

# BRIDGES



## TO THE FUTURE



*Dedicated to Neurosurgical Education*

### P R E L I M I N A R Y P R O G R A M



**Congress of Neurological Surgeons**  
**54<sup>th</sup> Annual Meeting**  
**San Francisco, California**  
Moscone West Convention Center  
October 16 - 21, 2004

# 2004 CNS AT-A-GLANCE

|  | 7AM | 8AM | 9AM | 10AM | 11AM | 12PM | 1PM | 2PM | 3PM | 4PM | 5PM | 6PM | 7PM | 8PM | 9PM |
|--|-----|-----|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>SATURDAY</b>  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Afternoon Practical Courses (PC01 – PC07)  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Open Evening   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| <b>Sunday</b>  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| All Day Practical Courses (PC08 – PC14)  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Morning Practical Courses (PC15 – PC19)  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Afternoon Practical Courses (PC20 – PC27)  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Opening Reception  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| <b>Monday</b>  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| General Scientific Session I:<br>"Surgery at the Anatomical Edge"                                    |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Stephen F. Traynelis, Special Lecturer   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Vincent C. Traynelis, Presidential Address   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Exhibits Open  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Coffee with Exhibitors   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Arnold H. Menezes, Honored Guest   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Visit Exhibits   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Luncheon Seminars  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Special Course I and Section Sessions*   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Refreshments with Exhibitors   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Open Evening   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| <b>Tuesday</b>   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| General Scientific Session II: "Bridging the Gap:<br>Bench to Bedside, Conception to Implementation" |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| CNS Resident Award   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Exhibits Open  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Arnold H. Menezes, Honored Guest   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Coffee with Exhibitors   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Fifth Annual Walter E. Dandy Distinguished Orator<br>President Mikhail Gorbachev                     |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Visit Exhibits   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Luncheon Seminars  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Special Course II and Section Sessions**   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Refreshments with Exhibitors   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Open Evening   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| <b>Wednesday</b>   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| General Scientific Session III:<br>"Surgery at the Crossroads"                                       |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Burt Rutan, Special Lecturer on Creativity & Innovation  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Exhibits Open  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Arnold H. Menezes, Honored Guest   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Coffee with Exhibitors   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Visit Exhibits   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Luncheon Seminars  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Special Course III and Section Sessions***   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Refreshments with Exhibitors   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Open Evening   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| <b>Thursday</b>  |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| General Scientific Session IV: "A Lifetime of<br>Experience, A Future of Possibilities"              |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Arnold H. Menezes, Honored Guest   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |
| Coffee Break   |     |     |     |      |      |      |     |     |     |     |     |     |     |     |     |

\* Section on Cerebrovascular Surgery I  
 Section on Disorders of the Spine and Peripheral Nerves I  
 Section on Stereotactic and Functional Neurosurgery I  
 Section on Neurotrauma and Critical Care I  
 Council of State Neurosurgical Societies

\*\* Section on Tumors I  
 Section on Pain I  
 Section on Pediatric Neurological Surgery I  
 Section on Cerebrovascular Surgery II  
 Section on Disorders of the Spine and Peripheral Nerves II

\*\*\* Section on Stereotactic and Functional Neurosurgery II  
 Section on Tumors II  
 Section on Neurotrauma and Critical Care II  
 Section on Pediatric Neurological Surgery II  
 Digital Masters Video Symposium

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**Dear Colleagues:**

The Congress of Neurological Surgeons Annual Meeting grows in breadth and depth every year. The 54th Annual Meeting of the CNS continues this proud tradition and promises to be an outstanding event in all regards. The meeting theme, "Bridges to the Future" embodies the desire to improve our specialty scientifically, promotes the concept of a world community, and gives proper reference to the famed landmark bridge of our host city, San Francisco.

Nelson Oyesiku, Annual Meeting Chairman, and Chris Wolfla, Scientific Program Committee Chairman, have worked intensely with their large volunteer committees for almost two years. Their hard work has resulted in the creation of an outstanding Scientific Program. Practical Courses and Luncheon Seminars are designed to provide comprehensive and contemporary information. The General Scientific Sessions focus on complementary themes leading to a cohesive educational experience. There are Special Course sessions on Pain, Neurotrauma and Neurosurgical Liability. Selected paper presentations, posters and the always-excellent Section Symposia complete this extraordinary program.

This year's Honored Guest is Dr. Arnold H. Menezes. Dr. Menezes is a gifted surgeon who has made major contributions in the fields of Pediatric Neurosurgery, Skull Base Surgery, and Spinal Surgery. He will share his experiences and the surgical wisdom he has acquired throughout his career.

The 54th CNS Annual Meeting is a joint meeting with the Società Italiana di Neurochirurgia. Our SINch colleagues will enhance the Scientific Program in numerous ways. I know each of you will join me in welcoming our Italian partners and their President, Giovanni Broggi.

San Francisco is an outstanding host city. This large cosmopolitan city is comprised of numerous distinct neighborhoods each of which is easy to access and as friendly as a small town. It has a rich artistic heritage and the culinary options available are world-renowned. A full social program makes it easy to sample the offerings of this delightful and culturally diverse city.

Joan and I enthusiastically invite you to enjoy the CNS in San Francisco this autumn for what is certain to be a tremendous meeting in an outstanding venue.

A handwritten signature in blue ink that reads "V. C. Traynelis".

Vincent C. Traynelis, MD  
President, Congress of Neurological Surgeons



# Welcome to

# San Francisco

San Francisco is a golden dream come true, a place where heart, mind and soul embrace, lost in the simplicity of delightful deliverance. Fog and sun mingle playfully above America's favorite city; the cool, cloudy comfort of early morning slowly dissolving into the peaceful warmth of a gentle afternoon glow. Touch it...it is real. Feel it...it is the essence of escape. Savor it...it is one of a kind. Little wonder why San Francisco has been named the world's top city twice by readers of Condé Nast Traveler; the top U.S. city seven times since 1988.

- Visit the diverse San Francisco neighborhoods!
- Ride the cable cars!
- Walk the great hills!
- Cross the Golden Gate Bridge!
- Take a cruise on San Francisco Bay!
- Enjoy gourmet meals and great wines!
- Unwind in America's preeminent playground!

For more information on what San Francisco has to offer, visit [www.sfvisitor.org](http://www.sfvisitor.org) for a free Visitors' Guide.

## 2004 CNS ANNUAL MEETING HIGHLIGHTS

- Joint Meeting with 
- General Scientific Sessions with the latest scientific data and dynamic speakers
- Fifth Annual Walter Dandy Oration and Special Guest Lectures
- Point/counterpoint discussions and the best teachers in neurosurgery
- Innovative Practical Courses
- In-depth Luncheon Seminars (includes lunch served in seminar room)
- Special Courses and Section Sessions
- Digital Masters Video Symposium
- CNS Member Services Booth with full spectrum of services and products
- Special Residents' and Nurses' Programs
- An Exhibit Hall filled with dynamic companies showcasing state-of-the-art products and services
- Scientific Posters and Video Kiosks
- 25 CME hours (and 16.5 optional hours available)
- Terrific Auxiliary Program and optional evening events
- Section booth in Exhibit Hall

*All this and much, much more awaits you in San Francisco – a golden dream come true.*



Congress of Neurological Surgeons  
**54<sup>th</sup> Annual Meeting**  
 October 16 - 21, 2004  
 San Francisco, California

# EXTRAORDINARY SPEAKERS



President Mikhail Gorbachev  
 5<sup>th</sup> Annual Walter E. Dandy  
 Distinguished Orator



Arnold H. Menezes, MD  
 2004 CNS Honored Guest



Burt Rutan  
 CNS Special Lecturer  
 on Creativity and Innovation

## OUTSTANDING SCIENCE & EVENTS

**7 NEW PRACTICAL COURSES**

**25 HOURS OF CME CREDIT**  
 (AND UP TO 16.5 OPTIONAL CREDIT HOURS)

**DIGITAL MASTERS VIDEO SYMPOSIUM AND MORE!**

**Incredible Benefits exclusively for CNS Resident Member attendees.**



*The CNS welcomes the Italian Society of Neurosurgery  
 to the 54th CNS Annual Meeting.*

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**BRIDGES**

TO THE FUTURE



*Dedicated to Neurosurgical Education*

## HONORED GUEST

### Arnold H. Menezes, MD

Arnold Menezes was born in Bombay, India, where he attended the Topiwala National Medical College at Bombay University; graduating in 1967. He completed his neurosurgical training at the University of Iowa in 1973 under the tutelage of George Perret, MD, and Carl Graf, MD; adding fellowship training in Pediatric Neurology under William Bell, MD, and joined the faculty the following year.



Dr. Menezes is Professor and Vice Chairman of the Department of Neurosurgery at the University of Iowa Roy and Lucille Carver College of Medicine and the University of Iowa Health Care Center in Iowa City, Iowa, where he has been in practice for over 30 years. He has played a significant role in the development of the department and its teaching activities. His main areas of interest have been pediatric and spinal neurosurgery as well as the posterior skull base. He has been active in furthering these sections of the American Association of Neurological Surgeons as well as the Congress of Neurological Surgeons, advancing the field in pediatric neurosurgery and having major commitments to the Section on Disorders of the Spine and Peripheral Nerves. He is a founding member of the North American Skull Base Society. His over 20 professional affiliations encompass national and international neurosurgical groups that speak for his commitment to the spread of neurosurgery.

Dr. Menezes has substantial clinical research interests furthering the understanding of the craniocervical junction to provide definition of congenital, developmental and acquired pathological states at the craniocervical border, identifying the natural history and planning surgical physiological approaches to their management. The database of over 4,500 patients has identified numerous disorders. A major interest is the hindbrain herniation and its implications. Pediatric neurosurgery and especially its application to the developing spine has been on par with his development of the skull base interdisciplinary center.

Blending his clinical expertise in pediatric neurosurgery and disorders of the spine and the base of the skull has resulted in a truly unique clinical practice, with a major emphasis on congenital and acquired disorders. Through this work, the University of Iowa has become a national and international site for referral of craniocervical and skull base pathology. He has authored over 150 peer-reviewed publications, over 90 book chapters and serves on seven editorial boards. His major textbooks include the first textbook on Craniocervical Junction Abnormalities and Principles of Spinal Surgery, in addition to numerous monographs including “Spinal Neurosurgical Issues in the Pediatric Patient” and “The Craniocervical Junction”. He has made over 800 scientific presentations, including 52 visiting professorships throughout the United States and abroad. He is active in educational forums and advanced neurosurgical training. Dr. Menezes has held offices in the Joint Section on Disorders of the Spine and Peripheral Nerves, the American Society of Pediatric Neurosurgery, the Neurosurgical Society of America and the International Society of Pediatric Neurosurgery. He was involved in developing the first “hands-on” practical courses in spinal surgery in the country and has been instrumental in setting up spinal neurosurgery programs and fostering specialty education in Asia, Africa, Europe and South America.

*Continued on next page*

**HONORED GUEST** (continued)

Complementing his national and international successes, Dr. Menezes' true expertise lies in his tremendous ability as a teacher and a mentor. He has had a major influence in the success of his residents, providing a role model for dedication and enthusiasm for academic neurosurgery and has had a major impact in supporting both his residents and co-faculty members in pursuing their areas of interest.

Dr. Menezes comes from a long lineage of physicians and surgeons. He and his wife, Meenal, have two children: Francis, an economist, and Maithilee, in residency training in Otolaryngology.

**Dr. Menezes will give the following presentations:****General Scientific Sessions**

Monday, October 18, 2004, 10:30 am

Embryological Development of the Craniovertebral Junction and its Clinical Implications

Tuesday, October 19, 2004, 9:10 am

Spectrum of Craniovertebral Junction Disease from a Database of 4,800 Patients

Wednesday, October 20, 2004, 9:10 am

Craniovertebral Junction Neoplasms

Thursday, October 21, 2004, 9:10 am

Chiari Malformations and Syringomyelia

**Practical Courses**

Saturday, October 16, 1:00 pm

PC06 Anterior Approaches to the Craniocervical Junction

Sunday, October 17, 8:00 am

PC16 Operative Colloquium: Masters of Neurological Surgery

**Luncheon Seminars**

Monday, October 18, 12:30 pm

M01 Resident/Honored Guest Luncheon

Tuesday, October 19, 12:30 pm

T17 Cranial-cervical Junction Surgery



## THE FIFTH ANNUAL WALTER E. DANDY ORATOR

**President Mikhail Gorbachev**

**Former Soviet President/Nobel Laureate**

**Tuesday, October 19, 11:10 am**

**International Leadership**

The Congress of Neurological Surgeons is pleased and honored to welcome President Mikhail Gorbachev, one of the twentieth century's most pivotal leaders, as the Fifth Annual Walter E. Dandy Orator.

As leader of the Soviet Union, he ended the fifty years of nuclear brinkmanship named the Cold War. In an effort to secure relations with the West, Gorbachev signed two broad disarmament pacts, and ended Communist rule in Eastern Europe. He taught the world two new words: perestroika (governmental restructuring) and glasnost (political openness). As a result of his extraordinary achievements, Gorbachev was the recipient of the 1990 Nobel Peace Prize, the Orders of Lenin, the Red Banner of Labor, and the Badge of Honor.

Now retired from politics, Gorbachev continues to strive towards achieving his global vision of peace. In 1992, he founded the Gorbachev Foundation, a non-profit, non-partisan educational foundation dedicated to addressing the challenges of and articulating new priorities for the post-Cold War world.

In 1993, Gorbachev founded the environmental organization, Green Cross International. This is a non-governmental group with chapters in the United States, Russia, The Netherlands, Japan, and Switzerland. Green Cross International is a three-pronged program with a mission to clean up military toxins, assist in the creation of global ecological law, and foster a value shift on the environment.

After graduating from Moscow State University with a law degree, Gorbachev joined the Communist Party of the Soviet Union in 1952, and acted as First Secretary for the Stavropol Komsomol City Committee from 1955 to 1958. He then gained reputation and experience in Stavropol politics. In 1971, he was elected as a member to the Central Committee, Communist Party (CCCP) of the Soviet Union. From 1978 to 1985, he served as Secretary for the CCCP with the responsibility for areas involving agriculture. Gorbachev also served as Deputy of the Supreme Soviet from 1970 to 1990, and acted as Chairman for the Foreign Affairs Committee of the Soviet Union from 1984 to 1985. From 1985 to 1990, he was President of the Presidium of the Supreme Soviet of the USSR.

For the first time since World War II, a generation of children is growing up without the fear that their generation may be the last. President Mikhail Gorbachev will be forever honored for providing the courage and vision to help make that possible.





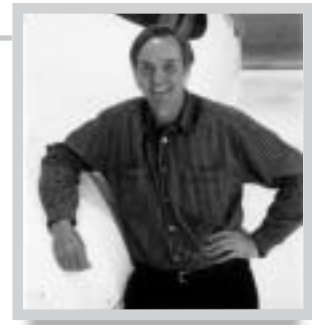
## CNS SPECIAL LECTURER ON CREATIVITY AND INNOVATION

**Burt Rutan**

**Aeronautical Engineer and Designer**

**Wednesday, October 20, 8:15 am**

**Breakthroughs: The Product of Innovators**



Referred to as “the world’s greatest airplane designer,” Burt Rutan is a gifted engineer, an adventurer whose eyes look to the future and whose work has at its heart the vision and passion for advancement of technology.

He is the designer of the legendary Voyager, the first aircraft to circle the world non-stop, without refueling. Like all of Mr. Rutan’s designs, Voyager showcased some of the most innovative and energy-efficient design concepts ever seen.

For his accomplishments, Mr. Rutan has received many awards, including the Presidential Citizen’s Medal, a Collier Trophy, the Chrysler Award for Innovation in Design, “Engineer of the Year” by Design News, the British Gold Medal for Aeronautics and the 2000 Charles A. Lindbergh Award.

Mr. Rutan was raised in Dinuba, California, and received his Bachelor of Science degree in Aeronautical Engineering at California Polytechnic University in 1965. His education includes the Space Technology Institute at Cal Tech and the Aerospace Research Pilot’s School at Edwards Air Force Base. Mr. Rutan holds numerous honorary degrees. A flight test engineer for the U.S. Air Force during the Vietnam War, his projects ranged from fighter spin tests to the XC-142 VSTOL transport.

In 1974, Mr. Rutan formed the Rutan Aircraft Factory (RAF) to develop light homebuilt aircraft. Burt Rutan is the founder and CEO of Scaled Composites LLC, the most aggressive aerospace research company in the world. As a speaker, Mr. Rutan immediately puts to rest the stereotype of the “dull” engineer. His visions for the future – including space travel for the rest of us, an individual small aircraft transportation system and a technology-enabled super society – will stir your imagination.

## SPECIAL LECTURER

**Stephen F. Traynelis, PhD**

**Monday, October 18, 8:35 am**

**Modulation of Glial Scar Formation: Implications for Neurosurgical Patient Care**



Stephen F. Traynelis is an Associate Professor of Pharmacology at the Emory University School of Medicine in Atlanta, GA. He received his BS degree in 1984 from West Virginia University in Chemistry (summa cum laude) and his PhD in Pharmacology from the University of North Carolina, Chapel Hill (1988). He completed postdoctoral fellowships at University College London, London and the Salk Institute, La Jolla, CA, before joining the faculty at Emory University in 1994. He is a previous John Merck scholar, and recipient of other scholarships and awards including the John Moore scholarship and membership to Phi Beta Kappa. He has extensively developed software for simulation and evaluation of ion channel function, and is co-inventor on numerous patent-pending technologies. He has served or is currently serving on the editorial boards of Molecular Pharmacology and CRC Critical Reviews in Neurobiology, and is a reviewer for 23 journals including Science, Nature, Nature Neuroscience, Nature Medicine, Neuron, and the Journal of Neuroscience. He is a member of the NTRC study section at NIH, serves on the Scientific Advisory Board for NeurOp Inc., and has served as Councilor and President of the Atlanta Chapter for the Society for Neuroscience. He is currently a member of the Society for Neuroscience, the Biophysical Society, the American Association for the Advancement of Science, and ASPET.

Dr. Traynelis’ research is focused on the role of protease receptor and glutamate receptor signaling in the central nervous system. He is currently investigating the potential effects of entry into brain tissue of blood-derived proteases capable of activating protease receptors expressed on glia and neurons. One effect involves potentiation of glutamate receptor function through the N-methyl-D-aspartate receptors, which may contribute to neuronal damage under conditions of brain injury. Other effects include the exacerbation of neuronal injury following ischemia, hypoxia, traumatic brain injury, neurotoxin injection. A second line of investigation in the lab deals with the structural and functional properties of glutamate receptors, which are involved in synaptic transmission and synaptic plasticity that may underlie learning and memory. Dr. Traynelis has published or submitted 47 peer-reviewed papers, been an author on 87 abstracts presented at National meetings, written 6 book chapters or invited commentaries, and given 49 international and national lectures/seminars. Dr. Traynelis’ research has been funded by the NIH, the American Epilepsy Foundation, the John Merck Fund, NARSAD, and the Emory University Research Committee.

## MISSION STATEMENT

The Congress of Neurological Surgeons exists for the purpose of promoting the public welfare through the advancement of neurosurgery, by a commitment to excellence in education, and by dedication to research and scientific knowledge. The Congress of Neurological Surgeons maintains the vitality of our learned profession through the altruistic volunteer efforts of our members and the development of leadership in service to the public, to our colleagues in other disciplines, and to the special needs of our fellow neurosurgeons throughout the world and at every stage of their professional lives.

## MEETING PURPOSE

The purpose of the 2004 Annual Meeting of the Congress of Neurological Surgeons is to provide continuing medical education for practicing neurosurgeons, neurosurgical residents in training, and post-graduate neurosurgical fellows, as well as allied health professionals including nurses, physician assistants and clinical specialists.

This education is provided in many forms:

- didactic lectures
- practical (hands-on) courses demonstrating neurosurgical techniques
- small group sessions to provide in-depth coverage of selected topics
- exhibits demonstrating the newest instruments and information known to the neurosurgical community
- posters to provide the latest information regarding clinical and laboratory advances in neurological surgery

## DISCLAIMER

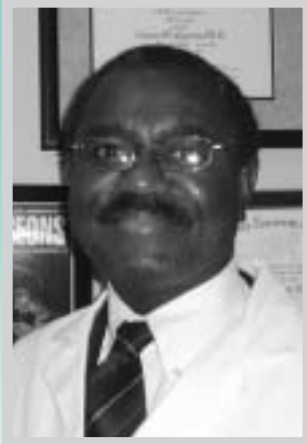
The material presented at the 54th Annual Meeting has been made available by the Congress of Neurological Surgeons for educational purposes only. The material is not intended to represent the only, nor necessarily the best, method or procedure appropriate for the medical situations discussed, but rather 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.

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- Dandy Orator Host
- Honored Guest Liaison
- International Committee Liaisons
  
- Information and Technology  
WINS
- Auxiliary Program

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- Issam A. Awad
- Guy H. McKhann, III
- Meryl A. Severson
- Michael Buchfelder (Germany), Jamie Pinto (Chile), Nobu  
Ikezaki (Japan), Gail Rosseau (USA), Giovanni Broggi (Italy)
- Joel D. MacDonald
- Roxanne Tudor
- Lola Oyesiku

## 2004 SCIENTIFIC PROGRAM COMMITTEE



### Scientific Program Chair

- CME Liaison
- CSNS Liaison
- General Scientific Session I
- General Scientific Session II
- General Scientific Session III
- General Scientific Session IV
- Joint Section Programs
- Luncheon Seminars
- Affiliate Members Program
- Open Scientific Session
- Poster Session
- Practical Courses
- Special Courses Chair
- Special Courses I/II/III
- Resident Program
  
- Digital Masters Video Symposium

### Christopher E. Wolfla

- B. Gregory Thompson, Kenneth Tonymon, Josh Rosenow
- William E. Bingaman
- Christopher C. Getch, Peter C. Gerszten
- P. David Adelson, Mark H. Bilsky
- Nevan G. Baldwin, James M. Markert
- Ann Marie Flannery, Michael M. Steinmetz
- Anthony L. Asher, Murat Gunel, Joseph T. Alexander
- Carl B. Heilman, John Honeycutt, Wesley A. King
- Michael W. Groff
- Benjamin White, Timothy Ryken, Mitesh V. Shah
- Joseph S. Cheng, Robert M. Friedlander, Sean Salehi
- Saleem I. Abdulrauf, Ali R. Rezaei
- Karin M. Muraszko
- Jaimie M. Henderson, Alex B. Valadka, C. Michael Cawley, III
- Kristen O. Riley
- Cargill H. Alleyne, Jr.
- Russell R. Lonser, Ganesh Rao

### DEDICATED TO NEUROSURGICAL EDUCATION

Our sincere thanks and appreciation go out to each committee for their dedication in organizing the 54th CNS Annual Meeting. It is due to each member's never-ending commitment to serve the CNS that we are able to provide excellence in education.



## CNS RESIDENT MEMBERSHIP

When neurosurgical residents need the most current information about breakthroughs in research and treatment options, continuing education opportunities and networking with peers, they turn to the CNS. CNS proudly offers its resident members exceptional benefits and the best educational opportunities.

In keeping with our dedication to neurosurgical education, the CNS continues to offer special programs to assist and encourage residents to attend the Annual Meeting by providing:

- Reduced Annual Meeting registration fee
- Complimentary housing (Limited availability apply now!). If you are not currently a CNS Resident Member, your membership application must be received by August 1 for resident housing consideration.
- Complimentary ticket to Opening Reception
- CNS funded Resident Award
- Complimentary Residents/Honored Guest Luncheon (limited capacity – register early!)
- Reduced fees for Luncheon Seminars
- Resident Recruitment Social

For a one-time membership fee of \$25, Resident Members are also entitled to the following benefits:

- Complimentary annual subscription to **NEUROSURGERY**<sup>®</sup>, the official journal of the CNS
- *Neurosurgery News*, the official newsmagazine of the CNS
- *Clinical Neurosurgery*
- Young Neurosurgeons' Directory CD
- Job Placement Center Access
- Convenient two-step conversion to Active Membership!



### DEAR RESIDENTS:

The 2004 Congress of Neurological Surgeons Annual Meeting is not to be missed! Join us for an exciting array of clinical and scientific presentations on the state-of-the-art in neurosurgical practice.

Benefit from learning the most current information on breakthroughs in research and treatment options, participating in exceptional programs for continuing education, and developing relationships with other neurosurgeons from around the world.

CNS Resident Members are afforded many benefits and we hope you will take full advantage of them. Become a member of one of the top neurosurgical organizations. Please contact Member Services toll free at 877-517-1CNS or via e-mail at [info@1CNS.org](mailto:info@1CNS.org) if you have any questions.

