

THE COMMUNITY OF NEUROSURGERY
WISDOM FROM SHARED EXPERIENCE



CONGRESS OF NEUROLOGICAL SURGEONS
2008 ANNUAL MEETING

ORLANDO, FLORIDA SEPTEMBER 20-25, 2008

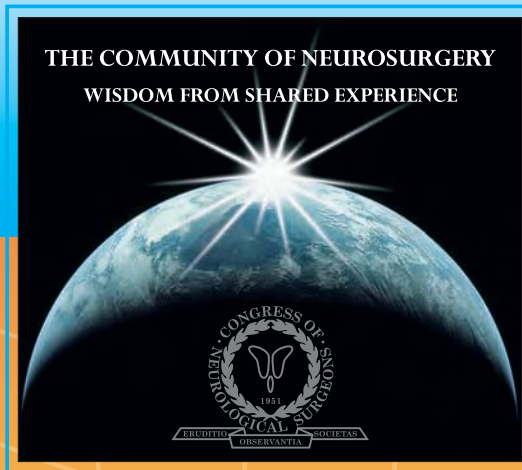


Education and Innovation

PRELIMINARY PROGRAM

Advance Registration Deadline
August 20, 2008!

2008 CNS ANNUAL MEETING * PRELIMINARY PROGRAM



September 20–25, 2008 Orlando, Florida

Annual Meeting Quick Guide

IMPORTANT DATES

Advance Registration Deadline: August 20, 2008

Housing Deadline: August 20, 2008

Cancellation Deadline: August 27, 2008

CNS ANNUAL MEETING WEB SITES

Annual Meeting Homepage & Online Registration:

<http://www.cns.org/meetings/2008>

Integrated Medical LearningSM (IML):

<http://www.cns.org/meetings/2008/attendees/new.asp>

Resident SANS Challenge Qualifying Rounds:

<http://sanschallenge.cns.org>

Online Case Submissions – Cases & Coffee with the Masters:

<http://www.cns.org/meetings/2008/attendees/scienceCase.asp>



Education and Innovation

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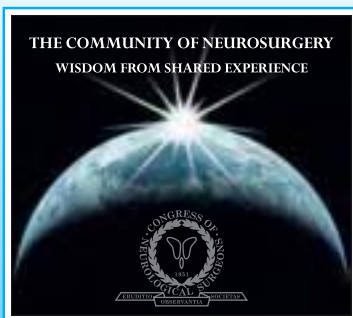
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Education and Innovation



2008 CNS Annual Meeting

The Community of Neurosurgery: Wisdom from Shared Experience

Don't miss the year's most highly anticipated neurosurgical conference! The 2008 CNS Annual Meeting promises the groundbreaking original science and innovative presentations you've come to expect, plus pioneering new session formats designed to help you more effectively analyze the information presented and apply the lessons learned to your neurosurgical practice.

Don't Miss These Highlights Throughout the Meeting!

New Session Formats – To enhance your educational experience, the CNS is introducing new session formats based on modern learning theory and cognitive science. Look for a complete explanation of these formats and a key to identify particular courses on page 21 of this preliminary program!

The CNS Neurosurgical Forum and Select Abstract Session

Presenting the top original abstracts in one interactive multi-subspecialty assembly. Details on page 37.

Integrated Medical LearningSM (IML)

Now featuring two unique platforms for the CNS' groundbreaking educational paradigm, designed to let participants drive the session content. Details on page 21.

Toolkit Sessions

These practical sessions give attendees the basic skills needed to interpret and evaluate medical evidence.

3-D Live Cadaveric Demonstrations

Neurosurgical Masters demonstrate microsurgical principles live from our General Scientific Session Stage. See page 63.

Consensus Sessions

These interactive workshops let attendees contribute to the advancement of organized neurosurgery by weighing in on critical socioeconomic issues and public policy topics. Details on pages 46, 52, 54, 64 and 66.

Cases and Coffee with the Masters

Submit your interesting cases in advance of the meeting for review and discussion by leading subspecialty experts. See page 69.

CNS Resident SANS Challenge

A game show-style competition for resident training programs. Details on page 24.

Digital Poster Center

See hundreds of scientific posters in this state-of-the-art digital format and submit questions electronically to the authors.

24.5 AMA PRA Category 1 CreditsTM (and up to 30.5 optional AMA PRA Category 1 CreditsTM).

PRESIDENT'S MESSAGE

Anthony L. Asher, MD, FACS



Dear Colleague:

The extraordinary advance of neurosurgical science coupled with unprecedented societal forces now transforming healthcare require that each of us obtain the skills necessary to work effectively and fluently with increasing amounts of complex data in our daily practices, while actively engaging with medical systems to improve the safety, effectiveness and value of systems-based medical care. In the rapidly evolving environment of modern medicine, our educational efforts must allow for the development of adaptable knowledge and essential competencies that will enable neurosurgeons to successfully manage the challenges that lie ahead for our specialty. The 2008 Congress of Neurological Surgeons Annual Meeting, our most significant educational offering to date, was designed in response to these fundamental challenges.

The theme of this year's gathering is The Community of Neurosurgery: Wisdom from Shared Experience. This theme reflects the imperative for all neurosurgeons to embrace completely new paradigms for clinical practice and continuing medical education in order to maintain our ability to effect positive change in healthcare. Specifically, we need to expand our individual professional lives to allow for the creation of new knowledge and the continual furthering of our own understanding. We must also collectively recognize the value of shared experience and work to harness the combined intellectual potential of our specialty.

The CNS Scientific Committee has developed our most powerful and innovative scientific program yet in support of our educational objectives. The collaborative "workshop of ideas" created for Orlando represents an important advance in our collective ability to navigate and master the tools of a knowledge society.

Lessons from educational science inform the design of scientific sessions throughout the meeting, providing the Community of Neurosurgery with multiple new instruments for learning. Interactive programs such as Integrated Medical Learning, Consensus Sessions and case conferences will allow participants to advance our collective understanding of current practice, evaluate its effectiveness and develop hypotheses for new avenues of investigation. Our invited speakers, particularly poet-activist Maya Angelou and the 2006 Nobel Peace prize winner Muhammad Yunus, will amplify the essential messages of individual responsibility and collective potential.

The 2008 Annual Meeting will provide us not just an opportunity to learn, but also an occasion to collaborate in the creation of knowledge and understanding, to foster interchange that stimulates innovation, to build consensus that advances the health of our specialty, and to harness the collective experience of our fellow surgeons for the good of our patients and society.

On behalf of the CNS Executive Committee, I encourage you to play a personal role in the advancement of our specialty and to help change the future of neurosurgical education and practice through your participation in the 2008 CNS Annual meeting. I look forward to joining with you and the rest of the Community of Neurosurgery for a remarkable educational and professional experience in Orlando.

Sincerely,

A handwritten signature in black ink that reads "Tony Asher" followed by a horizontal line.

Anthony L. Asher, MD, FACS

HONORED GUEST

William F. Chandler, MD



William Chandler is the Richard C. Schneider Professor of Neurological Surgery at the University of Michigan. He is co-director of the Multidisciplinary Pituitary and Neuroendocrine Clinic at the University of Michigan and Professor of Internal Medicine. Dr. Chandler has had a long standing clinical and research interest in disorders of the pituitary. Along with these interests, he has maintained interest and expertise in cerebrovascular neurosurgery, brain tumor surgery and general neurosurgery.

In 1980 Dr. Chandler and colleagues published one of the landmark articles on the use of intraoperative ultrasound for brain tumor localization. Subsequent articles detailed the use of intraoperative ultrasound for spinal cord tumors and intracranial vascular lesions. He was involved in the early work with intra-arterial radiosensitization for the treatment of malignant brain tumors. He was among the first surgeons at the University of Michigan to perform the microvascular bypass procedure and reported several innovative uses of these techniques. Dr. Chandler has worked closely with basic scientists to study the pathophysiology of pituitary tumors, including work with *in situ* hybridization and regulation of gene expression. He has worked with endocrinology colleagues to develop and test new drugs for the treatment of acromegaly.

A native of southeast Michigan, Dr. Chandler received his BA from Northwestern University. He received his medical degree from the University of Michigan and is a member of AOA, and he completed his internship and neurosurgery residency training at the University of Michigan. He received the VanWagenen Fellowship from the AANS in 1977 and spent 6 months at the Karolinska Institute in Stockholm, Sweden. There he worked with Dr. Nicolas Zwetnow doing research in the field of elevated intracranial pressure. During this time he also traveled to Paris to observe pituitary surgery by Dr. Gerard Guiot. He returned from Sweden to become an Assistant Professor of Neurosurgery at Louisiana State University, with Dr. David Kline as the chairman. In 1979 he returned to the University of Michigan and rose through the ranks to become Professor of Neurosurgery. In 2003, due to his continued efforts in training Fellows in Endocrinology, Dr. Chandler was appointed Professor of Internal Medicine. He did a sabbatical in 1986 with Dr. Alex Landoldt in Zurich, Switzerland, and also had the opportunity to work with Professor Yasergil.

In 1996 Dr. Chandler, along with Dr. Ariel Barkan from Endocrinology, started the Multidisciplinary Pituitary and Neuroendocrine Clinic. This clinic has been successful in attracting patients with a variety of pituitary related diseases. The clinic has also serves as a valuable opportunity for teaching both neurosurgery residents and endocrine fellows the intricacies of pituitary disorders. Dr. Chandler has operated on nearly 2,000 patients with pituitary and parasellar tumors. He has participated in numerous practical courses on pituitary surgery at the major national neurosurgery meetings. Dr. Chandler has authored over 130 peer reviewed publications, 3 books and numerous book chapters.

Dr. Chandler is very proudly a Past President of the Congress of Neurological Surgeons. He also served as Annual Meeting Chairman and Scientific Program Chairman. He was on the Board of Directors of the American Association of Neurological Surgeons and was Annual Meeting Chairman and Scientific Program Chairman for the AANS. Dr. Chandler was Chairman of the AANS-CNS Joint Section on Tumors. He was a Director on the American Board of Neurological Surgery and served as Chairman of the Board in 2006, also serving as Chairman of the Written Examinations Committee for the Board. He continues to serve on the Board of Directors of the American Board of Medical Specialties, representing the ABNS. He was Vice President and Scientific Program Chairman for the American Academy of Neurological Surgery. Dr. Chandler was President of the Michigan Association of Neurological Surgery. He is a member of the Society of Neurological Surgeons, the International Society of Pituitary Surgeons and is a Fellow of the American College of Surgeons.

Dr. Chandler has been very happily married to Susan Chandler for 38 years and has two sons. Their son Scott recently completed a JD-MBA program and is working in the San Francisco area. Their son Jesse is training in orthopaedic surgery at the University of North Carolina and is married to a medical school classmate who just finished her training in pediatrics. They have a beautiful one-year-old daughter – the first grandchild. Dr. Chandler has enjoyed family ski trips over the years and plays tennis year round.

NINTH ANNUAL WALTER E. DANDY ORATOR

Maya Angelou, PhD

Renowned Author, Actress, Poet

Monday, September 22, 11:05 – 11:45 am



★ Monday, September 22, 2008 ★

Maya Angelou is hailed as one of the great voices of contemporary black literature and as a remarkable Renaissance woman. She is a poet, historian, author, actress, playwright, civil-rights activist, producer and director.

A mesmerizing vision of grace, swaying and stirring when she moves; Dr. Angelou captivates her audiences lyrically with vigor, fire and perception. She has the unique ability to shatter the opaque prisms of race and class between reader and subject throughout her books of poetry and her autobiographies.

Dr. Angelou, born Marguerite Johnson on April 4, 1928, in St. Louis was raised in segregated rural Arkansas. She lectures throughout the U.S. and abroad and is a lifetime Reynolds professor of American Studies at Wake Forest University in North Carolina since 1981. She has authored twelve best selling books and numerous magazine articles earning her Pulitzer Prize and National Book Award nominations.

Dr. Angelou, poet, hit the bestsellers lists with *I Know Why the Caged Bird Sings*, a chronicle of her life up to age sixteen, which was published in 1970 with great critical and commercial success. In 1993, Angelou became the second poet in US History to have the honor of reciting original work at the Presidential Inauguration. *On the Pulse of Morning*, at Bill Clinton's presidential inauguration, was an occasion that gave her wide recognition for which she was awarded a Grammy award (best spoken word).

In the sixties, at the request of Dr. Martin Luther King, Jr., Dr. Angelou became the northern coordinator for the Southern Christian Leadership Conference and in 1975 she received the Ladies Home Journal Woman of the Year Award in communications. She received numerous honorary degrees and was appointed by President Jimmy Carter to the National Commission on the Observance of International Woman's Year and by President Ford to the American Revolutionary Bicentennial Advisory Council. She is on the board of the American Film Institute and is one of the few female members of the Director's Guild.

In the film industry, Dr. Angelou's work in script writing and directing, has been groundbreaking for black women. She has written and produced several prize-winning documentaries and her screenplay *Georgia, Georgia*, was the first by a black woman to be filmed. She was also nominated for an Emmy Award for her acting in *Roots*. In theatre, she produced, directed and starred in *Cabaret for Freedom* in collaboration with Godfrey Cambridge; starred in Genet's *The Blacks at St Mark's Playhouse*; and adapted Sophocles *Ajax*, which premiered in Los Angeles in 1974.

Past Walter E. Dandy Orators

Senator John Glenn	2000	Roberta L. Bondar, MD, PhD	2003	David McCullough	2006
Stephen E. Ambrose, PhD	2001	President Mikhail Gorbachev	2004	Sir Salman Rushdie	2007
Jane Goodall, PhD	2002	Professor Wole Soyinka	2005		

SPECIAL LECTURER

James J. Mulé, PhD

Researcher

Monday, September 22, 8:28 – 8:50 am

● Toolkit: The Promise of Personalized Medicine – The New Horizon

James J. Mulé is Executive Vice President, the U.S. Senator Connie Mack and Family Chair for Melanoma Research and Treatment, and the Director of Cell-Based Therapies at the H. Lee Moffitt Comprehensive Cancer Center. Dr. Mulé received his formal training at the Fred Hutchinson Cancer Research Center, University of Washington Medical Center in Seattle, Washington and at the Surgery Branch, Division of Cancer Treatment, National Cancer Institute, NIH, Bethesda, Maryland. He then became a tenured Senior Investigator at the Surgery Branch, NCI, NIH. During an 18 month period in Palo Alto, CA, Dr. Mulé was directly involved in the initiation of both SyStemix and its ProGenesys joint venture. He then moved to Ann Arbor, Michigan to become the Director of the Tumor Immunology and Immunotherapy Clinical Research Program at the University of Michigan Comprehensive Cancer Center. He was also the Maude T. Lane Endowed Professor of Surgery, Department of Surgery and held the appointment of Professor in the Department of Internal Medicine.

Dr. Mulé is recognized for his translational research studies in cancer immunotherapy, particularly in melanoma. His clinical research group is involved in vaccine strategies and other approaches to stimulate the immune system to recognize and destroy tumors. The work in these areas has helped to develop new treatments for advanced cancer patients. He was Chair of the Cellular, Tissue, and Gene Therapy Advisory Committee of CBER, FDA. Dr. Mulé has published nearly 200 articles in the areas of cancer vaccines and cancer immunotherapy. He was honored as the 25th Meadow Brook Lecturer in Medicine and Surgery and has appeared on ABC World News Tonight with the late Peter Jennings.



* Monday, September 22, 2008 *

SPECIAL LECTURER

James Surowiecki

Author and Financial Columnist

Tuesday, September 23, 9:08 – 9:30 am

James Surowiecki is the foremost authority on how to harness the collective wisdom of your organization for competitive advantage.

He has written a well-received book on the theory and practice of *The Wisdom of Crowds—Why The Many Are Smarter Than The Few And How Collective Wisdom Shapes Business, Economies, Societies And Nations*.

In *The Wisdom of Crowds*, Mr. Surowiecki describes systematic ways to organize and aggregate the intelligence available in your organization in order to arrive at superior decisions—often better than those that individuals would make, even if they are “experts.”

The book is full of insights into how groups operate that are invaluable to leaders in all fields. Mr. Surowiecki also offers practical methods for leveraging people and technology to learn what you need to know and make decisions that really serve the organization’s goals.



* Tuesday, September 23, 2008 *

CNS MICHAEL L.J. APUZZO LECTURER ON CREATIVITY AND INNOVATION

Muhammad Yunus, PhD

Nobel Peace Prize Laureate and Economist

Tuesday, September 23, 11:10 – 11:45 am

Muhammad Yunus was awarded the 2006 Nobel Peace Prize for his efforts to use microfinance as an instrument in the struggle against poverty. Through his groundbreaking Grameen Bank and its small micro-credit loans, Professor Yunus has managed to translate his vision of lifting individuals out of poverty into practical action, benefiting the lives of millions of people worldwide. His inspiring life story is a testimony to the power of ideas.

Professor Yunus studied economics at Vanderbilt University, USA and received his PhD in Economics in 1970. He taught economics in the Middle Tennessee University from 1969 to 1972. Returning to Bangladesh in 1972, he joined the University of Chittagong as Head of the Economics Department. He started the Grameen Bank Project in 1976. It was transformed into a formal bank in 1983, and today operates 1,781 branches providing credit to 5.6 million poor people residing in 60,815 villages in Bangladesh.

Grameen, Professor Yunus claims, is a message of hope, a program for putting homelessness and destitution in a museum so that one day our children will visit it and ask how we could have allowed such a terrible thing to go on for so long. The World Bank recently acknowledged that Yunus' business approach to the alleviation of poverty has allowed millions of individuals to work their way out of poverty with dignity.

In September of 2007, Professor Yunus and the Grameen Bank partnered with Intel to launch the Intel World Ahead Program in Bangladesh. This program aims to provide greater accessibility to the world's underserved by creating access to fully capable, affordable PCs tailored to their needs, as well as developing local infrastructures to sustain this access and providing the educational support needed to enable people in this area to effectively utilize this technology. This project is the next logical step toward Yunus' ultimate vision—the total eradication of poverty from the world.



★ Tuesday, September 23, 2008 ★

**Join us for book signings with these select speakers
throughout the 2008 CNS Annual Meeting.**



James Surowiecki
Tuesday, September 23
9:30 am



Professor Muhammad Yunus
Tuesday, September 23
11:45 am



Atul Gawande, MD
Wednesday, September 24
9:30 am



Ed Viesturs
Wednesday, September 24
11:45 am

SPECIAL LECTURER

Atul Gawande, MD

Surgeon and Acclaimed Author

Wednesday, September 24, 9:03 – 9:30 am

The Wisdom to Be Better

Atul Gawande is a practicing surgeon at Brigham and Women's Hospital and the Dana Farber Cancer Institute and an Assistant Professor at Harvard Medical School, as well as the author of several acclaimed books examining healthcare and surgical practice. He received the MacArthur Fellowship in 2006, for the "fresh and unique perspective, clarity, and intuition" in his written work and his "energetic and imaginative" approach to finding practical ways to improve surgical practice.

Dr. Gawande is a unique and important voice on the increasingly newsworthy and complex subject of healthcare and healthcare reform. His books combine an eloquent reflection of surgeons' conflicts and concerns with a deep insight into the issues of ethics and performance that all professionals face.

Dr. Gawande's book, *Better: A Surgeon's Notes on Performance*, uses the high stakes challenges that he faces as a surgeon to explore the universal struggle to perform well. Through gripping stories of diligence, ingenuity, and what it means to do right, he gives us an inside look at the life of a practicing surgeon and offers unique insights into what it takes to succeed in any area of human endeavor.

In his book *Complications*, Dr. Gawande offers a raw view from the scalpel's edge, where science is ambiguous, information is limited, the stakes are high, yet decisions must be made. Full of dramatic and revealing stories of patients and doctors, *Complications* is nuanced and lucid, unafraid to confront the conflicts and uncertainties that lie at the heart of modern medicine, yet always alive to the possibilities of wisdom in humanity's heroic attempts at healing.



Wednesday, September 24, 2008

SPECIAL LECTURER

Richard E. Mayer, PhD

Professor of Psychology

Wednesday, September 24, 10:30 – 10:50 am

What Neurosurgeons Should Discover About the Science of Learning

Richard E. Mayer is Professor of Psychology at the University of California, Santa Barbara where he has served since 1975. He is Vice President for Division C (Learning and Instruction) of the American Educational Research Association, Past-President of the Division of Educational Psychology of the American Psychological Association, and recipient of the E. L. Thorndike Award for career achievement in educational psychology. In 2008 he received the American Psychological Association's Distinguished Contributions of Applications of Psychology to Education and Training Award, and in 2004 he was ranked #1 as the most productive educational psychologist by Contemporary Educational Psychology. He is the author of 20 books and more than 250 articles and chapters, including *The Promise of Educational Psychology: Vols. 1 and 2* (1999, 2002), *Multimedia Learning* (2001), *Learning and Instruction* (2003, 2008), *E-Learning and the Science of Instruction* (with R. Clark, 2003, 2008), and the *Cambridge Handbook of Multimedia Learning* (editor, 2005).



Wednesday, September 24, 2008

SECOND ANNUAL JULIAN T. HOFF LECTURER

Ed Viesturs

Mountaineer

Wednesday, September 24, 11:15 - 11:45 am

Reaching the Summit

Washington resident Ed Viesturs is widely regarded as this country's foremost high-altitude mountaineer. He is familiar to many from the 1996 IMAX Everest Expedition documentary and in 2002 he was awarded the historic Lowell Thomas Award by the Explorer's Club for outstanding achievement in the field of mountaineering, joining an elite group of climbers including Sir Edmund Hillary.

Viesturs' motto has always been that reaching the summit is optional – coming down safely is mandatory. A proponent of careful planning, teamwork, safety and dogged determination, he is not shy about turning back from a climb if conditions are excessively dangerous. Using this approach, Viesturs has been one of the most successful Himalayan climbers in American history. Ultimately, in his words, "The mountain decides whether you climb or not. The art of mountaineering is knowing when to go, when to stay, and when to retreat."

Viesturs has successfully reached the summits of all of the world's fourteen 8000-meter peaks without supplemental oxygen, an 18-year project he christened Endeavor 8000. His goal was completed on May 12, 2005 with his ascent of Annapurna one of the world's most treacherous peaks. He is one of only a handful of climbers in history—and the only American—to accomplish this. Viesturs' dedication to teamwork and unflagging determination to succeed are emblematic of the late Dr. Julian T. Hoff, whose lectureship he will present.

Viesturs' future plans include a 150-mile unsupported ski traverse of the Canadian Arctic with John Stetson this year, and a 700-mile ski expedition in the South Pole to follow.



★ Wednesday, September 24, 2008 ★

THIRD ANNUAL JOHN THOMPSON HISTORY OF MEDICINE LECTURER

Wendy Moore

Medical Journalist and Author

Thursday, September 25, 10:00 - 10:25 am

John Hunter and the Birth of Modern Surgery

Wendy Moore is a British writer and journalist, and the author of *The Knife Man*, *The Extraordinary Life and Times of John Hunter, Father of Modern Surgery*. Moore has specialized in health and medical topics for more than twenty years. Her work has been published in a range of newspapers and magazines, including the Guardian, the Observer and the British Medical Journal, and has won several awards.

Moore holds a Diploma in the History of Medicine from the Society of Apothecaries and won its Maccabean Prize for best dissertation. She began in-depth research in 2003 on the life of John Hunter, the 18th century, Scottish-born surgeon who launched a revolution in medicine by his insistence that all surgery should be based on sound scientific evidence. Her biography of Hunter was published in 2005 and again in paperback as *The Knife Man, Blood, Body Snatching and the Birth of Modern Surgery*, in 2006. The highly acclaimed *Knife Man* won the Medical Journalist's Association Consumer Book Award, was short-listed for the biennial Marsh Biography Award, and was commended by the British Medical Association.



★ Thursday, September 25, 2008 ★

CNS PRESIDENT

Anthony L. Asher, MD



Anthony L. Asher, MD, FACS, received his BA degree in Religion and Biology from Kalamazoo College in 1982. He graduated from Wayne State University Medical School in 1987 and while there was named to the original class of Howard Hughes Medical Institute-NIH Research Scholars. Dr. Asher returned to the NIH in 1989-91 as a staff fellow under Dr. Steven Rosenberg at the Surgery Branch of the National Cancer Institute. He completed his training in neurological surgery in 1995 under the chairmanship of Dr. Julian Hoff at the University of Michigan.

After residency, Dr. Asher joined the Charlotte-based Carolina Neurosurgery and Spine Associates, where he maintains an active community-based practice with primary clinical interests in neuro-oncology and functional neurosurgery. He presently serves as the Director of Neurooncology at the Blumenthal Cancer Center of the Carolinas Medical Center, as Chairman of the Department of Neurosurgery at Presbyterian Hospital, as Adjunct Professor of Biology and Neurosurgery at the University of North Carolina (UNC) and as Clinical Professor of Neurosurgery at Penn State University. Over the last several years, Dr. Asher has been honored to serve the Congress of Neurological Surgeons in a number of roles including Vice President, Editor-in-Chief of the Self Assessment in Neurological Surgery, and as Chairman of the Strategic Planning, Scientific Program, and Annual Meeting Committees. During his tenure on the CNS Executive Committee, Dr. Asher has been particularly committed to the development of novel educational programs. Dr. Asher has also been privileged serve on the Executive Committee of the Section on Tumors since 1998 and is presently Co-Chairman of the Section's Community Collaborative Initiatives Subcommittee.

Dr. Asher's basic research has focused on tumor immunobiology. He is currently involved in brain tumor clinical research and has established cooperative cancer research programs with laboratory scientists at UNC. Dr. Asher is an RTOG principal investigator and a member of that organization's brain tumor committee. He presently serves as Co-Director of the Carolina Center for Translational Neuroscience and Co-Chairman of the Brain Tumor Foundation for the Carolinas. Dr. Asher has a special interest in promoting community involvement in clinical research and is the recent past chairman of the Central Nervous System Organ Site Committee of the American College of Surgeons Oncology Group. He is co-founder of the AANS/CNS Academic-Community Brain Tumor Initiative. Dr. Asher is also engaged in interdisciplinary educational research and the development of novel educational methods in medicine.

Tony and Jill Asher were born and raised in Michigan and met in Ann Arbor while Dr. Asher was a resident neurosurgeon. They have been married for 17 years. Jill previously worked as an ICU nurse at the University of Michigan and earned her DDS degree from that institution in 1995. Tony and Jill live in Charlotte with their three energetic children Tony (13), Kyle (11), and Dayna (8). The entire Asher family enjoys travel and a wide variety of outdoor sports including tennis, swimming, lacrosse and cycling.

PRESIDENT-ELECT

P. David Adelson, MD



P. David Adelson, MD, FACS, FAAP, is honored to serve the Congress of Neurological Surgeons as the President-Elect. He has served on the Executive Committee of the CNS in numerous roles since 1997, including Member-at-Large, Chair of the Bylaws, Publications and Strategic Planning Committees, Secretary (2003-2006), and Vice President (2006-2007). In addition, he is the Past-Chairman of the AANS/CNS Section on Neurotrauma and Critical Care, serves on the editorial board of **NEUROSURGERY**[®], and has been active nationally on the behalf of Neurosurgery, serving on the Washington Committee as Co-Chair of the Guidelines Committee, Executive Committee of the Section of Neurosurgery for the AAP and the Committee on Trauma for the American College of Surgeons.

Dr. Adelson is the A. Leland Albright Professor of Neurosurgery/Pediatric Neurosurgery at the University of Pittsburgh, School of Medicine and Children's Hospital of Pittsburgh. Dr. Adelson received his BA from Columbia College in 1982, and received his MD in 1986 from the College of Physicians and Surgeons, Columbia University. He completed his neurosurgical residency at the University of California, Los Angeles in 1993 under the chairmanship of Dr. Donald P. Becker and then pursued pediatric neurosurgery fellowship at the Children's Hospital of Boston, Harvard Medical School under the guidance of Drs. Michael Scott and Peter McLaren Black. He is also a Fellow of both the American College of Surgeons and the American Academy of Pediatrics.

Following fellowship training, Dr. Adelson came on faculty of the University of Pittsburgh and Children's Hospital of Pittsburgh, as an Assistant Professor in 1994 under Dr. Peter J. Jannetta, rising in the ranks to Associate Professor with tenure in 1999, Full Professor in 2003, and finally Albright Professor of Neurosurgery/Pediatric Neurosurgery in 2007. Dr. Adelson also serves as Vice Chairman (Research) for the Department of Neurological Surgery and has been a part of the growth of one of the most successful neurosurgical departments in terms of extramural funding. He is the Director of the Walter L. Copeland Neurosurgical Laboratories and also the Center for Injury Research and Control (CIRCL), a CDC funded ICRC at the University of Pittsburgh. Clinically, he is the Director of Pediatric Neurotrauma, Surgical Epilepsy and Brachial Plexus/Peripheral Nerve Injury at the University and Children's Hospital of Pittsburgh.

Dr. Adelson is a nationally and internationally recognized expert in pediatric neural injury, with a special interest in neural recovery and plasticity after traumatic brain injury in children. He has active and funded basic science laboratory and clinical research programs focused on pediatric TBI and hypothermia, synaptic connectivity, and neurogenesis. He is presently the Principal Investigator of an NIH funded multi-center randomized clinical trial studying the effect of moderate hypothermia following severe TBI in children. He has been the recipient of multiple awards, including The Best Doctors in America, Young Investigator Award from the Brain Injury Association, and CNS Clinical Investigation Award. His research has resulted in numerous publications; he has authored over 115 publications in refereed journals, and over 45 book chapters/invited articles and edited 8 books.

Born in New York, and following moves to New York City, Los Angeles, and Boston for training, Dr. Adelson has enjoyed life in Pittsburgh for the past 14 years with his wife Barbara whom he met in Los Angeles. Barbara, originally from Westport, Connecticut, trained as a nurse but found a new career as an Executive for non-profits in the Pittsburgh area, presently President of the Ladies Hospital Aid Society and President for the ACMS Alliance. They have five children, Casey, Brittany, David, Samuel, and Richard. While Dr. Adelson can be seen out early in the morning in the warmer weather on the Allegheny River rowing his single scull, the Adelson family enjoys reading, computers, movies and outdoor activities including golf and swimming.

ANNUAL MEETING CHAIRMAN

Gerald E. Rodts, Jr., MD



Gerald E. (Rusty) Rodts, Jr., MD, is honored to serve as the Annual Meeting Chairman for the 2008 CNS Annual Meeting in Orlando. Dr. Rodts is Professor of Neurological Surgery and Orthopedic Surgery at Emory University, School of Medicine, where he has worked since 1994.

Dr. Rodts majored in Biology at Princeton University where he also received a certificate for Science in Human Affairs. He completed his medical degree at The College of Physicians and Surgeons of Columbia University in the City of New York. He thanks Bennett Stein, MD, Donald Quest, MD Peter Carmel, MD, and others for stimulating his interest in a career in neurosurgery. Dr.

Rodts received his neurosurgery training at the University of California, Los Angeles under the tutelage of Donald Becker, MD, Ulrich Batzdorf, MD, Neal Martin, MD, Keith Black, MD, Duncan McBride, MD, John Frazee, MD and others. He is also grateful to the late Ed Dawson, MD, UCLA Professor of Orthopedic Surgery, for his teachings in spine surgery. Dr. Rodts completed a post-graduate fellowship in spine surgery under Regis Haid, MD at Emory University in Atlanta. He joined the Emory faculty the same year.

