific, technical and intellectual information to the neurosurgical community. Feedback obtained from the online attendee evaluation survey is one important factor in determining the program content of this meeting. Special recognition is extended to the individuals of the 81st Annual Scientific Meeting Committee and the committees they represent for their perseverance and commitment to making the Annual Scientific Meeting of the American Association of Neurological Surgeons a success.

Continuing Medical Education (CME)

The AANS is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The AANS designates this live activity for a maximum of 42.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

*A maximum of 19.5 AMA PRA Category 1 Credits™ can be claimed for general sessions and a maximum of 22.75 AMA PRA Category 1 Credits™ can be claimed for the ticketed sessions.

CME Credit for Practical Clinics

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Physicians may claim AMA PRA Category 1 Credits™ directly with the AMA for preparing an electronic poster presentation, which is also included in the published abstracts. To obtain credit from the AMA for this, physicians can either claim them on their AMA PRA certificate application or apply directly to the AMA for an AMA PRA Category Credit(s)™ certificate.

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Continuing Education for Mid-Level Practitioners

Practical clinics, breakfast seminars and afternoon sessions designated with an “N&PE” are designed with mid-level practitioners in mind.

This continuing nursing education activity was approved by the American Association of Neuroscience Nurses, an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation.

Physician assistants must self-report their credit on MyAANS.org after completion of the meeting. They will receive a certificate of attendance which can be submitted to the American Academy of Physician Assistants for acceptance towards the Physician Assistant Category I (pre-approved) CME requirement.
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