On behalf of the Congress of Neurological Surgeons, I look forward to helping you succeed in the growing field of neurosurgery.

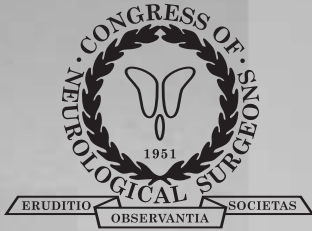
Sincerely,

Kristin O. Riley  
Chair, Resident Committee

### 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! And what better way to attend a Practical Course or Luncheon Seminar at no charge!

The Sergeant-at-Arms Program depends on volunteers like you to ensure the quality and success of our scientific sessions. Not only do you become part of the volunteer force of the CNS, you attend the session you are assigned to free of charge. Sergeant-at-Arms' responsibilities include collecting tickets, distributing and collecting evaluations and giving audio-visual assistance when necessary. Fill out and submit the enclosed form to join the Sergeant-at-Arms Program. Your participation is greatly appreciated.



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Over the last 25 years, thousands of neurosurgeons have relied on the Self Assessment in Neurological Surgery to judge and enhance their surgical knowledge base. SANS *Wired* 2004 is the digital evolution of this time-honored classic.

SANS *Wired* 2004 has been endorsed by the American Board of Neurological Surgery ([www.abns.org](http://www.abns.org)) as a valuable tool to help fulfill the Self Assessment portion of Life-Long Learning for Maintenance of Certification (MOC).

Question format and clinical information contained in SANS *Wired* 2004 will be similar to content in the planned ABNS Recertification/Maintenance of Certification cognitive exams.

**Order SANS *Wired* 2004 today!**

[www.neurosurgeon.org](http://www.neurosurgeon.org)

**AT-A-GLANCE**

1:00 pm – 5:00 pm

Afternoon Practical Courses (PC01 – PC07)

5:00 pm –

Open Evening

**PRACTICAL COURSES**

Afternoon Practical Courses PC01 – PC07

1:00 pm – 5:00 pm

**PC01 CPT Coding: What's New**

**Course Director:**

Gregory J. Przybylski

**Faculty:**

Samuel Hassenbusch,  
Robert R. Johnson,  
William Mitchell,  
Kimberly Pollock, RN, MBA,  
Richard A. Roski

**Learning Objective:**

This course provides a summary of the CPT 2005 coding changes and reviews the 2004 coding changes as well. Subspecialty areas of spine, intracranial, functional/pain surgery will be highlighted. Participants should become familiar with coding changes, their proper application and understand compliance to the regulations upon completion of this course.

**Course Fee: \$375**

**PC02 Applied Spinal Biomechanics**

**Course Director:**

Edward C. Benzel

**Faculty:**

Praveen V. Mummaneni,  
James S. Harrop,  
Jean-Valery Coumans,  
Francesco Chiappetta

**Learning Objective:**

This course presents the physical principles and biomechanical foundations of spinal surgery and stabilization via a didactic and interactive discussion format. Upon completion of this course, participants will be able to apply biomechanical principles and strategies to address clinical problems.

**Course Fee: \$250**

**PC03 Three Dimensional Neurosurgical Anatomy**

**Course Director:**

Albert L. Rhoton, Jr.

**Learning Objective:**

This course will provide three-dimensional microsurgical instruction regarding the anatomy and operative approaches to the ventricles, basal cisterns, cavernous sinus, posterior fossa and cranial nerves. Stepwise operative approaches will be shown in 3D. 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.

**Course Fee: \$250**

**PC04 Operating in the Eloquent Cortex**

**Course Director:**

Jeffrey P. Blount

**Faculty:**

Nicholas M. Barbaro,  
Walter A. Hall,  
Matthew Smyth, Gary Heit

**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, the participant will have an understanding of the available technologies for performing safer and more effective procedures within and around eloquent cortex.

**Course Fee: \$250**

PC05 **Surgical Arthrodesis of the Cervical Spine**

**Course Director:**

Daniel K. Resnick

**Faculty:**

Michael Y. Wang,  
Anthony K. Frempong-Boadu,  
Michael W. Groff,  
Joseph T. Alexander,  
Frank Lamarca,  
Michael P. Steinmetz

**Learning Objective:**

The indications, techniques, and complications of arthrodesis and instrumentation of the cervical spine, including the craniovertebral junction, will be reviewed using lectures, case presentation, and hands-on study using anatomical models. Upon completion of this course, participants will be able to recognize the indications for cervical and craniovertebral junction arthrodesis and instrumentation, and will also be able to describe the technical application of these procedures.

**Course Fee: \$425**

PC06 **Anterior Approaches to the Craniocervical Junction**

**Course Directors:**

Arnold H. Menezes,  
Jeffrey S. Henn

**Faculty:**

Curtis A. Dickman,  
Roberto Delfini

**Learning Objective:**

This course will provide instruction on anterior approaches to the craniocervical junction, including the transoral and lateral extrapharyngeal approaches. Through lecture and cadaveric dissection, upon completion of this course participants will gain exposure to the indications, surgical techniques, and methods of complication avoidance for these procedures.

**Course Fee: \$725**

Featuring  
CNS Honored  
Guest

PC07 **Endovascular Treatment of Aneurysms**

**Course Directors:**

C. Michael Cawley, III,  
Henry H. Woo

**Faculty:**

Robert A. Mericle

**Learning Objective:**

This course will discuss new literature and potential future technology in the endovascular treatment of intracranial aneurysms. Participants will gain exposure to newly developed coil and stent technology in the treatment of wide-necked aneurysms and will observe hands-on delivery of these devices in flow models.

**Course Fee: \$350**

NEW!





**AT-A-GLANCE**

|                      |   |
|----------------------|---|
| 8:00 am – 5:00 pm    | All Day Practical Courses (PC08 – PC14)   |
| 8:00 am – 12:00 Noon | Morning Practical Courses (PC15 – PC19)   |
| 1:00 pm – 5:00 pm    | Afternoon Practical Courses (PC20 – PC27) |
| 6:30 pm – 8:30 pm    | Opening Reception                         |

**PRACTICAL COURSES**

**Full Day Practical Courses (PC08 – PC14)**

**8:00 am – 5:00 pm**

**PC08      Microsurgical Anatomy**

**Course Director:**

Albert L. Rhoton, Jr.

**Co-directors:**

Stephen B. Lewis,

Evandro de Oliveira

**Faculty:**

Ron Smith, Pablo Rubino,

Xiaoguang Tong,

Hiroshe Abe, Hatem El-Khouly,

Chanyoung Choi

**Learning Objective:**

This hands-on course will provide instruction in the exposure of the lateral, third, and fourth ventricles, cavernous sinus, basal cisterns, and cranial nerves with the operating microscope. Upon completion of this course, participants will understand the techniques for exposing the third ventricle and basal cisterns and complete an extradural approach to the cavernous sinus and petrous apex and expose the cranial nerves in the cerebellopontine angle and internal acoustic meatus.

**Course Fee: \$875**

**PC09      Surgical Principles of Peripheral Nerve Surgery**

**Course Directors:**

David G. Kline, Allan H. Friedman

**Faculty:**

Allan J. Belzberg,

Robert J. Spinner,

Robert L. Tiel, Eric L. Zager,

Daniel H. Kim,

John E. McGillicuddy,

Allen H. Maniker

**Learning Objective:**

This course will include a hands-on dissection lab with cadavers. Upon completion of this course, participants will be able to identify the appropriate exposures for specific nerve injuries and entrapment syndromes, perform the anatomical exposure for peripheral nerves, and understand the indications and contraindications for surgical treatment of peripheral nerve disorders.

**Course Fee: \$750**

**PC10      Inpatient & Outpatient Management Dilemmas: For Nurses, Nurse Practitioners and Physician Assistants**

**Course Directors:**

Sarah Dawson, RN, BSN,

Andrea Strayer, MS APNP CNRN

**Faculty:**

Michael W. Groff,

Shannon Hagy, RN,

Ali Mesiwala,

Robin Mozenter, PA,

Virginia Prendergast, MS, NP,

CNRN

Robin Mozenter, PA-C

**Learning Objective:**

Upon completion of this course, the participants will gain an understanding of the foundations of radiographic interpretation of imaging studies utilized in neurosurgery. The learner will differentiate clinical indications for the various radiographic studies and analyze a variety of cranial and spinal case scenarios illustrating the required clinical decision making for allied health professionals in outpatient and inpatient settings. Inpatient unexpected neurologic decline, outpatient triage, as well as complication recognition in both settings will be discussed. *Physician attendees will not be awarded CME credit for this course.*

Nursing contact hours will be provided through AANN.

**Course Fee: \$300**

This session is sponsored by the American Association of Neuroscience Nurses, which is accredited as a provider of nursing continuing education by the American Nurses Credentialing Center's Commission on Accreditation (ANCC-COA). To meet CE standards, receive the appropriate number of contact hours and a certificate of attendance, participants who are registered nurses (RNs) will be expected to complete and return an evaluation form for this session. Participants can earn 9.6 neuroscience nursing contact hours.



**SUNDAY, OCTOBER 17, 2004**

**PC11 Traumatic Adult & Pediatric Brain Injury**

**Course Directors:**

John Ragheb,  
Raj K. Narayan

**Faculty:**

M. Ross Bullock,  
Shelly D. Timmons,  
Anthony Marmarou, PhD,  
William M. Coplin,  
Lori A. Shutter,  
P. David Adelson,  
Jack E. Wilberger, Jr.,  
Ann-Christine Duhaime,  
Jack I. Jallo, Alex B. Valadka, Domenic P. Esposito,  
Geoffrey T. Manley, Franco Servadei, Andrew Maas

**Learning Objective:**

This course focuses on current thinking regarding the non-surgical and surgical treatment of traumatic brain injury in adults and children. Newer monitoring techniques, as well as promising new therapies, will be discussed. The differences between the management of adult and pediatric patients with traumatic brain injury will be emphasized. Upon completion of this course, participants will gain exposure to current management strategies which incorporate appropriate management guidelines.

**Course Fee: \$350**

**PC12 Thoracic & Lumbar Fusion: Emerging Technologies**

**Course Directors:**

Daniel K. Resnick,  
Robert F. Heary,  
Steven L. Ondra

**Faculty:**

Gregory R. Trost,  
Robert F. Heary,  
Richard P. Schlenk,  
Daniel H. Kim,  
Charles Kuntz, IV,  
Sean Salehi, Maurizio Fornari,  
Langston Holly, Michael K. Rosner

**Learning Objective:**

This course provides hands-on experience with exposure, decompression, and reconstruction of the thoracic and lumbar spine from the cervical-thoracic junction to the sacrum. The course will include an in-depth review of current and future technologies applicable to arthrodesis of the thoracolumbar spine. Upon completion of this course, participants will be able to describe anterior, posterior, and posterior-lateral approaches to these regions along with the appropriate instrumentation systems and identify technologies appropriate for specific clinical conditions.

**Course Fee: \$750**

**PC13 Practical Update on Brain Tumors**

**Course Directors:**

Jeffrey Bruce,  
Frederick F. Lang

**Faculty:**

Gene H. Barnett,  
E. Antonio Chiocca,  
Franco DeMonte,  
Nalin Gupta, Mark E. Linskey,  
Michael W. McDermott,  
Andrew T. Parsa, Ian F. Pollack,  
Andrew E. Sloan,  
Frederick G. Barker

**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; discuss current concepts in glioma management including surgical techniques, adjuvant treatments, tumor biology and practical clinical management decisions; and apply current knowledge about brain tumors to daily clinical practice decision making.

**Course Fee: \$300**

**PC14 Skull-Base Approaches for Cerebral Aneurysms**



**Course Director:**

Saleem I. Abdulrauf

**Faculty:**

Harry R. van Loveren,  
Laligam N. Sekhar,  
Steven L. Giannotta,  
Michael T. Lawton,  
Basant Kumar Misra,  
Juha Hernesniemi,  
Fabio Calbucci

**Learning Objective:**

This course will provide exposure to hands-on cadaveric dissection and instruction on skull base (cranio-orbital zygomatic, petrosal, and trans-condylar) approaches for cerebral aneurysms. The potential for increased access using these approaches for the microsurgical treatment of complex aneurysms will be demonstrated. The course will also provide an in-depth review of microsurgical techniques necessary for clip reconstruction of cerebral aneurysms. Upon completion of this course, participants will gain an understanding of intra-operative decision making strategies and complication avoidance.

**Course Fee: \$775**

**PRACTICAL COURSES**

**Morning Practical Courses (PC15 – PC19)**

**8:00 am – 12:00 Noon**

**PC15 Percutaneous Spine Interventions**

**Course Directors:**

Lee R. Guterman,  
Richard D. Fessler

**Faculty:**

Andrew J. Ringer,  
Elad Levy,  
Alan S. Boulos,  
Bernard R. Bendok,  
Jon Taylor Ledlie,  
Ricardo A. Hanel

**Learning Objective:**

This course provides the opportunity for neurosurgeons to learn the fundamental concepts associated with spinal percutaneous interventions. The novice will learn to perform vertebroplasty and be exposed to kyphoplasty. For those with previous experience in these techniques, exposure to various spinal percutaneous devices with hands-on experience will be offered. This will include an opportunity to work with percutaneous disectomy devices, percutaneous delivery or allograft and percutaneous stabilization devices. Upon completion of this course, participants will be able to discuss the indications for vertebroplasty and kyphoplasty, discuss the potential complications and relative indications for kyphoplasty versus vertebroplasty, gain an understanding of the evolving role of minimally invasive devices in the treatment of spinal disease and discuss the relative merits and limitations of percutaneous approaches for spinal disease. This course is a prerequisite for PC20 Kyphoplasty: Novel Technologies.

**Course Fee: \$700**

Disclaimer: Vertebroplasty often involves the insertion of polymethylmethacrylate (PMMA) in the spine. PMMA bone cement is considered a device for FDA purposes. In October 1999 the FDA reclassified PMMA bone cement as a Class II device for its intended use "in arthroplastic procedures of the hip, knee and other joints for the fixation of polymer or metallic prosthetic implants to living bone". The use of a device for other than its FDA-cleared indication is an off-label use. Physicians may use a device off-label if they believe, in their best medical judgement that its use is appropriate for a particular patient. As is the CNS' policy regarding all of its educational offerings, the fact that the use of PMMA bone cement in the spine is discussed in this course does not constitute a CNS endorsement of this use.

**PC16 Operative Colloquium: Masters of Neurological Surgery**

**Course Director:**

Arnold H. Menezes

**Faculty:**

Ossama Al-Mefty,  
John M. Tew, Jr.,  
Duke S. Samson,  
Robert F. Spetzler,  
Robin P. Humphreys,  
Albino Bricolo

**Learning Objective:**

Using lecture, demonstration and question-and-answer sessions, this unique course will provide participants insight into the techniques of our neurosurgical masters in dealing with complex and common neurosurgical problems. Virtual 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.

**Course Fee: \$300**

Featuring  
CNS Honored  
Guest

**PC17 Minimally Invasive Neurosurgical Pain Management**

**Course Directors:**

Jaimie M. Henderson,  
Richard K. Osenbach

**Faculty:**

Robert M. Levy,  
Joshua M. Rosenow,  
Oren Sagher, Konstantin Slavin

**Learning Objective:**

This course will focus on the management of neurosurgical pain syndromes using current minimally invasive techniques. Upon completion of this course, participants will gain exposure to minimally invasive techniques for neuroablation, neuroaugmentation, and primary disease treatment.

**Course Fee: \$600**

**PC18 Adult & Pediatric Spinal Trauma**

**Course Directors:**

Dachling Pang,  
Ashwini Sharan

**Faculty:**

Edward C. Benzel,  
James S. Harrop,  
Mitchell R. Gropper,  
R. John Hurlbert,  
Eric M. Massicotte

**Learning Objective:**

This course focuses on the non-surgical and surgical treatment of spinal trauma in adults and children. Indications for decompression, arthrodesis, instrumentation, and bracing will be discussed. The differences between the management of adult and pediatric patients with spinal injuries will be emphasized. Upon completion of this course, participants will gain exposure to current management strategies which incorporate appropriate management guidelines.

**Course Fee: \$325**

**PC19 Spinal Arthroplasty**

**Course Director:**

Regis William Haid, Jr.

**Faculty:**

Vincent C. Traynelis,  
Robert J. Hacker,  
Richard G. Fessler,  
Stephen M. Papadopoulos,  
Rick Delamarter, Fred H. Geisler

**Learning Objective:**

This course will provide a detailed discussion of the current status of arthroplasty. Upon completion of this course, participants will gain exposure to the indications, instrumentation, and techniques involved in this procedure.

**Course Fee: \$425**

NEW!

**SUNDAY, OCTOBER 17, 2004**

## PRACTICAL COURSES

Afternoon Practical Courses (PC20 - PC27)

1:00 pm - 5:00 pm

### PC20 Kyphoplasty: Novel Technologies

**Course Directors:**

Lee R. Guterman,  
Richard D. Fessler

**Faculty:**

Andrew J. Ringer, Elad Levy,  
Alan S. Boulos,  
Bernard R. Bendok,  
Jon Taylor Ledlie, Ricardo A. Hanel

**Learning Objective:**

Upon completion of this course, participants will learn the indications, techniques, and complication avoidance strategies related to kyphoplasty. Hands-on cadaver experience will allow participants to perform the technique using fluoroscopy at multiple lumbar and thoracic levels. PC15: Percutaneous Spine Interventions is a prerequisite for this course.

**Course Fee: \$750**

### PC21 Mastering Spinal Disorders: Dealing with Complexities

**Course Directors:**

Christopher I. Shaffrey,  
Joseph T. Alexander

**Faculty:**

Robert F. Heary, Ziya L. Gokaslan,  
J. Patrick Johnson, Stephen L. Ondra,  
Michael G. Kaiser, Michael W. Groff,  
Praveen V. Mummaneni, Harel Deutsch,  
Larry Khoo, Langston Holly,  
Sylvain Palmer, Martin D. Herman, Anthony K. Frempong-Boadu, Ehud Mendel

**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 role of minimal access techniques and the artificial disc. Upon completion of this course, participants will be able to describe novel and useful surgical techniques for handling cases such as occipitocervical fusions, thoracic pedicle screws, spinal tumors and deformity, including strategies for complication avoidance and management.

**Course Fee: \$525**

### PC22 Cerebrovascular Critical Care

**Course Director:**

Joshua B. Bederson

**Faculty:**

Owen Samuels,  
Jay M. Findlay,  
Aman B. Patel,  
E. Sander Connolly, Jr.

**Learning Objective:**

This course will discuss diagnostic and therapeutic options, as well as perioperative management in the following conditions: ischemic stroke, intracerebral hemorrhage, subarachnoid hemorrhage and vasospasm. Upon completion of this course, participants will be able to describe the diagnosis and treatment of ischemic stroke, including the use of tissue plasminogen activator and decompressive craniectomy, describe the pathophysiology and treatment of subarachnoid hemorrhage, including prevention of early rebleeding and treatment of vasospasm; and discuss treatment options for intraparenchymal hemorrhage.

**Course Fee: \$350**

### PC23 Contracting & Financial Management: What You Must Know

**Course Director:**

Karen Zupko, President,  
Karen Zupko & Associates

**Learning Objective:**

Developing a strong financial foundation for your practice and using financial reports to make better business decisions is the focus of this course. This course is designed for neurological surgeons who want a firmer hold on the financial issues and contracting strategies in their practice. You'll learn how to make your P & L a more informative and useful tool; set up key financial benchmarks; design a monthly reporting system that can be easily monitored; prevent or limit embezzlement; create an RBRVS-based fee schedule that allows you to measure health plan performance; build the file architecture within your computer system to provide for optimal reporting; and develop a negotiating strategy with health plans that results in bureaucratic reductions and better payments. Practical examples serve as illustration of "how to" do this back in your practice.

**Course Fee: \$375**

### PC24 Minimally Invasive Lumbar Spine Surgery

**Course Directors:**

Maurice M. Smith,  
Noel I. Perin

**Faculty:**

Kevin T. Foley,  
Bruce M. McCormack,  
Seong-Hoon Oh,  
Arthur Williams, Richard G. Fessler

**Learning Objective:**

This course focuses on the indications for and limitations of minimally invasive techniques in the lumbar spine. Upon completion of this course, participants will gain exposure to current minimally invasive surgical techniques, their applications and limitations.

**Course Fee: \$725**



**PC25 Surgical Management of Movement Disorders**

**Course Director:**

Ali R. Rezai

**Faculty:**

Ron L. Alterman,  
Roy A.E. Bakay,  
Nicholas M. Boulis,  
Richard K. Simpson,  
Massimo Scerrati,  
Alim-Louis Benabid

**Learning Objective:**

This course will focus on neurosurgical procedures for the management of movement disorders. Procedures for both neuroablation and neuroaugmentation, including appropriate neuroanatomical targets, will be discussed. Upon completion of this course, participants should be able to understand the mechanisms of deep brain stimulation and DBS programming principles, list patient selection criteria, select preoperative evaluation studies and determine the surgical target of choice for Parkinson's disease, tremor and dystonia, and describe the benefits and adverse effects related to these procedures.

**Course Fee: \$450**

**PC26 Pain of Spinal Origin: A Comprehensive Approach**



**Course Directors:**

Edward C. Benzel,  
Jaimie M. Henderson

**Faculty:**

Kevin T. Foley,  
John C. Oakley

**Learning Objective:**

This course reviews the practical aspects of pain physiology through a discussion of the anatomical structures that have the potential to be painful. Participants will learn how to make an accurate structural diagnosis using the history, physical examination, radiological findings, and confirmatory diagnostic injections. Upon completion of this course, participants will have a greater understanding of the therapeutic options for spinal pain management, including the use of rehabilitation techniques, medications, radiofrequency neurotomy, spinal cord stimulation, and surgery.

**Course Fee: \$350**

**PC27 Cranial Endoscopic Procedures in Neurosurgery**



**Course Directors:**

David F. Jimenez,  
Mark G. Luciano,  
Paul A. Grabb

**Faculty:**

Gail Linskey Rosseau,  
John G. Frazee,  
Michael R. Gaab,  
Giuseppe Cinalli

**Learning Objective:**

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

**Course Fee: \$650**

# OPENING RECEPTION

**6:30 pm – 8:30 pm**

The Congress of Neurological Surgeons invites you to join local experts for a relaxing evening dedicated to appreciating fine wines on Sunday, October 17 from 6:30 pm to 8:30 pm in the Grand Ballroom of the Hilton San Francisco. We'll celebrate California's passion for wine that runs generations deep as we sample high quality local vintages and feast on a gourmet assortment of hors d'oeuvres and desserts. Experience the "California wine country" charm in our vine-covered arbors, splashing fountains, and peaceful garden setting.



Sniff, swirl and sip appreciatively as you are dazzled by the intensely blended flavors. Learn about the history of these wines and the wine making process. Gain insights into food and wine pairings from the experts as you toast to colleagues old and new.

Each Annual Meeting registrant will receive one complimentary ticket to the Opening Reception.

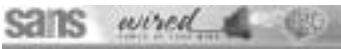
# VISIT THE CNS EXHIBIT HALL



## Location

Level One - Moscone West Convention Center.

## Benefits

- Discuss authoring and manuscript opportunities with **NEUROSURGERY**<sup>®</sup> journal staff.
- Learn about the benefits of CNS membership – pick up a membership application.
- Receive Fellowship information.
- Enhance your leadership skills - learn about volunteer opportunities on the CNS Committees.
- CNS Products on Display
  - **NEUROSURGERY**<sup>®</sup>, the official journal of the CNS.
  - *Neurosurgery News*, the official bi-monthly news magazine of the CNS.
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  - Check Your Email - complimentary email cafés located throughout the Exhibit Hall.

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Show your support of the CNS Exhibitors by visiting the Exhibit Hall. Their financial contributions play an important role in the success of the CNS Annual Meeting.

## Exhibit Hours

|                       |       |                   |
|-----------------------|-------|-------------------|
| Monday, October 18    | ..... | 9:00 am – 4:30 pm |
| Tuesday, October 19   | ..... | 9:00 am – 4:30 pm |
| Wednesday, October 20 | ..... | 9:00 am – 4:00 pm |

## Complimentary Beverage Breaks

Network with colleagues in one of the many refreshment areas.

|           |       |   |
|-----------|-------|---|
| Monday    | ..... | 9:30 am – 10:30 am<br>& 3:30 pm – 4:00 pm |
| Tuesday   | ..... | 9:30 am – 10:30 am<br>& 3:30 pm – 4:00 pm |
| Wednesday | ..... | 9:30 am – 10:30 am<br>& 3:30 pm – 4:00 pm |

**Please Note:** Admittance to the Exhibit Hall is by CNS name badge only. Children under the age of 18 are not allowed in the Exhibit Hall.