Dr. Rodts has held numerous volunteer and elected positions in the Congress of Neurological Surgeons. He has served as Vice-President, Secretary, Member-at-Large, Ex-Officio, Chairman of the Bylaws Committee, and Chairman of the CNS delegation to the CSNS. Last year he served as Chairman of the Scientific Program Committee. He has served numerous times on the Scientific Program Committee and Sergeant-at-Arms Committee. In addition to his work with the CNS, Dr. Rodts has served as Chairman, Treasurer, Scientific Program Chairman, and Annual Meeting Chairman of the Joint Section on Disorders of the Spine and Peripheral Nerves. He has served as the President of the Georgia Neurosurgical Society, and is a member of the Academy of Neurological Surgeons and the Society of Neurological Surgeons.

Dr. Rodts's clinical and academic interests include degenerative pathology of the spine, rheumatoid arthritis, congenital abnormalities of the cervical spine and skull base, and minimally-invasive and computer-assisted image guidance of the spine. He has published numerous peer-reviewed articles and book chapters and has co-edited several textbooks and surgical atlases. He was an original founder and developer of the award winning educational website SpineUniverse.com. He is on the editorial board of The Journal of Spinal Disorders and Techniques, The Japanese Spine Journal, and he is a frequent reviewer for Neurosurgery. He is Director of the Post-Graduate Fellowship in Spine Surgery at Emory University, Department of Neurosurgery.

Born in Wichita, Kansas, and having moved frequently during his youth around the Midwest and Northeast, Dr. Rodts enjoys life in Atlanta with his wife Kelly and his three boys Teddy, Duncan and Brady. The Rodts family is avidly engaged in baseball, golf, soccer, football, and winter and ocean sports.

SCIENTIFIC PROGRAM CHAIRMAN

Nathan R. Selden, MD



Nathan R. Selden, MD, PhD, FACS, is honored to serve as the Scientific Program Chairman for the 2008 CNS Annual Meeting. Dr. Selden is the Campagna Associate Professor and Head of Pediatric Neurosurgery at Oregon Health & Science University, as well as residency Program Director and Vice-Chairman for Education in the Department of Neurological Surgery.

Dr. Selden graduated with Distinction from Stanford University and then spent three years as a British Marshall Scholar at Cambridge University, where he completed a Ph.D. in Neuroscience and rowed for Jesus College. At Harvard Medical School, he was awarded the John E. Thayer Scholarship and graduated cum laude in Neuroanatomy. Dr. Selden trained at the University of Michigan under the chairmanship of Dr. Julian Hoff and was introduced to pediatric neurosurgery by Dr. Karin Muraszko. His post-doctoral work on human basal ganglia anatomy was recognized in 1998 by the American Academy of Neurological Surgery Award. He also served as a clinical fellow in pediatric neurosurgery at Children's Memorial Hospital in Chicago.

Dr. Selden continues a career-long interest in functional neurochemistry. His current work on pain modulatory centers in the amygdala and brainstem has been funded by the NIH, the Oregon Child Health Research Center, the Cameron Foundation and the Oregon Bioscience Innovation Fund. His clinical focus is functional neurosurgery for children, including epilepsy and spasticity. In November 2006, he performed the first implantation of neuronal stem cells in a human patient, as Co-Principal Investigator of a trial treating Batten's Disease. He is also interested in clinical evidence regarding spinal dysraphism and is an author of the Pediatric Traumatic Brain Injury Guidelines.

Dr. Selden continues a career-long interest in functional neurochemistry. His current work on pain modulatory centers in the amygdala and brainstem has been funded by the NIH, the Oregon Child Health Research Center, the Cameron Foundation and the Oregon Bioscience Innovation Fund. His clinical focus is functional neurosurgery for children, including epilepsy and spasticity. In November 2006, he performed the first implantation of neuronal stem cells in a human patient, as Co-Principal Investigator of a trial treating Batten's Disease. He is also interested in clinical evidence regarding spinal dysraphism and is an author of the Pediatric Traumatic Brain Injury Guidelines.

Dr. Selden has served the Congress of Neurological Surgeons as a member of the Executive and Strategic Planning Committees, as Chairman of the SANS Committee, and as a member of the Scientific Program, Education, Information Technology and Project Coordination Committees. He is also Chairman of the Bylaws Committee of the Joint Section on Pediatric Neurosurgery. He is a member of the Society of Neurological Surgeons, the American Society of Pediatric Neurosurgeons, the Society of University Neurosurgeons, and the Harvard Aesculapian Society and is a Fellow of the American College of Surgeons, the American Academy of Pediatrics, and the Cambridge Philosophical Society. He has a significant interest in lifelong neurosurgical education, and serves as Editor of the SNS Program Director's Toolkit, as past Editor of the Self-Assessment in Neurological Surgery (SANS), and on the editorial boards of Pediatric Neurosurgery and CNS Quarterly.

Dr. Selden is married to his medical school classmate, Dr. Karen Selden, a plastic and reconstructive surgeon. His interests include teaching their three children, Ryan (8), Lauren (7), and Megan (3), to ski, hike and raft in the Oregon Cascades, mystery novels, and Italian language and culture.

2008 CNS Annual Meeting Committee



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General Scientific Session II

Michael A. Vogelbaum

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Gregory R. Trost
Lynda J. Yang

Neurotrauma

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Jamie S. Ullman

Pain

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Joshua M. Rosenow
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Hugh Garton
Sarah J. Gaskill

Stereotactic and Functional Neurosurgery

Kathryn L. Holloway
Emad N. Eskandar

Tumors

Gene H. Barnett
Fred G. Barker
Michael W. McDermott
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Council of State Neurosurgical Societies

Satish Krishnamurthy
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Tumors

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Council of State Neurosurgical Societies

Michael P. Steinmetz

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Cerebrovascular

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Spine and Peripheral Nerves

Praveen V. Mummaneni

Lynda J. Yang

Neurotrauma

Dilantha B. Ellegala

Pain

Oren Sager

Pediatric Neurological Surgery

David Wrubel

Stereotactic and Functional Neurosurgery

Kathryn L. Holloway

Tumors

Michael William McDermott

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Theodore H. Schwartz
Stephen C. Saris

Luncheon Seminars

John G. Golfinos, Chairman
Daniel M. Oberer, Vice-Chairman
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Daniel James Guillaume
Timothy H. Lucas, II
Praveen V. Mummaneni
Howard A. Riina
Lynda J. Yang

Special Course

Jamie Sue Ullman, Chair
Vinay Deshmukh

3-D Dissection Course

Saleem I. Abdulrauf, Chairman
Ganesh Rao
James K. Liu

Digital Masters Video Symposium

Hugh Garton, Chairman
Ganesh Rao
Frank S. Bishop

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Leon E. Moores, Co-Chairman
Sunit Das
Michael P. Steinmetz
Luis M. Tumialan

Sergeant-at-Arms

Brian T. Ragel, Chairman
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Zachary N. Litvack
Jonathan H. Sherman
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CNRN

CNS Learning Style Key

- ◆ IML: Community Learning
- IML: Clinical Science
- ★ Consensus Sessions
- ▲ Case Based Learning
- Toolkit Sessions

See page 21 for more details on how the CNS is advancing neurosurgery through the Science of Education!

Annual Meeting Highlights For Nurses and Physician Extenders

The 2008 CNS Annual Meeting offers a number of special sessions and courses specifically aimed at helping nurses and physician extenders navigate the dynamic field of neurological surgery and improve patient care. Be sure to check out these optional courses throughout the program.

PC05 – Saturday, September 20 1:00 – 5:00 pm

Practical Neurosurgical ICU Management: The Basics (for MDs in Training, RNs, APRNs, and PAs). See Page 22.

PC12 – Sunday, September 21 8:00 am – 5:00 pm

Inpatient and Outpatient Management Dilemmas: For Nurses, APRNs and Physician Assistants. See Page 25.

M16 – Monday, September 22 12:30 – 2:00 pm

Implementing Evidence Based Practice in Your Neurosurgical ICU for Allied Health Providers in Neurosurgery. See Page 35.

T33 – Tuesday, September 23 12:30 – 2:00 pm

New Frontiers in Pain Management for Allied Health Providers in Neurosurgery. See Page 51.

Nurses and PAs also receive a discounted rate on all Luncheon Seminars.

Sergeant-at-Arms Program

What better way to become part of the Congress of Neurological Surgeons volunteer-based organization than to participate in the Sergeant-at-Arms Program!

The Sergeant-at-Arms volunteers contribute to the overall success of the Annual Meeting. Volunteer for these simple but vital organizational tasks and the CNS will cover your fee for the course to which you are assigned.



2008 CNS Annual Meeting Resident Program

Resident education and professional development are top priorities at the CNS and the 2008 Annual Meeting offers residents a host of opportunities to enhance their leadership skills, advance their education, and further their careers. Take advantage of these outstanding opportunities throughout the course of the meeting:



PC03 – Saturday, September 20 1:00 – 5:00 pm

Introduction to Endovascular Neurosurgery: Hands-on Simulators and the Treatment of Intracranial and Extracranial Cerebrovascular Disease for Residents.

See Page 22.

PC26 – Sunday, September 21 1:00 – 5:00 pm

Operative Colloquium: Masters of Neurological Surgery. *See Page 28.*

M01 – Monday, September 22 12:30 – 2:00 pm

Resident/Honored Guest Luncheon – COMPLIMENTARY TO CNS RESIDENT MEMBERS! *See Page 34.*

CNS Resident SANS Challenge Finals – Tuesday, September 23 5:00 – 6:00 pm

CNS Resident Recruitment Social – Tuesday, September 23 6:00 – 7:00 pm

W52 – Wednesday, September 24 12:30 – 2:00 pm

Graduating Residents' Course. *See Page 59.*

- Complimentary registration to the first 100 Resident Members! Sponsored by Synthes.
- Complimentary Housing to Resident Members (*limited availability – see Page 88 for details*).
- Reduced rates on all Luncheon Seminars!

Become a Resident Member Today!

If you're not already a Resident Member, you are missing out on valuable education and career development opportunities. See our ad on page 60 for details on outstanding Resident Member benefits like a complimentary subscription to **NEUROSURGERY**, the official journal of the CNS, access to the CNS University of Neurosurgery and more!

Submit your completed membership application by July 1, 2008 to be considered for complimentary resident housing at the Annual Meeting.

AT-A-GLANCE

Monday, September 22

Saturday, September 20

1:00 – 5:00 pmAfternoon Practical Courses
(PC01 – PC08)

Sunday, September 21

8:00 am – 5:00 pmFull Day Practical Courses
(PC09 – PC14)**8:00 am – 12:00 pm**● Morning Practical Courses
(PC15 – PC24)**1:00 – 5:00 pm**● Afternoon Practical Courses
(PC25 – PC35)**3:00 – 6:00 pm**Resident SANS Challenge Preliminary
Rounds**6:30 – 8:30 pm**CNS Opening Reception
Peabody Hotel – Plaza Ballroom

The Congress of Neurological Surgeons is committed to incorporating the best and newest cognitive and educational science into the Annual Meeting program. Look for these symbols throughout the preliminary program to identify the courses that best suit your personal learning style.

◆ **IML: Community Learning**■ **IML: Clinical Science**★ **Consensus Sessions**▲ **Case Based Learning**● **Toolkit Sessions**

See page 21 for more details on how the CNS is advancing neurosurgery through the Science of Education!

7:00 – 11:45 amGeneral Scientific Session I: The
Community of Neurosurgery:
Translational Science as a Source of
Knowledge**7:05 – 8:23 am**◆ **IML: Community Learning Session I:
Scientific Breakthroughs That Will
Fundamentally Change Our Neurosurgical
Practice****8:30 – 8:50 am****James J. Mulé**
Special Lecturer● Toolkit: Instruments
for Understanding
Translational Science**8:50 – 9:30 am****Anthony L. Asher**
Presidential Address**9:00 am – 4:30 pm**

Exhibits Open

9:30 – 10:30 am

Coffee with Exhibitors

**10:30 – 10:55 am****William F. Chandler**
Honored Guest**11:05 – 11:45 am****Maya Angelou**
Walter E. Dandy Orator**12:30 – 2:00 pm**

Luncheon Seminars

2:00 – 3:30 pm

★ Consensus Session I

2:00 – 5:45 pmCNS Original Science Program:
Neurosurgical Forum and Select
Abstract Session**3:30 – 4:00 pm**

Refreshments with Exhibitors

4:00 – 5:30 pm


Special Course

Tuesday, September 23


7:00 – 11:45 am

General Scientific Session II: The Community of Neurosurgery: Evidence as a Source of Knowledge

7:00 – 7:30 am

 Toolkit: Instruments for Understanding Evidence

7:30 – 9:08 am

 **IML: Community Learning Session II: The State of the Evidence – What Every Neurosurgeon Needs to Know**

9:00 am – 4:30 pm

Exhibits Open



9:08 – 9:30 am

James Surowiecki
Special Lecturer

9:30 – 10:30 am

Coffee with Exhibitors



10:30 – 10:50 am

William F. Chandler
Honored Guest




11:10 – 11:45 am

Muhammad Yunus
CNS Michael L.J. Apuzzo Lecturer on Creativity and Innovation

12:30 – 2:00 pm

Luncheon Seminars

2:00 – 5:45 pm

  Sections and Consensus Conferences

3:30 – 4:00 pm

Refreshments with Exhibitors

5:00 – 6:00 pm

Resident SANS Challenge Finals

5:30 – 6:30 pm

CNS Annual Business Meeting

6:00 – 7:00 pm


CNS Resident Recruitment Social

Wednesday, September 24


7:00 – 11:45 am

General Scientific Session III: The Community of Neurosurgery: Collective Wisdom as a Source of Knowledge

7:00 – 7:30 am

 Toolkit: Instruments for Understanding Experience

7:30 – 8:48 am

 **IML: Community Learning Session III: The Impact of Collective Wisdom on Practice**

9:00 am – 4:00 pm

Exhibits Open



9:03 – 9:30 am

Atul Gawande
Special Lecturer

9:30 – 10:30 am

Coffee with Exhibitors



10:30 – 10:50 am

Richard E. Mayer, PhD
Special Lecturer



10:50 – 11:05 am

William F. Chandler
Honored Guest






11:15 – 11:45 am

Ed Viesturs
CNS Julian T. Hoff Lecturer

12:30 – 2:00 pm

Luncheon Seminars

2:00 – 5:45 pm

   Operative Techniques with the Masters: 3-D Live Cadaveric Demonstration, Sections and Consensus Conferences

3:30 – 4:00 pm

Refreshments with Exhibitors

Thursday, September 25

8:00 – 11:30 am

General Scientific Session IV: The Community of Neurosurgery: Accumulated Experience as a Source of Knowledge

8:00 – 9:00 am

 Digital Masters Video Symposium

9:00 – 10:00 am

 Cases and Coffee with the Masters



10:00 – 10:30 am

Wendy Moore
John Thompson
History of Medicine
Lecturer

10:25 – 11:25 am

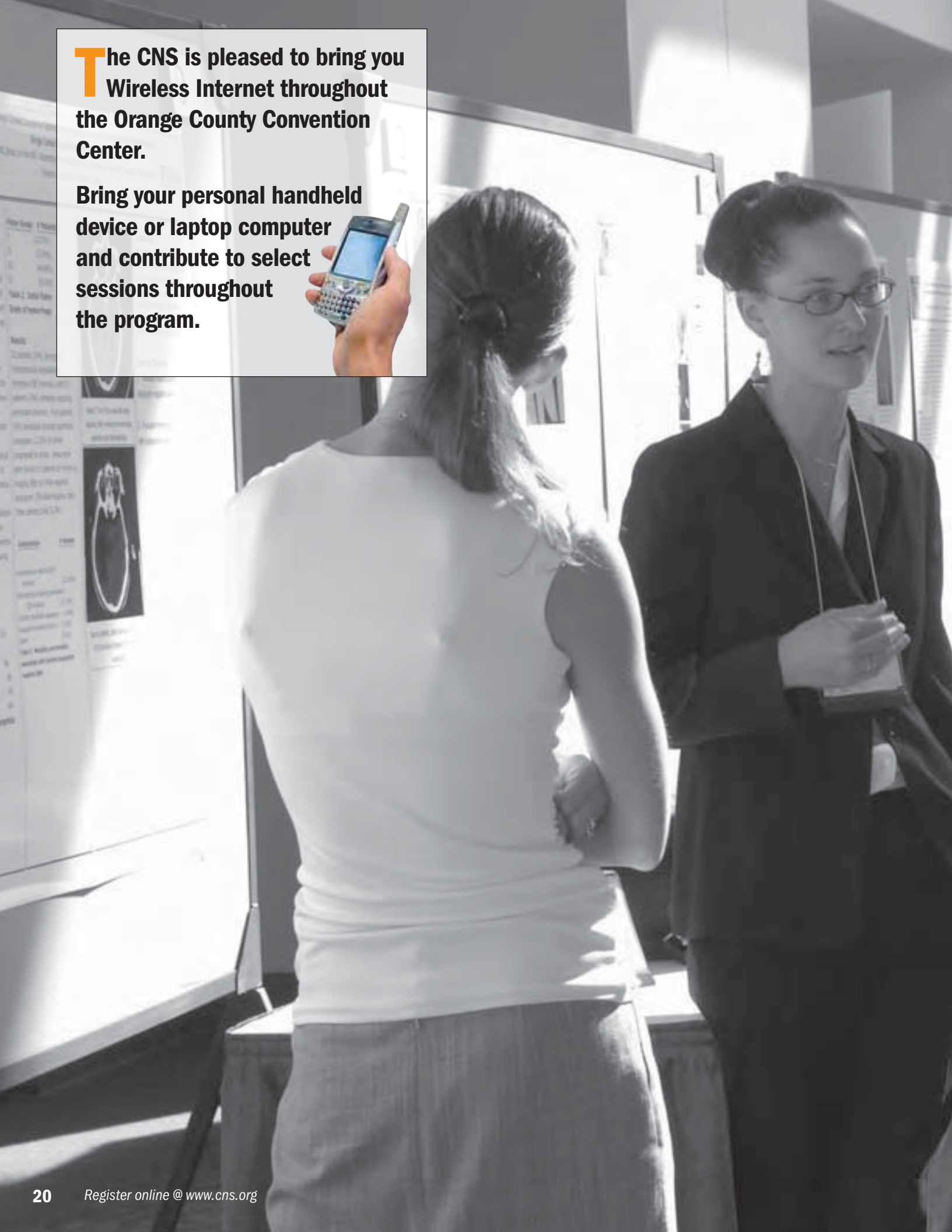
 Digital Masters Video Symposium

11:30 am

Adjourn

The CNS is pleased to bring you
Wireless Internet throughout
the **Orange County Convention
Center**.

**Bring your personal handheld
device or laptop computer
and contribute to select
sessions throughout
the program.**

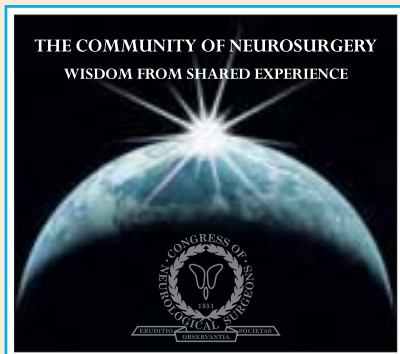


The Science of Education...

Advancing the Practice of Neurosurgery

The Congress of Neurological Surgeons is committed to incorporating the best and newest cognitive and educational science into the design of a compelling and effective educational experience for today's neurosurgeons.

The 2008 CNS Annual Meeting in Orlando, Florida, will include many new learning formats throughout the meeting. Throughout the preliminary program, look for these symbols to help you identify the courses and sessions that best suit your personal learning style.



Integrated Medical LearningSM (IML)

Integrated Medical Learning allows participants to define the content and direction of sessions targeted at the most practical and important clinical and scientific questions of the day. Learners evaluate key evidence, interact with faculty, and define current and future practice.



IML: Community Learning – IML returns to the General Scientific Session, allowing learners to directly interact with international experts in neurosurgical science, evidence and practice via personal handheld devices and laptop computers.



IML: Clinical Science – IML is extended to every subspecialty in sessions focused on key and controversial clinical topics. See the opinions of peers reflected in real time digital polling.



Consensus Sessions – Consensus Sessions allow participants to define and discuss the most important socioeconomic, ethical and professional issues facing neurosurgery today. Expert presentations, member participation and interactive polling define directions for organized neurosurgery.



Case Based Learning – The Community of Neurosurgery assembled in Orlando will tackle challenging neurosurgical cases.

Live 3-D Cadaveric Demonstrations – This digital presentation of 3-D dissections by surgical leaders has become a “must see” event at the CNS Annual Meeting.

Cases and Coffee with the Masters – Review cases submitted by participants in smaller subspecialty groups with leading experts.

Digital Video Masters – The Thursday General Scientific Session will highlight surgical video presentation from masters in every field.



Toolkit Sessions – Neurosurgery is defined by complex cognitive and technical skills and their application to clinical care. Beginning in Orlando, look for Toolkit learning sessions that present basic skills and information you can apply immediately and again at home in your daily practice and professional life.

General Scientific Sessions – Toolkit lectures present the basics of translational development, clinical trials, and evaluation of clinical experience, followed by examples of their most successful application by international neurosurgical leaders.

Medical Evidence Courses – Look for Practical Course 20 on Sunday morning, which allows participants to learn the fundamentals and pearls of statistical design, meta-analysis, clinical evidence, and guidelines formulation. Then apply these skills to evaluate current literature during PC 30 that afternoon.

Neurosurgeon as Educator: Making and Indelible Impression – Experts from of the Nicholson School of Communication at the University of Central Florida discuss methods for enhancing public speaking and effectively using presentation tools in professional presentations.

Look for other toolkit sessions throughout the meeting in Practical Courses, Luncheon Seminars and more!

SATURDAY, SEPTEMBER 20, 2008

SATURDAY

PRACTICAL COURSES 1:00 – 5:00 PM**PC01 \$375****3-D Anatomy (Supratentorial)***Course Directors: Albert L. Rhoton, Jr.*

Learning Objective: This course will provide three-dimensional microsurgical instruction on routes through the anterior and posterior cerebrum and temporal lobe; anatomy and approaches to the later and third ventricles and pineal region; anterior skull base and cavernous sinus; and transsphenoidal, transmaxillary and transoral approaches. Upon completion of this course, participants will be able to describe the anatomy of these areas and develop an appreciation for the three-dimensional neurovascular relationships of each region.

PC02 \$425**Operating in Eloquent Cortex***Course Directors: Michael M. Haglund**Faculty: Mitchel S. Berger, George A. Ojemann, Matt D. Smyth*

Learning Objective: This course will provide an in-depth review of techniques and technologies that can be applied to identify and work within eloquent regions of the cerebral hemispheres. Upon completion of this course, participants will be able to discuss the available technologies for performing safer and more effective procedures within and around the eloquent cortex.

NEW PC03 \$375**Introduction to Endovascular Neurosurgery: Hands-on Simulators and the Treatment of Intracranial and Extracranial Cerebrovascular Disease For Residents***Course Directors: Elad I. Levy, Howard A. Riina, Bernard R. Bendok**Faculty: Robert H. Rosenwasser, Erol Veznedaroglu, H. Hunt Batjer, Ricardo A. Hanel*

Learning Objective: At the completion of this course, the participants will have hands-on experience with realistic simulators of carotid stenting, aneurysm coiling, and stroke thrombolysis; understand basic concepts and techniques in endovascular neurosurgery; and achieve basic understanding of endovascular device capabilities.

PC04 \$425**Surgical Indications, Techniques and Alternatives for Cranial Vascular Malformations***Course Directors: Rafael J. Tamargo, E. Sander Connolly, Jr.**Faculty: H. Hunt Batjer, Christer E. Lindquist, Robert A. Mericle, Philippe Gailloud*

Learning Objective: At the completion of this course, participants will be able to discuss the epidemiology, diagnosis, evaluation, and treatment (microsurgical, radiosurgical, and endovascular) of cranial arteriovenous malformations (AVMs). In addition, the epidemiology of and treatment options for cranial arteriovenous fistulas (AVFs) and cavernous malformations (CMs) will be discussed. The spectrum of microsurgical transcranial approaches and specialized techniques, as well as the indications for stereotactic radiosurgery and endovascular embolization, will be reviewed and compared, allowing the participants to contrast the advantages and disadvantages inherent in each particular approach. Multi-modality therapy of AVMs and AVFs will be discussed. The participants will also be able to discuss the avoidance of complications as well as the management of intra-operative and peri-operative complications or challenges in the treatment of AVMs, AVFs, and CMs.

PC05 \$375**Practical Neurosurgical ICU Management: The Basics (for MDs in Training, RNs, APRNs, and PAs)***Course Directors: Owen B. Samuels**Faculty: William M. Coplin, Michael DeGeorgia, E. Sander Connolly, Jr., Jennifer A. Frontera*

Learning Objective: The focus of the course will be ancillary care personnel. This course will provide the attendee a broad spectrum of information regarding the management of a critically-ill neurosurgical patient. The attendee will learn the most up-to-date recommendations for ICP management, hemodynamic monitoring and measurement, ventilatory support, infection prevention and treatment, neurological examination, EEG monitoring, etc.

Nursing contact hours will be provided through AANN. The American Association of Neuroscience Nurses is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. Physician assistants will receive credit for attendance. Each physician assistant will need to contact his or her individual membership association and certification board to determine the requirements for accepting credits. All attendees will receive a confirmation of attendance. No CMEs will be awarded to physician participants.

PC06 \$375**CPT Coding: Fall 2008 Update***Course Directors: Gregory J. Przybylski**Faculty: Joseph S. Cheng, Mina Foroohar, Robert R. Johnson, II, Alexander M. Mason, William Mitchell*

Learning Objective: This course provides a summary of the anticipated CPT 2009 coding changes and reviews the 2008 coding changes as well. Subspecialty areas of spine, intracranial, functional/pain and vascular surgery will be highlighted. Upon completion of this course, participants will have gained exposure to coding changes, their proper applications and compliance issues with regard to new regulations.

SATURDAY

PC07

\$425

Techniques and Technologies in Achieving Spinal Arthrodesis/Stabilization of the Cervical Spine**Course Directors:** Daniel K. Resnick, Michael G. Kaiser**Faculty:** Frank La Marca, Neill M. Wright, Langston Holly, Michael Y. Wang, James S. Harrop**Learning Objective:** The indications, techniques, and complications of arthrodesis and stabilization of the cervical spine, including the craniovertebral and cervicothoracic junction, will be reviewed using lectures, case-presentations, and hands-on practical exercises. Upon completion of this course, participants will be able to discuss the appropriate indications and state of the art techniques for arthrodesis and instrumentation of the occipitocervical to cervicothoracic spine, as well as steps to avoid common complications.

PC08

\$375

Applied Spinal Biomechanics**Course Directors:** Edward C. Benzel**Faculty:** Praveen V. Mummaneni, James S. Harrop, Richard P. Schlenk, Michael P. Steinmetz**Learning Objective:** This course presents the physical principles and biomechanical foundations of spinal surgery and stabilization via a didactic and interactive case discussion format. Upon completion of this course, participants will be able to discuss biomechanical principles and strategies to address clinical problems.

Welcome!



The Congress of Neurological Surgeons extends a special welcome to our colleagues from the Brazilian Society of Neurosurgery (SBN).



Be sure to join us for these special lectures and events!

**SBN Guest Lecture
Evandro de Oliveira**

Tuesday, September 23 (GSS II) 8:58 – 9:08 am

**SBN President Guest Address
Jose Carlos Saleme**

Tuesday, September 23 (GSS II) 11:00 – 11:10 am

Brazilian Luncheon Seminar – T21

Tuesday, September 23, 12:30 – 2:30 pm

CNS International Reception

Wednesday, September 24, 2008 – See page 61 for details.

Attention Residents!

CNS Resident **SANS** Challenge



The 2008 CNS Resident SANS Challenge offers your program the chance to compete in a live game show-style contest at the 2008 CNS Annual Meeting.

Preliminary Rounds – Sunday, September 21

Final Round – Tuesday, September 23

Contend for

- **Bragging rights**
- **Trophies**
- **Cash prize for your program**

1st Place Team \$2,500

2nd Place Team \$1,500

3rd Place Team \$1,000

(All North American, Mexican and Canadian Residents are eligible.)

Take the online quiz at www.cns.org! The nine highest-scoring training programs will each send their top two players to live rounds at the 2008 CNS Annual Meeting in Orlando, Florida.

(Travel expenses to the CNS Annual Meeting must be covered by program or individual.)

All scores are confidential.

**Log on to play:
July 14 – August 1, 2008
www.cns.org**

PRACTICAL COURSES 8:00 AM – 5:00 PM**PC09 \$475****Brain Tumor Update**

Course Directors: Andrew T. Parsa, Frederick F. Lang
Faculty: Peter B. Dirks, Donald M. O'Rourke, Michael K. Lim, Manish K. Aghi, Mark E. Shaffrey, Jeffrey S. Wienberg, Frederick G. Barker, Ronald E. Warnick, Franco DeMonte, William T. Couldwell, Charles Teo, Philip V. Theodoropoulos, Ganesh Rao, Jeffrey Bruce, Edward H. Oldfield, Howard L. Weiner
Learning Objective: This course will provide the practicing clinician with an up-to-date overview of current management strategies for major types of benign and malignant brain tumors. The seminar includes current research topics but emphasizes practical management issues. Upon completion of this course, participants will be able to discuss the state-of-the-art management of benign and malignant brain tumors including glial tumors, meningiomas, acoustic neuromas, skull base tumors, pediatric tumors and metastases and discuss current concepts in glioma management including surgical techniques, adjuvant treatments, tumor biology and practical clinical management decisions.

PC10 \$800**Hands On: Cerebral Revascularization**

Course Directors: Fady T. Charbel, Sepideh Amin-Hanjani
Faculty: David J. Langer, Jacques J. Morcos, Gary K. Steinberg, Gregory J. Zipfel, Ying Mao, Ketan R. Bulsara, George K.C. Wong
Learning Objective: This course will review the indications for cerebral revascularization in the setting of cerebral ischemia and aneurysm/skull base tumor surgery. Extracranial-intracranial bypass procedures for revascularization in the anterior and posterior circulation will be demonstrated. Participants will have the opportunity to practice micro-suturing and anastomosis skills. Upon completion of this course, participants will have gained hands-on experience with micro-suturing and anastomosis techniques, be able to discuss the indications for cerebral revascularization in ischemia and aneurysm/skull base tumor surgery and describe the different bypass procedures for revascularization of the anterior and posterior circulation. *This course will be held off-site – shuttle transportation will be provided.*

PC11 \$475**Traumatic Brain Injury**

Course Directors: Raj K. Narayan, Lori Anne Shutter
Faculty: Jamshid Ghajar, Jack Jallo, Claudia S. Robertson, Shelly D. Timmons, Geoffrey T. Manley, Domenic P. Esposito, Rocco Armonda, Ramon Diaz-Arrastia, Jogi V. Pattisapu
Learning Objective: This course focuses on current thinking regarding the non-surgical and surgical treatment of traumatic brain injury. Newer monitoring techniques, as well as promising new therapies, will be discussed. Upon completion of this course, participants will list and discuss current management strategies which incorporate appropriate management guidelines.