## 2004 EXHIBITORS

### A - C

4-D Neuroimaging  
AANS / CNS Sections  
Accuray, Inc.  
Acra-Cut, Inc.  
Ad-Tech Medical Instrument Corp.  
Adagen Medical International, Inc.  
Advanced Bionics Corp.  
Aesculap, Inc.  
Affinity Medical Group  
Aloka  
Alphatec Manufacturing, Inc.  
American Association of Neurological Surgeons  
American Spine, Inc.  
ANS Advanced Neuromodulation Systems  
Anspach Companies  
Apex Medical, Inc.  
ArthroCare Spine  
B-K Medical Systems, Inc.  
Baptist Health  
Berkeley Advanced Biomaterials, Inc.  
Blackstone Medical, Inc.  
BOSS Instruments, Ltd.  
Boston Scientific  
BrainLAB  
Cadwell Laboratories, Inc.  
Cardinal Health, V. Mueller Neuro / Spine Products  
Carl Zeiss Certified  
Carl Zeiss Surgical, Inc.  
Cervitech, Inc.  
ChartLogic - Task Technologies  
Clarus Medical, LLC  
CLOWARD Instrument Corp.  
CMA Microdialysis AB  
Codman, a Johnson & Johnson Company  
Community Tissue Services  
Comphealth  
Confluent Surgical, Inc.  
Congress of Neurological Surgeons  
Cook Incorporated  
Cosman Company, Inc.  
Cryolife, Inc.  
Cyberonics, Inc.

### D - F

DePuy Spine, Inc. a Johnson & Johnson Company  
Designs For Vision, Inc.  
EBI Medical Systems, Inc.  
Elekta Instruments, Inc.  
Ellman Innovations  
Endius Incorporated  
ERBE USA, Inc.  
Fehling Surgical Instruments, Inc.  
Flowtronics, Inc.

### G - I

GE Healthcare  
Globus Medical  
Guilford Pharmaceuticals, Inc.  
HCA Healthcare  
Hospice Worldwide, Inc.  
Image Stream Medical  
Image-Guided Neurologics, Inc.  
IMRIS  
Integra NeuroSciences  
Interpore Cross International

### J - L

Johnson & Johnson Wound Mgmt. a division of ETHICON  
Journal of Neurosurgery  
Karl Storz Endoscopy-America, Inc.  
Keeler Instruments, Inc.  
Kinamed, Inc.  
Kirwan Surgical Products, Inc.  
KLS - MARTIN L.P.  
Koros USA / Koros Instruments  
Kyphon, Inc.  
Leica Microsystems, Inc.  
Life Instrument Corp.

### M - O

Market Access Partners  
Mayfield Clinic  
Medtronic Neurological  
Medtronic Neurologic Technologies / Neurosurgery  
Medtronic Neurologic Technologies / Powered Surgical Solutions  
Medtronic Sofamor Danek  
Medtronic Surgical Navigation Technologies  
Micro Therapeutics, Inc.  
MicroVention, Inc.  
Micrus Corp.  
Mizuho America, Inc.  
Nadia International, Inc.  
Neurosurgery  
New World Rarities  
NS Recruitment Incorporated  
Olsen Medical  
Olympus America, Inc.  
Ortho Development Corporation  
OSI  
OsteoMed L.P.

### P - R

Pacific Research / Sawbones  
Pain Care Holdings, Inc.  
Phoenix Biomedical Corp.  
Pikeville Methodist Hospital  
Platinum Medical  
PMT Corp.  
Porex Surgical, Inc.  
Prescott's, Inc.  
Pro Med Instruments, Inc.  
Proxima Therapeutics, Inc.  
Quality Medical Publishing  
Radionics, Inc., a division of Tyco Healthcare Group LP  
Regeneration Technologies, Inc.  
Regent Surgical Health  
REO SpineLine LLC  
Richard Wolf Medical Instrument Corp.  
RSB Spine

### S - T

Scanlan International, Inc.  
Schaerer Mayfield USA, Inc.  
Siemens Medical Solutions USA, Inc.  
Signus Medical, LLC  
SILVERGlide Surgical Technologies, Inc.  
Spinal Concepts, Inc.  
Spineology, Inc.  
Springer New York, Inc.  
St. Francis Medical Technologies, Inc.  
Stryker  
Surgical Acuity  
SurgiTel / General Scientific Corp.  
Synergetics, Inc.  
Synovis Surgical Technologies  
Synthes  
Thieme Medical Publishers  
Think First National Injury Prevention Foundation

### U - Z

Varian Medical Systems  
W.B. Saunders / Mosby / Churchill / Elsevier Science - Health Science Div.  
W.L. Gore & Associates, Inc.  
W. Lorenz Surgical  
Zimmer Spine

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# ITALIAN SOCIETY OF NEUROSURGERY

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Vice-President .....Francesco Tomasello  
Past-President .....Albino Bricolo  
Secretary .....Roberto Delfini  
Treasurer .....Giancarlo Andrioli

## SPECIAL PRESENTATIONS

Monday, October 18  
Giovanni Broggi  
General Scientific Session I

Monday – Wednesday, October 18-20  
SINch Oral Posters

Tuesday, October 19  
Section on Tumors CNS/SINch Symposium

Thursday, October 21  
Giovanni Broggi  
General Scientific Session IV

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**AT-A-GLANCE**

|                              |  |
|------------------------------|--|
| <b>7:00 am – 12:00 noon</b>  | General Scientific Session I: Surgery at the Anatomical Edge   |
| <b>8:40 am – 9:00 am</b>     | Stephen F. Traynelis, Special Lecturer   |
| <b>9:00 am – 9:20 am</b>     | Vincent C. Traynelis, Presidential Address   |
| <b>9:00 am – 4:30 pm</b>     | Exhibits Open  |
| <b>9:30 am – 10:30 am</b>    | Coffee with Exhibitors   |
| <b>10:30 am – 11:00 am</b>   | Arnold H. Menezes, Honored Guest   |
| <b>12:00 noon – 12:30 pm</b> | Visit Exhibits   |
| <b>12:30 pm – 2:00 pm</b>    | Luncheon Seminars  |
| <b>2:00 pm – 5:30 pm</b>     | Special Course I<br>Section on Cerebrovascular Surgery I<br>Section on Disorders of the Spine and Peripheral Nerves I<br>Section on Stereotactic and Functional Neurosurgery I<br>Section on Neurotrauma and Critical Care I<br>Council of State Neurosurgical Societies |
| <b>3:30 – 4:00 pm</b>        | Refreshments with Exhibitors   |
| <b>5:30 pm</b>               | Open Evening   |

**GENERAL SCIENTIFIC SESSION I**

**Surgery at the Anatomical Edge**

**7:00 am – 12:00 noon**

**Moderators:**

Christopher C. Getch,  
Peter C. Gerszten

**Presiding Officer:**

Vincent C. Traynelis



**Stephen F. Traynelis**



**Vincent C. Traynelis**



**Arnold H. Menezes**

**Learning Objectives:**

This session will explore neurosurgical diagnoses and treatments that push the limits of current anatomical, physiological, and technological understanding. Participants will gain exposure to emerging indications for neurosurgical intervention, emerging techniques in neurosurgical treatment, and promising directions for future study.

|             |  |                     |
|-------------|--|---------------------|
| 7:00 – 7:15 | A New View of the Future:<br>The Role of Virtual Surgery in Neurosurgical Practice . . . . .   | Marc R. Mayberg     |
| 7:15 – 7:30 | Surgery at the Sacral Pelvic Junction . . . . .  | Stephen L. Ondra    |
| 7:30 – 7:45 | Decision Making and Surgical Techniques for<br>Resection of Cranial Facial Skull Base Tumors . . . . .   | Chandra N. Sen      |
| 7:45 – 8:05 | Implications of Technology Trends in Neurosurgery . . . . .  | Charles B. Wilson   |
| 8:05 – 8:20 | Exploring the Limits of Survivability:<br>Rational Indications for Decompressive Craniectomy and Resection of<br>Cerebral Contusions in Adults . . . . . | Austin R.T. Colohan |
| 8:20 – 8:35 | Application of Endoscopy to Third Ventricular Tumors . . . . .   | Charles Teo         |

## MONDAY, OCTOBER 18, 2004

|               |   |                       |
|---------------|---|-----------------------|
| 8:35 – 8:40   | Introduction of Special Lecturer Stephen F. Traynelis . . . . .   | Vincent C. Traynelis  |
| 8:40 – 9:00   | <i>Special Lecture</i><br>Modulation of Glial Scar Formation: Implications for Neurosurgical Patient Care . . . . .                       | Stephen F. Traynelis  |
| 9:00 – 9:05   | Introduction of President Vincent C. Traynelis . . . . .  | Richard G. Ellenbogen |
| 9:05 – 9:20   | Presidential Address . . . . .  | Vincent C. Traynelis  |
| 9:20 – 9:30   | The Internet and Neurosurgery . . . . .   | Joel D. MacDonald     |
| 9:30 – 10:30  | Coffee with Exhibitors  |                       |
| 10:30 – 10:35 | Introduction of Honored Guest Arnold H. Menezes . . . . .   | Vincent C. Traynelis  |
| 10:35 – 11:00 | <i>Honored Guest Presentation</i><br>Embryological Development of the Craniovertebral Junction and<br>its Clinical Implications . . . . . | Arnold H. Menezes     |
| 11:00 – 11:10 | SINch: The Italian Neurosurgical Society . . . . .  | Giovanni Broggi       |
| 11:10 – 11:25 | Metastatic Spinal Cord Compression: The Role for Direct Decompression . . . . .   | Roy A. Patchell       |
| 11:25 – 11:40 | Stenting for Intracranial Artherosclerosis . . . . .  | L. Nelson Hopkins     |
| 11:40 – 12:00 | Treatment of Intramedullary Spinal Cord Tumors:<br>Microsurgery and Molecular Biology . . . . .   | Paul C. McCormick     |

**THE CNS RESIDENT RECRUITMENT SOCIAL**  
Moscone West Convention Center  
Tuesday, October 19, 2004  
5:30 pm – 7:00 pm

### ATTENTION NEUROSURGERY RESIDENTS AND RECRUITERS:

If you are within 2-3 years of completing your residency, we would like to invite you to a Resident Recruitment Social at the Congress of Neurological Surgeons Annual Meeting in San Francisco. After a successful debut at the 2003 Annual Meeting, we are pleased to again offer this event which aims to bring together practicing physicians who are looking to add partners/colleagues to their practice with newly trained Neurosurgeons.

Official exhibiting recruitment firms looking to fill positions, please join us for an opportunity to meet young neurosurgeons who may fit your requirements.

We anticipate an informal gathering with the opportunity to become acquainted with Neurosurgeons across the country. Hopefully, this event will lead to future business partnerships for many of you. The Resident Recruitment Social is being coordinated in close conjunction with the CNS's Job Placement Service.

Please mark the date on your calendar and plan to attend in San Francisco!

Sincerely,

Kristen Riley, MD  
Chief Resident, Neurosurgery, Univ. of AL-Birmingham  
CNS Executive Committee, Chairman, Resident Committee

Michael Cawley, MD  
Emory University  
CNS Executive Committee, Chairman, Job Placement Service

RSVP by October 1 to [info@1CNS.org](mailto:info@1CNS.org) or call 1 877 517 1CNS

## LUNCHEON SEMINARS

12:30 pm – 2:00 pm

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon Seminar Fees are \$60 each (\$45 Resident/Fellows/Nurses)

### M01 Resident/Honored Guest Luncheon – COMPLIMENTARY TO CNS RESIDENT MEMBERS

Register early – space is limited

**Moderators:**

Kristen O. Riley,  
Michael P. Steinmetz

**Faculty:**

Arnold H. Menezes,  
Honored Guest

**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. At the conclusion of this seminar, participants will have a greater knowledge of neurosurgical education, career development, and life-long learning from the perspective of an experienced and honored neurosurgical educator.

### M02 Cervical Arthroplasty

**Moderator:**

Richard G. Fessler

**Faculty:**

Perry J. Argires,  
Maurizio Fornari,  
Stephen M. Papadopoulos,  
Rick Delamarter

**Learning Objective:**

At the conclusion of this seminar, participants will appreciate the current state of the art in cervical disc prosthesis technology and understand the applications for this technology.

### M03 Treatment of Cervical Radiculopathy: Ventral vs. Dorsal Approaches

**Moderator:**

Paul M. Arnold

**Faculty:**

Joseph T. Alexander,  
Giancarlo Andrioli,  
Hae-Dong Jho,  
P. Patrick Johnson

**Learning Objective:**

At the conclusion of this seminar, the participant will be familiar with the advantages and disadvantages of the various surgical approaches for cervical disc herniations with radiculopathy. The participant will be able to discuss the anterior foraminotomy approach with fragmentectomy without fusion, as well as the more traditional approaches.

### M04 Minimally Invasive Spinal Surgery

**Moderator:**

Kevin T. Foley

**Faculty:**

Tim E. Adamson,  
Robert F. Heary,  
Langston Holly,  
Mick J. Perez-Cruet

**Learning Objective:**

At the conclusion of this seminar, participants will understand the current indications and techniques appropriate for minimally invasive spinal surgery and be aware of the expected outcomes and complications associated with these techniques.

### M05 Anterior Skull Base Approaches: What, When and How?

**Moderator:**

Mitesh V. Shah

**Faculty:**

Francesco Biroli,  
Thomas C. Origitano,  
Vikram Prabhu,  
Harry R. Van Loveren

**Learning Objective:**

At the conclusion of this seminar, participants will understand the techniques available in anterior skull base surgery and be able to discuss when these techniques are appropriate to use. Participants will understand the key steps in the successful execution of an anterior skull base approach.

**M06 Acoustic Schwannomas: Options, Approaches and Results**

**Moderator:**

Steven L. Giannotta

**Faculty:**

Sergio Giombini,  
Michael J. Link,  
Mark E. Linskey,  
Madjid Samii

**Learning Objective:**

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

**M07 State of the Art Management of Brain Metastases**

**Moderator:**

Raymond Sawaya

**Faculty:**

Douglas Kondziolka,  
Antonino Raco,  
Mark L. Rosenblum,  
Steven A. Toms

**Learning Objective:**

At the conclusion of this seminar, participants will understand the current status of research pertaining to the treatment of brain metastases and comprehend treatment modalities appropriate for treating intracranial metastases, their complications and results.

**M08 Emerging Techniques in Brain Tumor Diagnosis and Treatment**

**Moderator:**

James T. Rutka

**Faculty:**

Francesco Di Meco,  
Russell R. Lonser,  
James M. Markert,  
Timothy Ryken

**Learning Objective:**

At the conclusion of this seminar, participants will be able to discuss emerging techniques in the diagnosis of brain tumors. Participants will also be able to discuss the role of these techniques in the development and implementation of new therapies for brain tumor patients.

**M09 Cranial Minimally Invasive Techniques Including Endoscopy**

**Moderator:**

Wesley A. King

**Faculty:**

Paolo Cappabianca,  
Amin Kassam,  
Charles Liu,  
Mark G. Luciano

**Learning Objective:**

At the conclusion of this seminar, participants will understand the available techniques and technologies relevant to minimally invasive cranial surgery and neuroendoscopy and discuss the outcomes for a variety of minimally invasive procedures.

**M10 Management of Posterior Circulation Aneurysms**

**Moderator:**

Issam A. Awad

**Faculty:**

H. Hunt Batjer,  
Renato Galzio,  
Thomas A. Kopitnik,  
Jacques J. Morcos

**Learning Objective:**

At the conclusion of this seminar, participants will be aware of relevant research data pertaining to the management of posterior circulation intracranial aneurysms and understand the surgical options for treating the various types of posterior circulation aneurysms, including giant aneurysms.

**M11 Intracranial Aneurysms: Coil or Clip?**

**Moderator:**

L. N. Hopkins, III

**Faculty:**

Saleem I. Abdulrauf,  
Massimo Collice,  
Michael B. Horowitz,  
Sean D. Lavine,  
Christian Raftopoulos

**Learning Objective:**

At the conclusion of this seminar, the participant will be able to discuss the current literature on aneurysm coiling versus clipping. Participants will also be able to discuss which patient or aneurysm features favor clipping versus which patient or aneurysm features favor coiling.



**M12 Carotid Disease: Surgical and Endovascular Management**

**Moderator:**

Robert E. Harbaugh

**Faculty:**

Alvaro Andreoli,  
C. Michael Cawley, III,  
Joel D. MacDonald,  
Peter Rasmussen

**Learning Objective:**

At the conclusion of this seminar, participants will be able to discuss the indications for surgical and endovascular management of carotid artery disease and understand the limitations and complications associated with both the surgical and endovascular management of carotid disease.

**M13 Craniosynostosis**

**Moderator:**

Mark R. Proctor

**Faculty:**

Anthony Avellino,  
Joel C. Boaz,  
Frederick A. Boop,  
Concezio DiRocco,  
Ann Marie Flannery

**Learning Objective:**

At the conclusion of this seminar, participants will understand the craniosynostosis syndromes and discuss the appropriate indications for microsurgical management for each type and comprehend the management of syndromic craniosynostosis. Participants will gain knowledge of new techniques and techniques relevant in the management of craniosynostosis.

**M14 Functional Neurosurgery: Emerging Applications**

**Moderator:**

Ali R. Rezaei

**Faculty:**

Roy A.E. Bakay,  
Alim-Louis Benabid,  
Giovanni Broggi,  
Andres M. Lozano,  
Stephane Palfi

**Learning Objective:**

At the conclusion of this seminar, the participants will be able to discuss emerging applications in functional neurosurgery. Participants will be knowledgeable about cutting edge functional neurosurgery and future technology, as well as indications and complication avoidance for these procedures.

**M15 Sports Medicine in Neurosurgery**

**Moderator:**

Julian E. Bailes

**Faculty:**

Michael L.J. Apuzzo,  
Henry Feuer,  
Joseph C. Maroon,  
Roberto Vagnozzi

**Learning Objective:**

At the conclusion of this seminar, the participant will be able to discuss when an athlete can return to competition after a concussion. Participants will also understand the impact of various other neurosurgical conditions such as shunted hydrocephalus, cervical disc herniation, lumbar disc herniation, spondylolisthesis, Chiari malformation, epilepsy, etc. on participation in sporting events.

**M16 The Use of Current Guidelines in Neurosurgical Practice**

**Moderator:**

Raj K. Narayan

**Faculty:**

Stephen J. Haines,  
Paul G. Matz,  
David W. Newell,  
Beverly C. Walters

**Learning Objective:**

At the conclusion of this seminar, the participant will be familiar with all of the current Guidelines in Neurosurgery Practice. The participant will also be aware of how these guidelines are developed and what other guidelines are in preparation.

**SPECIAL COURSE I**

**Update on Neurosurgical Pain Procedures: Focus on Facial Pain Syndromes**

**2:00 pm – 5:30 pm**

**Course Director:**

Jaimie M. Henderson

**Learning Objectives:**

Upon completion of this Special Course, participants will be able to discuss the classification of facial pain syndromes, define surgical treatment strategies for trigeminal neuralgia, and identify emerging surgical treatment strategies for neuropathic facial pain and headaches.

|             |  |                     |
|-------------|--|---------------------|
| 2:00 – 2:15 | A New System for the Classification of Facial Pain . . . . .     | Kim J. Burchiel     |
| 2:15 – 2:30 | Trigeminal Neuralgia: Microvascular Decompression . . . . .      | Richard K. Osenbach |
| 2:30 – 2:45 | Trigeminal Neuralgia: Gamma Knife . . . . .                      | Robert M. Levy      |
| 2:45 – 3:00 | Trigeminal Neuralgia: Percutaneous Ablative Procedures . . . . . | G. Robert Nugent    |
| 3:00 – 3:15 | Discussion   |                     |
| 3:15 – 3:30 | Neuropathic Facial Pain: Ablative Procedures . . . . .           | Yücel Kanpolat      |
| 3:30 – 4:00 | Refreshments with Exhibitors                                     |                     |
| 4:00 – 4:15 | Neuropathic Facial Pain: Motor Cortex Stimulation . . . . .      | Ali R. Rezaei       |
| 4:15 – 4:35 | Other Stimulation Options: Trigeminal/Deep Brain . . . . .       | Jaimie M. Henderson |
| 4:35 – 4:55 | Headache: DBS for Cluster Headaches . . . . .                    | Giovanni Broggi     |
| 4:55 – 5:15 | Headache: Occipital/Supraorbital Nerve Stimulation . . . . .     | Richard L. Weiner   |
| 5:15 – 5:30 | Discussion   |                     |

**SECTION ON CEREBROVASCULAR SURGERY I**

**Neurosurgery and the Stroke Center**

**2:00 pm – 5:30 pm**

**Moderators:**

C. Michael Cawley, III,  
Christopher C. Getch

**Learning Objectives:**

Upon completion of this session, the participant will understand the critical role a neurosurgeon plays in the care of ischemic stroke by both endovascular and surgical means. Additionally, participants will learn the value of an integrated, multidisciplinary stroke system in the management of both hemorrhagic and ischemic stroke. Specifically, steps at creating a center and JCAHO accreditation will be discussed. Finally, participants will become familiar with the value of an integrated Neurovascular-ICU team, and with data regarding improved outcomes and shorter length-of-stay for these complicated patients.

|             |  |                    |
|-------------|--|--------------------|
| 2:00 – 2:05 | Introduction of the Charles Drake Lecturer . . . . . | Philip E. Stieg    |
| 2:05 – 3:15 | The Charles Drake Lecture . . . . .                  | L. N. Hopkins, III |
| 3:15 – 3:30 | The Stroke Center Concept . . . . .                  | Warren R. Selman   |
| 3:30 – 4:00 | Refreshments with Exhibitors                         |                    |
| 4:00 – 4:15 | SINch Oral Posters 900-904                           |                    |
| 4:15 – 4:35 | The Vascular Neuro-ICU Service . . . . .             | Owen Samuels       |
| 4:35 – 5:15 | Open Papers 700-703                                  |                    |
| 5:15 – 5:30 | Oral Posters 1-5                                     |                    |



## SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES I

2:00 pm – 5:30 pm

**Moderator:**

Stephen M. Papadopoulos

**Learning Objectives:**

At the end of this session, the participants should have a greater understanding of the background behind artificial disc replacement, the current state of technology and its limitations, the indications for disc arthroplasty, and the ongoing investigations to establish safety and efficacy.

|             |  |                     |
|-------------|--|---------------------|
| 2:00 – 2:20 | Considerations in the Design of an Artificial Disc:<br>What Requirements Need to Be Met? . . . . .       | Charles Kuntz, IV   |
| 2:20 – 2:40 | Present Day Technology of Spinal Arthroplasty:<br>What's Available Now and in the Near Future? . . . . . | Lali H.S. Sekhon    |
| 2:40 – 3:00 | Complications of Spinal Arthroplasty: Are We Sure We Should Be Doing This? . . . . .                     | Joseph T. Alexander |
| 3:00 – 3:15 | Discussion   |                     |
| 3:15 – 3:30 | Oral Posters 57-61   |                     |
| 3:30 – 4:00 | Refreshments with Exhibitors   |                     |
| 4:00 – 5:15 | Open Papers 704-711  |                     |
| 5:15 – 5:30 | SINch Oral Posters 930-934   |                     |

## SECTION ON STEREOTACTIC AND FUNCTIONAL NEUROSURGERY I

### Neuromodulation for Epilepsy

2:00 pm – 5:30 pm

**Moderator:**

Andres M. Lozano

**Learning Objectives:**

Upon completion of this session, participants will have a greater understanding of the mechanisms of neuromodulation in patients with epilepsy, the success of trials in patients to date, and the possible future directions in brain stimulation for epilepsy.

|             |  |   |
|-------------|--|---|
| 2:00 – 2:15 | Vagus Nerve Stimulation . . . . .      | Werner Doyle                                |
| 2:15 – 2:30 | Thalamic DBS . . . . .                 | Andres Lozano                               |
| 2:30 – 2:45 | Subthalamic DBS . . . . .              | Alim-Louis Benabid                          |
| 2:45 – 3:00 | Novel Devices and Techniques . . . . . | Brian Litt                                  |
| 3:00 – 3:15 | Neuropace Trial . . . . .              | Joseph R. Smith                             |
| 3:15 – 3:30 | Discussion                             |   |
| 3:30 – 4:00 | Refreshments with Exhibitors           |   |
| 4:00 – 5:15 | Open Papers 712-719 . . . . .          | Moderators: Ali R. Rezai, Konstantin Slavin |
| 5:15 – 5:30 | SINch Oral Posters 940-944             |   |