PC12 \$375**Inpatient and Outpatient Management Dilemmas: For Nurses, APRNs and Physician Assistants**

Course Directors: Mark E. Shaffrey, Andrea L. Strayer, MSN, APNP, CNRN
Faculty: Praveen V. Mummaneni, Christopher I. Shaffrey, David O. Okonkwo, Aaron S. Dumont, John A. Jane, Jr., W. Jeffrey Elias, Elana Farace, PhD, Tina Lisman, PA
Learning Objective: Upon completion of this course, participants will be able to discuss clinical management for a variety of cranial and spinal conditions. Topics include new directions in functional neurosurgery, brain tumor treatment options, quality of life determination and end of life discussions; cervical disc arthroplasty, spinal trauma, interactive cervical spine trauma case studies, endoscopic approach to the skull base and ventricles, brachial plexus injury, current interventions in traumatic brain injury, and the vascular patient: clip versus coil. These topics will illustrate patient selection, clinical decision making, and patient outcomes for the allied health professional in outpatient and inpatient settings.

Physician attendees will not be awarded CME credit for this course. Nursing contact hours will be provided through AANN. Physician assistants will receive credit for attendance. Each physician assistant will need to contact his or her individual membership association and certification board to determine the requirements for accepting credits. All attendees will receive a confirmation of attendance. No CME will be awarded to physician participants.

PC13 \$375**Neurosurgical Practice Development, Negotiation and Liability**

Course Directors: William E. Bingaman, Alan M. Scarrow, Michael P. Steinmetz
Faculty: Frederick A. Boop, Edward C. Benzel, Fernando G. Diaz, Gregory J. Przybylski, Katie O. Orrico, Shelly D. Timmons, Victoria Vance, JD, J. Javier Provencio, Andrea Strayer, MSN, APNP, CNRN
Learning Objective: Techniques to effectively build and develop a neurosurgical practice will be presented. The mechanics of operating a practice will be explored. Key aspects of medical liability will be discussed. Upon completion of this course, participants will be able to describe the neurosurgical political process and how to get involved.

PC14 \$875**Nuances of Minimally Invasive Spinal Surgery**

Course Directors: Kevin T. Foley, Larry T. Khoo
Faculty: Donald L. Hilton, Jr., Muwafak Abdulhak, Langston Holly, Paul Park, David J. Hart
Learning Objective: This course will focus on minimally invasive procedures for cervical and lumbar spine surgery. Techniques for decompression, fixation, and fusion will be discussed. Upon completion of this course, participants should be able to describe various minimally invasive techniques for cervical and lumbar spine surgery; and discuss the indications, results and potential complications for these procedures.

PRACTICAL COURSES 8:00 AM – 12:00 PM**PC15 \$425****Surgical Approaches to the Ventricular System**

Course Directors: Alan Cohen, Mark M. Souweidane
Faculty: Richard G. Ellenbogen, Albert L. Rhoton, Jr., Erdener Timurkaynak

Learning Objective: The course will be case-intensive and involve didactic demonstrations of open surgical and endoscopic cases supplemented with intraoperative video. The course will conclude with frank discussions of pearls, pitfalls, complication avoidance and management, and determination of when endoscopic or open surgical approaches are best utilized. At the completion of the course, the attendee will be able to discuss the best treatment alternative for intraventricular tumors within the lateral, third and fourth ventricles; describe the pertinent neuroanatomy associated with each surgical procedure; discuss potential complications with various surgical routes to the ventricular system; and outline the limitations of endoscopic approaches and recognize when to consider an alternative surgical option.

PC16 \$425**Modern Indications and Techniques for Open Aneurysm Surgery**

Course Directors: Byron Gregory Thompson, Jr., Michael T. Lawton
Faculty: Jacques J. Morcos, Ali F. Krisht, Saleem I. Abdulrauf, Carlos A. David, Paul J. Camarata, Luca Regli

Learning Objective: Participants will analyze case presentations of patients presenting with intracranial aneurysms to select the optimal (endovascular or microsurgical) approach. Participants will be introduced to advanced preoperative imaging evaluation to maximize effectiveness of preoperative surgical planning. Participants will be exposed to skull base approaches for anterior and posterior circulation aneurysm surgery in order to optimize exposure for complex aneurysms. Participants will review and discuss adjunctive intraoperative imaging techniques to optimize obliteration of cerebral aneurysms with preservation of parent and branch vasculature.

NEW PC17**\$425****Advanced Techniques of Endovascular Neurosurgery**

Course Directors: Sean D. Lavine, Felipe Albuquerque
Faculty: Erol Veznedaroglu, Demetrius K. Lopes, Brian L. Hoh, Robert A. Mericle

Learning Objective: This course is a hands-on clinic with brief discussions of advanced endovascular techniques by experts in the field, followed by practical application utilizing endovascular models and simulators. Upon completion of this educational activity, participants should be able to: discuss the endovascular treatment of complex: intracranial and spinal aneurysms, arteriovenous malformations and fistulas, intracranial and extracranial occlusive vascular disease, and tumors; describe the indications, practical aspects and potential complications of advanced endovascular techniques in the treatment of cerebrovascular disease and tumors; and practice the basic aspects of these techniques in models of human disease.

NEW PC18**\$425****Entrepreneurship in Neurosurgery**

Course Directors: John Abrahams, Vinay Deshmukh
Faculty: Jeffrey Thramann, Peter A. Zahos, Neil R. Malhotra, Steven Feldman, JD, Mark Spilker, PhD

Learning Objective: After completing this educational activity, participants should be able to develop an idea into the basic business outline for presentation to a company or investors; demonstrate how to protect and patent intellectual property; describe the basics of financing and capital related to a medical venture; and list licensing and co-development paradigms with corporate programs.

PC19**\$425****Cranial Radiosurgery: Current State-of-the-Art**

Course Directors: Andrew E. Sloan
Faculty: Antonio A. DeSalles, Douglas Einstein, William A. Friedman, Michael William McDermott

Learning Objective: Participants will describe the basic features of the most commonly used radiosurgery treatment platforms, their similarities and differences, and basic principles for radiosurgery treatment planning for benign and malignant tumors, AVMs and functional disorders. Participants will have practical experience planning treatments with expert guidance using various radiosurgery treatment platforms.

NEW PC20 \$425

Data and Practice: Tools to Guide Patient Care in the Information Age

Course Directors: Frederick G. Barker, Stephen J. Haines, Mark E. Linskey

Faculty: Bob Carter, Timothy C. Ryken

Learning Objective: This course is intended to provide participants with the tools necessary to select and critically interpret clinically relevant medical publications. Participants will have the opportunity to utilize these skills in a practical session where recent evidence-based publications will be analyzed.

Consider PC30 – Apply the skills learned in PC20 to evaluate current literature.

NEW PC21 \$425

National Institutes of Health Grant Writing

Course Directors: Theodore H. Schwartz

Faculty: Michael G. Kaplitt, Robert M. Friedlander, Eric C. Holland, E. Sander Connolly, Jr., E. Antonio Chiocca

Learning Objective: In the current environment, balancing a research career and clinical neurosurgery is becoming increasingly challenging. One of the keys to success is to master the art of grant writing. This course will be lead by faculty who have successfully obtained funding from the NIH and sit on NIH study sections that review grants. The course objectives are to instruct neurosurgeons in the methodologies in writing successful grants, both for the NIH and private foundations and provide tips and tricks that have helped the faculty in their own grants. Participants are also encouraged to bring their own grants-in-progress and time will be set aside for the faculty to review these grants and provide individual instruction on how to craft and improve them.

PC22 \$425

Cervical Arthroplasty

Course Directors: Vincent C. Traynelis

Faculty: Dan Murrey, Domagoj Coric, Steven Gill, Lali H. Sekhon, William Sears

Learning Objective: This course will review pertinent issues referable to cervical arthroplasty. At the conclusion of the course, participants will be able to describe the indications and contraindications for cervical arthroplasty, list potential complications of arthroplasty, and review alternatives to cervical arthroplasty.

PC23 \$425

Adult and Pediatric Spinal Trauma Surgery

Course Directors: James S. Harrop

Faculty: Ashwini D. Sharan, Michael Y. Wang, Eric M. Massicotte, R. John Hurlbert, Dachling Pang, Douglas L. Brockmeyer

Learning Objective: This course focuses on the disease management of spinal trauma in adults and pediatric patients. It has been separated into three parts: a general overview of trauma in these groups, specific fracture patterns and an interactive case presentation. Indications for decompression, arthrodesis, instrumentation, and bracing will be discussed. The management and identification of differences in spinal trauma in various sub-populations will be emphasized. Upon completion of this course, participants will describe current management strategies that incorporate appropriate management guidelines. The course lectures are supplemented with discussions and case presentations; a syllabus and literature are provided.

PC24 \$425

Challenges in Anterior Spinal Access

Course Directors: Brian R. Subach, John C. Liu

Faculty: Marc Eichler, Robert F. Heary, Stephen L. Ondra, Michael K. Rosner

Learning Objective: Surgical corridors to the cervical, thoracic and lumbar spine will be presented in detail. Rationale, limitations and details of approaches could include transoral, thoracotomy, anterolateral thoracolumbar, retroperitoneal and transperitoneal routes. Concepts will be solidified by surgical video. The presentations will be case-intensive to include considerations for optimizing approach selection and complication avoidance and management. Following completion of this course, participants will be able to discuss and describe the common routes of access to the anterior spine.

SUNDAY, SEPTEMBER 21, 2008

SUNDAY

PRACTICAL COURSES 1:00 – 5:00 PM**PC25 \$375****3-D Anatomy (Infratentorial)***Course Directors: Albert L. Rhoton, Jr.*

Learning Objective: This course will provide three-dimensional microsurgical instruction on anatomy and approaches through the temporal bone; cerebellum and fourth ventricle; far lateral and transcondylar approaches; approaches to the cerebellopontine angle; and anatomy and approaches to the jugular foramen. Upon completion of this course, participants will be able to describe the anatomy of these areas and discuss the three-dimensional neurovascular relationships of each region.

PC26 \$375**Operative Colloquium: Masters of Neurological Surgery***Course Directors: William F. Chandler, Issam A. Awad**Faculty: Ali R. Rezai, Philip H. Gutin, Robert H. Rosenwasser, Daniel K. Resnick, Amin B. Kassam*

Learning Objective: Using lecture, demonstration and question-and-answer sessions, this unique course will provide participants insight into the techniques of international neurosurgical masters in dealing with complex and common neurosurgical problems. The speakers are virtuosos in their particular fields, and state-of-the-art technology will be used to display refinements in operative techniques, complication avoidance, and resident education. Upon completion of this course, participants should be able to describe novel and useful techniques for the management and surgical options involved in the care of common and complex neurosurgical problems.

PC27 \$425**Masters of Endovascular Neurosurgery: Complication Avoidance and Management***Course Directors: C. Michael Cawley, Henry H. Woo**Faculty: Peter Kim Nelson, Cameron G. McDougall, David Fiorella, Daniel L. Barrow, Robert A. Mericle*

Learning Objective: This course is an advanced course to discuss the most complex endovascular cases and complication management for practicing endovascular neurosurgeons. Participants will describe common pitfalls and their management

PC28 \$800**Cranial Endoscopic Procedures in Neurosurgery***Course Directors: David F. Jimenez, Mark G. Luciano**Faculty: John G. Frazee, Peter Nakaji, Amin B. Kassam, Michael R. Gaab*

Learning Objective: Upon completion of this course, through didactic and hands-on instruction, participants will describe to the use of endoscopy for intracranial applications, including management of hydrocephalus, intraventricular tumors, microneurosurgery, and transsphenoidal procedures. Participants will have gained exposure to the latest endoscopic instrumentation available.

PC29 \$425**Spinal Radiosurgery***Course Directors: Peter C. Gerszten**Faculty: Lilyana Angelov, Mark H. Bilsky, Steven D. Chang, Fraser C. Henderson, Jason P. Sheehan*

Learning Objective: This course will provide the attendee with an exposure to the background of spinal radiosurgery, including radiobiological principles of hypofractionated radiotherapy. An emphasis will be placed on the indications and limitations of spinal radiosurgery. The various technologies available to perform spinal radiosurgery will also be described and compared. The attendee will be able to describe the most commonly used techniques for spinal radiosurgery; discuss the current indications for and preliminary outcomes after spine radiosurgery; describe the current relative contraindications to spine radiosurgery; discuss the potential risks and complications of spine radiosurgery.

PC30 \$375**Neurosurgery 2008: Literature Review***Course Directors: Paul C. McCormick, Daniel K. Resnick**Faculty: Paul G. Matz, Michael G. Kaiser, Peter D. Angevine, Timothy C. Ryken, Zoher Ghogawala*

Learning Objective: Designed for the practicing neurosurgeon, this workshop will critically analyze recent peer reviewed publications important to contemporary neurosurgical clinical practice. The faculty, comprised of editorial board members from *Neurosurgery* and *Journal of Neurosurgery*, will describe and illustrate the process and structure of peer review as it applies to recent landmark publications in medical literature, including the SPORT Trial on lumbar disc herniation and the International Study of Unruptured Intracranial Aneurysms (ISUIA). These and other contemporarily relevant papers will be used to illustrate key aspects of study design, conduct, analysis that effect study validity and the generalizability of the studies' conclusions to individual patients. Participants will be provided with the relevant materials prior to the workshop, and a fundamental knowledge of the published papers will be assumed. Early registrants are encouraged to contact the course chairmen to submit suggestions of additional recent papers for inclusion in the workshop. After completion of this course, participants will be able to: describe and discuss the elements of study design and how it may effect a study's validity and generalizability; discuss the strengths and limitations of the design and conduct of recent pivotal papers in the literature, including SPORT and ISUIA; explain the relevance and applicability of these studies to individual patients treated in neurosurgical practice; and apply the principles and techniques of structured peer reviewed assessment to investigational and observational clinical studies.

Want more? Consider PC20: Learn the fundamentals of statistical design, meta-analysis, clinical design and guidelines formation to help you evaluate the literature presented in PC30.

NEW PC31**\$425****Principles of Peripheral Nerve Surgery****Course Directors:** Rajiv Midha**Faculty:** Allen H. Maniker, Robert J. Spinner, Robert L. Tiel, Lynda J. Yang, Eric L. Zager

Learning Objective: Participants will learn and be able to describe the following: evaluation of patients with peripheral nerve lesions, including aspects of history, physical exam, electro diagnostic tests and appropriate imaging modalities; an understanding of the relevant biology of nerve injury and regeneration; selection of patients with nerve injury for operation including timing of intervention; appreciation of nerve conditions that require emergency and urgent management; management of patients with peripheral nerve tumors; and management of patients with common entrapment neuropathies.

PC32**\$425****Pediatric Brain Tumor Update****Course Directors:** James T. Rutka, Corey Raffel**Faculty:** Michael Taylor, Nalin Gupta, Jeffrey H. Wisoff, Shenandoah Robinson, John A. Jane, Jr., John Wellons, III, Andrew Jea, Douglas L. Brockmeyer, Mark D. Krieger

Learning Objective: This course will provide the practicing neurosurgeon and the neurosurgery resident with an up-to-date overview of current management strategies for all types of benign and malignant brain and spinal tumors that occur in the pediatric population. The course will focus on practical management issues and neurosurgical approaches in particular for pediatric brain tumors through a series of didactic lectures and video demonstrations given by established pediatric neurosurgeons. Participants will list basic principles and recent updates.

PC33**\$500****Mastering Spinal Disorders: Dealing with Complexities****Course Directors:** Stephen L. Ondra, Charles Kuntz, IV**Faculty:** Richard G. Fessler, Tyler R. Koski, Praveen V. Mummaneni, Laurence D. Rhines, Christopher I. Shaffrey

Learning Objective: Using lecture, question-and-answer and practical sessions, this unique course will provide participants insight into the mastery of complex spinal disorders, including the evaluation of spinal alignment and classification of deformity, occipital-cervical anatomy with fixation, fusion and arthroplasty options, thoracic-lumbar-pelvic anatomy with fixation and fusion options, surgical planning and operative management of adult spinal deformity, revision spinal surgery and complication avoidance, minimally invasive spinal reconstruction, and indications and techniques for resection of spinal tumors. Upon completion of this course, participants will be able to describe novel and useful surgical techniques such as occipitocervical fusion, placement of thoracic pedicle screws, treatment of spinal tumors and deformity, as well as strategies for revision spinal surgery and complication avoidance/management.

PC34**\$425****Dynamic Stabilization: Fad or Future?****Course Directors:** Russ P. Nockels, Nevan G. Baldwin**Faculty:** Edward C. Benzel, Reginald J. Davis, Fred H. Geisler, Larry T. Khoo

Learning Objective: After completion of this course, participants will be able to discuss the biomechanical concepts of dynamic stabilization, describe the various devices available for dynamic stabilization and discuss the theoretical and real advantages and disadvantages of dynamic stabilization.

PC35**\$425****Functional Neurosurgery: New Frontiers****Course Directors:** Ali R. Rezai**Faculty:** Roy A. Bakay, Gordon H. Baltuch, Michael G. Kaplitt, Nicholas M. Boulis, Emad N. Eskandar, Robert E. Gross, Brian H. Kopell, Ashwini D. Sharan, Philip A. Starr

Learning Objective: DBS for movement disorders such as Parkinson's disease, tremor and dystonia is now routinely performed and is accepted as the standard of care for advanced and medically intractable patients. In the past several years, technological advances such as MRI guided DBS and automated DBS surgery have been investigated. In addition, a number of emerging functional neurosurgical applications are being explored. These include cortical stimulation for depression, stroke, tinnitus, DBS for epilepsy, DBS for OCD, DBS for Depression, and DBS for Alzheimer's. In addition, a number of gene therapy trials are underway for Parkinson's disease and other neurodegenerative disorders. The faculty will discuss the technological advances as well as the new indications, and outcomes from these emerging applications in functional neurosurgery. Participants will describe recent advances in functional neurosurgery.

**The CNS is pleased to bring you
Wireless Internet throughout the
Orange County Convention Center.**

**Bring your personal handheld device
or laptop computer and contribute
to select sessions throughout
the program.**



CNS Opening Reception Florida Spectacular

**Sunday, September 21, 2008
6:30 – 8:30 pm
Hosted by the CNS
Peabody Hotel**



Amazing sites and sounds of Florida await you at the 2008 CNS Opening Reception.

From the alligators of the everglades to the thrills of space exploration, join the CNS for a Florida Spectacular. Enjoy the power and inspiration of the space coast, then relax and stroll through South Beach and Key West as you take in incredible atmosphere. Enjoy fabulous hors d'oeuvres and beverages while reconnecting with CNS colleagues and friends!

Each registered attendee will receive one complimentary ticket to the Opening Reception.



It is with sincere appreciation that the Congress of Neurological Surgeons acknowledges the Integra Foundation as a 2008 CNS Neurosurgical Partner.



Regenerating Health, Rebuilding Lives



Due to the tremendous success of last year's Integrated Medical LearningSM (IML) launch, the CNS is proud to bring IML back to the 2008 CNS Annual Meeting, now in two unique formats.

◆ **IML: Community Learning** returns to the General Scientific Sessions, allowing participants to define content and use interactive technology to directly communicate with experts in neurosurgical science, evidence, and practice. Look for sessions Monday through Wednesday during the GSS.

■ **IML: Clinical Science** is extended to every subspecialty in sessions focused on key clinical topics, allowing participants to identify answers and generate knowledge using real time digital polling and personal handheld devices. Look for section-specific sessions on Tuesday and Wednesday afternoon.

IML Sessions at the 2008 CNS Annual Meeting were made possible through an educational grant provided by the Integra Foundation.

CNS Learning Style Key

- ◆ IML: Community Learning
- IML: Clinical Science
- ★ Consensus Sessions
- ▲ Case Based Learning
- Toolkit Sessions

See page 21 for more details on how the CNS is advancing neurosurgery through the Science of Education!



MONDAY

GENERAL SCIENTIFIC SESSION I

The Community of Neurosurgery: Translational Science as a Source of Knowledge

7:00 – 11:45 AM

Presiding Officer: P. David Adelson

Moderators: Mark E. Linskey, Zoher Ghogawala

Technology Moderators: Costas Hadjipanayis, Michael W. Groff

Learning Objective: Learners will participate in an interactive session with an advance opportunity to read key background material suggested by faculty and to direct faculty presentations towards important information and gaps in existing knowledge. Participants will identify key breakthroughs in basic and translational science that are likely to immediately impact clinical care, list existing limitations for clinical implementation, and identify important topics for follow-up sessions and further investigation.

7:00 – 7:05 am

2008 CNS Scientific Program: Creating a Community of Learning

Nathan R. Selden

7:05 – 8:23 am

IML: Community Learning Session I Scientific Breakthroughs That Will Fundamentally Change Our Neurosurgical Practice

7:05 – 7:18 am

Peripheral Nerve Regeneration: Energizing Axonal Trajectory and Target

Rajiv Midha

7:18 – 7:31 am

Strategies for Spinal Cord Preservation and Cellular Repair

James D. Guest

7:31 – 7:44 am

Flow Biology: The Significance of Vascular Stem Cells

Brian Lim Hoh

7:44 – 7:57 am

Chained Lightning: Therapeutic Intervention in Cerebral Function

Nicholas M. Boulis

7:57 – 8:10 am

Hydrocephalus Happens in a Heartbeat: The Paradigm of Pulsations

Joseph R. Madsen

8:10 – 8:23 am

Customized Therapy for Individual Brain Tumor Patients

John S. Kuo

8:23 – 8:28 am

Presentation of the Distinguished Service Award

Anthony L. Asher

Toolkit: Instruments for Understanding Translational Science

8:28 – 8:30 am

Introduction of Special Lecturer James J. Mulé

John Golfinos

8:30 – 8:50 am

James J. Mulé
Special Lecturer
Toolkit: The Promise of Personalized Medicine – The New Horizon

8:50 – 8:57 am

Introduction of CNS President Anthony L. Asher

Nathan R. Selden

8:57 – 9:30 am

Anthony L. Asher
Presidential Address

9:00 am – 4:30 pm

Exhibits Open

9:30 – 10:30 am

Coffee with Exhibitors

10:30 – 10:35 am

Introduction of Honored Guest William F. Chandler

Anthony L. Asher

10:35 – 10:55 am

William F. Chandler
Honored Guest
30 Years of Pituitary Surgery – Wisdom from Collective Experience

10:55 – 11:00 am

Fellowship Awards Presentation

Elad I. Levy

11:00 – 11:05 am

The Congress of Neurological Surgeons: History of a Neurosurgical Community

William A. Friedman

11:05 – 11:08 am

Introduction of Walter E. Dandy Orator Maya Angelou

Issam A. Awad

11:08 – 11:45 am

Maya Angelou
Walter E. Dandy Orator

IML Sessions sponsored by



Monday, September 22, 2008

MONDAY

LUNCHEON SEMINARS 12:30 – 2:00 PM

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon seminar fees are \$60 each (\$45 each for Residents/Fellows/Nurses/Physician Extenders).

M01 Complimentary to CNS Resident Members!**Resident/Honored Guest Luncheon**

Moderator: Zachary N. Litvack

Faculty: William F. Chandler

Learning Objective: Participants and our Honored Guest will review and discuss the Honored Guest's thoughts on neurosurgical education, career development, and life-long learning.

M02**Disk Arthroplasty of the Cervical and Lumbar Spine**

Moderator: Stephen Papadopoulos

Faculty: Domagoj Coric, Robert J. Hacker, Vincent C. Traynelis

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the state of the art in cervical and lumbar disc arthroplasty technology and to be able to discuss the indications and relevant applications for this technology.

M03**Minimally Invasive Spinal Surgery**

Moderator: Richard G. Fessler

Faculty: Tim E. Adamson, Kurt M. Eichholz, Kevin T. Foley

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the current indications and techniques appropriate for minimally invasive spinal surgery and be able to describe the expected outcomes and complications associated with these techniques.

M04**Anterior Skull Base Approach**

Moderator: Anil Nanda

Faculty: Benedicto Oscar Colli, Franco DeMonte, Fred Gentili, Raphael J. Tamargo

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the techniques available in anterior skull base surgery including endoscopic techniques and be able to discuss when these techniques are appropriate to use. Participants will be able to discuss the key steps in the successful execution of a particular anterior skull base approach.

M05**Acoustic Schwannomas**

Moderator: John G. Golfinos

Faculty: Frederick G. Barker, Carl B. Heilman, Basant Kumar Misra, Eduardo A.S. Vellutini

Learning Objective: At the conclusion of this seminar, participants will be able to discuss treatment options, the surgical approaches, and treatment results for acoustic schwannomas, including surgical and radiosurgical techniques.

M06**State-of-the-Art Brain Metastases**

Moderator: Raymond Sawaya

Faculty: William A. Friedman, Stephen B. Tatter, Robert Weil

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the current status of research pertaining to the treatment of brain metastases and list surgical and radiosurgical treatment options appropriate for treating intracranial metastases, their complications and results.

M07**Malignant Gliomas: Future Treatment**

Moderator: James M. Markert

Faculty: Guilherme C. Ribas, Mark L. Rosenblum, John H. Sampson, Stephen B. Tatter

Learning Objective: At the conclusion of this seminar, participants will be able to discuss current and emerging techniques in the treatment of malignant gliomas. Participants will also be able to discuss the role of these techniques in the development and implementation of new therapies for malignant glioma tumor patients.

M08**Intraventricular Endoscopy**

Moderator: Alan Cohen

Faculty: Anthony M. Avellino, Sergio Cavalheiro, Amin B. Kassam, Benjamin Warf

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the available techniques relevant to minimally invasive intraventricular neuroendoscopy in adults and pediatrics and discuss the key technical steps and outcomes for a variety of minimally invasive intraventricular procedures.

M09**Management of Posterior Circulation Aneurysms**

Moderator: Daniel L. Barrow

Faculty: Evandro De Oliveira, Michael T. Lawton, Robert H. Rosenwasser

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the natural history, surgical and endovascular treatment of anterior circulation aneurysms. Participants will be able to choose appropriate treatment strategies and discuss the advantages and risks associated with each.

M10**Pseudoarthrosis of the Cervical and Lumbar Spine**

Moderator: William C. Welch

Faculty: Joseph S. Cheng, Michael G. Kaiser, William E. Krauss

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the appropriate imaging modalities to accurately diagnosis a pseudoarthrosis of either the cervical or lumbar spine and management strategies to increase the potential for successful clinical outcome, including current salvage techniques, their results and potential complications.

M11**Endovascular Cerebrovascular Pathology**

Moderator: B. Gregory Thompson

Faculty: Joe D. Bernard, Jr., Sean D. Lavine, Charles J. Prestigiacomo

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the evidence-based indications for endovascular management of cerebrovascular disease and be able to discuss the limitations and complications associated with endovascular therapies.

NEW M12**Hematology and Coagulation for Neurosurgeons: Pitfalls and Solutions**

Moderator: Mark Hamilton

Faculty: William T. Couldwell, E. Thomas Chappell, Gerald A. Grant

Learning Objective: Neurosurgeons commonly face acute peri- and intra-operative decisions regarding the diagnosis and management of coagulopathy that are crucial to patient safety and excellent outcomes. Participants will review important coagulation mechanisms, parameters, indications and clinical pearls, list important screening guidelines, and define the key points of emergency and intra-operative coagulation management.

M13**Surgery for Psychiatric Disorders**

Moderator: Ali R. Rezaei

Faculty: Rees Cosgrove, Emad Eskandar, Brian H. Kopell, Andres M. Lozano, Manoel Jakobsen Teixeira

Learning Objective: At the conclusion of this seminar, participants will be able to discuss current surgical treatments for obsessive-compulsive disorder, major depression, and other psychiatric disorders, as well as potential future applications of neuromodulatory techniques for these disorders.

M14**Pituitary Surgery**

Moderator: Nelson M. Oyesiku

Faculty: William T. Couldwell, John A. Jane, Jr., Jose Alberto Landeiro, Edward H. Oldfield

Learning Objective: At the conclusion of this seminar, participants will

gain exposure to the fundamentals and nuances in performing pituitary surgery and be able to discuss new techniques and advances in treatment.

M15**Error and Complications and Their Avoidance**

Moderator: Mark A. Bernstein

Faculty: Frederick F. Lang, H. Louis Harkey

Learning Objective: At the conclusion of this seminar, participants should demonstrate better understanding of how to track errors and complications, and will be able to describe some strategies for avoiding errors and complications in cranial, spinal, and peripheral nerve surgery.

NEW M16**Implementing Evidence Based Practice in Your Neurosurgical ICU for Allied Health Providers in Neurosurgery**

Moderator: Andrea L. Strayer, MSN, APNP, CNRN

Faculty: Michael W. Groff, Michael F. Nido, PA-C, Shelley Timmons

Learning Objective: Participants will identify key sources of evidence for ICU practice, list important new evidence-based practice information, and suggest future topics that are critical for ongoing investigation and review.

Nursing contact hours will be provided through AANN. The American Association of Neuroscience Nurses is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. Physician assistants will receive credit for attendance. Each physician assistant will need to contact his or her individual membership association and certification board to determine the requirements for accepting credits. All attendees will receive a confirmation of attendance. No CME's will be awarded to physician participants.

M17**Neuromodulation for Pain**

Moderator: Jaimie M. Henderson

Faculty: Andre Machado, Joshua M. Rosenow, Ashwini D. Sharan, Konstantin V. Slavin

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the use of motor cortex stimulation for pain, movement disorders, and stroke. Participants will be able to describe the current literature on motor cortex stimulation, as well as ongoing studies.

NEW M18**Peripheral Nerves for Spine Surgeons**

Moderator: Stephen M. Russell

Faculty: Nicholas M. Boulis, Line Jacques, John E. McGillicuddy, Michael P. Steinmetz, Linda J. Yang, Eric L. Zager

Learning Objective: Detailed peripheral nerve examination and pathophysiology have long been the domain of specialized peripheral nerve surgeons. In this luncheon, participants working with experts in the field, will identify key points of knowledge, examination and peripheral nerve practice that are critical for specialists in complex spinal neurosurgery. At the conclusion, participants will list the important physical findings and other diagnostic pearls involved in the peripheral nerve examination.

2008 CNS Neurosurgical Forum and Select Abstract Session

Monday, September 22, 2008, 2:00 – 5:45 PM

The centerpiece of Monday afternoon is the CNS Neurosurgical Forum and Select Abstract Session offering the highest-impact original science in one multi-subspecialty assembly.

Neurosurgical Forum

- Concentrated Neurosurgical symposium featuring the most compelling, novel and high-impact clinical and basic science.
- Multi-subspecialty assembly presented in simultaneous and physically-contiguous sessions.
- Attendees move efficiently between adjacent meeting rooms to see various presentations and interact with presenters outside their subspecialty.
- Attendees submit comments electronically to abstract authors via the Digital Poster Center.