**JOINT SECTION ON NEUROTRAUMA AND CRITICAL CARE I AND AMERICAN COLLEGE OF EMERGENCY PHYSICIANS**

**Fluid Management in Neurosurgery**

**2:00 pm – 5:30 pm**

**Moderators:**

Jamie Sue Ullman,  
Bizhan Aarabi

**Learning Objectives:**

Participants will become familiar with the options available for fluid management of the critically ill brain injured patient, including the use of crystalloid, colloid, and hypertonic fluids. Participants will be able to discuss the recent evolution of fluid therapy and resuscitation research for traumatic brain injury along with potential future directions.

|             |  |
|-------------|--|
| 2:00 – 2:15 | Synthes Award for Resident Research on Spinal Cord and Spinal Column Injury                  |
| 2:15 – 2:30 | Synthes Award for Resident Research on Craniofacial and Brain Injury                         |
| 2:30 – 2:50 | Fluid Management in the ICU: The Use of Colloids . . . . . J. Claude Hemphill, III           |
| 2:50 – 3:10 | Fluid Management in the ICU: The Use of Hypertonic Fluids . . . . . Geoffrey T. Manley       |
| 3:10 – 3:30 | Fluid Resuscitation Options in the Field and on Arrival in the ED . . . . . Gregory L. Henry |
| 3:30 – 4:00 | Refreshments with Exhibitors   |
| 4:00 – 5:15 | Open Papers 722-729  |
| 5:15 – 5:30 | Oral Posters 27-31   |

**MONDAY**  
**SCIENTIFIC PROGRAM / SPECIAL COURSE / SECTIONS**

**COUNCIL OF STATE NEUROSURGICAL SOCIETIES**

**Neurosurgical Practice Management: Insurance Contract Evaluation and Negotiation. Do We Have a Choice?**

**2:00 pm – 5:30 pm**

**Moderators:**

Joshua M. Rosenow,  
Mick J. Perez-Cruet

**Learning Objectives:**

Upon completion of this session, participants will gain greater understanding of the following socioeconomic topics in neurosurgery: Methods to analyze practice reimbursement data in relationship to medical payor contracts, methods to assess practice overhead and costs of neurosurgical care, effective strategies to negotiate medical insurance contracts, and criteria used to define when to opt out of a medical insurance contract.

|             |  |
|-------------|--|
| 2:00 – 2:15 | The Role of the Practice Manager: Establishing a Partnership . . . . . Mark Mason, Gregory B. Lanford  |
| 2:15 – 2:35 | Evaluating and Negotiating with the Payors: When to Opt Out? . . . . . Nancy Timmons   |
| 2:35 – 3:00 | Panel Discussion: Opting Out . . . . . Moderator: Benjamin B. Lecompte, III<br>Neurosurgeon's Perspective: Opting Out of Medicare . . . . . Gregory J. Przybylski, Ed Kornel |
| 3:00 – 3:30 | Open Papers 730-732  |
| 3:30 – 4:00 | Refreshments with Exhibitors   |
| 4:00 – 4:30 | Oral Posters 17-26   |
| 4:30 – 5:30 | Open Papers 733-739<br>CSNS Resident Award<br>CSNS Young Neurosurgeon Award  |





**AT-A-GLANCE**

|                              |   |
|------------------------------|---|
| <b>7:00 am – 12:00 noon</b>  | General Scientific Session II: Bridging the Gap: Bench to Bedside, Conception to Implementation   |
| <b>9:00 am – 9:10 am</b>     | CNS Resident Award  |
| <b>9:00 am – 4:30 pm</b>     | Exhibits Open   |
| <b>9:10 am – 9:30 am</b>     | Arnold H. Menezes, Honored Guest  |
| <b>9:30 am – 10:30 am</b>    | Coffee with Exhibitors  |
| <b>11:10 am – 12:00 noon</b> | President Mikhail Gorbachev, Fifth Annual Walter E. Dandy Orator  |
| <b>12:00 pm – 12:30 pm</b>   | Visit Exhibits  |
| <b>12:30 pm – 2:00 pm</b>    | Luncheon Seminars   |
| <b>2:00 pm – 5:30 pm</b>     | Special Course II<br>Section on Tumors I<br>Section on Pain I<br>Section on Pediatric Neurological Surgery I<br>Section on Cerebrovascular Surgery II<br>Section on Disorders of the Spine and Peripheral Nerves II |
| <b>3:30 pm – 4:00 pm</b>     | Refreshments with Exhibitors  |
| <b>5:30 pm</b>               | Open Evening  |

**GENERAL SCIENTIFIC SESSION II**

**Bridging the Gap: Bench to Bedside, Conception to Implementation**

**7:00 am – 12:00 noon**

**Moderators:**

P. David Adelson,  
Mark H. Bilsky

**Presiding Officer:**

Nelson M. Oyesiku

**Arnold H. Menezes**



**President Mikhail Gorbachev**



**Learning Objectives:**

This session will explore conception, testing, and implementation of new treatments, strategies, and technologies in neurosurgery. Participants will gain exposure to novel translational therapies that are on the threshold of moving from the research laboratory to clinical practice.

|             |  |                    |
|-------------|--|--------------------|
| 7:00 – 7:15 | Conception, Development and Implementation of Novel Technology . . . . .                     | John Adler         |
| 7:15 – 7:30 | Human Stem Cells: Hype or Reality? . . . . .   | Viviane S. Tabar   |
| 7:30 – 7:45 | Advanced Neuromonitoring: Emerging Technologies and New Directions in Patient Care . . . . . | Geoffrey T. Manley |

|               |  |
|---------------|--|
| 7:45 – 8:00   | Human Gliomas: From Mouse Model to Rational Chemotherapy for Humans . . . . .Eric C. Holland   |
| 8:00 – 8:15   | Keyhole Surgery in the Treatment of Sellar Region Tumors . . . . .Paolo Cappabianca  |
| 8:15 – 8:30   | Hydrocephalus: New Concepts and New Shunts? . . . . .Marvin Bergsneider  |
| 8:30 – 8:45   | Neurostimulation for Epilepsy . . . . .Robert Fisher   |
| 8:45 – 9:00   | New Techniques of Cortical Mapping . . . . .Theodore H. Schwartz   |
| 9:00 – 9:10   | CNS Resident Award   |
| 9:10 – 9:30   | <i>Honored Guest Presentation</i><br>Spectrum of Craniovertebral Junction Disease from a Database of 4,800 Patients . . . .Arnold H. Menezes |
| 9:30 – 10:30  | Coffee with Exhibitors   |
| 10:30 – 10:45 | Advances in Biomaterials that Led to the Artificial Disc . . . . .Regis William Haid, Jr.  |
| 10:45 – 11:05 | Guidelines to Practice Implementation: When Is a New Idea Mature for Practice? . . . .Beverly C. Walters                                     |
| 11:05 – 11:10 | CNS Fellowship Program and Fellowship Presentations . . . . .Paul J. Camarata  |
| 11:10 – 11:15 | Introduction of President Mikhail Gorbachev,<br>the Fifth Annual Walter E. Dandy Orator . . . . .Vincent C. Traynelis                        |
| 11:15 – 12:00 | <i>The Fifth Annual Walter E. Dandy Orator</i><br>International Leadership . . . . .President Mikhail Gorbachev                              |



**THE FIFTH ANNUAL  
WALTER E. DANDY ORATOR**

**President Mikhail Gorbachev**  
**Former Soviet President/Nobel Laureate**  
**Tuesday, October 19, 11:10 am**  
**International Leadership**

## LUNCHEON SEMINARS

12:30 pm – 2:00 pm

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon Seminar Fees are \$60 each (\$45 Resident/Fellows/Nurses)

### T17 Cranial-cervical Junction Surgery

Featuring  
CNS Honored  
Guest

**Moderator:**

Arnold H. Menezes

**Faculty:**

Curtis A. Dickman,  
Ziya L. Gokaslan,  
Noel I. Perin

**Learning Objective:**

At the conclusion of this seminar, the participant will be able to discuss indications, surgical options, expected outcomes, postoperative care and complications of cranial-cervical junction surgery.

### T18 Cervical Spondylotic Myelopathy

**Moderator:**

Dennis J. Maiman

**Faculty:**

Paul R. Cooper,  
Meic H. Schmidt,  
Scott Shapiro,  
Michael Y. Wang

**Learning Objective:**

At the conclusion of this seminar, participants will understand how to assess the syndrome of cervical spondylotic myelopathy and evaluate treatment options available for cervical spondylotic myelopathy, including surgery. Participants will understand outcomes of treatment in patients with cervical spondylotic myelopathy.

### T19 Lumbar Surgery: Motion Sparing Techniques

**Moderator:**

Iain H. Kalfas

**Faculty:**

Kevin T. Foley, Fred H. Geisler,  
Paul J. Marcotte,  
Bruce E. Mathern

**Learning Objective:**

At the conclusion of this seminar, participants will appreciate the current state of the art in motion sparing techniques in lumbar surgery, including lumbar arthroplasty. Participants will gain exposure to emerging technology and understand the applications for this technology.

### T20 Intra-operative Salvage Techniques: “Getting Out of Trouble in Spinal Surgery”

**Moderator:**

Volker K. Sonntag

**Faculty:**

Nevan G. Baldwin,  
Antonio Paolo Fabrizi,  
Daniel K. Resnick,  
Gerald E. Rodts, Jr.

**Learning Objective:**

At the conclusion of this seminar, participants will recognize when intra-operative salvage techniques are necessary in spinal surgery and understand the steps and techniques necessary to rectify intra-operative difficulties.

### T21 Posterior Skull Base Approaches: What, When and How?

**Moderator:**

Jon H. Robertson

**Faculty:**

Albino Bricoli,  
Franco DeMonte,  
Jason Heth, Joung H. Lee

**Learning Objective:**

At the conclusion of this seminar, participants will understand the techniques available in posterior skull base surgery and be able to discuss when these techniques are appropriate to use. Participants will understand the key steps in the successful execution of a posterior skull base approach.

### T22 Technical Aspects of Acoustic Neuroma Surgery

**Moderator:**

Carl B. Heilman

**Faculty:**

Apio Claudio Antunes,  
Johnny B. Delashaw,  
John G. Golfinos,  
William E. Hitselberger

**Learning Objective:**

At the conclusion of this seminar, the participant will be able to discuss the various surgical approaches and surgical techniques that can be used in different situations that arise during acoustic neuroma surgery.

**T23 Multimodality Treatment of Malignant Gliomas**

**Moderator:**

Mitchel S. Berger

**Faculty:**

Anthony L. Asher,  
Segio Maria Gaini,  
Eric C. Holland,  
Frank D. Vrionis

**Learning Objective:**

At the conclusion of this seminar, participants will be able to appreciate the various treatment modalities appropriate for the treatment of malignant gliomas and understand current research pertaining to the management of malignant gliomas. Participants will be able to discuss outcomes associated with various treatment modalities for malignant gliomas.

**T24 Intraoperative Imaging: Current Applications**

**Moderator:**

Peter McLaren Black

**Faculty:**

Gene H. Barnett,  
Neil A. Martin,  
Michael Schulder,  
Miron Skrap

**Learning Objective:**

At the conclusion of this seminar, participants will comprehend the current applications of various imaging techniques in the intra-operative environment and be able to select intra-operative imaging techniques appropriate for a given surgical situation.

**T25 Mastery of Pituitary Surgery**

**Moderator:**

Ian Earl McCutcheon

**Faculty:**

William T. Couldwell,  
Giorgio Frank,  
Massimo Giovanelli,  
Edward R. Laws,  
Gerard S. Rodziewicz

**Learning Objective:**

At the conclusion of this seminar, participants will be aware of nuances in performing pituitary surgery and be able to discuss new techniques and advances in treatment.

**T26 Management of Anterior Circulation Aneurysms**

**Moderator:**

Daniel L. Barrow

**Faculty:**

Cargill H. Alleyne, Jr.,  
Richard D. Fessler,  
Terry H. Horner,  
Giuseppe Lanzino,  
Guilio Maira

**Learning Objective:**

At the conclusion of this seminar, participants will be aware of relevant research data pertaining to the management of anterior circulation intracranial aneurysms and understand the surgical options for various types of anterior circulation aneurysms, including giant aneurysms.

**T27 Arteriovenous Malformations: Multimodality Management**

**Moderator:**

Robert F. Spetzler

**Faculty:**

Vincenzo Antonio d'Angelo,  
William A. Friedman,  
Murat Gunel,  
Demetrius K. Lopes

**Learning Objective:**

At the conclusion of this seminar, participants will understand the various treatment modalities available for the treatment of intracranial arteriovenous malformations and understand the risks and complications associated with each treatment modality.

**T28 Management of Spinal Dysraphism Including Tethered Spinal Cord**

**Moderator:**

Karin M. Muraszko

**Faculty:**

Thomas G. Luerssen,  
Timothy B. Mapstone,  
Dachling Pang,  
Bradley E. Weprin

**Learning Objective:**

At the conclusion of this seminar, the participant will be able to discuss the current understanding of fetal myelomeningocele surgery as well as the post natal treatment of the other forms of spinal dysraphism. Participants will understand the pathophysiology of tethered spinal cord and be able to discuss the indications and complications of tethered spinal cord surgery.



**T29 Surgical Treatment of Movement Disorders**

**Moderator:**

Kenneth A. Follett

**Faculty:**

Isabelle M. Germano,  
Carlo Efisio Marras,  
Joshua M. Rosenow,  
Philip A. Starr

**Learning Objective:**

At the conclusion of this seminar, participants will be aware of the types of movement disorders amenable to surgical treatment and understand the surgical techniques and outcomes for treating movement disorders.

**T30 Peripheral Nerve Surgery: "Must Knows" for Practicing Neurosurgeons**

**Moderator:**

David G. Kline

**Faculty:**

Giovanni Gazzeri,  
Michel Kliot,  
Rajiv Midha,  
Lynda Yang

**Learning Objective:**

At the conclusion of this seminar, participants will understand basic nerve entrapment syndromes and their medical and surgical management and be knowledgeable in the indications and techniques associated with peripheral nerve surgery. Participants will be able to discuss techniques to augment or include peripheral nerve surgery in one's practice.

**T31 Traumatic Brain Injury: Lessons Learned and Future Directions**

**Moderator:**

Alex B. Valadka

**Faculty:**

Donald P. Becker,  
William F. Ganz,  
Geoffrey T. Manley,  
Franco Servadei

**Learning Objective:**

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

**T32 Neurosurgical ICD-9 and CPT Coding: Questions and Answers**

**Moderator:**

John Allan Wilson, Jr.

**Faculty:**

Frederick A. Boop,  
Samuel Hassenbusch,  
William Mitchell,  
Gregory J. Przybylski

**Learning Objective:**

At the conclusion of this seminar, participants will have an understanding of complex neurosurgical coding problems in both spine and cranial surgery and be aware of various strategies to enhance neurosurgical coding in one's practice.

**T33 Allied Health Providers in Neurosurgery: The Opportunities and the Impact**

**Moderator:**

Andrea Strayer, MS,  
APNR, CNRN

**Faculty:**

Virginia Prendergast, MS,  
ANP, CNRN,  
Ellen Dooling, CNP,  
Robin Mozenter, PA-C

**Learning Objective:**

At the conclusion of this symposium the participant will be able to discuss the impact allied health providers have in the health care environment, in particular in terms of role, patient outcomes and cost effectiveness and discuss the variety of allied health provider role opportunities available in neurosurgery. *Physician attendees will not be awarded CME credit for this course.* Nursing contact hours will be awarded through AANN.

This session is sponsored by the American Association of Neuroscience Nurses, which is accredited as a provider of nursing continuing education by the American Nurses Credentialing Center's Commission on Accreditation (ANCC-COA). To meet CE standards, receive the appropriate number of contact hours and a certificate of attendance, participants who are registered nurses (RNs) will be expected to complete and return an evaluation form for this session. Participants can earn 1.2 neuroscience nursing contact hours.



## SPECIAL COURSE II

### Controversies in Neurotrauma and Neurosurgical Emergency Care

2:00 pm – 5:30 pm

**Course Director:**

Alex B. Valadka

**Learning Objectives:**

Upon completion of this course, participants will be able to discuss the rationale for regionalization of neurotrauma care, to describe the reasons for and arguments against the training of general surgeons to perform neurosurgical procedures, to summarize the evidence supporting the role of immediate decompression in patients with acute spinal cord injury, and to explain the benefits and drawbacks of the use of decompressive craniectomy in brain-injured patients.

|             |   |                   |
|-------------|---|-------------------|
| 2:00 – 2:20 | The Argument for Official Designation of Specified Neurotrauma Centers . . . . .                        | M. Ross Bullock   |
| 2:20 – 2:30 | Discussion  |                   |
| 2:30 – 2:50 | General Surgeons <i>Should</i> Be Trained to Perform Neurosurgical Operations . . . . .                 | Robert Mackersie  |
| 2:50 – 3:10 | General Surgeons <i>Should Not</i> Be Trained to Perform Neurosurgical Operations . . . . .             | William F. Ganz   |
| 3:10 – 3:30 | Discussion  |                   |
| 3:30 – 4:00 | Refreshments with Exhibitors  |                   |
| 4:00 – 4:20 | Is Immediate Spinal Cord Decompression Needed in Spinal Cord-Injured Patients? . . .                    | Daniel K. Resnick |
| 4:20 – 4:30 | Discussion  |                   |
| 4:30 – 4:50 | Decompressive Craniectomy for Brain-Injured Patients <i>Is</i> an Over-utilized Operation . . . .       | Alex B. Valadka   |
| 4:50 – 5:10 | Decompressive Craniectomy for Brain-Injured Patients <i>Is Not</i> an Over-utilized Operation . . . . . | William M. Coplin |
| 5:10 – 5:30 | Discussion  |                   |

## SECTION ON TUMORS I

### CNS/SINch Symposium



2:00 pm – 5:30 pm

**Moderators:**

Linda M. Liau,  
Albino Bricolo

**Learning Objectives:**

Participants will be able to describe the diagnosis, natural history, surgical management, and adjuvant treatment of primary CNS neoplasms, meningiomas, pituitary adenomas, craniopharyngiomas, and other neoplasms of the skull base. Participants will be able to discuss new developments and cutting-edge technologies in the field of neuro-oncology and skull base surgery, with perspectives from both the United States and Italy.

|             |   |   |
|-------------|---|---|
| 2:00 – 2:15 | Pituitary Adenomas and Craniopharyngiomas . . . . . | Edward R. Laws                            |
| 2:15 – 2:30 | Pituitary Adenomas and Craniopharyngiomas . . . . . | Enrico Di Divitiis                        |
| 2:30 – 2:45 | Sphenoidal-Cavernous Sinus Meningiomas . . . . .    | Ossama Al-Mefty                           |
| 2:45 – 3:00 | Sphenoidal-Cavernous Sinus Meningiomas . . . . .    | Franco Tomasello                          |
| 3:00 – 3:15 | Anterior Skull Base Tumors . . . . .                | William T. Couldwell                      |
| 3:15 – 3:30 | Anterior Skull Base Tumors . . . . .                | Francesco Di Meco                         |
| 3:30 – 4:00 | Refreshments with Exhibitors                        |   |
| 4:00 – 5:15 | Open Papers 741-748 . . . . .                       | Moderators: Raymond Sawaya, Jeffrey Bruce |
| 5:15 – 5:30 | SINch Oral Posters 949-953                          |   |

**SECTION ON PAIN I**

**Pain Imaging: Diagnostic and Therapeutic Implications**

**2:00 pm – 5:30 pm**

**Moderator:**

Oren Sagher

**Learning Objective:**

At the conclusion of this seminar, participants will have gained a greater understanding of the state-of-the-art of modern day pain imaging and mechanisms of neurostimulation.

|             |   |                   |
|-------------|---|-------------------|
| 2:00 – 2:15 | State-of-the-Art in Modern Day Pain Imaging ..... | Frederick A. Lenz |
| 2:15 – 3:00 | Mechanisms of Neurostimulation .....              | Ali R. Rezai      |
| 3:00 – 3:15 | Discussion  |                   |
| 3:15 – 3:30 | Oral Posters 42-46                                |                   |
| 3:30 – 4:00 | Refreshments with Exhibitors                      |                   |
| 4:00 – 5:05 | Open Papers 749 – 755                             |                   |
|             | Ronald Tasker Award                               |                   |
| 5:05 – 5:30 | SINch Oral Posters 914-919                        |                   |

**SECTION ON PEDIATRIC NEUROLOGICAL SURGERY I**

**Craniophagus Twins: Experience at Three Centers**

**2:00 pm – 5:30 pm**

**Moderator:**

Ann Marie Flannery

**Learning Objectives:**

Participants will gain exposure to the current concepts in preoperative planning and interoperative and post-operative management of Craniophagus twins.

|             |   |   |
|-------------|---|---|
| 2:00 – 2:30 | The Dallas Experience .....   | Dale M. Swift                                 |
| 2:30 – 3:00 | The Children’s Hospital at Montefiore Medical Center Experience ..... | James T. Goodrich                             |
| 3:00 – 3:30 | The UCLA Medical Center Experience .....                              | Jorge Lazareff                                |
| 3:30 – 4:00 | Refreshments with Exhibitors  |   |
| 4:00 – 5:15 | Open Papers 756-763 .....   | Moderators: Andrew G. Parent, Mark R. Proctor |
| 5:15 – 5:30 | SINch Oral Posters 920-924  |   |

## SECTION ON CEREBROVASCULAR SURGERY II

### New Ideas on Vascular Malformations

2:00 pm – 5:30 pm

**Moderators:**

E. Sander Connolly, Jr.,  
Cargill H. Alleyne, Jr.

**Learning Objectives:**

Participants will become facile with a new outlook on the risks associated with AVMs and how this impacts daily management of the patient with such a lesion. Additionally, participants will be exposed to the latest data and philosophies on the treatment of high grade AVMs via radiotherapy fractionated in time or dose. Finally, the participant will gain new insight into the risks associated with cavernous malformations with various presentations, specifically detailing when definitive treatment should be offered.

|             |  |
|-------------|--|
| 2:00 – 2:12 | Galbraith Award  |
| 2:12 – 2:27 | AVMs: New Perspectives on Natural History . . . . . Jay Mohr                                 |
| 2:27 – 2:42 | The High Grade AVM: Fractionated Radiotherapy . . . . . David W. Andrews                     |
| 2:42 – 2:57 | SINch Oral Posters 905-909   |
| 2:57 – 3:30 | Oral Posters 6-16  |
| 3:30 – 4:00 | Refreshments with Exhibitors   |
| 4:00 – 4:20 | Cavernous Malformation Natural History and Management Decisions . . . . . Douglas Kondziolka |
| 4:20 – 5:30 | Open Papers 765-771  |

## SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES II

### Management of Nerve Sheath Tumors

2:00 pm – 5:30 pm

**Moderator:**

Rajiv Midha

**Learning Objectives:**

Upon completion of this seminar, participants will have gained greater understanding of the presenting features and findings of patients with nerve tumors, the natural history and outcomes of treatment for patient with benign and malignant nerve sheath tumors, and the indications for surgical treatment. Additionally, participants will be exposed to different surgical approaches to paraspinal nerve sheath tumors.

|             |   |
|-------------|---|
| 2:00 – 2:15 | Diagnosis and Treatment Options . . . . . Eric L. Zager   |
| 2:15 – 2:30 | Benign Peripheral Nerve Tumors . . . . . Line Jacques     |
| 2:30 – 2:45 | Paraspinal Tumors . . . . . John McGillicuddy             |
| 2:45 – 3:00 | Malignant Nerve Sheath Tumors . . . . . Allan J. Belzberg |
| 3:00 – 3:15 | Discussion  |
| 3:15 – 3:30 | Oral Posters 62-66  |
| 3:30 – 4:00 | Refreshments with Exhibitors                              |
| 4:00 – 5:15 | Open Papers 772-779                                       |
| 5:15 – 5:30 | SINch Oral Posters 935-939                                |





**AT-A-GLANCE**

|                       |   |
|-----------------------|---|
| 7:00 am – 12:00 noon  | General Scientific Session III: Surgery at the Crossroads |
| 8:15 am – 8:50 am     | Burt Rutan, Special Lecturer on Creativity and Innovation |
| 9:00 am – 4:00 pm     | Exhibits Open   |
| 9:10 am – 9:30 am     | Arnold H. Menezes, Honored Guest                          |
| 9:30 am – 10:30 am    | Coffee with Exhibitors                                    |
| 12:00 noon – 12:30 pm | Visit Exhibits  |
| 12:30 pm – 2:00 pm    | Luncheon Seminars   |
| 2:00 pm – 5:30 pm     | Special Course III  |
|                       | Section on Stereotactic and Functional Neurosurgery II    |
|                       | Section on Tumors II                                      |
|                       | Section on Neurotrauma and Critical Care II               |
|                       | Section on Pediatric Neurological Surgery II              |
|                       | Digital Masters Video Symposium                           |
| 3:30 pm – 4:00 pm     | Refreshments with Exhibitors                              |
| 5:30 pm               | Open Evening  |