Select Abstract Session

- Authors present their work during a multi-disciplinary Open Poster Session between CNS Neurosurgical Forum Sessions.
- Attendees listen to poster presentations live, talk through techniques with the author and ask questions about the abstract that interests them most.
- Attendees and authors participate in electronic discussions on each poster throughout and following the Annual Meeting.

Let Your Voice be Heard!



Consensus Sessions offer attendees a unique opportunity to contribute to the advancement of organized neurosurgery by weighing in on critical socioeconomic issues and public policy topics. National experts in each subject area lead these interactive workshops, which use member participation and interactive polling to define the direction for organized neurosurgery.

See page 21 for information on these and other courses based on the Science of Education!

Available Monday through Wednesday afternoons!



CNS ORIGINAL SCIENCE PROGRAM

The CNS Neurosurgical Forum presents the most compelling, novel and high impact basic and clinical science in a neurosurgical “marketplace” of ideas. All specialties are represented in this interactive session. The forum includes two components:

- **CNS Open Papers Sessions (2:00 – 4:00 pm):** Platform presentations of leading scientific abstracts, with opportunity for interaction with the authors. These section specific sessions take place simultaneously, in adjacent rooms, facilitating interdisciplinary interest and exchange. Computer stations facilitate the initiation of ongoing online discussions and networking by authors and participants.
- **CNS Select Abstract Session (4:00 – 5:45 pm):** Presentation of cutting edge basic and clinical neurosurgical science. All sections are represented in this large and open scientific event. Authors present their work dynamically to small groups using illustrated posters and computer based media. Pick and choose from the wealth of new ideas, techniques and findings represented in each specialty area. Gather in the Clinical Trials area to network with the principals of ongoing clinical studies.

Learning Objectives: At the conclusion of this interactive educational session, participants will be able to discuss the findings of novel neurosurgical scientific studies, critique the design and methodology of these studies, list important areas for further knowledge development and research, and identify the most important ongoing clinical trials.

2:00 – 3:00 pm

CNS Neurosurgical Forum – Council of State Neurosurgical Societies

Moderators: Mick J. Perez-Cruet, William E. Bingaman

2:00 – 2:10 pm

Council of State Neurosurgical Societies Young Neurosurgeon Award

801

Fiducials: Achilles Heel of Image Guided Neurosurgery: An Attempt at Indigenization and Improvement

Deepak Aggrawal; Paul Steinbok

2:10 – 2:20 pm

802

Integrated Medical Learning: Concepts and Outcomes from the 2007 CNS Meeting

*Douglas Kondziolka; Anthony L. Asher; Gerald E. Rodts, Jr.;
Nathan R. Selden*

2:20 – 2:30 pm

Council of State Neurosurgical Societies Resident Award

803

Post-Operative Pain Management following Craniotomy Using Atypical Analgesics: Evaluation and Cost Analysis

*Scott Y. Rahimi; Cargill H. Alleyne, Jr.; Douglas George Hughes;
Mark R. Witcher; John R. Vender*

2:30 – 2:40 pm

804

Conventional vs. Digital Radiographs for Intraoperative Cervical Spine Level Localization: A Prospective Time and Cost Analysis

Michael P. Steinmetz; Tom Mroz; Ajit Ashok Krishnaney; Michael Modic

2:40 – 2:50 pm

805

The Effect of the Role Out of Massachusetts Health Care Reform on Neurosurgical Procedure Reimbursements

*Anthony Burrows; Richard Moser; John P. Weaver; Demetrius Litwin;
Julie G. Pilitsis*

2:50 – 3:00 pm

806

A Model for Neurosurgical Outreach to International Charity Hospitals: Lessons From Maria Auxiliadora Hospital, Lima, Peru

*Melanie Hayden; Samuel Hughes; E. J. Hahn; Henry E. Aryan;
Michael L. Levy; Rahul Jandial*

Monday, September 22, 2008

MONDAY

4:00 – 5:45 pm

**Select Abstract Session –
Council of State Neurosurgical Societies**

Moderators: Michael P. Steinmetz, Gary R. Simonds

2:00 – 4:00 pm

**CNS Neurosurgical Forum –
Section on Cerebrovascular Surgery**

Moderators: Saleem I. Abdulrauf, Aman B. Patel

2:00 – 2:10 pm

Galbraith Award

807

**Traumatic Intracranial Aneurysms: A 5-Year Study of the
Natural History and Multi-Modal Treatment of 61
Traumatic Arterial Injuries during Wartime**Randy Scott Bell; Ryan Roberts; Frederick L. Stephens; Ben Crandall;
Alexander H. Vo; John E. Wanebo; Robert Ecker; Rocco Armonda

2:10 – 2:20 pm

808

**Natural History of Brain Arteriovenous Malformations: A
Long-term Follow-up Study of 238 Patients**Aki Laakso; Reza Dashti; Seppo Juvela; Kristjan Väärt; Mika Niemela;
Juha Antero Hernesniemi

2:20 – 2:30 pm

809

**International Collaboration of Enterprise Stent-Coiling
(ICES): Initial Results**J Mocco; Kenneth Vincent Snyder; Felipe Albuquerque;
Bernard R. Bendok; Alan S. Boulous; Jeffrey S. Carpenter;
David Fiorella; Brian Lim Hoh; Jay U. Howington; Brian T. Jankowitz;
Kenneth M. Liebman; Ansaar Rai; Rafael Rodriguez-Mercado;
Adnan Hussain Siddiqui; Erol Veznedaroglu; L. Nelson Hopkins, III;
Elad I. Levy

2:30 – 2:40 pm

810

**Timing of Surgery for Aneurysmal Subarachnoid
Hemorrhage**Kelly B. Mahaney; James Torner; Michael M. Todd;
Bradley J. Hindman; Julie B. Weeks

3:30 – 4:00 pm

Refreshments with Exhibitors

2:40 – 2:50 pm

811

**Hemoglobin Level and Cerebral Metabolism in Patients
with Aneurysmal Subarachnoid Hemorrhage: A
Microdialysis Study**H. Isaac Chen; Mauro Oddo; Andrew H. Milby; Suzanne Frangos;
Eileen Maloney-Wilensky; Michael F. Stiefel; Andrew Kofke;
Joshua Levine; Peter D. LeRoux

2:50 – 3:00 pm

812

**Comparison of Primary Angioplasty with Stent Placement
for Treating Symptomatic Intracranial Atherosclerotic
Disease: A Multi-center Study**Farhan Siddiq; Muhammad Zeeshan Memon; Gabriela Vazquez;
Muhammad Fareed K. Suri; Joan C. Wojak; John C. Chaloupka;
Adnan I. Qureshi

3:00 – 3:10 pm

813

**Recent Trends in the Treatment of Spontaneous
Intracerebral Hemorrhage: Analysis of a Nationwide
Inpatient Database**

Norberto O. Andaluz; Mario Zuccarello

3:10 – 3:20 pm

814

**Embolization as an Adjuvant in the Treatment of Cerebral
Arteriovenous Malformations: Predicting Complications
and Outcome**Robert M. Starke; Ricardo Jorge Komotar; Raqeeb M. Haque;
Marc Louis Otten; Brian Y. Hwang; Laura Fischer; Matthew C. Garrett;
Maxwell B. Merkow; Michael B. Sisti; Robert A. Solomon;
Sean D. Lavine; E. Sander Connolly, Jr.; Philip M. Meyers

3:20 – 3:30 pm

815

**Short- to Mid-term Results of Stent-Angioplasty with
Drug-Eluting Stents for Intracranial Atherosclerosis**

Min-Woo Baik

3:30 – 3:40 pm

816

**Clinical Features, Surgical Treatment, and Long-term
Outcome of Adult Moyamoya Patients: A Single U.S.
Institution Experience**Robert M. Starke; Ricardo Jorge Komotar; Zachary Lee Hickman;
Yehuda Paz; Angela Pugliese; Marc Louis Otten; Matthew C. Garrett;
Maxwell B. Merkow; Mitchell S. Elkind; Randolph Marshall;
Philip M. Meyers; Joanne Festa; Edward S. Connolly

3:40 – 3:50 pm

817

Single Center Comparison of Bioactive versus Bare Platinum Coils for the Endovascular Treatment of Intracranial Aneurysms: A Multivariate Regression Analysis*Michelle Janine Smith; Kyle Chapple; Justin Mascitelli; Philip E. Stieg; Howard A. Riina; Pierre Gobin*

3:50 – 4:00 pm

818

C3a Receptor and C5a Receptor Blockade Augments Recovery after a Murine Model of Intracerebral Hemorrhage*Matthew C. Garrett; Marc Louis Otten; Ricardo Jorge Komotar; Robert M. Starke; Maxwell B. Merkow; E. Sander Connolly, Jr.*

4:00 – 5:45 pm

Select Abstract Session – Section on Cerebrovascular Surgery*Moderators: Jacques J. Morcos, Murat Gunel*

2:00 – 4:00 pm

CNS Neurosurgical Forum – Section on Disorders of the Spine and Peripheral Nerves*Moderators: Christopher I. Shaffrey, Allen H. Maniker*

2:00 – 2:10 pm

819

Operative versus Conservative Treatment of Back Pain in Adults with Scoliosis: A Retrospective Review of a Prospective Multicenter Database with 2-year Follow-up*Justin S. Smith; Christopher I. Shaffrey; Sigurd Berven; Steven D. Glassman; Christopher Hamill; William Horton; Stephen L. Ondra; Frank Schwab; Kai-Ming G. Fu; Michael Shainline; Keith Bridwell*

2:10 – 2:20 pm

820

Surgical Approach and Outcome in Patients with Malignant Peripheral Nerve Sheath Tumors: A 25-year Institutional Review*Daniel M. Sciubba; Clarke Nelson; Michael Dorsi; Matthew McGirt; Allan J. Belzberg; Jaishri Blakeley*

2:20 – 2:30 pm

821

Prognostic Factors Influencing the Outcome of 267 Consecutive Patients Undergoing Surgery for Metastatic Renal Cell Carcinoma of the Spine*Claudio E. Tatsui; Stefan S. Kim; Mustafa Aziz Hatiboglu; Ian E. McCutcheon; Sheila M. Smitherman; Dima Suki; Abhijit Salaskar; Laurence D. Rhines*

2:30 – 2:40 pm

822

Correlations of Changes in Back and Leg Pain with Changes in Oswestry Disability Index, SRS-22 and SF-12 in Surgically Treated Patients with Adult Scoliosis: A Retrospective Review of a Prospective Multicenter Database with 2-year Follow-up*Justin S. Smith; Christopher I. Shaffrey; Sigurd Berven; Steven D. Glassman; Christopher Hamill; William Horton; Stephen L. Ondra; Frank Schwab; Kai-Ming G. Fu; Michael Shainline; Keith Bridwell*

2:40 – 2:50 pm

823

The Impact of Duration of Symptoms on the Outcomes of Surgical Management of Cervical Spondylotic Myelopathy: Analysis of a Prospective Multicenter Study*Michael G. Fehlings; Branko Kopjar; Eric M. Massicotte; Paul M. Arnold; Tim Yoon; Alexander R. Vaccaro; Eric J. Woodard; Darrel S. Brodke; Jens Chapman; Christopher I. Shaffrey; Michael Janssen; Rick Sasso*

2:50 – 3:00 pm

824

Adjuvant Treatment with Locally Delivered Oncogel Delays the Onset of Paresis after Surgical Resection or Radiotherapy of Experimental Spinal Column Metastasis*Beril Gok; Matthew McGirt; Daniel M. Sciubba; Giannina L. Garcés-Ambrossi; Clarke Nelson; Joseph C. Noggle; Ali Bydon; Timothy F. Witham; Jean-Paul Wolinsky; Ziya L. Gokaslan*

3:00 – 3:10 pm

825

Management of Low Back-pain in Division I College Football Players: A Multi-institutional Study on Long-term Outcomes, Disability and Return to Play*Jay Jagannathan; Adam S. Kanter; Charles Y. Liu; James Mills; Jason P. Sheehan; Brian Jeremy Williams; Jonas Sheehan; Joseph C. Maroon; Christopher I. Shaffrey; Julian E. Bailes; John A. Jane, Sr.*

3:10 – 3:20 pm

826

Surgical vs. Conservative Treatment for Geriatric Odontoid Fractures: Initial 6-month Outcomes of a Multi-Center Prospective Study of 122 Patients*Alexander R. Vaccaro; Michael G. Fehlings; Branko Kopjar; Jens Chapman; Christopher I. Shaffrey; Darrel S. Brodke; Paul M. Arnold; Ziya L. Gokaslan; Mark Dekutowski; Tim Yoon; Roger Hartl; John France*

Monday, September 22, 2008

MONDAY

3:20 – 3:30 pm

827

Transplanted Adult Neural Precursor Cells Differentiate into Mature Oligodendrocytes, Remyelinate the Injured Axons and Improve Functional Recovery after Chronic Spinal Cord Injury*Sarah Chan; Soheila Karimi-Abdolrezaee; Eftekhari Eftekharpour; Jian Wang; Michael G. Fehlings*

3:30 – 3:40 pm

828

Operative versus Conservative Treatment of Leg Pain in Adults with Scoliosis: A Retrospective Review of a Prospective Multicenter Database with 2-year Follow-up*Justin S. Smith; Christopher I. Shaffrey; Sigurd Berven; Steven D. Glassman; Christopher Hamill; William Horton; Stephen L. Ondra; Frank Schwab; Kai-Ming G. Fu; Michael Shainline; Keith Bridwell*

3:40 – 3:50 pm

829

The Na⁺, K⁺-ATPase Pump Is Essential for Regeneration of the Injured Adult Central Nervous System*Elias Boulos Rizk; Brenton Meier; Agahan Unlu; Bermans Iskandar; Joshua E. Medow; Roham Moftakhar; Nithya Hariharan; Raghu Vemuganti; Dandan Sun*

3:50 – 4:00 pm

830

Preliminary Results of Schwann Cell Transplantation for Chronic Spinal Cord Injuries*Hooshang Saber; Maasoumeh Firoozi; Pooria Moshayedi; Hamidreza Aghayan; Babak Arjomand; Kazem Hosseini; Mohammadreza Omidzohoor; Hassan Emami; Saeed Sarkar*

4:00 – 5:45 pm

Select Abstract Session – Section on Disorders of the Spine and Peripheral Nerves*Moderators: Ajit Krishnaney, Lynda J. Yang*

2:00 – 4:00 pm

CNS Neurosurgical Forum – Section on Neurotrauma and Critical Care*Moderators: Jamie S. Ullman, Shelly D. Timmons*

3:30 – 4:00 pm

Refreshments with Exhibitors

2:00 – 2:10 pm

Synthes Award for Resident Research on Brain and Craniofacial Injury

831

The Use of MR Diffusion Biomarkers to Predict Functional Outcome in Mild Traumatic Brain Injury*Amy Lee; Christine Mac Donald; Sarah C. Jost; Tammie Benzinger; Steffany Chleboun; David L. Brody; Sheng-Kwei Song*

2:10 – 2:20 pm

Synthes Award for Resident Research on Spinal Cord and Spinal Column Injury

832

The Combination of Selective Inhibition of the Cannabinoid CB1 Receptor and Activation of the Cannabinoid CB2 Receptor Yields Improved Attenuation of Motor and Autonomic Deficits in a Mouse Model of Spinal Cord Injury.*Joshua E. Heller; Darric E. Baty; Ming Zhang; Hongbo Li; Martin Adler; Doina Ganea; Christopher M. Loftus; Jack Jallo; Ronald F. Tuma*

2:20 – 2:30 pm

833

A Prospective Randomized Clinical Trial to Compare the Effect of Hyperbaric to Normobaric Oxygenation on Cerebral Metabolism and Intracranial Pressure in Severe Traumatic Brain Injury*Gaylan L. Rockswold; Sarah B. Rockswold; Thomas A. Bergman; Xuewei Zhang; Archie Defillo; Carla Cerra*

2:30 – 2:40 pm

834

Somatosensory Functional Correlates of Spinal Cord Diffusion Tensor Imaging (DTI) during Long-term Recovery from Spinal Contusion*Shekar N. Kurpad; Benjamin Ellingson; Brian Schmit*

2:40 – 2:50 pm

835

Simvastatin Suppresses Apoptosis and Promotes Neurological Recovery after Traumatic Brain Injury in Rats*Asim Mahmood; Hongtao Wu; Dunyue Lu; Michael Chopp*

2:50 – 3:00 pm

836

Current Evaluation of Mild Traumatic Brain Injury in NCAA Division I Football Players*Todd L. Harshbarger; Julian E. Bailes; Ron Courson*

3:00 – 3:10 pm

837**Blast-Induced Traumatic Brain Injury: A Review of Current Neurosurgical Experience in Operation Iraqi Freedom***Jason H. Huang; Richard E. Clatterbuck*

3:10 – 3:20 pm

838**The Effect of Chronic Cigarette Smoking on Brain-derived Neurotrophic Factor Expression in Rats with Traumatic Brain Injury***Martin Lin; Jen-Tsung Yang; Ming-Hsueh Lee; Ting-Chung Wang; Yu-Kai Cheng; Chen-Hsing Su; Chia-Mao Chang*

3:20 – 3:30 pm

839**Discrete Cerebral Hypothermia in the Management of Severe Traumatic Brain Injury***Odette Harris; Carrie Rebecca Muh; Monique Surlles; Yi Pan; Grace Rozycki; Jana Macleod; Kirk Easley*

3:30 – 3:40 pm

840**Levetiracetam versus Phenytoin as Seizure Prophylaxis in Severe Traumatic Brain Injury***Kristen E. Jones; Ava Puccio; Kathy J. Harshman; Bonnie Falcione; Neal Benedict; Brian T. Jankowitz; Michael R. Fischer; David O. Okonkwo*

3:40 – 3:50 pm

841**Static Cerebral Pressure Autoregulation is Intact in Patients with Severe Traumatic Brain Injury***Eric C. Peterson; Randall Chesnut*

3:50 – 4:00 pm

842**Assessment of Early vs Late Tracheostomy in Severely Head Injured Patients: A Systematic Review of 3,104 Patients***Elias Boulos Rizk; Kevin M. Cockroft; Vernon M. Chinchilli; Christy Stetter*

4:00 – 5:45 pm

Select Abstract Session – Section on Neurotrauma and Critical Care*Moderators: Eve Tsai, David O. Okonkwo*

2:00 – 4:00 pm

CNS Neurosurgical Forum – Section on Pediatric Neurological Surgery*Moderators: Sarah J. Gaskill, Mark D. Krieger*

2:00 – 2:10 pm

843**Factors Associated with Recurrence and Survival for Pediatric Supratentorial Malignant Gliomas***Kaisorn L. Chaichana; Matthew McGirt; Graeme F. Woodworth; Benjamin S. Carson; Jon D. Weingart; George I. Jallo; Alfredo Quinones-Hinojosa*

2:10 – 2:20 pm

844**Neurocognitive Aspects of Chiari Malformation Type I***Maureen Lacy; Emily L. Austria; David M. Frim*

2:20 – 2:30 pm

845**Complication Rates Using Various Dural Graft Substitutes in Posterior Fossa Decompression for Type 1 Chiari Malformation***Stephen Parker; Herbert E. Fuchs; Peggy Cotton; Gerald A. Grant*

2:30 – 2:40 pm

846**Chiari 1.5 Malformation: Is It Real?***Kerri Thorn; Katie Quigley; Michael C. Huang; John S. Myseros; Amanda Yaun; Robert F. Keating*

2:40 – 2:50 pm

847**Outcome of Repeat Spinal Cord Untethering***Wajd Al-Holou; Karin M. Muraszko; Hugh Garton; Cormac O. Maher*

2:50 – 3:00 pm

848**Trends in Myelomeningocele Repair in the United States: 1993-2005***Ali Baaj; Fernando L. Vale; Juan S. Uribe*

3:00 – 3:10 pm

849**Use of Axial and Subaxial Translaminar Screws in the Management of Upper Cervical Spinal Instability in Children***Roukoz B. Chamoun; Keyne Kristin Johnson; William E. Whitehead; Daniel Curry; Thomas G. Luerksen; James M. Drake; Andrew Jea*

Monday, September 22, 2008

MONDAY

3:10 – 3:20 pm

850

Use of rhBMP-2 in Pediatric Spinal Fusion*Michael Antonucci; Jeffrey Bennett; David W. Pincus*

3:20 – 3:30 pm

851

Long-term Benefits of the Percutaneous Endoscopic Recanalization of Catheter (PERC) Technique for Proximal Shunt Revision: Analysis of 105 Cases*Jogi V. Pattisapu; Christopher Gegg; Greg Olavarria; Scott Poag; Eryn Lawson; Susan Lynch*

3:30 – 3:40 pm

852

Idiopathic Aqueductal Stenosis: The Ideal Endoscopic Option?*Aaron Mohanty; Satyanarayana Satish; Kim H. Manwaring*

3:40 – 3:50 pm

853

Pediatric Sinusitis: A Significant Problem for the Neurosurgeon*Robert F. Keating; Maria Pena; Diego Preciado; John S. Myseros; Amanda Yaun; George Zalzal*

3:50 – 4:00 pm

854

Distribution of Dextran in Animal Model Suggests Role for Osmotic Gradients in Hydrocephalus*Satish Krishnamurthy; James P. McAllister; Jie Li*

4:00 – 5:45 pm

**Select Abstract Session –
Section on Pediatric Neurological Surgery***Moderators: Greg Olavarria, Michael Muhonen*

2:00 – 4:00 pm

**CNS Neurosurgical Forum – Section on
Stereotactic and Functional Neurosurgery***Moderators: Philip A. Starr, Michael Schulder*

2:00 – 2:10 pm

855

Decoding Speech Phonemes from Broca's Area for Neuroprosthetic Application*Eric C. Leuthardt; Woosung Kim; Nick Anderson; Kim Wisneski; Dennis Barbour; Gerwin Schalk*

2:10 – 2:20 pm

856

Motor Evoked Response Predicts Efficacy of Motor Cortex Stimulation for Motor Recovery Following Ischemic Stroke*Robert M. Levy; Todd B. Parrish*

2:20 – 2:30 pm

857

Deep Brain Stimulation for Major Depressive Disorder (Resistant to 4 or more Treatments): Preliminary Results of a Multi-Center Study*Abbas F. Sadikot; Helen S. Mayberg; Andres M. Lozano; Sidney H. Kennedy; Peter Giacobbe; Clement Hamani; Guy Debonnel; Theodore Kolivakis; Christopher Honey; Raymond Lam; Andrew Howard*

2:30 – 2:40 pm

858

Cortical Stimulation for Tinnitus: Long-term Follow-up with PET/rTMS*Brian H. Kopell; Manoj Raghavan; Wolfgang Gaggl; Christina Runge-Samuelson; Justin Hulvershorn; David Soltysik; David Friedland*

2:40 – 2:50 pm

859

Chronic Electrical Stimulation of the Dentate Nucleus Enhances Motor Recovery following Ischemic Strokes in Rats*Andre Machado; Kenneth B. Baker; Daniel Schuster; Ali R. Rezaei*

2:50 – 3:00 pm

**Stereotactic and Functional Neurosurgery Resident Award
860****An Implantable, Automated Focal Cerebral-Cooling System Suppresses Epileptic Seizures in Free-Moving, Spontaneously Epileptic Rats***Hiroshi Fujioka; Masami Fujii; Hiroyasu Koizumi; Joji Uchiyama; Yuji Kurata; Takashi Saito; Hirochika Imoto; Sadahiro Nomura; Michiyasu Suzuki*

3:00 – 3:10 pm

861

Electrocorticographic Guided Resection of Supratentorial Cavernomas; is it Warranted and Does It Alter Surgical Approach?*Jamie Joseph Van Gompel; Jesus Rubio; Fredric B. Meyer*

3:30 – 4:00 pm

Refreshments with Exhibitors

3:10 – 3:20 pm

862

Anatomo-Functional Organization of the Insular Cortex in Epileptic Humans: Study Using Intracerebral Electrical Stimulation

Afif Afif, L. Minotti, A.L. Benabid, P. Kahane, D. Hoffmann

3:20 – 3:30 pm

863

Further Experience with a Stereotactic Near-Infrared Probe for Localization during Functional Neurosurgical Procedures

Cole A. Giller; Hanli Liu; Dwight C. German; Dheerendra Kashyap; Richard B. Dewey, Jr.

3:30 – 3:40 pm

864

Mapping the Effects of STN DBS: The Spatial Relationship between Desired and Adverse Stimulation Effects, and Implications for a Multiparameter Localization-Optimization Paradigm

Mahesh B. Shenai; Harrison Walker; Stephanie Guthrie; Barton L. Guthrie

3:40 – 3:50 pm

865

Parkinson's Disease Pathology in Migral Grafts 14 Years after Transplantation

Thomas B. Freeman; Yaping Chu; Robert Hauser; Warren Olanow; Jeffrey H. Kordower

3:50 – 4:00 pm

866

Cognitive Improvement following Deep Brain Stimulator Placement for Treatment of Movement Disorders

James McInerney; Moksha Ranasinghe; Tiffany Jennings; Elana Farace

4:00 – 5:45 pm

Select Abstract Session – Section on Stereotactic and Functional Neurosurgery

Moderators: Konstantin V. Slavin, Emad N. Eskandar

2:00 – 4:00 pm

CNS Neurosurgical Forum – Section on Tumors

Moderators: Gene H. Barnett, Jeffrey Bruce

2:00 – 2:10 pm

867

Hedgehog Signaling Regulates Brain Tumor Stem Cell Self-renewal and Portends a Shorter Survival for Patients with PTEN-coexpressing Glioblastomas

John S. Yu; Keith L. Black; Qijin Xu; Xiangpeng Yuan; Gentao Liu

2:10 – 2:20 pm

Integra Foundation Award

868

Intraoperative Localization of Pituitary Adenomas

M. Sam Eljamel; Graeme Leese; Harry Moseley

2:20 – 2:30 pm

Mahaley Clinical Research Award

869

The Role of Tregs in Human Glioma Patients and Their Inhibition with a Novel STAT-3 Inhibitor

Mohamed Abou-Ghazal; Ling-Yuan Kong; Chantal Reina-Ortiz; David S. Yang; Jun Wei; Wei Qiao; Robert J. Schmittling; Gary E. Archer; Gregory N. Fuller; John H. Sampson; Waldemar Priebe; Amy B. Heimberger

2:30 – 2:40 pm

American Brain Tumor Association Young Investigator Award

870

Proteasome Inhibition in High Grade Glioma Treatment: A Strategy for Simultaneous Tumorcidal Activity, Temolozamide Chemosensitization and Radiation Sensitization

Clark C. Chen; Richard Kennedy; Santosh Kesari; Andrew Kung; Alan D'Andrea

2:40 – 2:50 pm

871

Glioblastoma Hypoxia Promotes Oncolytic HSV Replication in Vitro and in Vivo

Manish Kumar Aghi; Ta Chiang Liu; Samuel Rabkin; Robert L. Martuza

2:50 – 3:00 pm

872

Factors Influencing the Risk of Local Recurrence Following Resection of a Single Brain Metastasis

Akash J. Patel; Dima Suki; Mustafa Aziz Hatiboglu; Hiba Abou-Assi; Frederick F. Lang; Raymond E. Sawaya

Monday, September 22, 2008

MONDAY

3:00 – 3:10 pm

873

Identification of a Human Pituitary Adenoma Stem Cell*John S. Yu; Patrizia Tunici; Xiangpeng Yuan; Gentao Liu; Minlin Xu; Keith L. Black*

3:10 – 3:20 pm

874

Human Glioma Cells Recruit and Expand Adult Glial Progenitors via Paracrine PDGF Signaling*Kim A. Lopez; Marcela Assanah; Allen E. Waziri; David Fusco; Aaron M. Tannenbaum; Katy Linskey; Guy M. McKhann, II; Michael B. Sisti; Jeffrey Bruce; Peter D. Canoll*

3:20 – 3:30 pm

Preuss Resident Research Award

875

Novel Tyrosine Kinase Genes Fusions in Glioma*Cameron Brennan; Tatsuya Ozawa*

3:30 – 3:40 pm

876

Factors Associated with Recurrence and Malignant Degeneration following Surgical Resection of a Hemispheric Low Grade Glioma*Kaisorn L. Chaichana; Matthew McGirt; Sophia Shakur; Debraj Mukherjee; Alfredo Quinones-Hinojosa*

3:40 – 3:50 pm

Sherry Apple Resident Travel Scholarship

877

Development of Resistance in Multicycle Temozolomide Chemotherapy for Glioblastoma*Michelle J. Clarke; Mark Schroeder; Brett Carlson; Patrick Grogan; Paul Decker; Jann Sarkaria*

3:50 – 4:00 pm

878

Adjuvant Autologous Dendritic Cell Immunotherapy for Malignant Gliomas: A Phase I-II Clinical Trial*Der-Yang Cho; Wen-Kang Yang; Hang-Chung Lee; Hong-Lin Lin; Shinn-Long Liin; Li-Hwei Ho*

4:00 – 5:45 pm

Select Abstract Session – Section on Tumors*Moderators: Alfredo Quiñones-Hinojosa, Manish K. Aghi*

3:30 – 4:00 pm

Refreshments with Exhibitors

3:00 – 4:00 pm

CNS Neurosurgical Forum – Section on Pain*Moderators: Joshua M. Rosenow, Oren Sagher*

3:00 – 3:10 pm

Ronald Tasker Award

879

Occipital Nerve Stimulation for Intractable Occipital Neuralgia: An Open Surgical Technique*Philippe Magown; Rene Garcia; Ian Beauprie; Ivar Mendez*

3:10 – 3:20 pm

880

Spinal Cord Stimulation versus Conventional Medical Management for Failed Back Surgery Syndrome: Long-term Results from the PROCESS Study*Line Jacques; on behalf of the PROCESS study group*

3:20 – 3:30 pm

881

Intrathecal Transplantation of the Human Neuronal GABA/Glycinergic hNT2.17 Cell Line for Alleviation of Neuropathic Pain in the Streptozotocin (STZ) Model of Diabetic Neuropathy*Stacey Charlene Quintero Wolfe; Alice Holohean; Miguel Martinez; Yadira Salguiero; Massiel Hernandez; Mary Eaton*

3:30 – 3:40 pm

882

Alpha2-Noradrenergic Antagonist Administration into the Central Nucleus of the Amygdala Blocks Stress-Induced Analgesia*Nathan R. Selden; Justin P. Ortiz; Liesl N. Close; Mary M. Heinricher*

3:40 – 3:50 pm

883

Adenovirus-mediated Expression of GAD65 into the Trigeminal Ganglion Produces Long-lasting Analgesia*Luc Jasmin; Jean-Philippe Vit; Mariana Puntel; Chunyan Liu; Maria Castro; Pedro Lowenstein; Peter Ohara*

3:50 – 4:00 pm

884

Negative Exploration during Microvascular Decompression: Initial Experience with Intra-operative Glycerol Rhizotomy for Trigeminal Neuralgia*Richard S. Zimmerman; Amy Theiler; Naresh P. Patel*

4:00 – 5:45 pm

Select Abstract Session – Section on PainModerators: *Andre Machado, Alon Mogilner*

2:00 – 4:00 pm

CNS Neurosurgical Forum – Clinical Trial Design and Translational Science in the Community of Neurosurgery

Learning Objective: Learners will hear didactic information on basic science and clinical research in neurological surgery. The session will include experts in neurosurgical basic science discussing examples of investigatory strategies as well as barriers to the careers of clinician-scientists. The session will also include experts active in clinical trial design and implementation, including leaders of current North American clinical trials. Learners will be able to list the criteria for participating as a center in trials as well as the benefits to neurosurgery and to individual patients of trial participation. They will also describe how to identify active trials that may be joined by additional centers.

2:00 – 3:00 pm

Basic and Translational ScienceModerator: *Robert M. Friedlander, Murat Gunel, E. Sander Connolly, Jr.*

2:00 – 2:12

Preparing for an Academic Laboratory Career: Residency and the Early Faculty Years*Henry Brem*

2:12 – 2:24

Anatomy of an NIH Grant*E. Antonio Chiocca*

2:24 – 2:36

Competing at a Higher Level: Building a Community of Collaborators*Theodore H. Schwartz*

2:36 – 2:48

The Wisdom of Balance: Lab, Practice, Career... and Family!*Robert M. Friedlander*

2:48 – 3:00

Interactive/Audience Panel Discussion

3:00 – 4:00 pm

Clinical Trial Design and ParticipationModerator: *Michael A. Vogelbaum*

3:00 – 3:12

Public and Private Funding Opportunities for Clinical Research*Nicholas M. Boulis*

3:12 – 3:24

Equipoise: Determining Clinical Trials' Feasibility*Frederick G. Barker*

3:24 – 3:36

Local and National Regulation of Human Subjects Research*John H. Sampson*

3:36 – 3:48

The Academic Community Alliance: Opportunities for Clinical Research*Russell R. Lonser*

3:48 – 4:00

Interactive Panel/Audience Discussion

4:00 – 5:45 pm

Active Clinical Trials Select Abstract SessionModerator: *Sarah C. Jost, Ali Chahlavi*

Monday, September 22, 2008

MONDAY

2:00 - 3:30 pm

★ **Consensus Session 1****Individual and Community: Managing Conflicts of Interest***Moderators: Stephen L. Ondra, Mark E. Linskey**Technology Moderators: Trent L. Tredway, John E. O'Toole*

Learning Objectives: Learners will identify potential sources of conflict of interest in research, education and practice of neurosurgery. They will also identify current regulatory constraints and list potential strategies for mitigating conflict. As part of this multidimensional interactive session, learners will evaluate existing policy and evidence related this topic and use formal consensus building methodology to define and choose policy options for organized neurosurgery.

2:00 - 2:10 pm

Introduction and Audience Polling: Current Attitudes, Knowledge and Practice Regarding Conflict Identification and Management*Stephen L. Ondra***Expert Opinion: Conflicts of Interest for the Practicing Neurosurgeon**

2:10 - 2:25 pm

How Do We Measure and Document Fair Market Value for Consultancy Retainers?*Regis W. Haid, Jr.*

2:25 - 2:40 pm

Physician Ownership of Medical Technology and Service: How Can We Mitigate Conflict?*Stephen L. Ondra*

2:40 - 2:55 pm

Industry Funding: How Can We Advance Patient Care through Research and Continuing Medical Education?*Paul C. McCormick*

2:55 - 3:10 pm

What Are the Concerns and the Role of the Federal Government?*Jack Mitchell**Chief Investigator, Senate Special Committee on Aging*

3:10 - 3:30 pm

Interactive Discussion and Consensus Development*Moderators: Stephen L. Ondra, Mark E. Linskey*

3:30 - 4:00 pm

Refreshments with Exhibitors**YOU'RE INVITED!**

CNS Resident Recruitment Social

The Right Opportunity May Be Looking for You!

Tuesday
September 23, 2008
 6:00 - 7:00 pm

Residents

If you are within 2-3 years of completing your residency, you won't want to miss this important (and complimentary!) networking event. This is your opportunity to meet exhibiting recruiters and practicing physicians who are looking to add colleagues to their practices.

Recruiters

If you are an official exhibitor of the CNS Annual Meeting and are looking to fill positions, this is your opportunity to meet the nation's best and brightest young neurosurgeons.

Come build relationships in a relaxed and informal environment. The Resident Recruitment Social is coordinated in close conjunction with the CNS Job Placement Service.

MONDAY

4:00 - 5:30 pm

Special Course

Neurosurgeon as Educator: Making an Indelible Impression

Course Director: *Vinay Deshmukh, Jamie S. Ullman*

Neurosurgeons are often called upon to serve as educators for both medical professionals and the public. The quality of medical care and outreach depends on effective communication as a part of continuing medical education. Communication of complex medical information often relies on effective multimedia presentation tools. Join faculty members from the Nicholson School of Communication, University of Central Florida as they discuss methods for enhancing public speaking and effectively using presentation tools for professional presentations. Participants will also practice these skills in mentored break-out sessions.

Learning Objectives: At the conclusion of this course, participants should be able to identify methods of speech delivery to optimally enhance audience understanding, demonstrate public speaking skills to effectively communicate information across medical disciplines and to various audience types, and apply Power Point and other media to optimize the effectiveness of presentations.

Faculty

Jim Katt, PhD

Assistant Professor of Organizational and Interpersonal Communication
University of Central Florida

Steven Neel

Instructor, Fundamentals of Technical Presentation and Business and Professional Communication
University of Central Florida

Melissa Hinson

Adjunct Faculty, Fundamentals of Technical Presentations
University of Central Florida

4:00 - 4:15 pm

Public Speaking: Audience-Centered Speaking

Steven Neel

4:15 - 4:30 pm

Effective Presentations: Media-Enhanced Messages

Jim Katt, PhD

4:30 - 4:45 pm

Communicating Across Medical Disciplines

Melissa Hinson

4:45 - 5:20 pm

Break-out Sessions

All Faculty

5:20 - 5:30 pm

Interactive Panel/Audience Panel Discussion

All Faculty

Neil Gabler

Monday, September 22

CNS Auxiliary Program

California Grill

12:30 - 3:00 pm



Your trip to Orlando simply wouldn't be complete without an in-depth look at the magic and mystery that was Walt Disney. Join us Monday, September 22 at the California Grill for the CNS Auxiliary Program and Luncheon, where the CNS welcomes cultural critic and award-winning author Neil Gabler as the keynote speaker.



Gabler's newest work, *Walt Disney: The Triumph of the American Imagination*, is the definitive biography of this Orlando icon. Gabler is the first writer to be given complete access to the Disney archives and his passion for the subject is clear throughout the book. Seven years in the making and meticulously researched, the book has received overwhelming critical acclaim as an illuminating portrait of the man who built an empire from a mouse.

"Delightfully addictive"

- John Hartl, *The Seattle Times*

"A revelatory portrait of a visionary...Disney examines its subject with a balance of insight, awe and empathy."

- Pat H. Broeske, *Bookpage*

"Illuminating . . . engrossing . . . Gabler paints a vivid portrait."

- Bruce Handy, *New York Times Book Review*

So be sure to join us for the CNS Auxiliary Luncheon at the award-winning California Grill, where you'll savor flavors influenced by the Pacific Coast melting pot atop Disney's Contemporary resort. Then enjoy Gabler's fascinating exploration of how one man's vision changed the world.

CNS Learning Style Key

- ◆ IML: Community Learning
- IML: Clinical Science
- ★ Consensus Sessions
- ▲ Case Based Learning
- Toolkit Sessions

See page 21 for more details on how the CNS is advancing neurosurgery through the Science of Education!



TUESDAY

GENERAL SCIENTIFIC SESSION II

The Community of Neurosurgery: Evidence as a Source of Knowledge

7:00 – 11:45 AM

Presiding Officer: Christopher C. Getch
Moderators: Stephen B. Tatter, John G. Golfinos
Technology Moderators: Ali Chahlavi, Sarah C. Jost

Learning Objective: Learners will participate in an interactive session with an advance opportunity to read key background material suggested by faculty and to direct faculty presentations towards important information and gaps in existing knowledge. Participants will identify key new published medical scientific evidence that is likely to immediately impact clinical care, list existing gaps in clinical evidence, and identify important topics for follow-up sessions and further investigation.

● Toolkit: Instruments for Understanding Evidence

7:00 – 7:10 am

Toolkit: What is Evidence and What is its Significance?

Frederick G. Barker

7:10 – 7:20 am

Toolkit: The Ethics of Accumulating Evidence in the Clinical Setting

Peter Angelos

7:20 – 7:30 am

Toolkit: What is the Future of Clinical Research Beyond Phase 3 Trials?

Michael A. Vogelbaum

7:30 – 8:48 am

◆ **IML: Community Learning Session II: The State of the Evidence – What Every Neurosurgeon Needs to Know**

7:30 – 7:43 am

NeuroIntensive Care

M. Ross Bullock

7:43 – 7:56 am

Functional and Pain Neurosurgery

Ali R. Rezai

7:56 – 8:09 am

Pediatric Neurosurgery

P. David Adelson

8:09 – 8:22 am

Cerebrovascular Surgery

E. Sander Connolly, Jr.

8:22 – 8:35 am

Spinal Neurosurgery

Daniel K. Resnick

8:35 – 8:48 am

Neuro-oncology and Radiosurgery

Frederick F. Lang

IML Sessions sponsored by



8:48 – 8:58 am

The Human Cerebrum: Thirty Years of Neurosurgery®

Michael L.J. Apuzzo

8:58 – 9:08 am

Brazilian Society of Neurosurgery

Guest Lecturer

Evandro de Oliveira

9:00 am – 4:30 pm

Exhibits Open

9:08 – 9:10 am

Introduction of Special Lecturer

James Surowiecki

Gerald E. Rodts, Jr.



9:10 – 9:30 am

James Surowiecki

Special Lecturer

The Wisdom of Crowds

9:30 – 10:30 am

Coffee with Exhibitors

10:30 – 10:50 am

William F. Chandler

Honored Guest Lecture

Regulation of Neurosurgical

Practice – Does Accountability

Promote Quality?



10:50 – 11:00 am

The CNS Resident Award

Enriched Motor Neuron Populations

Derived from BAC-transgenic Human

Embryonic Stem Cells

Dimitris G. Placantonakis

11:00 – 11:10 am

Brazilian Society of Neurosurgery

Presidential Guest Address

Jose Carlos Saleme

11:10 – 11:15 am

Introduction of the CNS Michael L.J.

Apuzzo Lecture on Creativity and

Innovation Professor Muhammad Yunus

Douglas Kondziolka

11:15 – 11:45 am

Muhammad Yunus

The CNS Michael L.J. Apuzzo

Lecturer on Creativity and

Innovation



LUNCHEON SEMINARS 12:30 – 2:00 PM

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon seminar fees are \$60 each (\$45 each for Residents/Fellows/Nurses/Physician Extenders).

T19**Surgical Intervention for Lumbar Spine: What the Literature Supports**

Moderator: Charles L. Branch, Jr.

Faculty: Charles Kuntz, IV, Daniel K. Resnick, Beverly C. Walters

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the current literature on surgical treatment of degenerative lumbar spine disease. Participants will be able to discuss the indications and expected outcomes for various lumbar spine surgical procedures.

T20**Cervical Spondylotic Myelopathy: Guidelines for Surgical Management**

Moderator: Paul K. Maurer

Faculty: Michael G. Kaiser, Paul G. Matz, Timothy C. Ryken

Learning Objective: At the conclusion of this seminar, participants will be able to discuss how to diagnose the syndrome of cervical spondylotic myelopathy and evaluate the treatment options available. Participants will be able to discuss outcomes of treatment in patients with cervical spondylotic myelopathy.

T21**Brazilian Luncheon Seminar**

Moderator: Jose Carlos Saleme

Faculty: Luis Carlos de Alencastro, Evandro De Oliveira, Andre Machado, Francisco Ricardo

Learning Objective: At the conclusion of this seminar, participants will identify the characteristics of organized neurosurgery in Brazil, describe particular patterns of neurosurgical disease prevalence in the region, and list the accomplishments of Brazilian neurosurgery in advancing novel techniques of neurosurgical treatment.

T22**Intraoperative Salvage Techniques: Getting Out of Trouble in Spinal Surgery**

Moderator: Stephen L. Ondra

Faculty: Anthony Frempong-Boadu, Regis W. Haid, Jr., Michael G. Kaiser

Learning Objective: At the conclusion of this seminar, participants will have been exposed to situations when intraoperative salvage techniques are necessary in spinal surgery and be able to discuss the steps and techniques necessary to rectify intraoperative difficulties.

T23**Peripheral Nerve Entrapment**

Moderator: Lynda J. Yang

Faculty: Robert J. Spinner, Robert L. Tiel, Eric L. Zager

Learning Objective: At the conclusion of this seminar, participants will be able to discuss basic nerve entrapment syndromes and their medical and surgical management, and will have been exposed to the indications and techniques associated with peripheral nerve surgery. Participants will be able to describe techniques to augment or include peripheral nerve surgery in their practices.

T24 **radiosurgery: What the Literature Supports**

Moderator: Bruce E. Pollock

Faculty: Isabelle M. Germano, John G. Golfinos, Douglas Kondziolka, Jason P. Sheehan

Learning Objective: At the conclusion of this seminar, participants will be able to describe the evidence in the medical literature supporting the use of radiosurgery for neurosurgical disorders including tumors, vascular lesions, and functional applications.

T25**Management of Low Grade Gliomas: Current Strategies and Dilemmas**

Moderator: John K. Park

Faculty: Joseph M. Piepmeier, Jose Marcos Rotta, Andrew E. Sloan, Reid C. Thompson

Learning Objective: At the conclusion of this seminar, participants will gain exposure to the various surgical and medical modalities appropriate for the treatment of low grade gliomas and be able to discuss current research pertaining to the management of these tumors. Participants will be able to discuss various medical and surgical strategies used to manage low grade gliomas.

T26**Cerebral Ischemic Disease**

Moderator: Robert L. Macdonald

Faculty: Saleem I. Abdulrauf, Atos de Souza, David J. Langer, George Teitelbaum

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the indications for both surgical and endovascular treatments of cerebral ischemic disease, including the evidence-based results and possible complications.

T27**Adult Hydrocephalus: Current Treatment**

Moderator: *Marvin Bergsneider*

Faculty: *Neil Feldstein, Greg Olavarria, Jogi V. Pattisapu*

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the available and emerging technologies relevant to the treatment of hydrocephalus. Participants will be knowledgeable about complications avoidance and outcomes in the treatment of hydrocephalus.

T28**Anterior Circulation and Giant Aneurysms**

Moderator: *Robert M. Friedlander*

Faculty: *E. Sander Connolly, Jr., Guiseppe Lanzino, Felix Pahl*

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the natural history, surgical and endovascular treatment of anterior circulation aneurysms. Participants will be able to describe appropriate treatment strategies and discuss the advantages and risks associated with each.

T29**Surgical Treatment for Movement Disorders**

Moderator: *Robert E. Gross*

Faculty: *Peter E. Konrad, Alon Y. Mogilner, Joshua M. Rosenow*

Learning Objective: At the conclusion of this seminar, participants will be able to describe the major movement disorders amenable to surgical treatment, will be able to discuss the surgical techniques, indications, and outcomes for treating specific movement disorders.

T30**Management of Cranial Arteriovenous Malformations**

Moderator: *Peter Nakaji*

Faculty: *Jafar J. Jafar, Christer E. Lindquist, Neil A. Martin*

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the various treatment modalities available for the treatment of intracranial arteriovenous malformations, be able to discuss multimodality management strategies, and be able to discuss the risks and complications associated with each treatment modality.

T31**Traumatic Brain Injury: Future Directions**

Moderator: *Peter D. LeRoux*

Faculty: *Luiz Vicente Forte, John Douglas Pickard, Jamie S. Ullman*

Learning Objective: At the conclusion of this seminar, participants will have been exposed to research advances in traumatic brain injury and be able to discuss various medical and surgical treatment options associated with traumatic brain injury.

T32**ICD-9 and CPT Coding**

Moderator: *John A. Wilson, Jr.*

Faculty: *Frederick A. Boop, Robert R. Johnson, II, William Mitchell*

Learning Objective: At the conclusion of this seminar, participants will be able to discuss complex neurosurgical coding problems in both spinal and cranial surgery and will have been exposed to various strategies for improving neurosurgical coding procedures in one's own practice.

T33**New Frontiers in Pain Management for Allied Health Providers in Neurosurgery**

Moderator: *Andrea L. Strayer, MSN, APNP, CNRN*

Faculty: *Deborah Bizjak, Joseph S. Cheng, Daryl R. Fourney*

Learning Objective: Learners will identify key components of clinical pain rating, diagnosis and treatment strategies, list the new regulatory requirements for the documentation of pain care, and identify important topics for future consideration.

Nursing contact hours will be provided through AANN. The American Association of Neuroscience Nurses is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. Physician assistants will receive credit for attendance. Each physician assistant will need to contact his or her individual membership association and certification board to determine the requirements for accepting credits. All attendees will receive a confirmation of attendance. No CMEs will be awarded to physician participants.

T34**Financial Growth Strategies**

Moderator: *E. Hunter Dyer*

Faculty: *Gary M. Bloomgarden, Richard W. Byrne, Alan M. Scarrow*

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the skills necessary to develop a strong financial foundation for their practice and personal life, with an emphasis on the utilization of financial benchmarks and economic reporting systems to maximize profit and enhance negotiation skills with health plans to reduce administrative expenditures and increase payments.

T35**Pediatric Brain Tumors**

Moderator: *Mark M. Souwedayne*

Faculty: *Mark D. Krieger, James T. Rutka, Jeffrey H. Wisoff*

Learning Objective: At the conclusion of this seminar, participants will be familiar with the various types of pediatric brain tumors and will be able to discuss the current modalities appropriate for the treatment of brain tumors in the pediatric population.

Tuesday, September 23, 2008

TUESDAY

T36**Maintenance of Certification: What the Future Holds**

Moderator & Faculty: The faculty for this recurring session will be drawn from the Directors of the American Board of Neurological Surgery, including the Chair of the Maintenance of Certification Committee.

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the rationale and process of Maintenance of Certification and the steps necessary to collect data from their clinical practice in order to meet the requirements of MOC.

T37**How to Pursue an Academic Career in Neurosurgery**

Moderator: David M. Frim

Faculty: Henry Brem, Ennio Antonio Chiocca, Walter A. Hall, Paulo Andrade Mello

Learning Objective: Participants in this luncheon seminar will hear from experts in various niches of academic neurosurgery and research. Participants will discuss what is important to achieve during residency training in terms of research, teaching and publications. Participants will be able to describe the essential elements of curriculum vitae preparation, research grant application, how to enter the job search, how to market one's self, and the interview process.

2:00 – 3:30 pm

★ **Consensus Session 2****Serving our National Community: Emergency Coverage, Acute Care Surgery, and the Neurosurgeon**

Moderators: Richard W. Byrne, William E. Bingaman

Technology Moderators: Sepehr B. Sani, Harel Deutsch

Learning Objectives: At the conclusion of this symposium, participants will describe the current status and challenges for neurosurgery emergency coverage nationally, examine the proposed role of acute care surgery proposal by trauma surgery organizations, contrast the various solutions proposed for improving neurosurgery coverage, and rate the likely impact of each solution on emergency neurosurgery care. As part of this multidimensional interactive session, learners will evaluate existing policy and evidence related this topic and use formal consensus building methodology to define and choose policy options for organized neurosurgery.

2:00 – 2:10 pm

Introduction and Audience Polling: Current Attitudes, Knowledge and Practice Regarding Emergency Care Neurosurgery

Richard W. Byrne

Expert Opinion: Emergency Care Coverage in Neurosurgery

2:10 – 2:25 pm

National Neurosurgery Coverage: Current Status

Shelly D. Timmons

2:25 – 2:40 pm

Acute Care Surgeons: How Would They Train, What Would They Do, and Where?

David F. Jimenez

2:40 – 2:55 pm

Solutions for Neurosurgical Emergencies: Coverage Exclusively by Neurosurgeons

Richard G. Ellenbogen

Consensus Development: Policy Options

2:55 – 3:00 pm

I. Offer No Resistance to Acute Care Surgery Proposals

Mick J. Perez-Cruet

3:00 – 3:05 pm

II. Regionalization of Acute Care: Neurosurgeons Provide Care

William T. Couldwell

3:05 – 3:10 pm

III. Maintain and Improve the Status Quo

Ralph G. Dacey, Jr.

3:10 – 3:30 pm

Interactive Discussion and Consensus Development

Moderators: Richard W. Byrne, William E. Bingaman

3:30 – 4:00 pm

Refreshments with Exhibitors

2:00 – 3:30 pm

**IML: Clinical Science Session
Section on Disorders of the Spine
and Peripheral Nerves**

Metastatic Spinal Tumors: Data, Practice and Experience

Moderators: Michael W. Groff, Ehud Mendel
Technology Moderators: James S. Harrop, Michael G. Kaiser
Learning Objective: Upon completion of this session participants will be able to list the goals surgery for spinal column metastasis; describe three contraindications to percutaneous vertebroplasty; identify the benefits of surgery and XRT compared to XRT alone for symptomatic spinal column metastasis; and list situations in which vertebroplasty and stereotactic radiosurgery may be a better choice than surgical resection and reconstruction.

- Case Presentations
- Audience Polls
 - Current Opinion
 - Evidence
 - Practice
- Digitally Submitted Questions

Expert Discussion: Multimodal Management of Metastatic Spinal Tumors: Evaluating the Options

Ziya L. Gokaslan, Mark H. Bilsky, Kevin C. Yao



2:00 – 3:30 pm

Section on Pediatric Neurological Surgery Seminar

Treatment of Spasticity in the Pediatric Population

Moderators: Sarah J. Gaskill, Mark D. Krieger
Learning Objective: At the conclusion of this session, participants will be able to identify tone disorders commonly seen in the pediatric population. They will be able to explain the different modalities utilized in the treatment of spasticity. Participants will be able to identify appropriate candidates for selective dorsal rhizotomy and indications for baclofen pump placement in the pediatric population.

2:00 – 2:10 pm

Introduction to Spasticity in the Pediatric Population

Arthur E. Marlin

2:10 – 2:40 pm

Selective Posterior Rhizotomy: Functional Outcomes in the Pediatric Population

Bruce B. Storrs

2:40 – 3:00 pm

Baclofen Pumps in the Pediatric Population

Michael S. Turner

3:00 – 3:30 pm

Interactive Panel/Audience Discussion

2:00 – 3:30 pm

**IML: Clinical Science Session
Section on Stereotactic and Functional Neurosurgery**

Deep Brain Stimulation for Parkinson's Disease: Data, Practice and Experience

Moderators: Emad N. Eskandar, Kathryn L. Holloway
Technology Moderators: Kelly D. Foote, Paul Larson
Learning Objective: Upon completion of this session the participants will be able to list the indications for Deep Brain Stimulation Surgery (DBS) in Parkinson's Disease (PD); describe the advantages and disadvantages of targeting the GPi and STN for the treatment of PD; and describe scenarios in which it is appropriate to use STN or GPi in the treatment of PD.

- Case Presentations
- Audience Polls
 - Current Opinion
 - Evidence
 - Practice
- Digitally Submitted Questions

Expert Discussion: Optimal Stimulation Target for Parkinson's Disease: Globus Pallidus Internus versus Subthalamic Nucleus

Kim J. Burchiel, Philip A. Starr



3:30 – 4:00 pm
Refreshments with Exhibitors

Tuesday, September 23, 2008

TUESDAY

2:00 – 3:30 pm

Section on Tumors Seminar**International Tumor Symposium: The Community of Neurosurgery in Latin America***Moderators: Alessandro Olivi, Rodrigo Ramos-Zuniga*

Learning Objective: Upon the completion of this session, the participants will be able to describe socioeconomic issues pertinent to neurosurgeons in Latin America and the United States. Participants will list challenges regarding the training of neurosurgeons in Latin American countries. They will identify similarities and differences in the management of brain tumors between Latin American countries and the United States, as well as summarize the epidemiologic findings associated with brain tumors among the Hispanic population in the United States.

2:00 – 2:20 pm

Socioeconomic Issues Pertinent to Neurosurgeons in Latin America and the United States*Fernando G. Diaz*

2:20 – 2:40 pm

Neurosurgery in Uruguay*Edgardo Spagnuolo*

2:40 – 3:00 pm

Neurosurgery in Brazil*Jose Carlos Saleme*

3:00 – 3:15 pm

Neurosurgery in Mexico*Ramiro del Valle Robles*

3:15 – 3:30 pm

Epidemiology of Brain Tumors and Other Central Nervous System Diseases among the Hispanic Population in the United States*Alfredo Quiñones-Hinojosa*

3:30 – 4:00 pm

Refreshments with Exhibitors

4:00 – 5:30 pm

★ Consensus Session 3**Continuity in the Community of Neurosurgery: Changes to Residency Training***Moderators: Richard P. Schlenk, Deborah L. Benzil**Technology Moderators: Holly Gilmer-Hill, Sepehr Sani*

Learning Objectives: At the conclusion of this symposium, participants should be able to list the potential applications of competency-based training for medical and resident education, explain the potential impact of generational differences on neurosurgical resident education, determine the beneficial and detrimental effects of work hour restrictions on neurosurgical resident training, and identify alternative educational strategies for resident training. As part of this multidimensional interactive session, learners will evaluate existing policy and evidence related this topic and use formal consensus building methodology to define and choose policy options for organized neurosurgery.

4:00 – 4:10 pm

Introduction and Audience Polling: Current Attitudes, Knowledge and Practice Regarding Residency Education*Richard P. Schlenk***Expert Opinion: Educational Methodology and Policy for Residents**

4:10 – 4:25 pm

Review of the Published Evidence on Duty Hours: A Resident's Real World Perspective*Mark Douglas Bain, R3 Cleveland Clinic Foundation Program in Neurological Surgery*

4:25 – 4:40 pm

Generational Differences in Neurosurgical Trainees*Allen H. Friedman*

4:40 – 4:55 pm

Competency Based Medical Training*Deborah Powell, MD**Dean, University of Minnesota Medical School***Consensus Development: Policy Options**

4:55 – 5:00 pm

I. Creation of a Shortened Core Neurosurgical Residency*Edward C. Benzil*

5:00 – 5:05 pm

II. Preservation of Traditional Neurosurgical Training*Ralph G. Dacey, Jr.*

5:05 – 5:10 pm

III. Enveloping Fellowships within Residency*M. Sean Grady*

5:10 – 5:30 pm

Interactive Discussion and Consensus Development*Moderators: Richard P. Schlenk, Deborah L. Benzil*

4:00 – 5:30 pm

**IML: Clinical Science Session
Section on Cerebrovascular Surgery**

Hemispheric Stroke: Data, Practice and Experience

Moderators: Bernard R. Bendok, Erol Veznedaroglu
Technology Moderators: Sean D. Lavine, Gregory J. Zipfel
Learning Objective: Upon completion of this session, participants will be able to describe the epidemiology, natural history, diagnosis and medical management of malignant MCA stroke; list the current indications, timing and techniques for craniectomy in the treatment of malignant MCA stroke; and indicate the long term outcomes after craniectomy for malignant MCA stroke.

- Case Presentations
- Audience Polls
 - Current Opinion
 - Evidence
 - Practice
- Digitally Submitted Questions

Expert Discussion: Hemispheric Stroke: Hemicraniectomy versus Intensive Medical Management

Issam A. Awad, Christopher S. Ogilvy, Andrew Naidech



4:00 – 5:30 pm

Section on Neurotrauma and Critical Care Seminar

Injury Prevention: Neurosurgery and Public Health

Moderators: Michael G. Fehlings, Odette Harris
Learning Objective: At the conclusion of this session, participants will be able to determine the role of neurosurgery in public health and injury prevention in the civilian, athletic, and military arenas. Participants will be able to identify the progress made by head and spinal cord injury prevention programs.

4:00 – 4:15 pm

Integra Lecture: Putting the Neurosurgeon Out of Business – Spinal Injury Prevention and ThinkFirst

Charles H. Tator

4:15 – 4:30 pm

Epidemiology and the Neurosurgeon

Beverly C. Walters

4:30 – 4:45 pm

Protecting Soldiers from Harm: Military Gear

Glen Jeffrey Poffenbarger

4:45 – 5:00 pm

Injury Prevention Organizations: Progress Made

Daniel B. Michael

5:00 – 5:15 pm

Making Sports Safer

Joseph C. Maroon

5:15 – 5:30 pm

A Case in Study: Pedestrian Safety in New York City

Jamie S. Ullman

4:00 – 5:30 pm

**IML: Clinical Science Session
Section on Pain**

Failed Back Syndrome Neuromodulation: Data, Practice and Experience

Moderators: Joshua M. Rosenow, Julie G. Pilitsis
Back Table Moderator: Konstantin V. Slavin, Andre Machado
Learning Objective: Upon completion of this session the participants will be able to describe the results of spinal cord stimulation in the management of failed back surgery syndrome (FBSS); identify the relative benefits and risks of neuromodulation versus reoperation for patients with FBSS; and outline nuances of neuromodulation for the treatment of FBSS.

- Case Presentations
- Audience Polls
 - Current Opinion
 - Evidence
 - Practice
- Digitally Submitted Questions

Expert Discussion: Optimizing Management of Failed Back Syndrome: The Role of Neuromodulation

Richard K. Osenbach, Daniel K. Resnick



**5:00 – 6:00 pm
CNS Resident SANS Challenge Finals**
See page 24 for details

**5:30 – 6:30 pm
CNS Annual Business Meeting**

**6:00 – 7:00 pm
CNS Resident Recruitment Social**

CNS Learning Style Key

- ◆ IML: Community Learning
- IML: Clinical Science
- ★ Consensus Sessions
- ▲ Case Based Learning
- Toolkit Sessions

See page 21 for more details on how the CNS is advancing neurosurgery through the Science of Education!



WEDNESDAY

GENERAL SCIENTIFIC SESSION III

The Community of Neurosurgery: Collective Wisdom as a Source of Knowledge

7:00 – 11:45 AM

Presiding Officer: Joel D. MacDonald
Moderators: Mark E. Shaffrey, E. Hunter Dyer
Technology Moderators: James S. Harrop, Michael G. Kaiser, John S. Kuo

Learning Objective: Learners will participate in an interactive session with an advance opportunity to read key background material suggested by faculty and to direct faculty presentations towards important information and gaps in existing knowledge. Participants will identify the important role of wisdom and experience in daily clinical decision-making, list factors leading to synergy or competition in the use of experience and evidence in decision-making, and identify important topics for follow-up sessions and further investigation.

● Toolkit: Instruments for Understanding Experience

7:00 – 7:15 am

Toolkit: Defining Collective Experience, When Does Wisdom Take Precedence?
Edward C. Benzel

7:15 – 7:30 am

Toolkit: How to Incorporate Clinical Experience into Evidence Based Medicine
Michael W. Groff

7:30 – 8:48 am

◆ **IML: Community Learning Session III: The Impact of Collective Wisdom on Practice**

7:30 – 7:43 am

Applied Anatomy: The Neurosurgical Cathedral
Albert L. Rhoton, Jr.