**GENERAL SCIENTIFIC SESSION III**

**Surgery at the Crossroads**

**7:00 am – 12:00 noon**

**Burt Rutan**



**Arnold H. Menezes**



**Moderators:**

Nevan G. Baldwin,  
James M. Markert

**Presiding Officer:**

Richard G. Ellenbogen

**Learning Objectives:**

This session will explore areas in neurosurgical practice that intersect with other subspecialties. Participants will gain exposure to management options for diagnoses which require multimodality or multidisciplinary treatment paradigms.

|             |   |                    |
|-------------|---|--------------------|
| 7:00 – 7:15 | Fractures of the Upper Thoracic Spine: Approaches and Surgical Management . . . . .                     | Richard G. Fessler |
| 7:15 – 7:30 | Treatment of Cerebral AVM: An Integrated Approach . . . . .   | Michael T. Lawton  |
| 7:30 – 7:45 | Treatment of Spinal AVM: An Integrated Approach . . . . .   | Robert F. Spetzler |
| 7:45 – 8:00 | NPHCA Update . . . . .  | Troy M. Tippet     |
| 8:00 – 8:15 | Movement Disorders:<br>Integrated Treatment Paradigms, the Role of Neurology and Neurosurgery . . . . . | Philip A. Starr    |

## WEDNESDAY, OCTOBER 20, 2004

|               |   |
|---------------|---|
| 8:15 – 8:20   | Introduction of Burt Rutan, Special Lecturer on Creativity and Innovation . . . . .Christopher E. Wolfla            |
| 8:20 – 8:50   | <i>Special Lecture on Creativity and Innovation</i> . . . . .Burt Rutan<br>Breakthroughs: The Product of Innovators |
| 8:50 – 9:10   | Biomechanical Considerations for Stabilization of the Craniovertebral Junction . . . . .Curtis A. Dickman           |
| 9:10 – 9:30   | <i>Honored Guest Presentation</i><br>Craniovertebral Junction Neoplasms . . . . .Arnold H. Menezes                  |
| 9:30 – 10:30  | Coffee with Exhibitors  |
| 10:30 – 10:45 | Emerging Indications for Stereotactic Radiosurgery . . . . .Douglas Kondziolka                                      |
| 10:45 – 11:00 | Multimodality Treatment of Pituitary Tumors . . . . .Nelson M. Oyesiku  |
| 11:00 – 11:05 | Distinguished Service Award Presentation . . . . .Mark N. Hadley  |
| 11:05 – 11:15 | Presidential Acknowledgement . . . . .Vincent C. Traynelis  |
| 11:15 – 11:30 | When It's Not Radiculopathy:<br>Thoracic Outlet, Shoulder and Bracial Plexus Syndromes . . . . .J. Paul Muizelaar   |
| 11:30 – 11:45 | Complex Craniofacial Anomalies in Children . . . . .John A. Persing   |
| 11:45 – 12:00 | Physiologic Alternatives to Autologous Bone Grafts . . . . .Gregory A. Helm   |

## LUNCHEON SEMINARS

12:30 pm – 2:00 pm

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon Seminar Fees are \$60 each (\$45 Resident/Fellows/Nurses)

### W34 Kyphoplasty & Vertebroplasty: Indications, Techniques and Outcomes

**Moderator:**

Peter C. Gerszten

**Faculty:**

Arun P. Amar,  
Giancarlo Guizzardi,  
Christopher D. Kager,  
Richard P. Schlenk

**Learning Objective:**

At the conclusion of this seminar, participants will understand appropriate indications and surgical techniques for kyphoplasty and vertebroplasty. They will also understand the complications and outcomes associated with these procedures.

### W35 Cervical Spine Trauma and Spinal Cord Injury: Advances in Medical and Surgical Management

**Moderator:**

Russ P. Nockels

**Faculty:**

Umberto Agrillo,  
Michael G. Fehlings,  
Michael W. Groff,  
R. John Hurlbert

**Learning Objective:**

At the conclusion of this seminar, participants will appreciate advances in the medical treatment of traumatic spinal cord injury and understand state of the art surgical management of cervical spine trauma and spinal cord injury. Participants will be able to discuss how to clear the spine in a comatose patient.

### W36 Spinal Fusion: Biochemical and Biomechanical Approaches

**Moderator:**

Daniel K. Resnick

**Faculty:**

Edward C. Benzel,  
Pasquale Ciappetta,  
Greg Helm,  
William Charles Welch

**Learning Objective:**

At the conclusion of this seminar, participants will understand how to evaluate new biochemical advances for augmentation of spinal fusion and discuss the biomechanics relevant to spinal fusions in the cervical, thoracic and lumbar spine.

### W37 Treatment of Spinal Tumors

**Moderator:**

Mark H. Bilsky

**Faculty:**

Jacques Brotchi,  
Paul C. McCormick,  
Paul D. Sawin,  
Jeffrey S. Weinberg

**Learning Objective:**

At the conclusion of this seminar, participants will be aware of current diagnostic and treatment strategies for primary and metastatic tumors of the spine. Participants will be able to discuss the indications for microsurgery, reconstruction, and stereotactic radiosurgery in the treatment of patients harboring these lesions.

### W38 Intra-operative Salvage Techniques: “Getting Out of Trouble in Cranial Surgery”

**Moderator:**

Laligam N. Sekhar

**Faculty:**

Arthur L. Day,  
Joseph M. Piepmeier,  
Duke S. Samson,  
Pietro Primo Versari

**Learning Objective:**

At the conclusion of this seminar, participants will recognize when intra-operative salvage techniques are necessary in cranial surgery and understand specific techniques for rectifying difficulties in cranial surgery.

**W39 Intraventricular Tumor Surgery**

**Moderator:**

Albert L. Rhoton, Jr.

**Faculty:**

Michael L.J. Apuzzo,  
Alan Cohen,  
Kerry R. Crone,  
Roberto Delfini

**Learning Objective:**

At the conclusion of this seminar, the participant will be knowledgeable of intraventricular anatomy, ventricular tumor pathology, and operative approaches to the ventricles. The participants will be able to discuss the indications, outcome and complications of the various approaches to the cerebral ventricles.

**W40 Endovascular Management of Intracranial Aneurysms: Indications, Techniques and Results**

**Moderator:**

Robert H. Rosenwasser

**Faculty:**

Kai U. Frerichs,  
Lee R. Guterman,  
Aman B. Patel,  
Henry H. Woo

**Learning Objective:**

At the conclusion of this seminar, participants will understand the indications for endovascular management of intracranial aneurysms and understand various endovascular techniques available for aneurysm treatment. Participants will be able to discuss the results of endovascular versus open management of intracranial aneurysms.

**W41 Management of Unruptured Intracranial Aneurysms**

**Moderator:**

Robert A. Solomon

**Faculty:**

Robert M. Friedlander,  
Michael T. Lawton,  
Robert A. Mericle,  
Alberto Pasqualin

**Learning Objective:**

At the conclusion of this seminar, participants will be aware of relevant research data pertaining to the management of unruptured intracranial aneurysms and understand surgical options for various types of unruptured intracranial aneurysms, including giant aneurysms.

**W42 Controversies in the Management of Chiari I Malformations**

**Moderator:**

Richard G. Ellenbogen

**Faculty:**

Ulrich Batzdorf,  
Carlo Mazza,  
Thomas H. Milhorat,  
Edward H. Oldfield

**Learning Objective:**

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

**W43 Robotics, Telepresence and Future Technology**

**Moderator:**

John G. Frazee

**Faculty:**

John Adler,  
Howard M. Eisenberg,  
Marc R. Mayberg,  
Garnette R. Sutherland

**Learning Objective:**

At the conclusion of this seminar, the participant will be able to discuss the use of robotics and telepresence in Neurosurgery. The participant will be able to discuss the future trends in this technology.



**W44 International Luncheon Seminar: International Opportunities in Neurosurgery**

**Moderator:**

Gail Linsky Rosseau

**Faculty:**

Merwyn Bagan,  
Frank Culicchia,  
Robert J. Dempsey,  
Daniel F. Kelly

**Learning Objective:**

At the conclusion of this seminar, participants will be able to identify the volunteer opportunities available in international neurosurgery, name several sites where such neurosurgical volunteer activities may be carried, summarize the steps required to initiate such a process, and describe the benefits to the volunteer and to the site from such activity.

**W45 Concepts in Epilepsy Surgery**

**Moderator:**

Dennis D. Spencer

**Faculty:**

William E. Bingaman,  
Giorgio Lo Russo,  
Guy M. McKhann,  
Edie E. Zusman

**Learning Objective:**

At the conclusion of this seminar, participants will recognize 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.

**W46 Pain: Procedures and Applications**

**Moderator:**

Richard K. Osenbach

**Faculty:**

Kim J. Burchiel,  
Jaimie M. Henderson,  
Mark D. Johnson,  
Mario Meglio

**Learning Objective:**

At the conclusion of this seminar, participants will be aware of various procedures appropriate for the surgical management of pain. Participants will understand indications for these techniques and the applications of various technologies in the surgical management of pain.

**W47 Neurosurgical Practice: Enhancement, Compliance and Development**

**Moderator:**

Craig A. Van Der Veer

**Faculty:**

Mark Camel,  
Anil Nanda

**Learning Objective:**

At the conclusion of this seminar, participants will appreciate various techniques that can enhance neurosurgical practice, discuss important compliance matters relevant to the practice of neurosurgery and be aware of various tools helpful in the development of a neurosurgical practice.

**SPECIAL COURSE III**

**Neurosurgery Professional Liability Litigation: A 360 Degree Perspective**

**2:00 pm – 5:30 pm**

**Course Directors:**

William E. Bingaman,  
Victoria Vance, Esq.

**Learning Objectives:**

Upon completion of this Special Course, participants will be able to define strategies to minimize the liability associated with providing neurosurgical care, understand the components of the medical liability process, and identify the mechanisms to bring about effective tort reform.

|             |   |  |
|-------------|---|--|
| 2:00 – 2:05 | Introduction . . . . .  | William E. Bingaman  |
| 2:05 – 2:30 | Minimizing Medical Liability Risk . . . . .                     | Victoria Vance, Esq.,<br>Director of Legal Affairs, Office of General Counsel, Cleveland Clinic Foundation |
| 2:30 – 2:50 | Mock Trial: Plaintiff Argument . . . . .                        | Anna Carulas, Esq., Partner, Roetzel & Andress   |
| 2:50 – 3:10 | Mock Trial: Defense Argument . . . . .                          | Ingrid Zajac, Esq., Senior Associate, Roetzel & Andress  |
| 3:10 – 3:15 | Plaintiff Rebuttal . . . . .                                    | Anna Carulas, Esq.   |
| 3:15 – 3:30 | Wrap-up/Verdict/Audience Participation . . . . .                | Victoria Vance, Esq.   |
| 3:30 – 4:00 | Refreshments with Exhibitors                                    |  |
| 4:00 – 4:30 | When to File a Case: Plaintiff's Attorney Perspective . . . . . | Michael A. Kelly, Esq.,<br>Partner/Vice President, Walkup, Melodia, Kelly, Wecht & Schoenberger            |
| 4:30 – 4:50 | Defensive Medicine: The Neurosurgeon's Perspective . . . . .    | James R. Bean  |
| 4:50 – 5:15 | Plotting a Course of Action: NPHCA/DMLR . . . . .               | Stewart B. Dunsker,<br>Gail Linskey Rosseau, Katie O. Orrico   |
| 5:15 – 5:30 | Discussion . . . . .  | Course Faculty   |

**SECTION ON STEREOTACTIC AND FUNCTIONAL NEUROSURGERY II**

**Robotics in Neurosurgery**

**2:00 pm – 5:30 pm**

**Moderator:**

Michael Schulder

**Learning Objectives:**

Upon completion of this session, participants will have greater understanding of the basic concepts of surgical robotics, the results of actual robotic neurosurgery to date, and the limitations of robots in neurosurgery.

|             |   |  |
|-------------|---|--|
| 2:00 – 2:15 | Developing a Neurosurgical Robot . . . . .              | Garnette R. Sutherland                       |
| 2:15 – 2:30 | Experience with the NeuroMate Robot . . . . .           | Alim-Louis Benabid                           |
| 2:30 – 2:45 | Possibilities with the da Vinci Robot . . . . .         | Peter D. Le Roux                             |
| 2:45 – 3:00 | Applications of Robotics in Neurosurgery . . . . .      | John Adler                                   |
| 3:00 – 3:15 | Stereotactic and Functional Neurosurgery Resident Award |  |
| 3:15 – 3:30 | Oral Posters 67-71                                      |  |
| 3:30 – 4:00 | Refreshments with Exhibitors                            |  |
| 4:00 – 5:15 | Open Papers 781-788 . . . . .                           | Moderators: Ron L. Alterman, Robert E. Gross |
| 5:15 – 5:30 | SINch Oral Posters 945-948                              |  |

## SECTION ON TUMORS II

2:00 pm – 5:30 pm

**Moderators:**

Michael W. McDermott,  
Raymond Sawaya

**Learning Objectives:**

Participants will become familiar with current research in the biology, diagnosis, and treatment of central nervous system tumors. Participants will be able to discuss the rationale for treatment and management options for selected cerebral and spinal neoplasm

|             |  |
|-------------|--|
| 2:00 – 2:05 | Tumor Section Award Presentations  |
| 2:05 – 2:20 | Preuss Resident Research Award   |
| 2:20 – 2:35 | Tumor Young Investigator Award   |
| 2:35 – 2:50 | Mahaley Clinical Research Award  |
| 2:50 – 3:30 | Oral Posters 72-83   |
| 3:30 – 4:00 | Refreshments with Exhibitors   |
| 4:00 – 5:15 | Open Papers 792-799 . . . . .Moderators: Behnam Badie, Ronald E. Warnick |
| 5:15 – 5:30 | SINch Oral Posters 954-958   |

## SECTION ON NEUROTRAUMA AND CRITICAL CARE II

### Ethics in Neurotrauma

2:00 pm – 5:30 pm

**Moderators:**

Shelly D. Timmons,  
Peter B. Letarte

**Learning Objectives:**

Participants will become familiar with decision making at the end of life and the issues facing the neurosurgeon. Participants will be able to discuss contemporary concepts in the management of patients with severe brain injury and the choice to withdraw care.

|             |   |
|-------------|---|
| 2:00 – 2:15 | Should I Let this Patient Die? When Is Care Futile? Withdrawing Care in the Field . . . .S. Marshall Isaacs |
| 2:15 – 2:30 | Should I Let this Patient Die? When Is Care Futile? Withdrawing Care in the ED . . .Catherine A. Marco      |
| 2:30 – 2:45 | Decision Making at the End of Life . . . . . John Luce  |
| 2:45 – 3:00 | Discussion  |
| 3:00 – 3:30 | Oral Posters 32-41  |
| 3:30 – 4:00 | Refreshments with Exhibitors  |
| 4:00 – 5:15 | Open Papers 800-807   |
| 5:15 – 5:30 | SINch Oral Posters 910-913  |

**WEDNESDAY, OCTOBER 20, 2004**

## SECTION ON PEDIATRIC NEUROLOGICAL SURGERY II

Pediatric Neurosurgery: Scientific Section

**2:00 pm – 5:30 pm**

**Moderators:**

Joseph R. Madsen,  
Bradley E. Weprin

**Learning Objectives:**

Participants will gain exposure to the most current information in Pediatric Neurosurgery.

|             |                              |
|-------------|------------------------------|
| 2:00 – 3:00 | Open Papers 800-813          |
| 3:00 – 3:30 | Oral Posters 47-56           |
| 3:30 – 4:00 | Refreshments with Exhibitors |
| 4:00 – 5:15 | Open Papers 814-821          |
| 5:15 – 5:30 | SINch Oral Posters 925-929   |

## DIGITAL MASTERS VIDEO SYMPOSIUM

**2:00 pm – 5:30 pm**

**Moderators:**

Russell R. Lonser  
Ganesh Rao

**Learning Objectives:**

Participants will be able to describe the surgical approach and pitfalls to a variety of neurosurgical disorders. A series of authorities will present brief video demonstrations of surgical management.

**Faculty:**

Ronald I. Apfelbaum, Albino Bricolo, Giovanni Broggi, Maurice Choux, Alan H. Crockard, Vinko V. Dolenc, Rudolf Fahlbusch, Richard G. Fessler, Ziya L. Gokaslan, Nobuo Hashimoto, L. N. Hopkins, III, Yucel Kanpolat, Amin Kassam, David G. Kline, Shigeaki Kobayashi, Edward R. Laws, Andres M. Lozano, Joel D. MacDonald, Edward H. Oldfield, Axel Perneczky, Luca Regli, Albert L. Rhoton, Jr., Marc Sindou, Robert F. Spetzler, M. Gazi Yasargil

**WEDNESDAY**  
SCIENTIFIC PROGRAM / SPECIAL COURSE / SECTIONS

## To Our International Colleagues

Join your colleagues from around the world  
for a festive celebration!

### CNS International Reception

**6:30 pm – 8:00 pm**

**Wednesday, October 20, 2004**

Hilton San Francisco

Imperial Ballroom

during the 2004 CNS Annual Meeting

Hosted by the Congress of Neurological Surgeons and Lippincott, Williams & Wilkins



**AT-A-GLANCE**

|                             |  |
|-----------------------------|--|
| <b>7:00 am – 12:00 noon</b> | General Scientific Session IV: A Lifetime of Experience, A Future of Possibilities |
| <b>9:10 am – 9:30 am</b>    | Arnold H. Menezes, Honored Guest   |
| <b>9:30 am – 10:30 am</b>   | Coffee Break   |
| <b>12:00 noon</b>           | Adjourn  |

**GENERAL SCIENTIFIC SESSION IV**

**A Lifetime of Experience, A Future of Possibilities**

**7:00 am – 12:00 noon**



**Arnold H. Menezes**

**Moderators:**

Ann Marie Flannery,  
Michael P. Steinmetz

**Presiding Officer:**

Douglas Kondziolka

**Learning Objectives:**

This session will explore current concepts in the treatment of common neurosurgical diagnoses from the perspective of practitioners who have devoted their careers to the management of these disorders. Participants will gain exposure to current management strategies in light of past successes and future opportunities.

|               |  |
|---------------|--|
| 7:00 – 7:15   | Treatment of Posterior Circulation Aneurysms: A Process in Evolution . . . . .Duke S. Samson   |
| 7:15 – 7:30   | Surgical Management of Cervical Disc Disease:<br>From No Fusion to Fusion and Back Again . . . . .Volker K. Sonntag                                  |
| 7:30 – 7:45   | Spinal Dysraphism: Impact of Technique and Technology on Expectations . . . . .David G. McLone   |
| 7:45 – 8:00   | From Ablation to Neuroaugmentation:<br>Surgical Management of Movement Disorders . . . . .Alim L. Benabid  |
| 8:00 – 8:15   | Decompression, Arthrodesis and Arthroplasty:<br>Decision Making in the Surgical Treatment of Lumbar Disc Disease . . . . .Dennis J. Maiman           |
| 8:15 – 8:30   | Mere Survival Is Not Enough: Current and Future Management of Hydrocephalus . . .Marion L. Walker  |
| 8:30 – 8:45   | One Size Does Not Fit All: Choosing a Treatment Strategy for Trigeminal Neuralgia . . .Giovanni Broggi   |
| 8:45 – 9:00   | Evolution of Management Strategies for Cerebral Gliomas:<br>The Effects of Science and Technology . . . . .Mitchel S. Berger                         |
| 9:00 – 9:10   | Neurosurgery in Africa: The World Federation of Neurological Societies<br>13th World Congress of Neurological Surgery . . . . .Abdeslam El Khamlichi |
| 9:10 – 9:30   | <i>Honored Guest Presentation</i><br>Chiari Malformations and Syringomyelia . . . . .Arnold H. Menezes   |
| 9:30 – 10:30  | Coffee Break   |
| 10:30 – 10:45 | Moving Beyond Lesional Epilepsy: Surgical Treatment of Seizure Disorders . . . . .Dennis D. Spencer  |
| 10:45 – 11:00 | The Management of Traumatic Brain Injury:<br>The Development of Guidelines and Their Influence . . . . .Jack E. Wilberger, Jr.                       |
| 11:00 – 11:15 | Cervical Spine Fracture Management in the Era of Internal Fixation . . . . .Stephen M. Papadopoulos  |
| 11:15 – 11:30 | Lateral Skull Base Approaches in the Era of Stereotactic Radiosurgery and<br>Endovascular Approaches . . . . .Ossama Al-Mefty                        |
| 11:30 – 11:45 | Not Your Father's Lobotomy: The Rebirth of Psychosurgery . . . . .Ali R. Rezai   |
| 11:45 – 12:00 | Focus on Stereotactic Radiosurgery: A Convergence of Technological Streams . . . . .L. Dade Lunsford   |
| 12:00 noon    | Adjourn  |

**THURSDAY**  
**SCIENTIFIC PROGRAM / GENERAL SCIENTIFIC SESSION**

## MONDAY, OCTOBER 18

## SECTION ON CEREBROVASCULAR SURGERY I

4:36 - 4:45 PM 700

EC-IC Bypass for Occlusive Cerebrovascular Disease and Intracranial Aneurysms in the United States, 1992-2001: A Population-based Study

*Sepideh Amin-Hanjani, Bob S. Carter, William E. Butler, Christopher S. Ogilvy, Fred G. Barker*

4:45 - 4:54 PM 701

Determinants of Intellectual Outcome after Surgical Revascularization in Pediatric Moyamoya Disease: A Multivariate Analysis

*Kuroda Satoshi, Houkin Kiyohiro, Ishikawa Tatsuya, Iwasaki Yoshinobu*

4:54 - 5:03 PM 702

Temporal Variation of Induction Neurogenesis in a Rat Model of Transient Middle Cerebral Occlusion

*John M. Abrahams, Dheeraj Khurana, Christopher J. Lenart, Solen Gokhan, Mark F. Mehler*

5:03 - 5:12 PM 703

Endosaccular Treatment of Intracranial Aneurysms Using A New Hydrogel-Coated Self-expandable Coil (HydroCoil): Early Experience from a Single Large Volume Center

*Jonathan I. Brisman, Joon K. Song, Yasunari Niimi, David Langer, Mark J. Kupersmith, Patricia Fernandez, Alejandro Berenstein*

## SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES I

4:00 - 4:09 PM 704

Prospective, Randomized, Multicenter Trial of Artificial Disc vs. Fusion for Single Level Lumbar Degenerative Disc Disease: A 2-Year Follow-up IDE Study

*Fred H. Geisler, Scott L. Blumenthal, Paul C. McAfee, Richard D. Guyer, Stephen H. Hochschuler, Rolando Garcia Jr., John J. Regan*

4:09 - 4:18 PM 705

Cervical Disc Arthroplasty: A Controlled Randomized Prospective Study with Intermediate Follow-up Results from One Center

*Robert J. Hacker*

4:18 - 4:27 PM 706

A Prospective, Randomized, Controlled Investigation of the Prestige Cervical Disc: Early Experience at a Participating Investigational Site

*Wade M. Ceola, Charles Mace*

4:27 - 4:36 PM 707

Phase 1 Veterinary Trial of Intravenous/Topical Polyethylene Glycol in Natural Occurring Dog Complete Spinal Cord Injury

*Scott A. Shapiro, Richard Borgens, Peter Laverty, Alena Leskovar, Joan Coates, William Widmer, James Toombs, Scott Purvines*

4:36 - 4:45 PM 708

Effect of Artificial Disc Placement on Facet Loading: Unconstrained vs. Semi-constrained

*Missoum Moumene, Fred H. Geisler*

4:45 - 4:54 PM 709

A Prospective, Randomized, Multicenter Evaluation of a Carbon Fiber Reinforced Polymer Cage for Anterior Cervical Discectomy and Fusion

*Carl Lauryssen, John Brantigan, Daniel H. Kim, David A. Wiles, Michael O'Brien, Faisal Albanna*

4:54 - 5:03 PM 710

TLIF: A Comparison of Rh-BMP2 and Iliac Crest Autograft. Is Rh-BMP2 Superior?