7:43 – 7:56 am

Common Sense Approach to the Treatment of Spine Disorders
Mark N. Hadley

7:56 – 8:09 am

Practical Truths in Peripheral Nerve Reconstruction
David G. Kline

8:09 – 8:22 am

The Past is Relevant: Neurosurgical Heritage and Modern Epilepsy Surgery
Dennis D. Spencer

8:22 – 8:35 am

Merging Art and Science in the Neurosurgical Care of the Child
R. Michael Scott

8:35 – 8:48 am

The Central Role of Experience and Intuition in Vascular Neurosurgery
H. Hunt Batjer

IML Sessions sponsored by



8:48 – 8:53 am

Presentation of the Founders' Laurel
Richard G. Ellenbogen

8:53 – 9:03 am

Presidential Acknowledgement
Anthony L. Asher

9:00 am – 4:30 pm

Exhibits Open

9:03 – 9:05 am

Introduction of Special Lecturer Atul Gawande
Robert M. Friedlander



9:05 – 9:30 am

Atul Gawande
Special Lecturer
The Wisdom to Be Better

9:30 – 10:30 am

Coffee with Exhibitors

10:30 – 10:32 am

Introduction of Special Lecturer Richard E. Mayer
Nathan R. Selden



10:32 – 10:50 am

Richard E. Mayer, PhD
Special Lecturer
What Neurosurgeons Should Discover About the Science of Learning



10:50 – 11:05 am

William F. Chandler
Honored Guest
Neurosurgery Education – Residency Redesign and Recognition of Special Expertise

11:05 – 11:15 am

Response to the Economic Forces Buffeting the Community of Neurosurgery
James R. Bean

11:15 – 11:20 am

Introduction of the CNS Julian T. Hoff
Lecturer Ed Viesturs
Karin M. Muraszko



11:20 – 11:45 am

Ed Viesturs
The CNS Julian T. Hoff
Lecturer: Reaching the Summit

WEDNESDAY

LUNCHEON SEMINARS 12:30 – 2:00 PM

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon seminar fees are \$60 each (\$45 each for Residents/Fellows/Nurses/Physician Extenders).

W38**Spine Trauma and Spinal Cord Injury**

Moderator: Mark N. Hadley

Faculty: Barth A. Green, Michael G. Fehlings, R. John Hurlbert, Osmar Moraes

Learning Objective: At the conclusion of this seminar, participants will be able to discuss advances in the medical treatment of traumatic spinal cord injury and be able to discuss state of the art surgical management of cervical spine trauma and spinal cord injury. Participants will also list procedures for ruling out cervical spine injury in the comatose patient.

W39**Enhancing Spinal Fusion**

Moderator: Praveen V. Mummaneni

Faculty: Darryl J. Dirisio, Roger Hartl, Daniel K. Resnick

Learning Objective: At the conclusion of this seminar, participants will be able to discuss biochemical means for enhancing spinal fusion and discuss the biomechanics relevant to spinal fusions in the cervical, thoracic, and lumbar spine.

W40**Metastatic Spine Disease**

Moderator: Ziya L. Gokaslan

Faculty: Mark H. Bilsky, Richard G. Perrin, Laurence D. Rhines

Learning Objective: At the conclusion of this seminar, participants will describe current diagnostic and treatment strategies for metastatic tumors of the spine. Participants will be provided with a conceptual framework to make decisions about surgery, conventional radiation, radiosurgery, and vertebral augmentation.

W41**Intraoperative Salvage Techniques: Getting Out of Trouble in Cranial Surgery**

Moderator: Mark N. Shaffrey

Faculty: Edward R. Laws, Michael T. Lawton, Chandra N. Sen

Learning Objective: At the conclusion of this seminar, participants will be able to describe indications for intraoperative salvage techniques in cranial surgery and be able to discuss indications for specific techniques for rectifying difficulties in cranial surgery.

W42**Management of Peripheral Nerve and Brachial Plexus Injury**

Moderator: David G. Kline

Faculty: Allan J. Belzberg, Lynda J. Yang, Eric L. Zager

Learning Objective: At the conclusion of this seminar, participants will be able to discuss practical strategies for the management of various peripheral nerve injuries. Participants will be able to discuss various diagnostic paradigms, treatment indications and timing, as well as surgical techniques used in the management of different kinds of injury.

W43**Spinal Cord Tumors**

Moderator: Paul C. McCormick

Faculty: Jacques Brotchi, George I. Jallo, Russell R. Lonser, Mario Augusto Taricco

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the major types of spinal cord tumors, diagnostic and therapeutic alternatives, and complication management/avoidance related to surgical treatment of these lesions.

W44**Treatment of Cerebral Vasospasm**

Moderator: Elad I. Levy

Faculty: Felipe Albuquerque, Hildo R. Cirne Azevedo-Filho, Aman B. Patel, Howard A. Riina

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the natural history and current therapies to treat cerebral vasospasm including medical management and endovascular techniques, with an emphasis on evidence-based outcomes and possible complications.

W45**Unruptured Aneurysms**

Moderator: Henry H. Woo

Faculty: Issam A. Awad, Jay M. Findlay, Robert L. Macdonald, Jair Leopoldo Raso

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the epidemiology and natural history of unruptured intracranial aneurysms and will be familiar with appropriate treatment algorithms for these lesions.

WEDNESDAY

W46

Chiari I Controversies

Moderator: Karin M. Murazko

Faculty: Douglas L. Brockmeyer, Joseph S. Cheng, Richard G. Ellenbogen, Thomas H. Milhorat

Learning Objective: At the conclusion of this seminar, participants will be able to discuss various medical and surgical treatment options in the management of Chiari I malformations, their controversies, and the differences in management of pediatric vs. adult Chiari I malformations. Participants will be able to discuss new research relevant to the treatment of Chiari I malformations and syringomyelia.

W47

Difficult Pediatric Problems: Case Studies

Moderator: Joseph R. Madsen

Faculty: David H. Harter, Bermans Iskandar, Gerald Tuite

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the surgical management of challenging problems in children including difficult shunts, pediatric stroke, spasticity, deep seated tumors and challenging congenital anomalies. Participants will be able to discuss complication avoidance and outcomes in the treatment of spasticity.

W48

Epilepsy: Current Concepts

Moderator: Guy M. McKhann, II

Faculty: Jeffrey G. Ojemann, Jean Regis, Howard L. Weiner

Learning Objective: At the conclusion of this seminar, participants will be able to describe the clinical features of seizure disorders and be able to discuss various techniques in the preoperative, intra-operative, and postoperative management of patients with epilepsy.

W49

Meningiomas: Benign & Malignant

Moderator: Michael William McDermott

Faculty: Luiz Alencar Borba, Jeffrey Bruce, Ali F. Krisht, Michael J. Link

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the various modalities appropriate for the treatment of benign and malignant meningiomas, as well as current research on topics related to meningiomas and their treatment.

W50

Economics of Neurosurgical Healthcare

Moderator: Fernando G. Diaz

Faculty: E. Hunter Dyer, Katie O. Orrico, Edie S. Zusman

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the important issues facing neurosurgical health care including quality care, patient satisfaction, pay-for-performance, reimbursement issues, and the ever-changing governmental regulatory environment.

W51

Anterior vs. Posterior for Cervical Radiculopathy

Moderator: Nicholas Theodore

Faculty: Andrea F. Douglas, Larry T. Khoo, Joseph C. Maroon

Learning Objective: At the conclusion of this seminar, participants will list the advantages and disadvantages of the various surgical approaches for cervical disc herniation with radiculopathy. Participants will be able to discuss the anterior foraminotomy approach, as well as more traditional approaches.

W52

Graduating Residents' Course

Moderator: Michael P. Steinmetz

Faculty: James M. Markert, Alan M. Scarrow, Craig A. Van Der Veer

Learning Objective: At the conclusion of this seminar, participants will be able to discuss relevant issues related to securing a clinical position in either a private practice or academic setting and discuss important steps to initiate and develop a successful practice.

W53

Adult Spinal Deformity

Moderator: Christopher I. Shaffrey

Faculty: Peter D. Angevine, Curtis A. Dickman, Robert F. Heary

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the various types of spinal deformity, the appropriate diagnostic evaluation, and management strategies, with an emphasis on surgical planning and current operative techniques to increase the potential for a successful clinical outcome.

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INVITES ALL INTERNATIONAL ATTENDEES TO THE**

**CNS INTERNATIONAL RECEPTION,
WEDNESDAY, SEPTEMBER 24, 2008 AT
EPCOT, DISNEY'S DISCOVERY PARK
IN THE AMERICAN ADVENTURE ROTUNDA**

The CNS invites our international colleagues to join us for a whimsical glimpse at America's glorious past. Take in the incredible setting at the American Pavilion as you are serenaded by the nationally acclaimed Voices of Liberty. Join your international colleagues for sumptuous hors d'oeuvres and an exclusive dessert reception for the night-time spectacular IllumiNations: Reflections of the Earth. This one-of-a-kind light show combines video, water fountains, lasers, pyrotechnics and a magnificent illuminated LED globe, all set to an original musical score. We invite you to celebrate at the 2008 CNS Annual Meeting International Reception in Disney's Discovery Park, EPCOT, exclusively for the CNS International attendees.

The CNS is pleased to bring you **Wireless Internet** throughout the **Orange County Convention Center**.

Bring your personal handheld device or laptop computer and contribute to select sessions throughout the program.



WEDNESDAY

2:00 – 5:30 pm

▲ Operative Techniques with the Masters: 3-D Live Cadaveric Demonstration of Surgical Techniques

Course Director: *Saleem I. Abdulrauf*

Learning Objective: This course will provide:

- Review of the microsurgical principles of the trajectories for lesions involving the basal cisterns, mesial temporal lobe, and the brainstem.
- Review of the microsurgical principles of surgery involving the Sylvian fissure and clipping of a complex middle cerebral artery aneurysm.
- Review of the microsurgical principles and surgical trajectories for lesions involving the suprasellar region.
- Review of microsurgical principles of the subtemporal approach to the upper basilar region and the technical nuances of clipping a complex wide neck basilar apex aneurysm.
- Review of the microsurgical principles of transtemporal approaches to the mesial temporal lobe and the technical steps of performing an amygdalohippocampectomy.
- Review of the landmarks for accessing lesions involving the brainstem and the microsurgical principles for the resection of a cavernous malformation involving the pons.
- Review of the anatomic principles of lateral skull base surgery and the microsurgical resection of a petroclival meningioma.
- Review of complication avoidance principles during basal cistern surgery, vascular surgery, mesial temporal lobe surgery, skull base surgery, and surgery of brainstem lesions.

By the end of the session, learners will identify the critical anatomical landmarks, list each technical step, and identify the potential pitfalls of each of these approaches.

Techniques:

Surgical Anatomy of the Transsylvian Approach/Microsurgical Clipping of a Complex Middle Cerebral Artery Aneurysm

Daniel L. Barrow

Surgical Anatomy of the Suprasellar and Anterior Third Ventricular Region/Microsurgical Resection of a Suprasellar Tumor

Albert L. Rhoton, Jr.

Surgical Anatomy of the Subtemporal Approach and the Upper Basilar Region/Microsurgical Clipping of a Complex/Wide Neck Basilar Apex Aneurysm

Juha A. Hernesniemi

Surgical Anatomy of the Mesial Temporal Lobe/Microsurgical Amygdalohippocampectomy

Dennis Spencer

Surgical Anatomy of the Petroclival Region/Microsurgical Resection of a Petroclival Meningioma

Laligam N. Sekhar

Surgical Anatomy of the 4th Ventricular and Pontine Regions/Microsurgical Resection of a Pontine Cavernoma

Evandro de Oliveira

Operative Techniques with the Masters: Live 3-D Cadaveric Demonstration of Surgical Techniques at the 2008 CNS Annual Meeting!

Wednesday, September 24
2:00 – 5:30 PM

Don't miss this opportunity to watch neurosurgical masters demonstrate six microsurgical principals live from our GSS stage! This innovative session features cadaveric demonstrations using state-of-the-art, 3-Dimensional imaging technology, followed by cutting-edge videos. Open to all registered medical attendees.

See page 21 for information on these and other courses based on the Science of Education!



Wednesday, September 24

WEDNESDAY

2:00 – 3:30 pm

★ **Consensus Session 4****Neurosurgeon Cranial Recertification after Disability or a Period of Practice Restricted to Spine**Moderators: *Todd Vitaz, Richard W. Byrne*Technology Moderators: *John E. O'Toole, Harel Deutsch*

Learning Objectives: At the conclusion of this symposium, participants should be able to identify the factors that contribute to neurosurgeons leaving clinical practice for an extended period of time, identify the impact that an extended absence from practice has on patient care skills and clinical outcomes, describe the effect that a limited scope of practice may have on future patient care and the types of recertification necessary prior to reinstating clinical privileges, and list the different strategies available to recertify physicians following an extended absence from clinical care. As part of this multidimensional interactive session, learners will evaluate existing policy and evidence related this topic and use formal consensus building methodology to define and choose policy options for organized neurosurgery.

2:00 – 2:10 pm

Introduction & Audience Polling: Current Attitudes, Knowledge and Practice Regarding Recertification of Neurosurgical Practice after a Gap*Todd Vitaz***Expert Opinion: Recertification After a Practice Gap**

2:10 – 2:45 pm

Physician Reentry into the Workforce: The Pediatric Experience*Holly J. Mulvey, MA*

Director, Division of Workforce & Medical Education Policy
American Academy of Pediatrics

2:45 – 2:50 pm

Special Case: Recertification after a Limited Scope of Practice*Todd Vitaz***Consensus Development: Policy Options**

2:50 – 2:55 pm

Responsibility Lies in the Hands of the Surgeon and Hospital*Mick J. Perez-Cruet*

2:55 – 3:00 pm

Recertification through CME and Limited Workshops Sponsored by Organized Neurosurgery*H. Hunt Batjer*

3:00 – 3:05 pm

Mini-Fellowships for Recertification*William E. Bingaman*

3:05 – 3:30 pm

Interactive Discussion and Consensus DevelopmentModerators: *Todd Vitaz, Richard W. Byrne*

2:00 – 3:30 pm

Section on Cerebrovascular Surgery Seminar**Advances in Ischemic Stroke Treatment from Community to Intervention**Moderators: *Joshua B. Bederson, Michael T. Lawton*

Learning Objective: At the conclusion of this session, participants will be able to describe recent advances in the surgical and endovascular treatment and prevention of stroke. Participants will identify proper patient selection factors, nuances of treatment and techniques for complication avoidance in stroke management.

2:00 – 2:05 pm

Introduction of the Charles Drake Lecturer*Jacques J. Morcos*

2:05 – 2:25 pm

The Charles Drake Lecture*Roberto C. Heros*

2:25 – 2:35 pm

Carotid Endarterectomy*Christopher M. Loftus*

2:35 – 2:45 pm

Carotid Stenting*Elad I. Levy*

2:45 – 2:55 pm

Thrombolysis, Thrombectomy and Stenting for Acute Stroke*Elad I. Levy*

2:55 – 3:05 pm

Telemedicine for Acute Ischemic Stroke*Richard D. Fessler, II*

3:05 – 3:15 pm

Extracranial to Intracranial Bypass*Fady T. Charbel*

3:15 – 3:25 pm

Intracranial Stenting for Atherosclerosis*Andrew J. Ringer*

3:25 – 3:30 pm

Audience Discussion

3:30 – 4:00 pm

Refreshments with Exhibitors

WEDNESDAY

2:00 – 3:30 pm

Section on Disorders of the Spine and Peripheral Nerves Seminar

Cervical Arthroplasty

Moderators: *Michael Y. Wang, James S. Harrop*

Learning Objective: At the conclusion of this session, participants will be able to summarize the role that the history of arthroplasty has had on its current development. Participants will list the constraints that specific materials create for contemporary devices. They will describe the advantages of arthroplasty compared to anterior discectomy and fusion and the difference between superiority and equivalence. Participants will also be able to explain the role of devices now available and those that are still in clinical trials.

2:00 – 2:15 pm

The History of Arthroplasty

Charles Kuntz, IV

2:15 – 2:30 pm

A Review of Definitions and Materials

Praveen V. Mummaneni

2:30 – 2:45 pm

The Pros and Cons of Motion Preservation

Michael G. Fehlings

2:45 – 3:00 pm

Anterior Cervical Discectomy versus Arthroplasty: Where Should the Bar Be Set?

Iain H. Kalfas

3:00 – 3:15 pm

What's Available Now and What's Coming in Clinical Trials

Domađoj Coric

3:15 – 3:30 pm

Interactive Panel/Audience Discussion

3:30 – 4:00 pm

Refreshments with Exhibitors

2:00 – 3:30 pm

IML: Clinical Science Session Section on Neurotrauma and Critical Care

Hyperosmolar Therapy in Traumatic Brain Injury: Data, Practice and Experience

Moderators: *Roland A. Torres, Odette Harris*

Technology Moderators: *Eve C. Tsai, Patricia B. Raksin*

Learning Objective: Upon completion of this session the participants will be able to summarize the current usage of hyperosmolar therapy in the management of severe traumatic brain injury; describe the potential complications of hyperosmolar therapy; assess the current available evidence for the use of hypertonic saline in severe Traumatic Brain Injury; summarize current deficiencies in the available evidence for the use of hypertonic saline in the management of severe traumatic brain injury; and identify appropriate patients to treat with hypertonic saline.

Case Presentations

Audience Polls

Current Opinion

Evidence

Practice

Digitally Submitted Questions

Expert Discussion: Hyperosmolar Therapy in the Management of Traumatic Brain Injury

Jamshid Ghajar, Geoffrey T. Manley, Roger Hartl

IML Sessions sponsored by



2:00 – 3:30 pm

IML: Clinical Science Session Section on Tumors

Low Grade Gliomas: Data, Practice and Experience

Moderators: *Frederick G. Barker, Alfredo Quiñones-Hinojosa*

Technology Moderators: *James L. Frazier, Michael K. Lim*

Learning Objective: Upon completion of this session the participants will be able to identify the role of surgery, chemotherapy and radiotherapy in the management of low-grade gliomas.

Case Presentations

Audience Polls

Current Opinion

Evidence

Practice

Digitally Submitted Questions

Expert Discussion: Evaluating Alternatives in the Management of Low Grade Gliomas

Michael William McDermott, Manfred Westphal, Mark A. Bernstein

IML Sessions sponsored by



Wednesday, September 24

WEDNESDAY

4:00 – 5:30 pm

★ **Consensus Session 5****Negotiating with Insurance Companies**Moderators: *Alan M. Scarrow, Mark E. Linskey*Technology Moderators: *Trent L. Tredway, Holly Gilmer-Hill*

Course Learning Objectives: Upon completion of this symposium, participants will identify information necessary to successfully negotiate with insurance companies, describe proven negotiation techniques, list specific legal issues associated with group negotiation, identify a plan to negotiate with insurers in their market, and describe their market to determine negotiation opportunities. As part of this multidimensional interactive session, learners will evaluate existing policy and evidence related this topic and use formal consensus building methodology to define and choose policy options for organized neurosurgery.

4:00 – 4:10 pm

Introduction and Audience Polling: Current Attitudes, Knowledge and Practice Regarding Insurance Contract Negotiation*Alan M. Scarrow***Expert Opinion: Effective Insurance Contract Negotiations for the Neurosurgeon**

4:10 – 4:55 pm

Effective Insurance Contract Negotiations for the Neurosurgeon*Howard Fagin, PhD***Consensus Development: Strategies for Successful Negotiation**

4:55 – 5:00 pm

Big Markets (>1,000,000)*Mark R. McLaughlin*

5:00 – 5:05 pm

Medium Markets (500,000-1,000,000)*Frederick A. Boop*

5:05 – 5:10 pm

Small Markets (<500,000)*Alan M. Scarrow*

5:10 – 5:30 pm

Interactive Panel Discussion and Audience PollingModerators: *Alan M. Scarrow, Mark E. Linskey*

4:00 – 5:30 pm

**IML: Clinical Science Session
Council of State Neurosurgical Societies****Compensation Models in Neurosurgical Practice**Moderators: *Michael P. Steinmetz, Gary R. Simonds*Technology Moderators: *Satish Krishnamurthy, Catherine A. Mazzola*

Learning Objective: Upon completion of this session, participants will be able to describe different compensation models available in neurosurgery; explain options for partnering with hospitals and gain sharing; and identify trends and recommendations for retention of group partners.
Digitally Submitted Questions

Expert Discussion: Competing Compensation Models: The Role of Incentive*Ken Hekman, M. Sean Grady, Angie L. Farris, MBA*

IML Sessions sponsored by



4:00 – 5:30 pm

**IML: Clinical Science Session
Section on Pediatric Neurological Surgery****Arrested Hydrocephalus: To Treat or Not To Treat?**Moderators: *Sarah J. Gaskill, Thomas Pittman*Technology Moderators: *Jogi V. Pattisapu, Philipp R. Aldana*

Learning Objective: Upon completion of this session the participants will be able to assess the role of shunt revision in asymptomatic failure; develop a treatment protocol for the management of fractured and outgrown shunts; and identify the essential components of a multi-center trial for investigations in the management and treatment of hydrocephalus.

Case Presentations

Audience Polls

Current Opinion

Evidence

Practice

Digitally Submitted Questions

Expert Discussion: Arrested Hydrocephalus: To Treat or Not To Treat?*Arthur E. Marlin, Corey Raffel, Hugh Garton*

IML Sessions sponsored by



WEDNESDAY

4:00 – 5:30 pm

Section on Stereotactic and Functional Neurosurgery Seminar

Management of Dystonia: Current Understanding and Treatment

Moderators: Konstantin V. Slavin, Michael Schulder

Learning Objective: At the conclusion of this session, participants will be able to list the main indications for deep brain stimulation surgery for dystonia. Participants will identify the advantages and disadvantages of globus pallidus versus subthalamic stimulation for dystonia. Participants will formulate specific deep brain stimulation treatment strategies for appropriate dystonia patients.

4:00 – 4:15 pm

Medical Approaches to Dystonia

Michael Okun

4:15 – 4:30 pm

Overview of Dystonia Surgery

Kelly D. Foote

4:30 – 4:45 pm

Globus Pallidus Deep Brain Stimulation for Dystonia

Ron L. Alterman

4:45 – 5:00 pm

Subthalamic Deep Brain Stimulation for Dystonia

Gordon Hirsh Baltuch

5:00 – 5:15 pm

Deep Brain Stimulation for Focal Dystonia

Philip A. Starr

5:15 – 5:30 pm

Interactive Panel/Audience Discussion

Difficult Case? Gain Expert Insight.



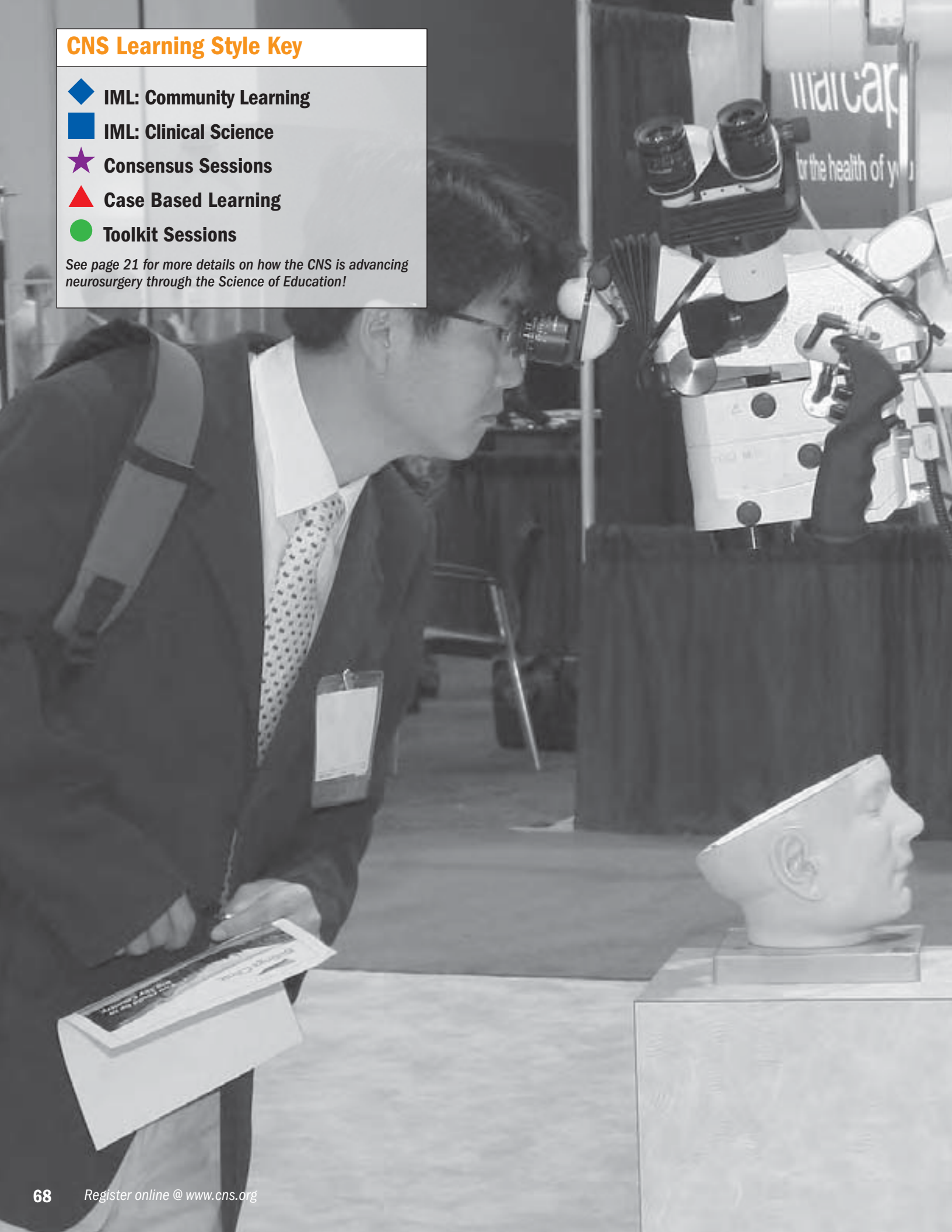
▲ **Cases and Coffee with the Masters** sessions on Thursday, let you share your interesting cases with your colleagues. Attendees submit their cases prior to the Annual Meeting. Experts from each of the neurosurgical subspecialties will review select cases during this interactive session to discuss management strategies, identify risk factors and review techniques for complication avoidance. All attendees are encouraged to submit their interesting cases.

See page 21 for information on these and other courses based on the Science of Education!

CNS Learning Style Key

- ◆ IML: Community Learning
- IML: Clinical Science
- ★ Consensus Sessions
- ▲ Case Based Learning
- Toolkit Sessions

See page 21 for more details on how the CNS is advancing neurosurgery through the Science of Education!



THURSDAY

GENERAL SCIENTIFIC SESSION IV

The Community of Neurosurgery: Accumulated Experience as a Source of Knowledge

8:00 – 11:30 AM

Presiding Officer: Christopher E. Wolfla

Moderators: Nicholas M. Boulis, Russell R. Lonser

Learning Objective: Participants will identify the importance of case management examples to improved care outcomes, will list important intra-operative management techniques and strategies for cranial and spinal surgery as demonstrated using surgical video by leading experts, and will participate in peer- and self-assessment of audience submitted cases in a unique smaller group interactive case format.

8:00 – 9:00 am

▲ **Digital Masters Video Symposium**

Moderators: Hugh Garton, Frank Bishop, Ganesh Rao

Faculty: Frederick F. Lang (Tumor), Evandro de Oliveira (Cerebrovascular/Skull Base), Roy A. Bakay (Functional), M. Ross Bullock (Neurotrauma), Richard G. Fessler (Spine), Jeffrey A. Brown (Pain)

9:00 – 10:00 am

▲ **Cases and Coffee with the Masters (Section-based Breakout Interactive Case Sessions)**

Tumor Discussants: Frederick F. Lang, Mark E. Shaffrey, Randy L. Jensen

Vascular Discussants: Elad I. Levy, Michael T. Lawton, Evandro De Oliveira

Spine Discussants: Laurence D. Rhines, Michael Y. Wang, Richard G. Fessler

Stereotactic/Functional Discussants: Roy A. Bakay, Robert E. Gross, Aviva Abosch

Pediatric Neurosurgery Discussants: Richard C. Anderson, David F. Jimenez, Richard G. Ellenbogen

Trauma Discussants: Shelly D. Timmons, M. Ross Bullock, Jamie S. Ullman

Pain Discussants: Joshua M. Rosenow, Jeffrey A. Brown, Jaimie M. Henderson

Peripheral Nerve Discussants: David G. Kline, Eric L. Zager, Lynda J. Yang

10:25 – 11:25 am

▲ **Digital Masters Video Symposium, (continued)**

Moderators: Hugh Garton, Frank Bishop, Ganesh Rao

Faculty: Laurence D. Rhines (Spinal Oncology), Elad I. Levy (Endovascular), Michael T. Lawton (Cerebrovascular), Eric L. Zager (Peripheral Nerve), David F. Jimenez (Pediatric Neurosurgery), Michael Y. Wang (Spine)

11:25 – 11:30 am

CNS President's Summary
Anthony L. Asher

11:30 am
Adjourn

Submit your cases to
<http://CNS.sessionupload.com>

10:00 – 10:02

Introduction of the John Thompson History of Medicine Lecturer Wendy Moore

Nicholas M. Boulis



10:02 – 10:25 am

Wendy Moore
The John Thompson History of Medicine Lecture
John Hunter and the Birth of Modern Surgery

EXHIBITORS

- 3M Medical
AANS/CNS Sections
Abbott Spine
Accuray, Incorporated
ACIGI Relaxation/Fujiiryoki
Acra-Cut, Inc.
Ad-Tech Medical Instrument Corporation
Advanced Neuromodulation Systems
Aesculap Implant Systems
Aesculap, Inc.
Allen Medical Systems
Aloka Ultrasound
Alphatec Spine, Inc.
Amedica Corporation
American Association of Neurological Surgeons
American RadioSurgery, Inc.
American Surgical Sponges
Anew International
Angioma Alliance
Anspach Companies
Anulex Technologies, Inc.
AOSpine North America
Apatech, Inc.
Apex Medical, Inc.
ArthroCare Spine
Aspen Medical Products, Inc.
Automated Healthcare Solutions
- Bal Seal Engineering, Inc.
Banner Health
Berkeley Advanced Biomaterials, Inc.
BFW, Inc.
Biomet Microfixation
Biomet Spine
Blackstone Medical, an Orthofix Company
Blue Chip Surgical Center Partners
Borgess Health
BOSS Instruments, Ltd.
Boston Scientific-Neuromodulation
BrainLAB
Bremer Group Co., The

Carl Zeiss Meditec, Inc.
CCV
Ceremed, Inc.
Cervitech, Inc.
Clarian Neurosciences
- CLOWARD Instrument Corporation
CMF Medicon Surgical, Inc.
Codman, a Johnson & Johnson Company
CompHealth
Concentric Medical, Inc.
Congress of Neurological Surgeons
Cosman Medical, Inc.
Covidien
Custom Spine, Inc.
Cyberkinetics Neurotechnology Systems, Inc.