*Praveen V. Mummaneni, Jeff Pan, Gerald E. Rodts, Regis W. Haid*

5:03 - 5:12 PM 711

Spine Stereotactic Radiosurgery: Evaluating Toxicity and Efficacy

*Deborah L. Benzil, Mehran Saboori, Ronald Rocchio, Chitti R. Moorthy, Alon Mogilner*

## SECTION ON STEREOTACTIC AND FUNCTIONAL NEUROSURGERY I

4:00 - 4:09 PM 712

Neurogenesis in Adult Human Neocortical Epilepsy

*Jorge A. Gonzalez-Martinez, Gabriel Moddel, Imad M. Najm, Hans O. Luders, William E. Bingaman*

4:09 - 4:18 PM 713

Re-operation in Failed Epilepsy Surgery

*Jorge A. Gonzalez-Martinez, Teeradej Srikiyvilakul, William E. Bingaman*

**4:18 - 4:27 PM** **714**  
 Real-time, In Vivo, Imaging of Convective Distribution of a Low Molecular Weight Tracer  
*David Croteau, Stuart Walbridge, Paul F. Morrison, John A. Butman, Alexander O. Vortmeyer, Dennis Johnson, Edward H. Oldfield, Russell R. Lonser*

**4:27 - 4:36 PM** **715**  
 Multipotent Astrocytes Mature into Neurons in the Adult Mammalian Brain  
*Dean D. Lin, Bjorn Scheffler, Noah Walton, Katrin Goetz, Dennis Steindler, Steven Roper*

**4:36 - 4:45 PM** **716**  
 Defining the Role of Stereotactic Radiosurgery in the Management of Newly Diagnosed, Multiple (3 or More) Intracranial Metastases: Is Whole Brain Radiation Necessary?  
*Mark Shaya, Ajay Jawahar, Peter Campbell, Federico Ampil, Brian Willis, Donald Smith, Anil Nanda*

**4:45 - 4:54 PM** **717**  
 Decreased Glutamine Synthesis in Human Temporal Lobe Epilepsy: Chicken or Egg?  
*Guy M. McKhann, Xiaoping Wu, Robert R. Goodman, Peter D. Crino, Alexander A. Sosunov*

**4:54 - 5:03 PM** **718**  
 Frameless Stereotactic Ventriculoperitoneal Shunting for Pseudotumor Cerebri: An Outcomes Comparison vs. Lumboperitoneal Shunting  
*Matthew J. McGirt, Graeme Woodworth, George Thomas, Neil Miller, Michael Williams, Daniele Rigamonti*

**5:03 - 5:12 PM** **719**  
 Ventriculoperitoneal Shunting for Idiopathic Normal Pressure Hydrocephalus: Predictors of Treatment Response and Analysis of Long-term Outcomes  
*Matthew J. McGirt, Graeme Woodworth, Alex Coon, George Thomas, Michael Williams, Daniele Rigamonti*

## **SECTION ON NEUROTRAUMA AND CRITICAL CARE I**

### **Synthes Award for Resident Research in Spinal Cord and Spinal Column Injury**

**2:00 - 2:15 PM** **720**  
 Granulocyte Macrophage Colony Stimulating Factor Decreases Apoptosis and Improves Neurologic Functions in Spinal Cord Injured Rats  
*Yoon Ha, Yoon Seung-Hwan, Dong-Keun Hyun, Eun Young Kim, Hyung chun Park, Chong Woon Park*

### **Synthes Award for Resident Research in Craniofacial and Brain Injury**

**2:15 - 2:30 PM** **721**  
 Normoxic Ventilatory Resuscitation following Controlled Cortical Impact Reduces Reactive Oxygen Species-mediated Protein Nitration in the Hippocampus  
*Edward S. Ahn, Gary Fiskum*

**4:00 - 4:09 PM** **722**  
 Human Recombinant Factor VII for Emergency Reversal of Coagulopathy in Neurosurgical Patients  
*Ben Roitberg, Obinna Kennedy, Sepideh Amin-Hanjani*

**4:09 - 4:18 PM** **723**  
 Antimicrobial-impregnated External Ventricular Catheters: Does the Very Low Infection Rate Observed in Clinical Trials Apply to Daily Clinical Practice?  
*Chris A. Sloffer, Lori Augspurger, Anne Wagenbach, Giuseppe Lanzino*

**4:18 - 4:27 PM** **724**  
 Injury Patterns from Operation Iraqi Freedom Seen at Walter Reed Army Medical Center and National Naval Medical Center  
*Chris Neal, Randy Bell, Mario Cardoso, Ross Moquin, James Ecklund*

**4:27 - 4:36 PM** **725**  
 USNS Comfort: Lessons Learned from Operation Iraqi Freedom  
*Marilyn L.G. Gates, Paul Hartzfeld*

**4:36 - 4:45 PM** **726**  
 Vaccine Prevention of Post Head Injury Meningitis  
*Stanley A. Shatsky, William C. Bergman, Joshua B. Shatsky*

**4:45 - 4:54 PM** **727**  
 Secondary Ischemia Results in Ion Dysfunction and Elevated ICP Following Traumatic Brain Injury  
*Michael F. Stiefel, Anthony Marmarou*

**4:54 - 5:03 PM** **728**  
 Continuous Propofol Infusion in the Treatment of Pediatric Traumatic Brain Injury: Is it Safe?  
*William F. Young, George Martin, Mary Aaland*

**5:03 - 5:12 PM** **729**  
 Experimental Ultrasound Imaging of Cerebral Perfusion at High Resolution  
*William E. Butler*

**COUNCIL OF STATE NEUROSURGICAL SOCIETIES****3:00 - 3:09 PM****730**

The Utilization of Spine Fusion in the United States  
*John A. Cowan, Reid Wainess, Justin B. Dimick,  
 Frank LaMarca*

**3:09 - 3:18 PM****731**

Surgeon Subspecialization and Patient Outcome in Aneurysm and Supratentorial Tumor Surgery: A Population Based Study  
*Fred G. Barker, William T. Curry, Sepideh Amin-Hanjani,  
 William E. Butler, Christopher S. Ogilvy, Bob S. Carter*

**3:18 - 3:27 PM****732**

Resident Duty-Hours Reform: The Results of a National Survey of the Program Directors and Residents in Neurosurgery Training Programs  
*Aaron A. Cohen-Gadol, David G. Piepgras,  
 Richard D. Fessler*

**CSNS Resident Award****4:30 - 4:39 PM****733**

Health Care Financing 101: An Internet Based Learning Platform for Nontraditional Resident Instruction on the Economics of Healthcare  
*John Tuttle, William Hamilton*

**CSNS Young Neurosurgeon Award****4:39 - 4:48 PM****734**

Acoustic Neuroma Surgical Cost and Outcome by Hospital Volume  
*Marc S. Schwartz, William H. Slattery, Mark Oppenheimer,  
 Laurel M. Fisher*

**4:48 - 4:57 PM****735**

Wrong-side/Wrong-level Neurosurgery: A Survey of Canadian Neurosurgeons  
*Balraj S. Jhavar, Doran Rabin, Jana Kellar,  
 Demytra K. Mitsis, Neil Duggal*

**4:57 - 5:06 PM****736**

The Alamo: An Analogy for Academic Neurosurgery in Illinois  
*T. C. O'rigitano*

**5:06 - 5:15 PM****737**

Ethics Consultations for Epilepsy Surgery Candidates: A 15-year Retrospective Review  
*Paul J. Ford, Carol E. Blixen, Elaine Wylie,  
 William E. Bingaman*

**5:15 - 5:24 PM****738**

Socioeconomic Factors in Neurosurgical Treatment Modalities: The Difference between Older and Newer Treatments  
*Ravish V. Patwardhan, Anil Nanda*

**5:24 - 5:33 PM****739**

The Intractable Epilepsy Problem in Developing Countries: Is There a Way Out?  
*Sujoy K. Sanyal, P. Chandra, Manjari Tripathi*

**TUESDAY, OCTOBER 19****GENERAL SCIENTIFIC SESSION II****CNS Resident Award****9:00 - 9:10 AM****740**

Selective Ablation of Nociceptive Neurons for Elimination of Neuropathic Pain  
*Gabriel C. Tender, Stuart Walbridge, Zoltan Olah,  
 Laszlo Karai, Michael Iadarola, Edward H. Oldfield,  
 Russell R. Lonser*

**SECTION ON TUMORS I****4:00 - 4:09 PM****741**

INTERPRET Study of Proton Magnetic Resonance Spectroscopy in Brain Tumors  
*B. Anthony Bell*

**4:09 - 4:18 PM****742**

Re-evaluation of Surgery for the Treatment of Brain Metastases  
*Sun Ha Paek, Paul B. Aude, Michael R. Sperling, Joon Cho,  
 David W. Andrews*

**4:18 - 4:27 PM****743**

Gliasite Radiotherapy System for Treatment of Recurrent Malignant Glioma: A Multi-Institutional Analysis  
*Abhay Sanan, Arash Gabayan, Baldassarre Stea,  
 Sylvan Green, Kenneth Bastin, Stuart Burri, Joseph Jenrette,  
 Michael Papagikos, Ashish Patel, Christopher Schultz,  
 Gordon Watson*

**4:27 - 4:36 PM****744**

Matrix-assisted Ionization Desorption Mass Spectrometry Proteomic-based Diagnosis and Prognosis of Gliomas  
*Robert J. Weil, Sarah A. Schwartz, Steven A. Toms, Mahlon D. Johnson, Ken Niermann, Yu Shyr, Bashour Shaktour,  
 Reid Thompson, Jeremy Roberts, Richard M. Caprioli*

**4:36 - 4:45 PM** **745**  
 Contribution of Intraoperative Cortico-subcortical Stimulations in Surgery of Low-grade Gliomas: A Comparative Study between 2 Series Without and With Functional Mapping  
*Hugues Duffau, Manuel Lopes, Peggy Gatignol, Emmanuel Mandonnet, Luc Taillandier, Marianne Leroy, Dominique Denvil, Ahmad Bitar, Jean-Pierre Sichez, R emy Van Effenterre, Laurent Capelle*

**4:45 - 4:54 PM** **746**  
 Surgical Management of Giant Glomus Jugulare Tumors without Rerouting of the Facial Nerve  
*Luis Borba, Samir Bark*

**4:54 - 5:03 PM** **747**  
 Transduced Bone Marrow Derived Cells Target Brain Tumors and Express Transgene  
*Faith H. Barnett, Elizabeth L. Scheppke, Stacey K. Moreno, Hannele Uusitalo-Jarvinen, Jun Yamanouchi, Sanford Shattil, Martin Friedlander*

**5:03 - 5:12 PM** **748**  
 Functional Recovery after Surgical Resection of Eloquent Brain Areas Invaded by Low-grade Gliomas: The Use of Cerebral Plasticity  
*Hugues Duffau, Peggy Gatignol, Emmanuel Mandonnet, Dominique Denvil, Nicole Sichez, Marianne Leroy, Manuel Lopes, Luc Taillandier, Ahmad Bitar, Jean-Pierre Sichez, R emy Van Effenterre, Laurent Capelle*

## SECTION ON PAIN I

### Ronald Tasker Award

**4:00 - 4:09 PM** **749**  
 The Mesopontine Tegmentum: A New Pain Modulatory Region  
*Jonathan D. Carlson, Kim J. Burchiel, Nathan Selden, Mary M. Heinricher*

**4:09 - 4:18 PM** **750**  
 A Neural Network Program Capable of Distinguishing and Accurately Making the Diagnosis of Different Types of Facial Pain Syndromes  
*Farhad M. Limonadi, Kim J. Burchiel*

**4:18 - 4:27 PM** **751**  
 The Long-term Results of Trigeminal Neuralgia Treated with Gamma Knife Surgery  
*Jason P. Sheehan, Hung-Chuan Pan, Mateti Stroila, Ladislau Steiner*

**4:27 - 4:36 PM** **752**  
 Differential Pattern of Spinal Dorsal Horn Gene Expression during the Expression and Loss of Thermal Hyperalgesia following Chronic Constriction Injury of the Rat Sciatic Nerve  
*Daniel K. Resnick, Gurwattan S. Miranpuri, Gordanna Miletic, Raghu L. Vemuganti, Viejo Miletic*

**4:36 - 4:45 PM** **753**  
 Clinical Results of Pulsed Radiofrequency Lesioning on Dorsal Root Ganglion in Patients with Chronic Low Back and Leg Pain  
*Jung Y. Park, Sang H. Keem, Sang D. Kim, Se H. Kim, Dong J. Lim, Hoon K. Lee*

**4:45 - 4:54 PM** **754**  
 Percutaneous Retrogasserian Glycerol Rhizotomy for Patients with Idiopathic Trigeminal Neuralgia: A Prospective Analysis of Factors Related to Pain Relief  
*Bruce E. Pollock*

**4:54 - 5:03 PM** **755**  
 Percutaneous Electrode Migration in Spinal Cord Stimulation: Problem and Solution  
*Violette M. Renard, Richard B. North*

## SECTION ON PEDIATRIC NEUROLOGICAL SURGERY I

**4:00 - 4:09 PM** **756**  
 Cellular and Network Mechanisms of Epileptogenesis in Cortical Dysplasia: A Combined Clinical, Pathologic, & Electrophysiologic Study  
*Gary W. Mathern, Carlos Cepeda, Veronique Andre, Mike S. Levine*

**4:09 - 4:18 PM** **757**  
 Programmable vs. Fixed-pressure Valves for the Treatment of Hydrocephalus in Children  
*Chris Heller, Mark D. Krieger, David I. Sandberg, Bryan C. Oh, J. Gordon McComb*

**4:18 - 4:27 PM****758**

Convection-enhanced Delivery of Glucocerebrosidase to the Primate Brain as a Potential Treatment for Neuronopathic Gaucher's Disease

*Michele Aizenberg, Stuart Walbridge, Murray J. Gary, Alexander O. Vortmeyer, Roscoe O. Brady, Edward H. Oldfield, Russell R. Lonser*

**4:27 - 4:36 PM****759**

Options for the Management of Patients with Hypothalamic Hamartoma and Intractable Epilepsy

*Harold Rekate, Iman Feiz-Erfan, Yu Tse Ng, John Kerrigan, Margaret Varland*

**4:36 - 4:45 PM****760**

Management of Hydrocephalus Using a Non-Invasive MRI Method for Measurement of Intracranial Compliance and Pressure

*Roberta P. Glick, Terry Lichtor, Patricia Raksin, Aaron Lee, Anusha Sivaramakrishnan, Susha Surapaneni, Osbert Egibor, Noam Alperin*

**4:45 - 4:54 PM****761**

Long-term Results of Endoscopic Aqueductoplasty

*Henry W.S. Schroeder, Joachim M.K. Oertel, Joerg Baldauf, Michael R. Gaab*

**4:54 - 5:03 PM****762**

Age, Shunted Hydrocephalus, and Myelomeningocele as Factors Predicting Outcome with Endoscopic Third Ventriculostomy

*Paul K. Kim, Steven S. Glazier*

**5:03 - 5:12 PM****763**

The Effects of Surgical Resection and Adjuvant Therapy on Pediatric Intracranial Ependymomas

*Mark D. Krieger, Ira Bowen, J. Gordon McComb*

## SECTION ON CEREBROVASCULAR SURGERY II

### Galbraith Award

**2:00 - 2:09 PM****764**

Simvastatin Attenuates Experimental Cerebral Vasospasm and Ameliorates Serum Markers of Neuronal and Endothelial Injury in Patients after Subarachnoid Hemorrhage: A Dose-response Effect Dependent on Endothelial Nitric Oxide Synthase

*Matthew J. McGirt, Gustavo Pradilla, John Lynch, Federico G. Legnani, Marilyn Perez, Rafael Tamargo, Richard E. Clatterbuck, Daniel Laskowitz*

**4:20 - 4:29 PM****765**

Genome-wide Linkage Analysis of Intracranial Aneurysms

*Brian V. Nahed, Abigail A. Hawkins, Michael L. Diluna, Askin Seker, Bulent Guclu, Andrea Chamberlain, Mathew W. State, Murat Gunel*

**4:29 - 4:38 PM****766**

Vasospasm Probability Index: A Combination of TCD Velocities, Cerebral Blood Flow, and Clinical Risk Factors to Predict Cerebral Vasospasm after Aneurysm Subarachnoid Hemorrhage

*Nestor Gonzalez, Thomas Glenn, John Boscardin, Fernando Vinuela, Neil Martin*

**4:38 - 4:47 PM****767**

Nimodipine Reduces Cerebral Oxygenation in Poor Grade Subarachnoid Hemorrhage Patients

*Michael F. Stiefel, Gregory G. Heuer, Stephanie Bloom, Eileen Maloney-Wilensky, M. Sean Grady, Peter D. Le Roux*

**4:47 - 4:56 PM****768**

First Pass Quantitative CT Perfusion Identifies Salvageable Penumbra in Acute Stroke Patients Treated with IA Thrombolysis

*Brian L. Hoh, Luca Roccatagliata, Michael H. Lev, Carlos J. Ledezma, Lee H. Schwamm, Walter J. Koroshetz, Pamela W. Schaefer*

**4:56 - 5:05 PM****769**

Thrombotic Intracranial Aneurysms: Classification Scheme and Management Strategies in 68 Patients

*Alfredo Quinones-Hinojosa, Edward Chang, Michael T. Lawton*

**5:05 - 5:14 PM****770**

Synchrotron-supported Cerebral Angiography in an Animal Model

*Michael E.B. Kelly, Elizabeth Schulke, Stephan Fiedler, Michel Renier, Jean-Francois Le Bas, Bernhard Juurlink, L. Dean Chapman, Kotoo Meguro*

**5:14 - 5:23 PM****771**

Racial/Ethnic Differences in Demographics, Acute Complications and Outcome in Patients with Subarachnoid Hemorrhage: A Large Patient Series

*David Rosen, Roberta Novakovic, Fernando Goldenberg, Axel Rosengart, Jeffrey Frank, R. Loch Macdonald*

## SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES II

**4:00 - 4:09 PM**

**772**

Two-Year Follow-up on Patients in a Pilot Safety and Efficacy Study of OP-1 (rhBMP-7) in Posterolateral Lumbar Fusion as a Replacement for Iliac Crest Autograft

*Dom Coric, Jeffrey S. Fischgrund, Tushar Patel, Alexander R. Vaccaro, Truumees Eeric, Harry N. Herkowitz, Todd Albert, Alan Hilibrand, Frank Phillips, Todd Wetzels, John McCulloch*

**4:09 - 4:18 PM**

**773**

A Prospective Randomized Study of Mineralized Collagen and Bone Marrow Aspirate vs. Iliac Crest Autograft for Instrumented Posterolateral Lumbar Fusion

*Kitchel H. Scott*

**4:18 - 4:27 PM**

**774**

Adjacent-segment Disease after Anterior Cervical Fusion: A Review of 70 Re-operated Cases

*Hongyan Zou, Cecil Chang, Hoang N. Le, Issada Thongtrangan, John Park, Daniel H. Kim*

**4:27 - 4:36 PM**

**775**

Comparison of Self-reported Outcomes of Pediatric and Adult Patients with Phrenic Nerve Stimulators

*Stephen I Ryu, Daniel H. Kim, Ho-Yeol Zhang*

**4:36 - 4:45 PM**

**776**

Marrow Stromal Cells Delivered via Lumbar Puncture Home towards Spinal Cord Contusion and Cause Repair

*Ajay Bakshi, Takahiko Mitsui, Sharon Swanger, Michael Sabol, Jed Shumsky, Itzhak Fischer*

**4:45 - 4:54 PM**

**777**

Recurrent Laryngeal Nerve Injury with Anterior Cervical Spine Surgery: A Prospective, Randomized Study of Risk of Injury with Laterality of Side of Surgical Approach

*William J. Beutler, Perri Brian*

**4:54 - 5:03 PM**

**778**

Phase 1 Trial of Oscillating Electrical Field Stimulation in Human Complete Spinal Cord Injury

*Scott A. Shapiro, Richard Borgens, Robert Pascuzzi, Michael Groff, Thomas Altstadt, Paul Nelson, Ben Rodgers*

**5:03 - 5:12 PM**

**779**

One Stage Surgery (Anterior and Posterior) for Craniovertebral Junction Anomalies: Lessons Learned from 632 Cases

*Shashank S. Kale, Sarat P. Chandra, Ashish K. Suri, Veer S. Mehta*

## WEDNESDAY, OCTOBER 20

### SECTION ON STEREOTACTIC AND FUNCTIONAL NEUROSURGERY II

**Stereotactic and Functional Neurosurgery Resident Award**

**3:00 - 3:09 PM**

**780**

Deep Brain Stimulation for Generalized Dystonia and Spasmodic Torticollis

*Richard G. Bittar, John Yianni, Shou Yang Wang, Xuguang Liu, Dipankar Nandi, Carole Joint, Richard Scott, Peter Bain, Ralph Gregory, John Stein, Tipu Z. Aziz*

**4:00 - 4:09 PM**

**781**

Bilateral Intraputaminial Infusion of Liaternin (Glial Cell Line-derived Neurotrophic Factor; r-metHuGDNF) in Subjects with Advanced Parkinson's Disease

*Steven Gill, Peter Heywood, Andres M. Lozano, Anthony Lang, Elena Moro, Richard Penn, Arif Dalvi, Kim J. Burchiel, John Nutt, Patrick Kelly, Michael Hutchinson, W. J. Elias, Frederic Wooten, Dennis Turner, Burton Scott, Nikunj Patel, Edward R. Laws, Jr., James Matcham, Robert Coffey, Michael Traub*

**4:09 - 4:18 PM**

**782**

Targeted Subthreshold Cortical Stimulation for Recovery of Motor Hand Function following Hemiparetic Stroke

*Robert M. Levy, Martin Weinand, Sean Ruland, David Lowry, Rima Dafer*

**4:18 - 4:27 PM**

**783**

Safety of Cortical Stimulation in Patients with Hemiparetic Stroke

*Jeffrey A. Brown, Helmi Letsup, Martin Weinand, Steve Cramer*

**4:27 - 4:36 PM****784**

The Long-term Response of Primary Generalized Torsion Dystonia to Bilateral Pallidal Deep Brain Stimulation

*Ron L. Alterman, Jay Shils, Michele Tagliati, Joan Miravite, Susan Bressman*

**4:36 - 4:45 PM****785**

The Speed at Which Reach Movement Plans Can Be Decoded from the Cortex and Its Implications for High Performance Neural Prosthetic Arm Systems

*Stephen I. Ryu, Gopal Santhanam, Byron Yu, Krishna V. Shenoy*

**4:45 - 4:54 PM****786**

Targeting of the Subthalamic Area Is Superior to the Ventrolateral Thalamus for Severe Intention Tremor and Asymmetric Stimulation Can Prevent Side Effects

*Wolfgang Hamel, Jan Herzog, Roland Wenzelburger, Monika Poetter, Frank Steigenwald, Florian Kopper, Ulrich Stiller, Markus Pinsker, Andre Morsnowski, Jens Volkmann, Günther Deuschl, Dieter Müller, H. Maximilian Mehdorn*

**4:54 - 5:03 PM****787**

Electrode Location Does Not Predict Contralateral Limb Motor Function Improvement in Subthalamic Stimulation for Parkinson's Disease

*Shearwood McClelland III, Blair Ford, Patrick B. Senatus, Steven J. Frucht, Linda M. Winfield, Yunling E. Du, Seth L. Pullman, Qiping Yu, Guy M. McKhann, Robert R. Goodman*

**5:03 - 5:12 PM****788**

Investigation of Gravity-induced Brain Shift Based on a 3-Dimensional Finite Element Model of the Human Brain

*Jong Beom Lee, Jingwen Hu, Liying Zhang, King H. Yang, Albert I. King, Lucia Zamorano*

**SECTION ON TUMORS II****Preuss Resident Research Award****2:05 - 2:20 PM****789**

Incorporation of Bone Marrow-derived Flk-1-expressing CD34+ cells in the Endothelium of Tumor Vessels in Mouse Brain

*Justin G. Santarelli, Vikram M. Udani, Samuel Cheshier, Stephen Huhn, Victor Tse*

**Tumor Young Investigator Award****2:20 - 2:35 PM****790**

Identification of Hypermethylated Tumor-Specific DNA in Plasma of Patients with Glioma

*Kyle D. Weaver, Stuart A. Grossman, James G. Herman*

**Mahaley Clinical Research Award****2:35 - 2:50 PM****791**

Extent of Brain Tumor Resection Using High-field (1.5T) vs. Low-field (0.2T) Intraoperative iMRI

*Marvin Bergsneider, Nouzhan Sehati, Pablo Villablanca, David McArthur, Linda M. Liau*

**4:00 - 4:09 PM****792**

Unique Periventricular Niche in Adult Human Brain Contains Astrocytic Stem Cells but No Evidence of Chain Migration

*Nader Sanai, Anthony D. Tramontin, Alfredo Quinones-Hinojosa, Nicholas M. Barbaro, Nalin Gupta, Sandeep Kumar, Michael T. Lawton, Michael W. McDermott, Andrew T. Parsa, Jose Manuel-Garcia Verdugo, Mitchel S. Berger, Arturo Alvarez-Buylla*