DePuy Spine, Inc. a Johnson & Johnson Company
Designs For Vision, Inc.
Doctors Research Group, Inc.
Dynamic Medical Facility Development (Formerly Caperian, Inc.)

Eisai (Formerly MGI Pharma, Inc.)
Elekta, Inc.
Ellman Innovations
Endure Medical, Inc.
ERBE USA, Inc.
Ev3 Inc.

Fehling Surgical Instruments, Inc.
FzioMed, Inc.

GE Healthcare
Globus Medical
Gore & Associates

Happy Feet, Inc.
HCA Physician Recruitment
HRA Research
HydroCision

Image Stream Medical
IMRIS, Inc.
Integra
Interbody Innovations, LP
Interventional Spine, Inc.
Invivo

Journal of Neurosurgery
K2M, Inc.
Karl Storz Endoscopy-America, Inc.
- Kinamed, Inc.
Kirwan Surgical Products, Inc.
King Pharmaceuticals
KLS – MARTIN L.P.
Koros USA, Inc.

Lanx, LLC
Leica Microsystems, Inc.
Life Instrument Corp.
LifeLink Tissue Bank
LifeNet Health

Market Access Partners
Medical Doctor Associates
Medtronic
MicroVention – Terumo, Inc.
Micrus Endovascular Corporation
Minrad International, Inc.
minSURG Corporation
Mizuho America, Inc.
Moeller Medical GmbH & Co. KG

Nadia International, Inc.
National Institute of Neurological Disorders & Stroke
NDA, Inc.
Neuro Diagnostic Devices
Neurognostics, Inc.
NeuroLogica Corporation
NeuroOptics, Inc.
New World Rarities, Ltd.
Nurospine Co., LTD.
NuVasive

Oceania Properties, Ltd.
Olsen Medical
Orthovita, Inc.
OsteoMed L.P.

Pacific Research Labs/Sawbones
Performance Grafts, LLC
Pioneer Surgical Technology
PMT Corporation
Porex Surgical, Inc.
Priority Consult, LLC
Pro Med Instruments, Inc.
Prosurgics, Ltd.

Richard Wolf Medical Instruments Corp.
Riverside Health System
RosmanSearch, Inc.
RSB Spine
- Saunders/Mosby – Elsevier
Scanlan International, Inc.
Schering-Plough
Scient'X
SeaSpine, Inc.
Siemens Medical Solutions USA, Inc.
Signus Medical, LLC
Sophysa USA Inc.
Spinal Elements
SpinalMotion, Inc.
Spine Surgical Innovation, Inc.
Spine Wave
SpineFrontier, Inc.
SpineMark Corporation
SpineMED-CERT Health Sciences, LLC
Spineology, Inc.
St. Bernards Healthcare
Stryker
Sunoptic Technologies
SurgiTel/General Scientific Corporation
Symmetry Medical, Inc.
Synergetics, Inc.
Synthes, Inc.

TeDan Surgical Innovations, LLC
Theken
Thieme Publishers
Thompson Surgical Instruments, Inc.
Trans1, Inc.
Transonic Systems, Inc.
TrueVision Systems, Inc.

Ulrich Medical

Vertos Medical, Inc
Vycor Medical, Inc.

Weatherby Locums
Welch Allyn
Wiggins Medical
Wolters Kluwer Health-Lippincott
Williams and Wilkins

X-Spine Systems, Inc.

Zimmer Spine

As of 4/15/08

Advance Your Education... Further Your Career.... Visit the 2008 CNS Exhibition!

The 2008 CNS Exhibition offers attendees an opportunity to learn about the latest technological innovations from around the world and meet with recruiters from across the United States.

Stop by the exhibition to catch up with your current corporate contacts and make new connections. This year's exhibition also features these additional opportunities for education and networking:

CNS Video Theater

View neurosurgical techniques demonstrated by master neurosurgeons. This video series plays continuously in the CNS Member Services Booth.



Maintain and improve your neurosurgical decision making proficiency and prepare for written/oral board examinations or the MOC cognitive examination. View a complimentary demonstration of our latest release of SANS Lifelong Learning, the online self-assessment test in the CNS Member Service Booth. You can also view SANS Competencies and the new SANS Pediatrics.

CNS University of Neurosurgery

Test or develop your knowledge with courses on epilepsy, spine techniques, revascularization and non-clinical core competencies. You can also view lectures from our last CNS Annual Meeting and access hundreds of neurosurgical images and videos. A complimentary demonstration is available daily in the CNS Member Services booth.

The CNS Job Placement Service (JPS)

A great opportunity may be looking for you. Connect with job opportunities across the United States or set up your job agent to be automatically notified when new postings meet your criteria. A complimentary demonstration is available daily in the CNS Member Services booth.

Publishers Row

Browse the latest neurosurgical publications, while comparing notes with your colleagues.



CNS Digital Poster Center

- * View the latest research in neurosurgery via a state-of-the-art digital format.
- * Find posters faster and easier than ever using digital search feature.
- * Communicate with poster authors during and after the Annual Meeting via online threaded discussions.
- * View color photos and short videos to enhance your understanding of the research methods and findings.
- * Make instant printouts of the scientific information most important to you.

The Exhibit Hall is also a great place to check your e-mail or catch up with colleagues during daily beverage breaks. Stop in daily during these hours:

Monday	9:00 AM – 4:30 PM
Tuesday	9:00 AM – 4:30 PM
Wednesday	9:00 AM – 4:00 PM

Note: Admittance to the Exhibit Hall is by the CNS name badge only. Children under 18 years old are not permitted inside the Exhibit Hall.



The Right Opportunity May be Looking for You!

Finding the perfect fit is easy with the Congress of Neurological Surgeons **Job Placement Service**. This complimentary online service offers Neurosurgeons and allied healthcare professionals the tools necessary to find and secure the right position. Visit us today at www.cns.org and see how the CNS Job Placement Service can help you.

- Quickly and easily locate opportunities that meet your subspecialty interests, ideal practice setting and geographical targets, using the Advanced Search function.
- Save time with our Online Job Agent which automatically delivers new postings to your inbox if they meet your specified criteria.
- Share your resume with neurosurgical recruiters and practice managers from around the country and across the globe with confidential online resume posting.

Whether you're looking to relocate or ready to take the next step in your career, we'll make it easier for you to find that perfect fit. Visit us online today at <http://careers.cns.org>.

Post your resume at <http://careers.cns.org>.



Education and Innovation

CONGRESS OF NEUROLOGICAL SURGEONS

10 NORTH MARTINGALE ROAD / SUITE 190 / SCHAUMBURG, IL 60173 / 847.240.2500

Theme Park ticket options, exclusively for the CNS!



- ✓ Multi-day/Park-hopper Tickets
- ✓ After 2:00 pm Entry Tickets*



- ✓ Multi-day/Park-hopper Tickets
- ✓ After 2:00 pm Entry Tickets*



- ✓ Multi-day/Park-hopper Tickets
- ✓ After 2:00 pm Entry Tickets*

The CNS has partnered with Convention Planning Services (CPS) to bring you discounted tickets to Orlando's attractions. An order form will be available through the CNS website.

Orders must be placed by **September 10, 2008** through:
Convention Planning Services, 2453 Orlando Central Parkway, Orlando, FL 32809.

For Information please call Ticket Registration Coordinator:

Phone: 407-393-6159 Fax: 407-851-8313

Final Order Deadline – Ticket orders will be sent Priority Mail at an additional cost of \$12.00 up to two weeks prior to the CNS Annual Meeting start date. Tickets can also be picked up at the CNS Tour desk in the Registration area at the Orange County Convention Center.

* These tickets are not available at park ticket counters.

WELCOME TO ORLANDO

Orlando and the surrounding Central Florida region is a perennial favorite destination for many visitors from around the globe. One of the area's biggest attractions is its year-round mild weather. At the heart of the "Sunshine State," the area's average September temperature is a comfortable 89 degrees.

Few destinations in the world come close to rivaling Orlando's incredible year-round outdoor activities and pastimes. With 176 golf courses, 800 tennis courts and 21 fitness trails, visitors take great delight in the area's multitude of recreational options. Up-close-and-personal encounters with a bounty of original Florida inhabitants like alligators, manatees, osprey, deer and eagles give Central Florida a diverse menu of outdoor choices that keep visitors coming back for more.

Orlando's spectacular day- and resort-style spas are truly in a class of their own when it comes to soothing indulgences. Whether it's for a couple of hours or a full day's treatment, guests of all ages can relax at any of the area's pampering paradises.

Visitors looking to taste Orlando's culinary offerings can choose from more than 5,300 restaurants, 20 of which can be found along Sand Lake Road's Restaurant Row. The downtown area also offers unique dining experiences closely nestled among trendy nightlife, theaters and galleries.

With more than 52 million square feet of retail space, including upscale malls, unique specialty shops and a variety of outlet stores, anyone can satisfy the mind, body and spirit during an escape to Orlando. A multitude of star-studded performing arts, world-renowned art exhibits, and moving cultural celebrations have put Orlando in the international limelight. Performing arts standouts include the Orlando Ballet, Orlando Opera, Orlando Philharmonic, Mad Cow Theatre and the Orlando Shakespeare Theater.

It's time to be a kid again and experience the many opportunities available for theme park rides and roller coasters. With 99 attractions, it would take 67 eight-hour days to visit them all!

Whether it's an exciting round of golf, a soothing massage, a world-class meal, a mega shopping junket, a moving theatre performance or a white-knuckled thrill ride, Orlando has it all. Please join us for the 2008 CNS Annual Meeting and experience Orlando for yourself!



Education and Innovation

MISSION STATEMENT

The Congress of Neurological Surgeons exists to enhance health and improve lives worldwide through the advancement of education and scientific exchange.

Dear Auxiliary Member:

Welcome to Orlando, where you'll be surrounded by world-class entertainment in an amazing subtropical climate. Orlando is known around the world for the magic and excitement of its many theme parks, but it truly has so much more to offer. In addition to fabulous attractions and resorts, Orlando offers fine dining, indulgent shopping, sophisticated arts and cultural events, world-class golfing and countless museums and historical sites. Come ready to have a great time while making memories that will last a lifetime.

As you plan your time in Orlando, there are some CNS events you may want to keep in mind and plan into your schedule. The tours are exciting and are designed specifically for the CNS. They fill up fast, so plan ahead and sign up for your favorites when you register.

We hope you will join us for the CNS Opening Reception at the Peabody Hotel on Sunday, September 21. You'll have the opportunity to reconnect with old acquaintances and meet new friends while enjoying sumptuous hors d'oeuvres and refreshing beverages in a spectacular Floridian setting.

Be sure to attend the 2008 CNS Auxiliary Luncheon and Program on Monday, September 22 at the California Grill – one of Disney's most famous restaurants. Our Auxiliary Program will be delivered by Neal Gabler, a renowned author whose latest book *Walt Disney: The Triumph of the American Imagination* explores the life of a man very important to Orlando! Don't miss this fascinating presentation on one of the most influential and innovative figures in twentieth century entertainment.

We also encourage you to enjoy the many other fascinating Special Lectures presented throughout the week at the Orange County Convention Center. On Monday, Dr. Maya Angelou will captivate you as she presents the Walter E. Dandy Oration. On Tuesday, the CNS Michael L.J. Apuzzo Lecture on Creativity and Innovation will be given by Professor Muhammad Yunus, 2006 Nobel Peace Prize winner. MacArthur Genius Award winner Dr. Atul Gawande delivers a Special Lecture on Wednesday, and the Second Annual Julian T. Hoff Lecture will also be presented on Wednesday by American mountaineer, Ed Viesturs.

We hope you will visit us in the CNS Spouse Hospitality Center at the Peabody Hotel, Monday through Wednesday from 7:00 to 10:30 am. Stop by to relax and catch up with friends or simply enjoy a continental breakfast before you head out to explore the excitement that the CNS has prepared for you in Orlando. A representative from the Orlando area will be available to answer any questions you might have about the city or the CNS' abundant offerings.

We hope that you will bring your family and join us at the 2008 CNS Annual Meeting, September 20 – 25. We look forward to hosting you for what promises to be a magical Orlando experience.



Jill Asher
CNS Auxiliary President



Kelly Rodts
CNS Auxiliary Chairperson

AUXILIARY PROGRAM

AT-A-GLANCE

SATURDAY, SEPTEMBER 20

AT01	10:30 am – 4:30 pm	Lunch at Chalet Suzanne and Bok Sanctuary	\$101
OE01	6:00 – 11:00 pm	Blue Man Group	\$90 adult/\$79 child (age 3-9)

SUNDAY, SEPTEMBER 21

AT02	9:00 am – 2:30 pm	The Big Three – Dolphin, Manatee and Alligator Tour	\$117 adult/\$104 child (8-12)
AT03	8:30 am – 4:30 pm	Kennedy Space Center	\$79 adult/\$68 child (3-11)
AT04	12:00 – 1:00 pm	Welcome to Orlando	Complimentary
AT05	1:00 – 5:00 pm	Splendor and Culture of Orlando Leu Gardens and Orlando Museum of Art	\$55
Open	6:30 – 8:30 pm	CNS Opening Reception	Hosted by the CNS

MONDAY, SEPTEMBER 22

Open	7:00 – 10:30 am	CNS Spouse Hospitality Center	Hosted by the CNS
AT06	9:00 am – 12:00 pm	Tour Orlando	\$47
AT07	12:30 – 3:00 pm	CNS Auxiliary Luncheon and Program	\$50; Hosted in part by the CNS
OE02	6:00 – 11:00 pm	Arabian Nights Dinner Theater	\$70 adult/\$56 child (3-11)

TUESDAY, SEPTEMBER 23

Open	7:00 – 10:30 am	CNS Spouse Hospitality Center	Hosted by the CNS
AT08	9:00 am – 1:00 pm	Epcot Behind the Scenes: Gardens of the World	\$98
AT09	9:15 am – 3:15 pm	Scenic Winter Park/Charles Hosmer Morse Museum of American Art/Park Avenue Shopping Tour	\$57
OE03	6:00 – 11:00 pm	Sunset Gator Hunt and Dinner	\$115 adult/\$101 child (3-9)

WEDNESDAY, SEPTEMBER 24

Open	7:00 – 10:30 am	CNS Spouse Hospitality Center	Hosted by the CNS
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AUXILIARY PROGRAMS

September 20, 2008

SATURDAY

AT01 Lunch at Chalet Suzanne and Bok Sanctuary
10:30 am - 4:30 pm
\$101



This idyllic afternoon begins with an exquisite gourmet lunch at Chalet Suzanne, an enchanting inn nestled on a 70-acre lakeside estate in the heart of Central Florida. Chalet Suzanne is renowned for its award-winning cuisine, featuring a breathtaking assortment of delights. Then, travel to Bok Sanctuary, situated on the peninsula's highest point - 298 feet above sea level. Delight in the beauty and serenity of the Sanctuary's 128-acre gardens where thousands of azaleas, camellias, magnolias and other seasonal flowering plants provide exquisite vistas of color against a lush green background. The tower, built of pink and gray marble and coquina stone, houses one of the world's greatest carillons (bells) featuring recitals each day.

OE01 Blue Man Group
6:00 - 11:00 pm
\$90 adult; \$79 child (3-9)



Experience the new face of entertainment at Universal Orlando Resort with Blue Man Group. Their unique form of entertainment combines music, comedy and multimedia theatrics that creates a blissful party atmosphere that people of all ages agree is a totally outrageous experience. World-renowned for their live shows, Blue Man Group now brings

their eclectic mix of live music, fantastic percussion instruments, unexpected humor and so much more to Orlando - and the only place in town you'll find a show as astounding as this is at Universal Orlando Resort.

September 21, 2008

SUNDAY

AT02 The Big Three - Dolphin, Manatee and Alligator Tour
9:00 am - 2:30 pm
\$117 adult; \$104 child (8-12)



The tour begins en-route, as the "certified" Eco-Guide narrates the significance of the endangered backwater estuary, a wilderness waterway used by the indigenous Ais Indians. The river is considered a sanctuary for the endangered West Indian Manatees and Bottled Nose Dolphins. We will learn more about its significance as we explore and cruise the smooth, inland waters around the lagoon's uninhabited islands in safety and comfort aboard a shallow-draft 55-passenger pontoon boat. Your Captain and guide narrates this two-hour cruise while you enjoy the sights and sounds of these giant creatures as well as the river's water birds and wildlife. Then it's off to find alligators in The Central Florida Everglades. We now travel 15 minutes west to a 100-year-old outpost - a turn of the century fish camp. Here we will board 15-passenger airboats to explore an American Heritage River, the St. John, and its abundant wildlife. Each airboat has a flat bottom and large driving propeller at the stern enabling the airboats to skim the surface of the shallow waters and traverse this fascinating "Sea of Grass" - a name the Indians gave to the swamp. Your 30-minute airboat expedition has its own guide and Coast Guard licensed boat captain who will take you deep into the fresh water swamp habitat of the Florida Alligator, and a wonderful assortment of other creatures that call the 'glades' home. The ambiance of the fish camp and the peaceful river cruise will be memorable experiences to say nothing about the excitement of seeing all three major Florida animals. Be sure to bring your camera and wear comfortable walking shoes.

AUXILIARY PROGRAMS

AT03 Kennedy Space Center
8:30 am – 4:30 pm
\$79 adult; \$68 child (3-11)



On the East coast of Florida, where the waves of the Atlantic crash up onto the sands of Cocoa Beach, lies one of America's most important and inspiring historical landmarks—a technological marvel and a tribute to mankind's bravery, ambition and perseverance. Kennedy Space Center is the birthplace of America's space program, and the only place on Earth where man has launched into space to set foot on the Moon. A must-see Visitor Complex experience, this tour takes guests on a tour of the Kennedy Space Center. The first stop on this go-at-your-own pace tour is the four story LC-39 Observation Gantry, where guests enjoy a panoramic view of Kennedy Space Center and the Space Shuttle launch pads, as well as a short film and interactive displays demonstrate how the launch pads are constructed and how a Shuttle is launched. Buses then drive by the monstrous Vehicle Assembly Building (VAB) where the Space Shuttle is stacked for launch on the way to your second stop—the Apollo/Saturn V Center. A dramatic multi-media show and hands-on displays provide visitors with an inspirational and exhilarating look into America's quest for the moon. Guests relive the historic launch of Apollo 8 at the Firing Room Theater, and then marvel at a monstrous 363-foot Saturn V moon rocket, the most powerful rocket ever built. Finally, the Lunar Theater provides a rare look at the harrowing final moments before man landed on the moon. The final stop is the International Space Station Center where you'll learn how nations representing every continent are joining together to create a Station that will weigh almost one million pounds and cover nearly a football field when completed.

AT04 Welcome to Orlando
12:00 – 1:00 pm
Complimentary



Come to this informative session at the Peabody Hotel to learn about the exciting tours and activities offered during your time in Orlando. A local expert will be on hand to give an overview of Orlando, along with detailed descriptions of the highlights offered during your week.

AT05 Splendor and Culture of Orlando: Leu Gardens and Orlando Museum of Art
1:00 – 5:00 pm
\$55



Tour Central Florida's secret treasure, Leu Gardens. Home to Harry P. Leu in the late 1800's, these glorious gardens span almost 50 acres along the shores of Lake Rowena. Stroll through paths lined with camellias and azaleas, sheltered by majestic southern oaks and camphor trees. Scenic walkways take you through herb, butterfly, palm and bamboo gardens, as well as the formal Rose Garden with its statues, Italian fountain and a magnificent 50-foot floral clock. Then tour the Leu House museum, restored to reflect turn-of-the-century Florida living.

Next, you're off to the Orlando Museum of Art, where outstanding national and international exhibitions will introduce you to a wide variety of artistic styles and media. The museum holdings include a growing permanent collection of 19th and 20th Century American art, pre-Columbian artifacts and African objects. For comfort and safety, bring sunglasses or hat and sunscreen. Be sure to wear comfortable walking shoes.

AUXILIARY PROGRAMS

CNS Opening Reception Florida Spectacular



Sunday, September 21, 2008
6:30 – 8:30 pm
Hosted by the CNS
Peabody Hotel



Amazing sites and sounds of Florida await you at the 2008 CNS Opening Reception.

From the alligators of the everglades to the thrills of space exploration, join the CNS for a Florida Spectacular. Enjoy the power and inspiration of the space coast, then relax and stroll through South Beach and Key West as you take in incredible atmosphere. Enjoy fabulous hors d'oeuvres and beverages while reconnecting with CNS colleagues and friends!

Each registered attendee will receive one complimentary ticket to the Opening Reception.



September 22, 2008

M O N D A Y

CNS Spouse Hospitality Center

7:00 – 10:30 am

Hosted by the CNS

Continental breakfast and beverages will be served each morning in the CNS Spouse Hospitality Center at the Peabody Hotel.

AT06 Tour Orlando

9:00 am – 12:00 pm

\$47



Known world wide as the city where “Dreams Come True,” with its numerous spectacular attractions, Orlando is also rich in history. Join us for a journey through the city’s past, present and future and learn how Orlando became the city that it is today. Your trip through time begins with a driving tour of Orlando’s original neighborhoods, where numerous bricked paved streets are lined by moss draped, cascading southern oaks, as well as its surrounding sparkling lakes. After this, you will be taken to the Orange County Regional History Center, located in downtown Orlando, for a dynamic, interactive one-and-a-half hour journey through Central Florida’s rich history. Propel yourself into the lives of the ancient Paleo-Indians. Jump into the 1800’s where an early pioneer cracker home is yours to explore. Explore how Orlando changed, be part of the construction of Cinderella’s Castle and the arrival of Walt Disney World. Finally, learn what Orlando is today and what it will be in the future. After this exciting journey through time, enjoy a stroll through Lake Eola, a peaceful retreat where nature thrives in the middle of metropolitan Orlando. It’s the perfect opportunity to capture some great Orlando photos.

AUXILIARY PROGRAMS

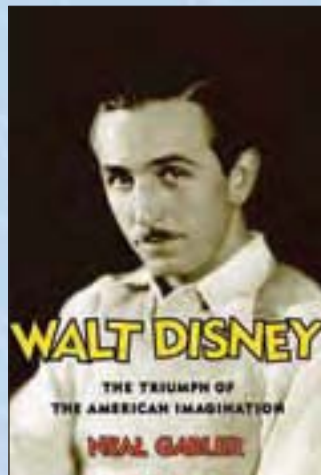
AT07 CNS Auxiliary Luncheon and Program
12:30 - 3:00 pm
California Grill
\$50; Hosted in part by the CNS



Your trip to Orlando simply wouldn't be complete without an in-depth look at the magic and mystery that was Walt Disney. Join us Monday, September 22 at the California Grill for the CNS Auxiliary Program and Luncheon, where the CNS welcomes cultural critic and award-winning author Neal Gabler as the keynote speaker.

Gabler's newest

work, *Walt Disney: The Triumph of the American Imagination*, is the definitive biography of this Orlando icon. Gabler is the first writer to be given complete access to the Disney archives and his passion for the subject is clear throughout the book. Seven years in the making and meticulously researched, the book has received overwhelming critical acclaim as an illuminating portrait of the man who built an empire from a mouse.



"Delightfully addictive"
- John Hartl,
The Seattle Times

"A revelatory portrait of a visionary...Disney examines its subject with a balance of insight, awe and empathy."
- Pat H. Broske, Bookpage

"Illuminating...engrossing...Gabler paints a vivid portrait."
- Bruce Handy, New York Times Book Review

So be sure to join us for the CNS Auxiliary Luncheon at the award-winning California Grill, where you'll savor flavors influenced by the Pacific Coast melting pot atop Disney's Contemporary resort. Then enjoy Gabler's fascinating exploration of how one man's vision changed the world.

OE02 Arabian Nights Dinner Theater
6:00 - 11:00 pm
\$70 adult; \$56 child (3-11)



Immerse yourself in a delightful fairy tale that comes alive before your eyes at the Arabian Nights Dinner Theater! The founders of Arabian Nights had one goal when they developed this show more than 15 years ago—to recreate the world's best horse performances. This spectacular production has surpassed everyone's expectations, wowing more than a million guests and winning several awards with its amazing displays of horsemanship atop more than 60 galloping majesties.

The fairy tale unfolds as soon as you enter the 1,200-seat arena known as the Horse Palace. You'll join the Royal Family on the wedding day of the Princess, where the feast and the entertainment are fit for a King—or in this case, Sultan. Every fairy tale needs a villain, and this one is no different. Romance, adventure and suspense lurk around every corner. The wedding's entertainment is provided by the genie, who calls up more than 20 delightful acts, from a square dance on horseback to bareback riding gypsies, and even a unicorn! Then, in one of the most noteworthy performances, the Black Stallion makes an appearance you won't forget.

September 23, 2008

T U E S D A Y

CNS Spouse Hospitality Center
7:00 - 10:30 am
Hosted by the CNS

Continental breakfast and beverages will be served each morning in the CNS Spouse Hospitality Center at the Peabody Hotel.

AUXILIARY PROGRAMS

AT08 Epcot Behind the Scenes: Gardens of the World
9:00 am – 1:00 pm
\$98

Everywhere you look at the Walt Disney World Resort, the trees, shrubs and flowers play a vital role in setting the stage for recreation, entertainment and beauty. Disney landscaping has become recognized as a show in itself, providing color and enjoyment throughout the year. This fascinating three-hour program gives you the chance to study the various gardens of Epcot World Showcase with one of the experts responsible for helping maintain the horticultural show. Your horticultural instructor turns Epcot in to a living classroom, using facilities on stage to describe the basic process of plant design and how it is incorporated in the landscape of the World Showcase pavilions. In addition, you'll learn how you can apply many of these elements of design and theme to your home gardens.

Attendees in Gardens of the World will cover the following:

- Horticulture – Study the five principals of the Disney horticulture program.
- Landscaping – Examine the role of landscaping at the Walt Disney World Resort.
- At Home – Discuss ways to adapt the Disney landscaping techniques at home.
- Theme – Discover how landscaping helps develop a theme.
- Techniques – Explore plant materials and gardening techniques in World Showcase.

The beauty of each country's traditional landscaping makes this tour an extraordinary introduction to the World Showcase nations!

Participants are encouraged to wear comfortable walking shoes and dress for the weather. Participants must be at least 16 years old and carry identification.

AT09 Scenic Winter Park/Charles Hosmer Morse Museum of American Art/Park Avenue Shopping Tour
9:15 am – 3:15 pm
\$57

Escape the hustle and bustle of city life by spending a peaceful day on scenic Park Avenue in Winter Park, where you'll be greeted by its tree-lined park and charming train station. Winter Park is known around the world for its annual Winter Park Art Festival and quaint brick streets. Start your tour with a relaxing, 45-minute scenic, open-air boat ride past luxurious homes along three beautiful lakes and canals.

Following your boat tour, browse the exclusive boutiques and art galleries filled with one-of-a-kind treasures, as well as stores bearing the names of your favorite designers. Take a break at one of the Avenue's open-air cafés for lunch or just sit in the park and people-watch.

Be sure to save time for the famous Charles Hosmer Morse Museum of American Art, featuring the largest collection of Louis C. Tiffany glass in the world.

For comfort and safety, bring sunglasses or hat and sunscreen. Be sure to wear comfortable walking shoes.

OE03 Sunset Gator Hunt and Dinner
6:00 – 11:00 pm
\$115 adult; \$101 child (3-9)



This exciting afternoon starts with your "Certified" Eco-Guide's narration en-route as you head to the turn of the century fish camp, located, miles from anywhere, on the banks of the Central Florida everglades. Here you'll enjoy a soft drink and sample some gator tail while being entertained with an educational lecture from an official agent from The Florida Fish and Wildlife Commission, showcasing live alligators and snakes. You'll take in this presentation while enjoying a Florida "Cracker-Style" dinner. Then as the sun sets, you travel into complete darkness at speeds up to 40 miles per hour, "hunting" in the habitat of giant reptiles. Piercing out from the darkness, the red eyes of the gators are sure indicators you're not alone. You will see this wildlife in a whole new light. Each 15-passenger airboat, has its own Eco-Guide plus a licensed captain. During the twilight portion of the expedition you'll learn of the fresh water ecosystem of the St. John's River, alligators and the huge assortment of wildlife you will encounter on this safe, educational, thrilling dinner adventure. This safe, educational dinner adventure takes you into the seldom-visited heart of natural Florida. You'll experience beautiful protected wetland hammocks, travel by airboat into pristine fresh water marshes and into a bald cypress swamp. You'll fall in love with the original beauty of old Florida. Upon your return to the fish camp, you'll have a chance to ask your questions, take in the ambiance of the fish camp, and maybe even get to hold an alligator if you dare. This is a real Florida experience you'll talk about forever.

September 24, 2008

WEDNESDAY

CNS Spouse Hospitality Center
7:00 – 10:30 am
Hosted by the CNS

Continental breakfast and beverages will be served each morning in the CNS Spouse Hospitality Center at the Peabody Hotel.

The CNS is pleased to bring you
Wireless Internet throughout
the **Orange County Convention
Center**.

**Bring your personal handheld
device or laptop computer
and contribute to select
sessions throughout
the program.**



GENERAL INFORMATION

Airlines

The Orlando International Airport (MCO) is located approximately 12 miles east of the CNS Annual Meeting Hotels and Orange County Convention Center.

For information on available shuttle and taxi services from the Orlando International Airport, refer to www.orlandoairports.net/ops/bus_taxi.htm.

Americans with Disabilities Act

The Orange County Convention Center (OCCC) continues to search for ways to better accommodate all visitors. Both buildings are in compliance with the Americans with Disabilities Act (ADA), designed with wheelchair ramps, automatic doors, passenger elevators and handicap-accessible restroom facilities.

Please let us know if, under the ADA, you require special accommodations or services in order to attend the 2008 CNS Annual Meeting. We want to ensure that no individual with a disability is excluded because of the absence of auxiliary aids and services. Your requirements should be sent directly to Laser Registration at:

CNS08@laser-registration.com or call 866 654 4047. Please provide any requests at least 30 days prior to the Annual Meeting to guarantee accommodation.

Scooter and wheelchair rentals are available by contacting Scootaround Inc. at their toll-free hotline: 888 441 7575. You can also submit a rental inquiry on the web at www.scootaround.com or by fax at 204 478 1172.

Attire

Attire for the 2008 CNS Annual Meeting is business or professional. Some Orlando restaurants require coats and ties for gentlemen. Please check each restaurant's policy when making reservations.

Auxiliary Tours, Optional Evening Events and CNS Social Activities

Auxiliary Tours provide spouses and guests with an opportunity to explore the more interesting attractions in the Orlando area.

All tours will depart from the CNS headquarters hotel, the Peabody Hotel. Please arrive 15 minutes prior to the scheduled departure time.

All registered CNS Annual Meeting spouses and guests are invited to use the Spouse Hospitality Suite, Monday through Wednesday, including daily continental breakfast from 7:00 am – 10:30 am. (Please note that admittance to the Spouse Hospitality Suite is by Spouse/Guest or Nurse/Spouse badge only.) The Spouse Hospitality Suite is located at the Peabody Hotel.

Optional Evening Events are available to all registered attendees and our exhibit partners. Complete details and fees for all planned Optional Activities can be found on pages 76 – 81. The Opening Reception on Sunday, September 21 is open to all registered attendees with one complimentary ticket included with each registration. See page 30 for more details.

Disclaimer

The material presented at the 58th Annual Meeting has been made available by the Congress of Neurological Surgeons for educational purposes only. The material is not intended to represent the only, nor necessarily the best, method or procedure appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement, or opinion of the faculty which may be helpful to others who face similar situations.

Neither the content (whether written or oral) of any course, seminar, or other presentation in the program, nor the use of a specific product in conjunction therewith, nor the exhibition of any materials by any parties coincident with the program, should be construed as indicating endorsement or approval of the views presented, the products used, or the materials exhibited by the CNS or by its Committees or Affiliates.

The CNS disclaims any and all liability for injury or other damages resulting to any individual attending the Annual Meeting, and for all claims which may arise out of the use of the techniques demonstrated therein by such individuals, whether these claims shall be asserted by physicians or any other person.

No reproductions of any kind, including audiotapes and videotape, may be made of the presentations at the CNS Annual Meeting. CNS reserves all of its rights to such material, and commercial reproduction is specifically prohibited.

Children

Children over the age of 12 may register as a guest at the Guest Registration fee. This will allow full participation in Auxiliary Program activities. (Please note that children under the age of 18 are not allowed in the Exhibit Hall.)

Should you desire childcare services, please contact the concierge desk at your hotel. CNS has no control over and assumes no responsibility for the care that is provided through hotels or these services. This information is provided solely to assist participants in identifying possible sources for childcare.

Climate

September temperatures average a high of 89 degrees and a low of 72.4 degrees.

Course Agendas and Faculty

Agendas are occasionally subject to change. As we continue to strive to improve the quality of your educational experience, CNS may substitute faculty with comparable expertise where necessary.

GENERAL INFORMATION

Digital Posters

Digital Posters will be displayed electronically and can be sorted by author, topic or key word. They will be available Monday through Wednesday in the Exhibit Hall.

E-mail

You will be able to check your e-mail messages from the E-mail Cafés in the CNS Member Services Center (in the Exhibition Hall). Please be sure to have your mail server URL, e-mail account username and password. The CNS will also provide complimentary wireless internet throughout the Convention Center

Exhibition

The CNS Exhibit Hall will be located in West Hall B1-2-3 of the Orange County Convention Center.

Hours are:

Monday, September 22

9:00 am – 4:30 pm

Tuesday, September 23

9:00 am – 4:30 pm

Wednesday, September 24

9:00 am – 4:00 pm

Admittance to the Exhibit Hall is by CNS name badge only. Children under the age of 18 are not allowed in the CNS Exhibit Hall.

Evaluations

The evaluation process is a key component in our continuous strive for excellence in neurosurgical education. Feedback from registrants helps to determine programming at future Annual Meetings. As a result of your input, our programming will continue to improve. Please complete your evaluation forms and deposit them in the drop boxes located throughout the Orange County Convention Center. CNS is dedicated to neurosurgical education...your opinions are important to us!

Housing Information

See pages 88 – 89.

Future Meetings

New Orleans

October 24 – 29, 2009

San Francisco

October 16 – 21, 2010

Washington, DC

October 1 – 6, 2011

Member Services Center

Designed to increase the visibility of CNS activities – including the CNS Secretary, the CNS Membership Department, **Neurosurgery®**, Residents' Office and Placement Office – the CNS Member Services Center is located in West Exhibit Hall B1-2-3. Staff members will be available to assist you and answer any questions you may have about the CNS and its member services. You can also check your e-mail at the E-mail Cafés!

Press Room

Press activities will take place at the Orange County Convention Center. Please stop by the Registration area for details.

Registration Information

Registration Hours:

Saturday, September 20

7:00 am – 5:30 pm

Sunday, September 21

7:00 am – 5:30 pm

Monday, September 22

6:30 am – 5:30 pm

Tuesday, September 23

6:30 am – 5:30 pm

Wednesday, September 24

6:30 am – 5:30 pm

Thursday, September 25

7:00 am – 11:00 am

For additional information see page 87.

Restaurant Reservations

The Orlando Convention and Visitors Bureau provides complementary restaurant reservation assistance through their guest services desk in the lobby of the Convention Center. You

can also visit them online at www.cns.orlandomeetinginfo.com.

Shuttle Services

Shuttle services to the Orange County Convention Center will be available to the Rosen Shingle Creek. A shuttle schedule will be posted at the hotel and at the Orange County Convention Center along with being printed in the Scientific Program Book.

Speaker Ready Room

The Speaker Ready Room will be available Saturday, September 20 through Wednesday, September 24, from 6:30 am – 6:00 pm and Thursday, September 25 from 6:30 am – noon at the Orange County Convention Center. All speakers and abstract presenters should visit the Speaker Ready Room prior to their presentations.

Smoking

By state law, and in the interest of public health, the Orlando Convention Center has adopted a non-smoking policy. There are designated areas outside the building where smoking is permitted.

Visa Information

To obtain an official CNS invitation letter, visit www.cns.org. The State Department of the United States encourages international participants to apply for their visas as early as possible. Visa wait times are available at: http://travel.his.com/visa/tempvisitors_wait.php

For information on the Visa process, please visit

www.nationalacademies.org/visas.

The U.S. State Department's visa site contains the official information on the visa application process: www.travel.state.gov/visa.

Who Should Attend

Neurological surgeons, neurosurgery nurses, physician assistants, orthopedic surgeons, primary care physicians, gerontologists, radiologists, hospital administrators, oncologists, neurologists, pediatricians, physiatrists and infectious disease specialists are welcome and encouraged to attend the 2008 CNS Annual Meeting.

CONTINUING MEDICAL EDUCATION (CME)

Meeting Purpose: The purpose of the 2008 Annual Meeting of the Congress of Neurological Surgeons is to provide continuing medical education for practicing neurosurgeons, neurosurgical residents in training, and postgraduate neurosurgical fellows, as well as allied health professionals including nurses, physician assistants and clinical specialists.

Accreditation

The Congress of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

CME Credit

US Physicians

The CNS designates this educational activity for a maximum of 55 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity. The same number of Category 1 Credits awarded will be applied toward the Continuing Education Award in Neurosurgery.

*A maximum of 24.5 *AMA PRA Category 1 Credits™* may be earned for general sessions only.

Allied Health Professionals

CNS cannot designate its Annual Meeting as meeting the criteria for credit for nurses and other allied health professionals. For credit that may be acceptable to state medical associations, specialty societies, or state boards for medical licensure, please contact those organizations directly.

Additional CME Credits can be earned by attending the following:

Practical Courses

Attendees will receive a maximum of four (4) *AMA PRA Category 1 Credits™* for all eligible half-day Practical Courses and a maximum of eight (8) *AMA PRA Category 1 Credits™* for all eligible full-day Practical Courses. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Luncheon Seminars

Attendees will receive a maximum of one-and-a-half (1.5) *AMA PRA Category 1 Credits™* for all eligible Luncheon Seminars. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Integrated Medical LearningSM

An additional 14 hours of *AMA PRA Category 1 Credit™* (at no extra charge) can be earned by participating in the IML pre-meeting and post-meeting surveys and relevant IML sessions.

Posters

Physicians may claim *AMA PRA Category 2 Credit™* directly from the AMA for preparing a poster presentation, which also includes the published abstracts. Physicians may claim them on their *AMA PRA* certificate application or apply directly to the AMA for an *AMA PRA Category 2 Credit™* certificate.

Physicians may *AMA PRA Category 2 Credit™* for viewing scientific posters. Physicians should self-claim credit on their *AMA PRA* certificate application form.

Claiming CME Credit

Physicians will receive a 2008 CME Tracking Form their registration packet. Complete, sign, and submit the form claiming the number of hours spent in each general session including the Neurosurgical Forum, Special Courses, Section Sessions and 3-D. The CME Tracking Form does not include optional courses such as Practical Courses and Luncheon Seminars – credit for these is based on tickets turned in on site. Credit for IML pre- and post-meeting surveys does not need to be claimed on the CME Tracking Form as electronic records are used. The CME Tracking Form will be posted online at www.cns.org after the 2008 CNS Annual Meeting.

CME Certificates

CME Certificates are mailed approximately six weeks after the meeting. Online CME Certificates will be available to CNS Members on the CNS at www.cns.org in November 2008.

Disclosures

ACCME's Updated Standards for Commercial Support require that anyone in a position to control the content of the educational activity has disclosed all financial relationships with any commercial interest. Failure or refusal to disclose or the inability to satisfactorily resolve the identified conflict may result in the withdrawal of the invitation to participate in any CNS educational activities. The ACCME defines a "commercial interest" as any entity producing, marketing, re-selling or distributing healthcare goods or services consumed by, or used on, patients.

It is also each speaker's responsibility to include the FDA clearance status of any device or drug requiring FDA approval discussed or described in their presentation or to describe the lack of FDA clearance for any "off label" uses discussed. Speakers from the audience are also required, therefore, to indicate any relevant personal/professional relationships as they discuss a given topic.

Disclosures will be published in the Scientific Program Book that will be distributed at the Annual Meeting.

Handout materials are prepared and submitted for distribution by the presenters who are solely responsible for their content.

FDA Statement

Some drugs or medical devices demonstrated at the Annual Meeting have not been cleared by the FDA or have been cleared by the FDA for specific purposes only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice.

CNS policy provides that "off label" uses of a drug or medical device may be described at the Annual Meeting so long as the "off label" use of the drug or medical device is also specifically disclosed. Any drug or medical device is being used "off label" if the described use is not set forth on the products approval label. A listing of these disclosures will be available in the Annual Meeting Program Book.

The CNS Welcomes the Association of Neurosurgical Physician Assistants 2nd Annual ANSPA CME* Meeting

Peabody Hotel
Saturday, September 20, 2008
7:30 am – 5:00 pm
6:00 – 8:00 pm Reception

Register Today Via:

Mail: ANSPA CME, PMB 202, 4267 NW Federal Hwy, Jensen Beach, FL 34957

Fax: 772 388 3457 Phone: 888 94 ANSPA

www.anspa.org

*This program is not yet approved for CME credit. Conference organizers plan to request 8 hours of Category 1 CME credit from the PA Review Panel. Total number of approved hours not yet determined.



American
Association of
Neurological
Surgeons

The Congress of Neurological Surgeons welcomes The Council of State Neurosurgical Societies!

*Friday, September 19 – Saturday, September 20, 2008
Peabody Hotel*

Get Involved with CSNS!

The CSNS is a grassroots socioeconomic organization made up of selected delegates from each state and additional appointees from its parent organizations, the AANS and the CNS. The CSNS is concerned with all socioeconomic issues pertinent to neurosurgery and sub-serves both its parent organizations accordingly.

ANNUAL MEETING REGISTRATION INFORMATION

The CNS, in conjunction with Laser Registration, offers you one-stop services for all your hotel and registration needs.

For your convenience, you can register for courses, reserve your hotel room and more via these four methods:

Online:
www.cns.org

- Internet booking is available 24 hours a day, seven days a week.
- Credit card only.
- Not available for Residents or Fellows.
- Receive *immediate* Registration and Housing Confirmation Notification.

Fax:
866 654 4048 U.S. & Canada

- 514 380 9363 International.
- Credit card only.
- Allow *seven business days* for Registration and Housing Confirmation Notification.

Phone:
866 654 4047 U.S. & Canada

- 514 380 9362 International.
- Credit card only.
- Not available for Residents or Fellows.
- Not available for Ticketed Events.
- Allow *three business days* for Registration and Housing Confirmation Notification.

Mail:

**CNS Annual Meeting
c/o Laser Registration
1200 G Street NW, Suite 800
Washington, DC 20005-3967**

- Credit card or check (no wire transfers).
- Allow *seven business days* for Registration and Housing Confirmation Notification.

Important Dates to Remember

August 20, 2008

Advance Registration Discount and Housing Deadline.

August 21 – September 2, 2008

Contact Laser Registration for any Housing questions.

August 27, 2008 Cancellation Deadline

\$100 Processing fee will be charged for written cancellation requests received by August 27, 2008. No refunds given after this date.

August 27, 2008

Course and event tickets will be refunded in full until this date. No refunds after this date.

September 3, 2008

Any changes to hotel reservations must be made directly with hotel from this date forward.

Fax & Mail

- Type or print all information on the registration/housing form in black ink. Do not use a cover sheet.
- CNS/Laser Registration is not responsible for faxes not received due to mechanical failure or circumstances beyond our control.
- Due to the high volume of forms received, Laser Registration cannot confirm receipt of faxed or mailed forms. You will receive confirmation of your registration.

Phone

- Have your completed registration/housing form and credit card information in front of you when placing your call.

Credit Card Payments

Visa
MasterCard
American Express

Registration Payment by Check

- Checks must be payable in U.S. dollars and drawn on a U.S. bank. Make checks payable to: CNS Annual Meeting/Laser Registration.
- Include appropriate fees for registration and any optional items purchased.
- Checks will be processed electronically. If you do not want your check processed electronically, please select another method of payment.

ANNUAL MEETING HOTEL RESERVATIONS

Contact Laser Registration, the official CNS Housing and Registration Service, to reserve your guest rooms.

Hotels will not accept reservations from CNS meeting attendees directly.

Reservations can be made online or via fax, phone or mail – See page 87.

Be sure to complete the entire housing section of the registration form.

Hotel Reservation Information and Deadlines

Hotel reservations are only available to registered CNS attendees. **You must first register for the CNS Annual Meeting before making your hotel arrangements – see page 87.** Don't wait. Rooms are limited and fill quickly. Reserve your room by August 20, 2008.

Deposits

A deposit is required and due at the time your hotel reservation is made. This payment must be submitted with your registration fees. Housing deposit will be charged separately. Housing transaction will appear as "Laser Registration Housing & Travel Services." Credit cards will be charged immediately. A small portion of your room rate will be used to help defray the cost of registration and housing services.

Deposit: Standard Room = \$225.

All rooms are subject to applicable state and local taxes, currently at 13.5%.

Hotel Confirmations, Cancellations or Changes

Note: *When canceling a reservation by phone, record the date, cancellation number, and name of the Laser Registration representative accepting the cancellation.*

Through August 20, 2008, 5:00 pm EST

- All changes and cancellations must be made through Laser Registration.
- Rooms are not transferable.
- Refunds for deposits will be issued by Laser Registration.

Between August 21 and September 2, 2008

- Contact Laser Registration for any Housing questions.

Beginning September 3, 2008

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

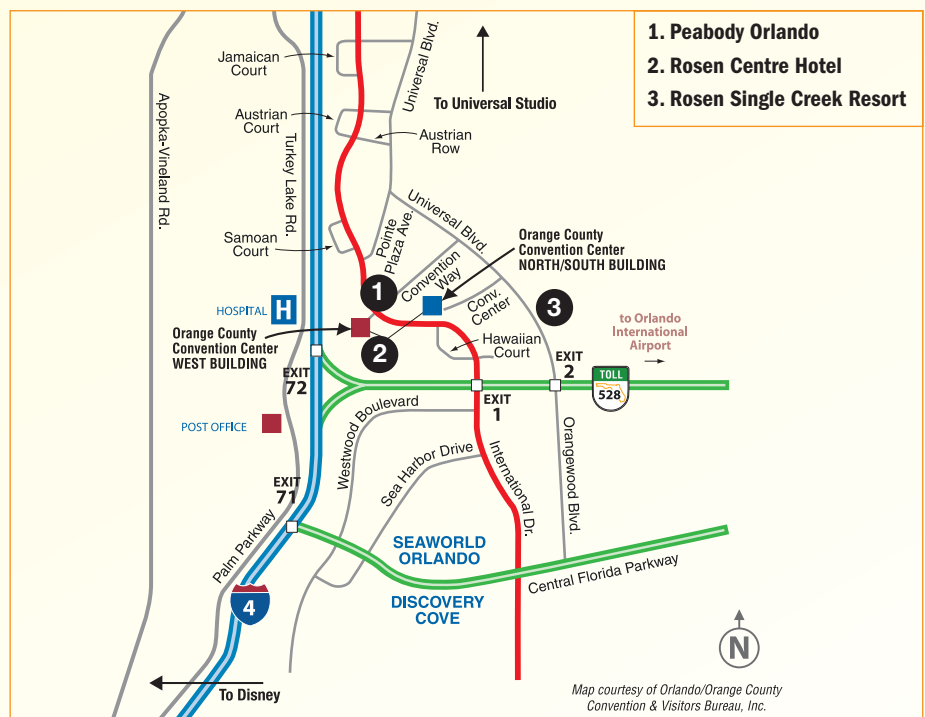
Complimentary Housing for CNS Resident Member Attendees

Complimentary housing at the CNS Annual Meeting is available to CNS Resident Members on a first-come, first-served basis.

To be considered for this program, CNS Resident Members must:

- Complete a separate CNS Resident Housing Form (Included with Resident Member registration materials). This form is to be sent *directly* to CNS via fax to 847 240 0804 or mail 10 N. Martingale Road, Suite 190, Schaumburg, IL 60173-2294.
- Register for the CNS Annual Meeting by August 13, 2008.
- Become a member by July 1, 2008. Residents who choose to reserve a room and through Laser Registration (deposit required) and are later accepted into the CNS Resident Housing Program are responsible for cancelling their extra room.

NOTE: All Resident attendees must register and make housing arrangements via fax or mail. Online and phone registration is not permitted.



ANNUAL MEETING HOTEL RESERVATIONS

Thank You for Your Continued Support of the CNS

The CNS thanks you for your support in reserving your guest room through Laser Registration, the official CNS Housing and Registration Bureau. The CNS, in negotiating contracts with convention centers and hotels, must commit to a minimum number of guest rooms. This commitment helps guarantee the availability of meeting space and helps control of the cost of the

meeting. When the CNS fails to anticipate the number of attendees reserving rooms through our housing block, we are held liable for contracted rooms that go unoccupied. This financial penalty may then impact future member services and programs. A history of high utilization of our room block enables CNS to negotiate better room rates for future meetings.

Hotel Room Rates:	Single	Double
The Peabody Hotel (Headquarters)	\$235*	\$235*
Rosen Centre Hotel	\$206	\$206
Rosen Shingle Creek	\$230	\$230

All rates are subject to applicable state and local taxes, currently at 13.5%.

A small portion of your room rate will be used to help defray the cost of housing and registration services.

* The stated rate includes unlimited local and 800 calls, two bottles of water per day, two I-Ride tickets per room per day, and access for one guest to the hotel's wireless high-speed Internet service.

Peabody Orlando Hotel

9801 International Drive

The Peabody Orlando Hotel is the official CNS Headquarter Hotel



The Peabody Orlando is a masterpiece of contemporary design and luxurious décor and furnishings. The hotel exudes relaxed elegance, and the warmth of Southern hospitality, it is further enhanced by the whimsy of the Peabody Ducks, and their world-famous march on the red carpet at 11 a.m. and 5 p.m. daily. At The Peabody Orlando, traditions are old, yet timeless — the perfect blending of state-of-the-art function space, catering and the award-winning Peabody Service Excellence®.

- Concierge services.
- Fitness center.
- Heated pool (2).
- High-speed internet.
- Restaurants (4).
- Room Service.
- Salon and day spa.
- Tennis courts.

Rosen Centre Hotel

9840 International Drive



The award-winning, Rosen Centre Hotel sets a spectacular standard of hospitality, service and value. This premier hotel offers a highly-respected professional staff and outstanding accommodations. Enjoy resort-style luxury.

- Concierge services.
- Fitness center.
- Golf services.

- Heated pool (3).
- High-speed internet.
- Restaurants (4).
- Room Service.
- Salon and day spa.
- Smoke free.
- Tennis courts.
- TSA approved remote skycap service for domestic travel.

Rosen Shingle Creek

9939 Universal Boulevard



Rosen Shingle Creek Hotel is situated on 230 acres of lush landscape. The history of Shingle Creek reveals the captivating tale of how its majestic cypress trees provided some much needed shelter for early settlers and their homes. Today, the stunning grand lobby welcomes you into a world of lavish choices, complete with luxury accommodations, enticing restaurants and a championship golf course.

- Concierge services.
- Fitness center.
- Golf services.
- Heated pool (4).
- High-speed internet.
- Restaurants (6).
- Room Service.
- Salon and day spa.
- Smoke free.
- Tennis courts.

HOW TO FILL OUT YOUR REGISTRATION FORM.

B1-B2

Advanced Registration and Housing Form

PRINT or TYPE your personal information. Your name and address, as entered here, will be used on your CME certificate, if applicable. Please include phone, fax, and e-mail. If international, please include country code for phone and fax.

PRINT or TYPE any spouse, guest or children's badge information. Spouse/guest/child registration includes one ticket to the Opening Reception on September 21, admission to the Exhibit Hall (children under 18 are not allowed in Exhibit Hall), ability to register for tours and optional evening events, and admission to the General Scientific Sessions).

Hotel Reservations: Indicate your hotel choices. List your arrival and departure days and dates. Check your room preference. Indicate with whom and where you will be staying if you are not making a hotel reservation. Should your room preference not be available you will automatically be placed in the room type most similar to your requested room type. All requests will be handled first-come, first-served. Reserve early!

Check the box that corresponds to your registration status. Residents and Fellows (domestic and international) must have registration form signed by Program Director. (Residents and Fellows may only register via fax or mail and use the designated CNS Resident Housing form).

Add the \$225 Hotel Deposit to the cost of your registration – this is the balance due for Annual Meeting Registration and Housing Deposit. Housing requests received without deposit payment cannot be processed.

Note: Residents who are applying for the CNS Resident Housing Program should check the appropriate box (a deposit is not required for CNS Resident Housing Program). If you also make a hotel reservation (with deposit) and are later accepted into the CNS Resident Housing Program, you are responsible for cancelling your extra room.

Payment: If paying by check, please make check payable to CNS Annual Meeting/Laser Registration. Checks must be payable in US dollars and drawn on a US bank. Any checks returned for insufficient funds are subject to additional charges. Checks will be processed electronically. If you do not want your check processed electronically, please select another method of payment.

If you are paying by credit card, write in full credit card number and expiration date; print the cardholder name, billing address and signature.

B3-B4

Practical Course and Luncheon Seminar Ticket Forms

Due to the popularity and limited space in many sessions, please indicate several choices where applicable.

Practical Courses and Luncheon Seminars are optional and each has a

separate fee. If the Practical Course and/or Luncheon Seminar you select is open, your credit card will be charged accordingly. You may pay and register via the methods outlined on page 87.

Practical Course Registration (B3)

Saturday, September 20

Afternoon Practical Courses are available.

Sunday, September 21

Full day, morning and afternoon Practical Courses are available.

Luncheon Seminar Tickets (B4)

You may attend one Luncheon Seminar per day. Fee includes a seated lunch served in the seminar room.

Luncheon Seminars are offered:

Monday, September 22

Tuesday, September 23

Wednesday, September 24

B5

Optional Evening/Auxiliary Tour Registration Form

(See pages 76 – 81 for details about these programs)

Please check the event tickets you would like to purchase, indicate quantity and total your purchase.

This form may be used to purchase additional tickets and order your Annual Meeting T-shirts.

PURCHASE TICKETED EVENTS ONLINE OR VIA FAX OR MAIL.

Phone orders will *not* be accepted.

Please print clearly to avoid registration delays!

ANNUAL MEETING MEETING REGISTRATION

Registration Materials Pick Up

All materials should be picked up at the Orange County Convention Center.

Items included in Registration Fee

- One ticket to the Opening Reception on Sunday, September 21.
- Admission Monday – Thursday General Scientific Sessions.
- Admission Monday – Wednesday Neurosurgical Forum. 3-D Cadaveric Demonstration. Special Courses. Consensus Sessions. Section Sessions.
- Morning Coffee and Afternoon Beverage Breaks in Exhibit Hall: Monday – Wednesday.
(Note: Children under the age of 18 are not allowed on the exhibit floor.)
- Thursday Morning Coffee Break.

REGISTRATION CANCELLATION POLICY

All refund requests must be received in writing.

Requests accepted via:

E-mail:

CNS08@laser-registration.com

Fax:

514 380 9363

Mail:

CNS Annual Meeting
c/o Laser Registration
1200 G Street NW, Suite 800
Washington, DC 20005-3967

Category	Discounted Fees	Full Price Fees
	On or before August 20, 2008 at 5:00 pm EST Register via: Internet, Fax, Phone, Mail (see page 87 for details).	After August 20, 2008
Member (Active/International/Vista)	\$575	\$675
Transitional Member	\$575	\$675
Non-Member Neurosurgeon	\$675	\$775
Non-member Physician	\$675	\$775
Non-member/Non-Physician	\$675	\$775
Member of the Armed Forces	\$475	\$575
Resident Member*	\$150	\$250
Resident Non-Member*	\$250	\$350
Fellow Member**	\$150	\$250
Fellow Non-Member	\$250	\$350
Retired Senior Member	\$250	\$350
Medical Student	\$250	\$350
Allied Health	\$400	\$500
Physician Assistant/ Physician Extender	\$400	\$500
Nurse/Nurse Practitioner	\$400	\$500
Spouse/Guest/Child (13 & over)	\$115	\$115
Resident Spouse	\$75	\$75

* All domestic and international Residents must have their Program Director sign registration form and register via fax or mail only.

** All domestic and international Fellows must attach letter from Program Coordinator verifying Fellow status and register via fax or mail only.

CANCELLATION DATE SCHEDULE

August 27, 2008

Registration and Course & Event Tickets = Full Refund less \$100 processing fee.

After August 27 and No Show

Absolutely no refunds will be issued after this date, for Registration and Course & Event tickets, regardless of cause.



CONGRESS OF NEUROLOGICAL SURGEONS
UNIVERSITY OF NEUROSURGERY

Advance Your Education!

Log in today to the
CNS University of Neurosurgery.

New Courses & Presentations Now Available!

★ Spine Techniques ★

★ Revascularization ★

★ Epilepsy ★

★ Non-Clinical Core Competencies ★

Plus even more clinical courses coming throughout the year.

The CNS University of Neurosurgery – Access is *FREE* to CNS Members.

- Log in using your CNS PA user name and password.
- Browse available courses and view lectures in video or narrated PowerPoint format.
- Easily locate rich content on any topic with the new Google-powered search function.
- Test your knowledge with pre- and post-participation evaluations.
- Access hundreds of neurosurgical images, videos and podcasts.
- *NEW!* View presentations from the CNS Annual Meeting General Scientific Sessions in the University Lecture Hall.
- Purchase CME credits for \$25 per hour.

The educational content is constantly evolving. Look for these new courses at www.cns.org and many more to come in the year ahead.

Congress of Neurological Surgeons

10 N. Martingale Road
Suite 190
Schaumburg, IL 60173

Phone: 847-240-2500
Toll-free: 877-517-1CNS

Fax: 847-240-0804
Email: info@1cns.org



Visit us in the CNS booth #933 for a demonstration.

CNS Annual Meeting Sponsors

2008

The Congress of Neurological Surgeons gratefully acknowledges these sponsors for providing educational grants in support of the 2008 CNS Annual Meeting.

CNS Neurosurgical Partner



Leader



Benefactors



Supporters

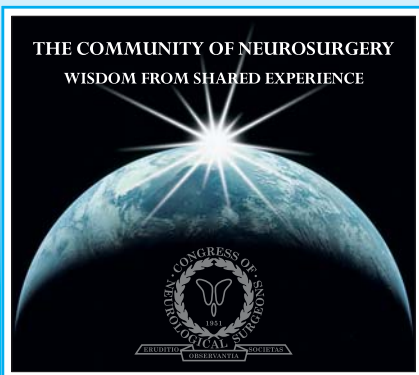


Medtronic



Contributor





CONGRESS OF NEUROLOGICAL SURGEONS 2008 ANNUAL MEETING

ORLANDO, FLORIDA * SEPTEMBER 20-25, 2008

THE COMMUNITY OF NEUROSURGERY
WISDOM FROM SHARED EXPERIENCE

Announcing the Joint Meeting with the
Brazilian Society of Neurosurgery!



CNS MICHAEL L.J. APUZZO LECTURER ON
CREATIVITY AND INNOVATION

Muhammad Yunus, PhD

Nobel Peace Prize Laureate and Economist

Recipient of the 2006 Nobel Peace Prize, Muhammad Yunus has been credited with allowing millions of individuals to work their way out of poverty through his Grameen Bank micro-credit program.

* Tuesday *
September 23, 2008



2008 DANDY ORATOR

Maya Angelou, PhD

Renowned Author, Actress, Poet

Hailed as one of the great voices of contemporary black literature, author, actress and poet Maya Angelou has the unique ability to shatter the opaque prisms of race and class between reader and subject.

* Monday *
September 22, 2008



SECOND ANNUAL JULIAN T. HOFF
MEMORIAL LECTURER

Ed Viesturs

Mountaineer

Widely regarded as America's foremost high-altitude mountaineer, Ed Viesturs is a proponent of careful planning, teamwork, safety and dogged determination.

* Wednesday *
September 24, 2008



THIRD ANNUAL JOHN THOMPSON HISTORY OF
MEDICINE LECTURER

Wendy Moore

Medical Journalist and Author

British writer and journalist Wendy Moore is best known for writing the critically-acclaimed biography *The Knife Man, The Extraordinary Life and Times of John Hunter, Father of Modern Surgery*.

* Thursday *
September 25, 2008



SPECIAL LECTURER

Atul Gawande, MD

Surgeon and Acclaimed Author

A practicing surgeon and author of two books—*Better: A Surgeon's Notes on Performance* and *Complications*—Atul Gawande has been lauded for his “energetic and imaginative” approach to finding practical ways to improve surgical practice.

* Wednesday *
September 24, 2008



SPECIAL LECTURER

James Surowiecki

Author and Financial Columnist

James Surowiecki is the foremost authority on how to harness the collective wisdom of an organization for competitive advantage. He has written a well-received book on the theory and practice of *The Wisdom of Crowds*.

* Tuesday *
September 23, 2008

Meeting Highlights

Integrated Medical LearningSM (IML) IML Sponsored by  Tuesday - Wednesday, September 23-24.
◆ New Afternoon IML Sessions will be held for each subspecialty section.

Neurosurgical Forum and Select Abstracts Session

Monday, September 22.

● This interactive assembly presents the highest-impact original science in each neurosurgical subspecialty.

Live 3-D Cadaveric Demonstrations

Wednesday, September 24.

▲ Don't miss this state-of-the-art presentation as technical neurosurgical masters demonstrate surgical approaches live in 3-D.

Cases and Coffee with the Masters

Thursday, September 25.

▲ Subspecialty experts address difficult cases submitted by attendees.



HONORED GUEST

William F. Chandler, MD

Honored Guest Presentations

- * 30 Years of Pituitary Surgery - Wisdom from Collective Experience
- * Regulation of Neurosurgical Practice - Does Accountability Promote Quality?
- * Neurosurgery Education - Residency Redesign and Recognition of Special Expertise

Don't Miss these Optional Courses with Dr. Chandler:

- * PC26: Operative Colloquium - Masters of Neurological Surgery
- * M01: Resident Honored Guest Luncheon



Anthony L. Asher
MD, FACS
CNS President



Gerald E. Rodts, Jr.
MD
Annual Meeting Chairman



Nathan R. Selden
MD, PhD, FACS
Scientific Program Chairman

For More Information
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