**4:09 - 4:18 PM****793**

Cranial Base Chordomas and Chondrosarcomas: A 12-year Review of 158 Patients Treated with Fractionated Proton Beam Therapy

*Walter D. Johnson, Lilia Loreda, Roger I. Grove, Jerry D. Slater*

**4:18 - 4:27 PM****794**

The Surgical Management of Cushing's Disease: Results in a Contemporary Series of 328 Patients

*Edward R. Laws, John B. Hanks, Mary L. Vance*

**4:27 - 4:36 PM****795**

Stereotactic Radiosurgery: An Alternative to Surgical Resection for Patients with Glomus Jugulare Tumors

*Bruce E. Pollock, Michael J. Link, Robert L. Foote*

**4:36 - 4:45 PM****796**

Proteins and Protein Pattern Differences between Glioma Cell Lines and Glioblastoma Multiforme

*Timothy W. Vogel, Robert J. Weil, Alexander O. Vortmeyer, Weifen Zeng, Youn-soo Lee, Makoto Furata, Edward H. Oldfield, Zhengping Zhuang*



**4:45 - 4:54 PM** **797**  
 Survival after Biopsy or Resection of Supratentorial Lobar Glioblastoma Multiforme: A Population-based Study  
*Fred G. Barker, Manish K. Aghi, William T. Curry, Bob S. Carter*

**4:54 - 5:03 PM** **798**  
 Accuracy of Image-guided Stereotactic Brain Biopsy in the Diagnosis of Glioma: Comparison of Biopsy and Open Resection Specimen  
*Matthew J. McGirt, Graeme Woodworth, Amer Samdani, Ira Garonzik, Alessandro Olivi, Jon Weingart*

**5:03 - 5:12 PM** **799**  
 Independent Predictors of Morbidity after Image-guided Stereotactic Brain Biopsy: A Risk Assessment of 270 Consecutive Cases  
*Matthew J. McGirt, Graeme Woodworth, James Frazier, Alex Coon, Ira Garonzik, Alessandro Olivi, Jon Weingart*

## SECTION ON NEUROTRAUMA AND CRITICAL CARE II

**4:00 - 4:09 PM** **800**  
 Experience with Transient Spinal Cord Injury in Athletes  
*Julian E. Bailes*

**4:09 - 4:18 PM** **801**  
 Do the GM-1 Multi-center Data Confirm NASCIS-3?  
*Fred H. Geisler, William P. Coleman*

**4:18 - 4:27 PM** **802**  
 Brain Tissue Oxygen Guided Management Reduces Mortality in Traumatic Brain Injury  
*Michael F. Stiefel, Oscar Guillaumondegui, Alicia Garuffe, Stephanie Bloom, Eileen Maloney-Wilensky, Vincente H. Gracias, M. Sean Grady, Peter D. Le Roux*

**4:27 - 4:36 PM** **803**  
 Study of Coagulation Factors in Patients with Mild Prolongation of Prothrombin Time: Implications for Neurosurgical Patients  
*Samuel L. Barnett, Michael Cimo, Kar'en Matevosyan, Kevin C. Morrill, Christopher Madden, Ravi Sarode*

**4:36 - 4:45 PM** **804**  
 Conventional Neuro Critical Care Monitoring Fails to Ensure Cerebral Oxygenation  
*Michael F. Stiefel, Gregory G. Heuer, Eileen Maloney-Wilensky, Alicia Garuffe, Stephanie Bloom, Vincente H. Gracias, M. Sean Grady, Peter D. LeRoux*

**4:45 - 4:54 PM** **805**  
 Immune-based Therapies for Central Nervous System Trauma  
*Jonathan B. Marder, Gustavo Auerbach, Linda Jones, Irit Shefer, David Snyder*

**4:54 - 5:03 PM** **806**  
 Penetrating Head Injuries from Terrorist Bomb Blasts: The Jerusalem Experience  
*Guy Rosenthal, Lilach Roemi, Yigal Shoshan, Ricardo Segal, Felix Umansky*

**5:03 - 5:12 PM** **807**  
 A Protocol of Delayed Surgery in 125 Cases of Penetrating, Craniocerebral Gunshot Wounds: The Cape Town Experience  
*Adriaan W. Liebenberg, Andreas K. Demetriades, Sunil Naik, Carl Hardwidge, Bennie H. Hartzenberg*

## SECTION ON PEDIATRIC NEUROLOGICAL SURGERY II

**2:00 - 2:09 PM** **808**  
 Results of Stereotactic Radiosurgery for Brain Arteriovenous Malformations in Children: The University of Toronto Experience  
*Gelareh Zadeh, Yuri Andreda-Souza, Michael Schwartz*

**2:09 - 2:18 PM** **809**  
 Radiosurgery for Pediatric Arteriovenous Malformations: An Outcome Study  
*Vini G. Khurana, Bruce E. Pollock*

**2:18 - 2:27 PM** **810**  
 Advanced Magnetic Resonance Spectroscopy in the Diagnosis of Pediatric Brain Tumors  
*Mark D. Krieger, J. Gordon McComb, Marvin D. Nelson, Ashok Panigrahy, Ignacio Gonzalez-Gomez, Floyd H. Gilles, Stefan Bluml*

- 2:27 - 2:36 PM** **811**  
 Relationship Between Valve Opening Pressure, Body Position, and Intracranial Pressure in Normal Pressure Hydrocephalus: Paradigm for Selection of Programmable Valve Pressure Setting  
*Marvin Bergsneider, Isaac Yang, BS; Shon Cook, Donald P. Becker*
- 2:36 - 2:45 PM** **812**  
 Transsphenoidal Surgery in Childhood and Adolescent Cushing's Disease  
*Shabin Joshi, Richard J.D. Hewitt, Kia Rejazoi, Habib Ellamushi, M. O. Savage, Fary Afshar*
- 2:45 - 2:54 PM** **813**  
 Familial Incidence of Moyamoya Syndrome in the Pediatric Population  
*Edward R. Smith, R. Michael Scott*
- 4:00 - 4:09 PM** **814**  
 Measurements of Magnet-induced Changes in Pressure Settings of Adjustable Hydrocephalus Shunt Valves  
*Sheng Liu, Richard Greene, Gordon A. Thomas, Joseph R. Madsen*
- 4:09 - 4:18 PM** **815**  
 Monobloc Distraction Osteogenesis in Pediatric Patients with Severe Syndromal Craniosynostosis  
*Torstein R. Meling, Bernt J. Due-Tønnessen, Hans-Erik Høgevoid, Per Skjelbred, Kjartan Arctander*
- 4:18 - 4:27 PM** **816**  
 Electrophysiologically-guided Tethered Spinal Cord: University of Virginia Experience  
*Nader Pouratian, Tracy L. Owensby, W.J. Elias, Lawrence A. Phillips, John A. Jane*
- 4:27 - 4:36 PM** **817**  
 Complications of Endoscopic Craniosynostosis Repair  
*Steven R. Cohen, Henry E. Aryan, Rahul Jandial, Hal S. Meltzer, Ralph E. Holmes, Michael L. Levy*
- 4:36 - 4:45 PM** **818**  
 Use of Programmable Valves to Prevent Overshunting Complications in Infants  
*Victor L. Perry, Nalin Gupta*
- 4:45 - 4:54 PM** **819**  
 Venous Air Embolism during the Surgical Treatment of Craniosynostosis Using Minimally Invasive Techniques  
*David F. Jimenez, Constance M. Barone, Joseph D. Tobias, Joel O. Johnson*
- 4:54 - 5:03 PM** **820**  
 Endoscopic Assisted Fronto-orbital and Cranial Osteotomies  
*Steven R. Cohen, Ralph E. Holmes, Henry E. Aryan, Burak M. Ozgur, Hal S. Meltzer, Michael L. Levy*
- 5:03 - 5:12 PM** **821**  
 Early Surgical Release of Tethered Cord May Benefit Children with a History of Imperforate Anus  
*Darlene A. Lobel, Mark R. Lee*

Dear Auxiliary Member:

Our families welcome you to San Francisco, one of the top destinations in the world. Come to San Francisco, bring your family, and experience the cosmopolitan flair, spectacular scenery, cultural diversity and year round spring-like climate. Within San Francisco's compact 47 square miles, the city's diversity is most evident in its unique neighborhoods such as exotic Chinatown, the colorful Mission District and the 1960's inspired Haight Ashbury District. Nowhere is



San Francisco's worldliness more evident than in its world-class cuisine with over 3,300 restaurants and convenient eateries of every ethnicity to please every taste and interest. Take a ride through San Francisco on the well-known and adored trolley cars while experiencing the tradition. Join us and leave your heart in San Francisco!

San Francisco has a glittering tradition in the performing arts, unique special events, fabulous sightseeing and a Galleria of boutique department stores all within walking distance. Art, culture and history are just steps away in several nearby museums. Visit the San Francisco Museum of Modern Art, the War Memorial Opera House, or the brand new Asian Art Museum. We invite you to join us October 16-21, 2004 at the 54th Annual Meeting of the Congress of Neurological Surgeons and experience the renowned City by the Bay.

Our week begins with the CNS Opening Reception to be held in the Grand Ballroom of the Hilton San Francisco, our headquarter hotel, on Sunday, October 17th. Wine lovers and wine connoisseurs alike will enjoy a peaceful country garden setting amidst California's Wine Country while sampling and learning about fine wine. Don't miss this year's CNS Auxiliary Luncheon and Program. We will visit Chinatown for a fascinating up-close look at its unique culture, cuisine and architecture. This event is always the highlight of the week and designed exclusively for the CNS Auxiliary Program. An event not to be missed!

The CNS Spouse Hospitality Center will be located in the Cityscape Restaurant at the Hilton San Francisco. It will be open Monday through Wednesday from 7:00 am to 10:30 am. A continental breakfast and beverages will be served each morning for your enjoyment.

Take advantage of the many cultural, scenic, historical and breathtaking tours and special evening events designed specifically for the CNS, our guests, and our families. We extend a warm and sincere invitation to discover San Francisco, where you are sure to leave your heart! A city of beauty, innovation and excitement!

Joan Traynelis  
CNS Auxiliary President

Lola Oyesiku  
CNS Auxiliary Chairperson

## AUXILIARY PROGRAM

### Saturday, October 16

|                     |      |                        |      |
|---------------------|------|------------------------|------|
| 7:15 pm to 10:00 pm | OE01 | San Francisco Symphony | \$83 |
|---------------------|------|------------------------|------|

### Sunday, October 17

|                    |       |                                 |               |
|--------------------|-------|---------------------------------|---------------|
| 7:00 am to 8:00 am | AT01  | Power Exercise - Yoga           | \$6           |
| 9:00 am to Noon    | AT02  | San Francisco Views             | \$38          |
| 9:30 am to 3:30 pm | AT03  | Art and Wine in The Napa Valley | \$143         |
| 1:00 pm to 5:00 pm | AT04  | Muir Woods & Sausalito          | \$43/\$38     |
| 6:30 pm to 8:30 pm | Open* | CNS Opening Reception           | Hosted by CNS |

### Monday, October 18

|                     |       |   |                                    |
|---------------------|-------|---|------------------------------------|
| 7:00 am to 8:00 am  | AT05  | Power Exercise - Aerobics                 | \$6                                |
| 7:00 am to 10:30 am | Open* | CNS Spouse Hospitality Center             | Hosted by CNS                      |
| 9:00 am to 3:00 pm  | AT06  | San Francisco City Highlights Tour        | \$43                               |
| 9:00 am to 9:20 am  | Open* | <i>Presidential Address</i>               | Hosted by CNS                      |
| 9:15 am to 1:15 pm  | AT07  | Time on "The Rock" - Alcatraz             | \$65/\$60                          |
| 12:30 pm to 3:00 pm | AT08  | CNS Auxiliary Luncheon & Program          | <i>Hosted in part by CNS, \$45</i> |
| 6:30 pm to 10:30 pm | OE02  | Sunset Dinner Cruise on San Francisco Bay | \$149/\$129                        |

### Tuesday, October 19

|                        |       |  |               |
|------------------------|-------|--|---------------|
| 7:00 am to 8:00 am     | AT09  | Power Exercise - Stretch and Tone  | \$6           |
| 7:00 am to 10:30 pm    | Open* | CNS Spouse Hospitality Center  | Hosted by CNS |
| 9:00 am - 1:00 pm      | AT10  | Filoli Estate  | \$58          |
| 10:00 am - 4:00 pm     | AT11  | Sonoma Valley Sparkling Wineries   | \$89          |
| 11:10 am to 12:00 noon | Open* | 5th Annual Walter E. Dandy Orator<br>President Mikhail Gorbachev<br>International Leadership | Hosted by CNS |
| 1:00 pm - 5:00 pm      | AT12  | Pacific Heights Walking Tour   | \$35          |
| 7:15 pm - 11:30 pm     | OE03  | An Evening at the San Francisco Opera  | \$107         |
| 7:15 pm - 11:00 pm     | OE04  | Golden Gate Theatre - <i>The Producers</i>   | \$158         |

### Wednesday, October 20

|                     |       |  |               |
|---------------------|-------|--|---------------|
| 7:00 am to 8:00 am  | AT13  | Power Exercise - Tai Chi Chuan                         | \$6           |
| 7:00 am to 10:30 pm | Open* | CNS Spouse Hospitality Center                          | Hosted by CNS |
| 9:30 am - 1:00 pm   | AT14  | Glass Artisan Studio &<br>Berkeley 4th Street Shopping | \$68          |

## SATURDAY, OCTOBER 16

All tour shuttle departures will meet at the Taylor Street entrance of the Hilton San Francisco.

### **OE01** SAN FRANCISCO SYMPHONY

**7:15 PM – 10:00 PM; \$83 PER PERSON**

Join the SF Symphony for an evening of musical adventures at the famed Davies Symphony Hall. Emanuel Ax plays Mozart: *Britten's Spring Symphony* is a celebration of life, its choral and solo texts drawn from centuries of great English poetry. Emanuel Ax, a master of Mozart, explores the composer's last piano concerto. The conductor is American Robert Spano, internationally recognized as one of the brightest, most imaginative maestros of his generation.

In an inaugural season featuring stars of the concert stage, Emanuel Ax is a stand out. Acclaimed for his poetic lyricism and brilliant technique, Ax is one of today's best known and most highly regarded classical artists.

Please bring your "CNS issued ticket" to the tour counter help desk located in the registration area, level 1 of the Moscone West Convention Center to exchange for a "concert ticket".

## SUNDAY, OCTOBER 17

### **AT01** POWER EXERCISE - YOGA

**7:00 AM – 8:00 AM; \$6 PER PERSON**

Yoga releases the body and mind from tensions allowing you to regain balance and energy. This powerful and vigorous practice purifies and realigns the body clearing energy channels blocked by years of stress and arouses the internal fire helping to cleanse, detoxify and strengthen the body. The synchronization of movements with breath awakens the mind-body-soul connection and establishes consistent states of balance, inner peace and well-being.

### **AT02** SAN FRANCISCO VIEWS

**9:00 AM – 12 NOON; \$38 PER PERSON**



Few cities in the world can vie with San Francisco in beauty of perfect landscapes and fabulous views. You will explore the bold hills, distinctive vistas that are unlike any other, and sites that are unequalled with spectacular architectural grandeur. Coit Memorial Tower, located at the top of Telegraph Hill, stands 210 feet tall. From this famous monument to firefighters you will get a bird's eye view of North Beach, the Bay and the Embarcadero. Next, you'll visit Twin Peaks which provides sweeping views of downtown San Francisco, Alcatraz, Angel Island, Yerba Buena Island, Berkeley, Oakland and much of the San Francisco Bay and beyond. From Treasure Island you will gaze across the deep blue bay for an unobstructed view of the famous San Francisco Skyline. Finally, you'll see Golden Gate Bridge, perhaps San Francisco's most famous landmark. Today, measuring 6,450 feet, it links the city with Marin County and the Redwood Empire.

## SUNDAY, OCTOBER 17

### AT03 ART AND WINE IN THE NAPA VALLEY

9:30 AM - 3:30 PM; \$143 PER PERSON

Many of Napa's top wineries combine the art of wine making with an avid passion for fine art. Today's visits will be to select properties known for their superb wines and outstanding art collections. This tour will highlight some of the many architecturally stunning facilities in the Napa Valley. We will visit one of the art wineries as well another premier winery. Our first stop is Artesa in Carneros. Artesa means "craftsman" and connotes "handcrafted" in Catalan. We will reach the winery by a sweeping staircase bordered by cascading waterfalls. The stairs ascend past beautiful fountains, reflecting pools and sculpture. At the top, you will see the panoramic vistas of Napa Valley, Carneros and San Francisco Bay. One step over the threshold and the setting transforms into a spectacular modernist interior, full of rich woods with expanses of glass and art. Then we travel to Nicholson Ranch, the newest winery in Sonoma Carneros, nestled in the foothills of Sonoma Valley. The winery is a realization of the Nicholson family, ranchers in Sonoma for four generations. The expansive California Mexican architecture makes an imposing picture in the beautiful foothills. A lunch stop at one of the many charming and popular wine country restaurants will be included.



### AT04 MUIR WOODS & SAUSALITO

1:00 PM - 5:00 PM; \$43 PER PERSON ADULT,  
\$38 PER PERSON FOR CHILD 12 AND UNDER

Just across the world famous Golden Gate Bridge is Marin County, an area of great physical beauty, stretching from the Pacific Ocean to the San Francisco Bay. A leisurely first stop will be in Muir Woods, a majestic grove of the world's oldest and tallest trees - the Giant Virgin Redwood Sequoias. Found nowhere else on earth, the redwoods are one of California's top attractions.

Leaving the tranquility of the Redwoods, the next visit will be to the bustling and Bohemian-like village of Sausalito, hugging the shore of San Francisco Bay. Distinctive shops, galleries, boutiques and charming restaurants lure visitors from all over the world. Guests will have the opportunity to shop and browse through the various shops and galleries.

## OPENING RECEPTION

6:30 pm - 8:30 pm

The Congress of Neurological Surgeons invites you to join local experts for a relaxing evening dedicated to appreciating fine wines on Sunday, October 17 from 6:30 pm to 8:30 pm in the Grand Ballroom of the Hilton San Francisco. We'll celebrate California's passion for wine that runs generations deep as we sample high quality local vintages and feast on a gourmet assortment of hors d'oeuvres and desserts. Experience the "California wine country" charm in our vine-covered arbors, splashing fountains, and peaceful garden setting.



Sniff, swirl and sip appreciatively as you are dazzled by the intensely blended flavors. Learn about the history of these wines and the wine making process. Gain insights into food and wine pairings from the experts as you toast to colleagues old and new.

Each Annual Meeting registrant will receive one complimentary ticket to the Opening Reception.

## MONDAY, OCTOBER 18

### **AT05** POWER EXERCISE - AEROBICS

**7:00 AM - 8:00 AM; \$6 PER PERSON**

Join us for spirited, high-energy movements, choreographed to the latest hits.

### **CNS SPOUSE HOSPITALITY CENTER**

**7:00 AM - 10:30 AM; HOSTED BY CNS**



Continental breakfast and beverages will be served this morning in the Cityscape Restaurant at the Hilton San Francisco.

### **AT06** SAN FRANCISCO CITY HIGHLIGHTS TOUR

**9:00 AM - 3:00 PM; \$43 PER PERSON**

San Francisco is well known as one of the world's most charismatic and cosmopolitan cities. Her world famous landmarks and her hidden treasures are the highlights of this fascinating tour. Spectacular scenery, the city's diverse cultures, and a wild and colorful past are brought to life through the narration of our knowledgeable guides. Time will be allotted for shopping at Fisherman's Wharf and lunch is on your own.

Sights visited will include:

GOLDEN GATE BRIDGE AND VISTA POINT

GOLDEN GATE PARK

TWIN PEAKS

NORTH BEACH

CHINATOWN

UNION SQUARE

VICTORIAN NEIGHBORHOODS

FISHERMAN'S WHARF AND PIER 39



### **Presidential Address**

**9:05 am - 9:20 am; Hosted by CNS**

## **Vincent C. Traynelis**

**University of Iowa Hospitals and Clinics**

**Department of Neurosurgery**

**Moscone West Convention Center, Level 3, Ballroom**

## MONDAY, OCTOBER 18

### **AT07** TIME ON "THE ROCK" - ALCATRAZ

**9:15 AM - 1:15 PM; \$65 PER PERSON ADULT,  
\$60 PER PERSON FOR CHILD 12 AND UNDER**

Discovered in 1775, "The Rock" was first a lighthouse and then a U.S. Military disciplinary installation. In 1934, it became the most famous federal prison in U.S. history. Alcatraz was home to the likes of Al Capone, Machine Gun Kelly, and Robert Stroud, the Birdman of Alcatraz. The prison was closed in 1963, by Robert Kennedy and is now part of the National Park Service.

The tour includes a scenic ferry ride to the island, and a fascinating self-guided audio tour. These tapes were recorded not by actors, but actual guards and inmates who occupied this desolate penitentiary. Warm clothing and comfortable walking shoes are recommended.

### **AT08** CNS AUXILIARY LUNCHEON & PROGRAM

**12:30 PM - 3:00 PM;  
HOSTED IN PART BY CNS, \$45 PER PERSON**

#### Experience Chinatown!

On Monday afternoon, California legend, author and chef, Shirley Fong Torres, will accompany the CNS Auxiliary Luncheon and Program as we walk through San Francisco's Chinatown for a fascinating close-up look at the unique culture, cuisine and architecture. First, we'll enjoy a French Chinoise lunch at an authentic Chinese restaurant, Tommy Toy's, in the heart of Chinatown and introduce you to Qinway Qigong, a set of simplified and modernized Qigong exercises with powerful healing and energizing effects. Qinway Qigong is said to help cure and prevent diseases, strengthen the body, and make one feel younger and live longer. You will hear from an expert on this ancient form of Chinese health science which is considered the cornerstone of traditional Chinese medicine. During the luncheon, we'll learn the basic principles of energy infusion, find out how to detoxify the body and spirit, and take in clear energy for a sense of renewal and well being.

Shirley's personally selected guides will then lead us through an array of exotic food markets, colorful shops, temples, museums and restaurants. We'll learn about dim sum (a "delight of the heart") and the Chinese tea ceremony; meet a Chinese herbalist; stop at a pastry shop, watch a famous Chinese artist perform his delicate brush painting; learn about jook, a traditional Chinese breakfast, and visit a Chinese produce market. Shirley will share her deep insights into the complex and intriguing history and culture of the Chinese Community in San Francisco. Her boundless enthusiasm and broad knowledge of Chinatown's cultural heritage is fascinating and enlightening. Join the CNS Auxiliary Luncheon and Program as we journey into this distinctive part of the city with Shirley Fong Torres and discover new ways of bringing mind, body and spirit into balance.



Shirley Fong Torres  
California legend, author and chef



### **OE02** SUNSET DINNER CRUISE ON SAN FRANCISCO BAY

**6:30 PM - 10:30 PM; \$149 PER PERSON ADULT,  
\$129 PER PERSON FOR CHILD 12 AND UNDER**

There is nothing more magical, mystical and wonderful than a trip on the water. San Francisco's skyline, a phenomenal sight from anywhere in the Bay Area, is uniquely impressive when seen from San Francisco Bay. Nothing enhances the experience of a San Francisco Bay cruise like an evening aboard the California Hornblower. Custom built in New Orleans in 1989, the California Hornblower is the largest and most luxurious dining yacht in the West. Modeled after turn-of-the-century steamships that once plied the coast, the "Cal" is a thoughtful blend of the classic and the contemporary. It features three spacious, fully enclosed decks and large windows provide an uninterrupted view of the Bay.

You will experience San Francisco from its most exhilarating perspective, surrounded by all the spectacular beauty of The Bay. A three course seated dinner will be accompanied by live musical entertainment.





## TUESDAY, OCTOBER 19

### **AT09** POWER EXERCISE - STRETCH AND TONE

**7:00 AM - 8:00 AM; \$6 PER PERSON**

Here's your chance to limber up and tone those muscles for a feeling of well-being and a sleek svelte body.



### **CNS SPOUSE HOSPITALITY CENTER**

**7:00 AM - 10:30 AM; HOSTED BY CNS**

Continental breakfast and beverages will be served this morning in the Cityscape Restaurant at the Hilton San Francisco.

### **AT10** FILOLI ESTATE

**9:00 AM - 1:00 PM; \$58 PER PERSON**

Visiting Filoli is a relaxing excursion to one of California's most exclusive suburban areas. Travel south of San Francisco through gently rolling hills to the majestic Filoli Estate and Gardens. The stately Georgian-style country mansion is set on 16 acres of formal display gardens meticulously cared for over the years. Guests will enjoy a private guided tour of both the house and the gardens. For many years, this estate was the setting for the television series, Dynasty. Highlights include the opulent and fully furnished interior of the mansion, Tea House, handsome Walled Garden, Dutch Garden and the amazing Chartres garden, planted to resemble the cathedral window pattern. The gardens will be resplendent with the colors of the season.

### **AT11** SONOMA VALLEY SPARKLING WINERIES

**10:00 AM - 4:00 PM; \$89 PER PERSON**

Guests will be offered a taste of the Sonoma Valley with visits to sparkling wine makers. Domaine Carneros winery, built in the style of an 18th century French chateau and renowned for its deep-set traditions, is owned by French champagne giant, Tattinger. The second stop will be at a still winery. Located on a hilltop above the Sonoma Valley, the Tuscan inspired architecture and landscaping of this unique winery provides an elegant, yet comfortable, atmosphere for savoring extraordinary wines and foods. We will begin with a tour of the winemaking cave and continue with a wine tasting in the hilltop villa. In the tasting we will learn the differences between chardonnay, merlot, pinot noir and cabernet sauvignon, as well as the process making from the grape picking, crushing and bottling. Once we have toured the facility and tasted the wines, we will be afforded time for lunch on own overlooking the expansive valley below. Viansa is also a perfect venue for browsing in the unique Italian Marketplace.



### **5th Annual Walter E. Dandy Orator**

**11:10 am - 12:00 Noon**

## **President Mikhail Gorbachev**

**International Leadership**

**Moscone West Convention Center, Level 3, Ballroom**

### **AT12** PACIFIC HEIGHTS WALKING TOUR

**1:00 PM - 5:00 PM; \$35 PER PERSON**

See many of the famous mansions in San Francisco's most exclusive neighborhood, Pacific Heights. This tour is a combination of walking and coach ride. We will begin at the crest of the heights and include viewing of the Flood Mansion, Jessica McClintock's home, the Mrs. Doubtfire House, the Paul Getty home and more. Union Street, an historical area, is now a boutique shopping mecca with a very European style. Guests have the option of staying on Union Street to shop at their leisure or continue the walking tour. At the Palace of Fine Arts guests will hear about the 1915 Pacific International Exposition /World's Fair for which this structure was built. We will enjoy a walk through and talk on the design and history of the most loved building at the World's fair- "Palace of Fine Arts". Today, it is an interactive children's museum, called the Exploratorium. After this fun and informative walk, we will stop at one of the chic boutiques lining Union Street for a special treat.



## TUESDAY, OCTOBER 19

### **OE03 AN EVENING AT THE SAN FRANCISCO OPERA**

**7:15 PM - 11:30 PM; \$107 PER PERSON**

San Francisco houses an elegant and renowned opera theatre, the War Memorial Opera House. We will be entertained by a performance of Puccini's *Tosca*, based on the original Giuseppe Verdi's play *La Tosca* written in 1889. This opera takes place over the course of just one day: June 17, 1800. Through stunningly realistic and luxurious settings, the tragic world of *Tosca* is vividly illustrated in this Thierry Bosquet recreation of the original 1932 sets.

The love between Floria Tosca, a singer, and Mario Cavaradossi, a painter, fills the sinister Baron Scarpia, the Chief of Police, with jealousy. Cavaradossi is hiding a political fugitive and Scarpia abuses his power to force Tosca to betray her lover's secret. Tosca has her revenge on Scarpia, but realizes too late that her plan to save Cavaradossi is doomed.

Please bring your "CNS issued ticket" to the tour counter help desk located in the registration area of the Moscone West Convention Center to exchange for a "theatre ticket".

### **OE04 GOLDEN GATE THEATRE - THE PRODUCERS**

**7:15 PM - 11:00 PM; \$158 PER PERSON**

Based on Mel Brooks' politically incorrect musical, *The Producers*, is a story of down-on-his-luck theatrical producer Max Bealystock and Leo Bloom, a mousy accountant. Together they hatch the ultimate scam: since the IRS only audits shows that make a profit, raise more money than you need for a sure-fire Broadway flop and pocket the difference. Their "sure-fire" theatrical fiasco? None other than the musical *Springtime for Hitler*. The irony is that despite their best efforts to find the worst play, hire the worst director and cast the worst actors, their musical is a hit, and Max and Leo are in a heap of trouble. Sets, costumes, sight-gags and dancing pigeons – all add up to a funfest.

Please bring your "CNS issued ticket" to the tour counter help desk located in the registration area of the Moscone West Convention Center to exchange for a "theatre ticket".

## WEDNESDAY, OCTOBER 20

### **AT13 MORNING POWER EXERCISE - TAI CHI CHUAN**

**7:00 AM - 8:00 AM; \$6 PER PERSON**

Practice slow and graceful movements with smooth transitions, designed to reduce stress and energize your "chi" (life force.) This is a meditative workout.



### **CNS SPOUSE HOSPITALITY CENTER**

**7:00 AM - 10:30 AM; HOSTED BY CNS**

Continental breakfast and beverages will be served this morning in the Cityscape Restaurant at the Hilton San Francisco.

### **AT14 GLASS ARTISAN STUDIO & BERKELEY 4TH STREET SHOPPING**

**9:30 AM - 1:00 PM; \$68 PER PERSON**

Randy Strong – artist, designer and master craftsman has created elegant and highly sought after works of glass for over 25 years. Combining his eye for contemporary design with ancient techniques, he designs and creates works of blown-glass art that are truly unique. A native of the Oakland-Berkeley area of California, his art has been displayed throughout the world from the Louvre in Paris, to the Osaka Museum in Japan.


You will get a rare close-up look as Mr. Strong talks in depth about this lost art form while step by step he brings you along the journey with the 'hot shop' and creates a one of a kind piece before your eyes. Before returning to San Francisco, there will be a bit of time for shopping on Berkeley's hip and trendy Fourth Street.



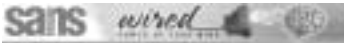
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- *Neurosurgery News*, official bi-monthly newsmagazine of the CNS
- [www.neurosurgeon.org](http://www.neurosurgeon.org)
- *Clinical Neurosurgery*, published annually for CNS members
- Job Placement Service Online Access
- Future Annual Meeting Information
-  2004
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JOAN AND VINCENT C.  
**TRAYNELIS**

President

Vincent C. Traynelis is Professor of Neurosurgery at the University of Iowa. Dr. Traynelis has a significant research interest in cervical spinal kinematics and the biomechanics of cervical spinal instrumentation and motion sparing reconstructive spinal surgery. He also directs a lab, which is focused on the investigation on the interactions of polyunsaturated fatty acids and malignant gliomas. He has an active clinical practice, which is heavily weighted toward spinal and skull base surgery. He has published 84 peer-reviewed papers, over 40 book chapters, and three books. He currently serves on the editorial boards of Neurosurgery, Spine, The Journal of Neurosurgery, The Journal of Spinal Disorders and Surgical Techniques and The Spine Journal.

Dr. Traynelis has served the Congress of Neurological Surgeons in many capacities including Executive Committee Member-at-Large, Chairman of the Education Committee, Scientific Program Chairman, and Annual Meeting Chairman. He currently serves on the Strategic Planning Committee. He has actively contributed time to other professional organizations. Dr. Traynelis is the past Chairman of the Joint Section of Disorders of the Spine and Peripheral Nerves. He has been a Councilor and the Scientific Program Chairman for the Neurosurgical Society of America. He has served as the Scientific Program Chairman for the Cervical Spine Research Society and is currently their Vice President.

Vince and Joan Traynelis have been married for 23 years. They met in Morgantown, West Virginia but Iowa City has been their home since 1989. They have three children: Vince, Laura, and Matt who are 21, 18, and 15 years of age. Vince is a junior at the University of Kansas in Lawrence. Laura will be a freshman in the fall at the University of Colorado in Boulder. Matthew is a sophomore at West High School in Iowa City.

**LOLA AND NELSON M.  
OYESIKU**

**President-Elect and Annual  
Meeting Chairman**



Dr. Oyesiku was born in Nigeria where he graduated from St. Gregory's College and received his medical degree from the University of Ibadan. He attended the University of London, UK as a Commonwealth Scholar. He did his neurosurgical residency training and completed a PhD degree in the neuroscience graduate program at Emory University, Atlanta.

Dr. Oyesiku is Associate Professor on the neurosurgical faculty at Emory University and Director of the Laboratory of Molecular Neurosurgery & Biotechnology. His clinical and research focus is the surgical treatment and molecular biology of pituitary tumors. Dr. Oyesiku's laboratory has identified unique aspects of pituitary adenoma gene expression and is developing a new modality for imaging and targeted therapy of pituitary tumors.

Dr. Oyesiku has served as Vice-President of the CNS. He serves on the Executive Committee of the CNS and the Executive Committee of the Joint Section of Neurotrauma/Critical Care. He has been Chair of the CNS International Committee. He is on the Board of Directors, Federation for International Education in Neurosurgery and the Volunteers for International Education in Neurosurgery. He is a CNS Delegate to the World Federation of Neurosurgical Societies. He is a Fellow of the American College of Surgeons.

Nelson and Lola have been married for 21 years. Lola is an R.N. with specialty training in Obstetrical Nursing and is a certified Midwife. They have three children, Angela (20), Linda (16) and Nelson III (13). Angela enjoys singing, Linda plays the piano and Nelson III plays the trumpet. Lola enjoys gardening and cooking while Nelson enjoys golf, football, cricket, and reading. Lola, Nelson and the kids have enjoyed seeing a great deal of the world together and have made the quadrennial pilgrimage to the World Cup finals a regular feature of their travels.



CATHERINE AND CHRISTOPHER E.  
**WOLFLA**  
 Scientific Program Chairman

Christopher E. Wolfla was born in North Carolina and grew up in Indianapolis, Indiana. He received his undergraduate education at Indiana University in Bloomington, Indiana and his medical education at Indiana University School of Medicine in Indianapolis, Indiana. He completed his Neurosurgery residency training at Indiana University Medical Center under the direction of Drs. Robert L. Campbell and Paul B. Nelson. After his residency, he did a fellowship in spinal Neurosurgery at the Medical College of Wisconsin under the direction of Dr. Sanford J. Larson.

Currently, Dr. Wolfla is an Associate Professor of Neurosurgery at the University of Oklahoma Health Sciences where he holds the Esther and Ted Greenberg Endowed Chair of Neurosurgery. Dr. Wolfla has an active clinical practice centered on spinal neurosurgery, including degenerative, neoplastic, infectious, and traumatic diseases of the spine. He is the Director of Oklahoma's only Neurosurgery residency training program. His research interests include cervical spondylotic myelopathy and the treatment of thoracic spinal fractures.

Dr. Wolfla currently serves the Congress of Neurological Surgeons as an Ex-Officio member of the Executive Committee, as Chairman of the 2004 Annual Meeting Scientific Program Committee, and as a member of the Strategic Planning Committee. He serves on a number of other committees in the Congress of Neurological Surgeons, including the Education, Web Site, and Fellowship Committees. He was formerly an Executive Committee Member-at-Large and the Chairman of the Education Committee. He was a contributor to the Resident Curriculum in Neurosurgery and Editor of the Medical Student Curriculum in Neurosurgery and the Image Database. In addition, Dr. Wolfla currently serves on the Executive Committee of the AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves as Chairman of the Web Site Committee.

Chris and Cathy have been married since 1988. Cathy is a mortgage broker and enjoys volunteering at school. She is a member of the Junior League of Oklahoma City and a former Officer. They have two lovely children, Andy (age 11) and Julie (age 5). The family enjoys annual trips to the Indianapolis 500, basketball and soccer games with the kids, and music.

SUZANNE AND MICHAEL T.

## LAWTON

Local Arrangements Chairman



Michael Lawton is Associate Professor of Neurological Surgery and Chief of Cerebrovascular Surgery at the University of California, San Francisco. He holds the Tong Po-Kan Endowed Chair. He completed his neurosurgical residency at the Barrow Neurological Institute, as well as a fellowship in cerebrovascular and skull base surgery with Dr. Robert Spetzler. He attended medical school at Johns Hopkins University, where he also stayed for his internship in general surgery. He completed his undergraduate studies in biomedical engineering at Brown University. He has been at UCSF for seven years, developing a clinical practice specializing in cerebrovascular and skull base surgery. He conducts NIH-funded research focused on the biology and therapeutics of arteriovenous malformations and aneurysms, as part of the Center for Cerebrovascular Research. He has published over 100 articles in neurosurgical and other medical journals, in addition to 20 book chapters.

Suzanne Lawton holds a Masters degree in International Health Management from Thunderbird, The American Graduate School of International Management. She has lived internationally in Costa Rica, Turkey, Germany, and Japan. She worked as Project Manager for the Marin Community Clinic, a non-profit medical organization serving the indigent population in Marin County. She began her professional career in ICU nursing and organ recovery for transplantation, after obtaining a degree in nursing from West Virginia University. Currently, Suzanne devotes her time to raising their young family of three children. Alexandra is 8 years old, and Simone and Blake are 6 year-old twins.

## GENERAL INFORMATION

### Accessibility

The Moscone West Convention Center is accessible through the Mission Street/4th Street and 4th Street/Howard street entrances. Inside, meeting rooms, exhibit halls and public areas are all served by conveniently located elevators. Telephones, drinking fountains and restrooms located throughout the facility are also wheelchair accessible.

Scooter and wheelchair rentals are available for a fee through ScootAround, Inc. and must be reserved prior to your arrival. Please call them toll free at 1-888-441-7575 or go to [www.scootaround.com](http://www.scootaround.com) for further information.

### Air Travel Information

Take advantage of one-stop service for all your air travel, registration and housing needs. See page 76 for details.

### Americans with Disabilities Act

Please let us know if, under the Americans with Disabilities Act, you may require special accommodations or services in order to attend the 2004 CNS Annual Meeting. We want to ensure that no individual with a disability is excluded because of the absence of auxiliary aids and services.

### Auxiliary Tours, Optional Evening Events and CNS Social Activities

Auxiliary Tours are optional activities and programs available to spouses and guests. Physicians and Allied Health Professionals may not register for the activities and programs that run simultaneously with our Scientific Program. These activities and programs are selected to provide an opportunity to explore the more interesting attractions in the San Francisco area.

All tours will depart from the CNS headquarters hotel, the Hilton San Francisco, Taylor Street entrance. Please arrive 15 minutes prior to the scheduled departure time.

All registered CNS Annual Meeting spouses and guests are invited to use the CNS Spouse Hospitality Center, Monday through Wednesday, including daily continental breakfast from 7:00 am – 10:30 am. Please note that admittance to the Hospitality Center is by Spouse/Guest or Nurse/Spouse badge only. The CNS Spouse Hospitality Center is located in Cityscape Restaurant at the Hilton San Francisco.

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 59-64. We encourage you to share this information with your spouse or guest for their convenience when registering for the week's extensive programming.

CNS Social Activities are also open to all registered attendees and are included with each registration. The Opening Reception on Sunday, October 17 is open to all registered attendees and one complimentary ticket is included with each registration. See page 19 for more details.

### 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 Babysitting services, please contact Core Group (415-567-0568) or American Child Care (415-285-2300 or [www.americanchildcare.com](http://www.americanchildcare.com)).

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

San Francisco is blessed with a temperate marine climate and enjoys mild weather year-round. October mean temperatures range from a high of 68°F to a low of 54°F. Visitors are most comfortable with a light jacket or coat, or in a suit. An all-weather coat will take the chill off cool evenings.

### CME Accreditation

The Congress of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

The CNS designates this continuing medical activity for a maximum of 25 credit hours in category 1 credit toward the American Medical Association's Physician's Recognition Award. An additional 16.5 hours of credit may be earned by attending optional educational programs such as Practical Courses and Luncheon



Seminars. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

Presenters of scientific posters can claim up to 10 category 2 credits for designing a poster and can also claim 1 category 2 credit for teaching; attendees can claim 1 category 2 credit for each hour spent viewing posters.

The same number of category 1 credits awarded will be applied toward the Continuing Education Award in Neurosurgery.

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.



Please note our new procedures for CME. Each medical registrant will be given a tracking form in their registration packet listing all CME activities. Prior to departure from the Annual Meeting, please submit your form indicating the number of hours of CME activity that you actually attended. You can submit your form in the Registration area at Moscone West (through Wednesday, October 20) or at the Hilton San Francisco (Thursday, October 21). No CME certificates will be issued unless a CME tracking is submitted at the Annual Meeting or faxed to the CNS Headquarters Office to 847 240 0804 by Friday, October 29, 2004.

### 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.

### Disclosures

Before the program, all speakers will disclose the existence of any financial interest and/or other relationship they might have with the manufacturer(s) of any commercial product(s) to be discussed during their presentation. 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.

Handout materials are prepared and submitted for distribution by the presenters who are solely responsible for their content.

Disclosures will be published in the Scientific Program Book and the Poster Program CD that will be distributed at the Annual Meeting.

### E-mail Cafés

You will be able to check your e-mail messages from the E-mail Cafés in the CNS Member Services Center (Booth 337 and throughout the Exhibit Hall). Please be sure to have your e-mail account username, password and the mail server name.

### Exhibition

The CNS Exhibit Hall will be located on Level One of the Moscone West Convention Center.

Hours are:

Monday, October 18 . . . . . 9:00 am – 4:30 pm  
 Tuesday, October 19 . . . . . 9:00 am – 4:30 pm  
 Wednesday, October 20 . . . . . 9:00 am – 4:00 pm

Admittance to the Exhibit Hall is by CNS name badge only. Please note that 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 Moscone West Convention Center. CNS is dedicated to neurosurgical education . . . your opinions are important to us!

### Future Meetings

Boston, MA . . . . . October 8 – 13, 2005  
 Chicago, IL . . . . . October 7 – 12, 2006  
 San Diego . . . . . September 15 – 20, 2007

### Housing Information

See pages 74-77.

**Member Services Center – Booth 337**

Designed to increase the visibility of the CNS Secretary, the CNS Member Services’ Staff and **NEUROSURGERY**® Editorial Staff, as well as the CNS Job Placement Service, the CNS Member Services Center is located on Level 1 of the Moscone West Convention Center. Staff members will be available to assist you and answer any questions you may have about CNS and its member services. You can also check your e-mail.

**Message Center**

The Message Center will be located in the CNS Registration Area during registration hours.

**Press Room**

Press activities will take place at the Moscone West Convention Center. Please stop by the Registration area for details.

**Registration Information**

**Registration Hours:**

**Moscone West Convention Center – Level 1**

Saturday, October 16 . . . . . 7:00 am – 5:00 pm  
 Sunday, October 17 . . . . . 7:00 am – 5:00 pm  
 Monday, October 18 . . . . . 6:30 am – 5:00 pm  
 Tuesday, October 19 . . . . . 6:30 am – 5:00 pm  
 Wednesday, October 20 . . . . . 6:30 am – 5:00 pm

**Hilton San Francisco – Continental Ballroom Foyer**

Thursday, October 21 . . . . . 6:30 am – 11:00 am

For additional information see page 74-79.

**Shuttle Services**

CNS will provide shuttle services to the Convention Center from the Hilton San Francisco. A shuttle schedule will be posted at the Hilton San Francisco and at the Convention Center and will be printed in the Scientific Program Book. Shuttle hours are as follows:

Saturday . . . . . 6:45 am – 5:30 pm  
 Sunday . . . . . 6:45 am – 5:30 pm  
 Monday . . . . . 6:45 am – 6:00 pm  
 Tuesday . . . . . 6:45 am – 6:30 pm  
 Wednesday . . . . . 6:45 am – 5:30 pm

**Speaker Ready Room**

All speakers and abstract presenters should visit the Speaker Ready Room prior to their presentations.

**Moscone West Convention Center**

Saturday, October 16 . . . . . 7:00 am – 5:00 pm  
 Sunday, October 17 . . . . . 7:00 am – 5:00 pm  
 Monday, October 18 . . . . . 6:30 am – 5:30 pm  
 Tuesday, October 19 . . . . . 6:30 am – 5:30 pm  
 Wednesday, October 20 . . . . . 6:30 am – 5:30 pm

**Hilton San Francisco**

Thursday, October 21 . . . . . 6:30 am – 11:00 am

**Smoking**

Smoking will be prohibited in all meeting rooms and exhibit areas.

**Transportation Information from San Francisco International Airport**

The San Francisco Airport is 13 miles from downtown San Francisco and travel can range from 15 minutes to 45 minutes. The Oakland airport is 19 miles from downtown and travel times can range from 25 minutes to an hour.

Super Shuttle Transportation Systems (800 258 3826 US only; 415 558 8500, [www.supershuttle.com](http://www.supershuttle.com)) provides airport shuttle service for \$14 from the San Francisco International Airport. Advance reservations are not required for shuttles from San Francisco International Airport. The shuttle runs every half hour from all terminals and payment is made at the time of boarding. Advance, prepaid reservations are required from Oakland Airport. Super Shuttle accepts cash and all major credit cards. SuperShuttle is offering a \$2 off coupon to all Congress of Neurological Surgeons travelers. Visit the SuperShuttle website [www.supershuttle.com](http://www.supershuttle.com) or call 1-800-BLUEVAN for further information or [www.supershuttle.com/coupons/sfo/neurological](http://www.supershuttle.com/coupons/sfo/neurological) to print the coupon.

Taxis are readily available outside the baggage claim area at the San Francisco International Airport. The fare will be approximately \$37 to the downtown area.

**Who Should Attend**

Neurological surgeons, neurosurgery nurses, nurse practitioners, physician assistants, orthopedic surgeons, primary care physicians, gerontologists, radiologists, hospital administrators, oncologists, neurologists, pediatricians, psychiatrists, and infectious disease specialists are welcome and encouraged to attend the 2004 CNS Annual Meeting.

# Become a CNS Member



**Only \$335 per year!**  
for Active and International Active Members


## ACCESS

**A global network of neurosurgical colleagues and information**

- ◆ CNS Member Contact Guide
- ◆ World Directory of Neurological Surgeons
- ◆ [www.neurosurgeon.org](http://www.neurosurgeon.org)

## EDUCATION

**Bringing you the latest scientific knowledge and solutions**

- ◆ CNS Annual Meeting
  - Save \$100** on registration fees
  - ◆ Earn valuable CME credit
- ◆ Complimentary subscriptions to leading neurosurgical publications—**over a \$300+ value**
  - ◆ **NEUROSURGERY**—the official journal of the CNS.
  - ◆ *Neurosurgery News*—the official news magazine of the CNS.
  - ◆ *Clinical Neurosurgery*—published annually for CNS members.
- ◆ 
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**For every stage of your career**

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  - Enhance your leadership skills through service on CNS Committees.*
- ◆ Job Placement Service

# Apply Today!

**Online—[www.neurosurgeon.org](http://www.neurosurgeon.org)**

Or send your application to: Congress of Neurological Surgeons  
10 N. Martingale Road, Suite 190  
Schaumburg, IL 60173

# INTRODUCING THE CNS Rewards Program

## FOR HOUSING, REGISTRATION, AND TRAVEL SERVICE

Register for courses, select your flights, reserve your hotel room, and more through the CNS Housing, Registration, and Travel Service (I.T.S.). Use this one-stop service for all your meeting needs and earn BIG REWARDS too!

### 🏆 DOUBLE HILTON HHONORS® POINTS

Earn double the points when you stay at the Hilton San Francisco – the official CNS Headquarter Hotel. Points can be redeemed for future hotel stays, airline tickets, or other **HHonors®** rewards. Not a **HHonors®** member? Join today at [www.hiltonhonors.com](http://www.hiltonhonors.com)

### 🏆 FREE HIGH-SPEED INTERNET ACCESS

Reserve one of the first 500 rooms contracted for the CNS medical attendees at the Hilton San Francisco and receive free high-speed internet access in your room for your entire stay. A savings of up to \$9.95 per day!

### 🏆 20% DISCOUNT ON SPA SERVICES

Spa Fusion & Health Club is the hottest new spa in town and conveniently located at the Hilton San Francisco. All CNS attendees staying at the Hilton San Francisco can relax and enjoy a variety of luxurious therapies at 20% savings. Learn more at [www.spafusion.com](http://www.spafusion.com).

### 🏆 SPECIALLY NEGOTIATED ROOM RATE AT THE HILTON SAN FRANCISCO (SEE PAGE 77 FOR MORE DETAILS.)

### 🏆 10% OFF AIRFARE FROM UNITED AIRLINES – OFFERED EXCLUSIVELY TO CNS MEETING PARTICIPANTS. (SEE PAGE 76 FOR MORE DETAILS).

### 🏆 COMPLIMENTARY SHUTTLE SERVICE BETWEEN THE HILTON SAN FRANCISCO AND THE MOSCONE WEST CONVENTION CENTER.

### 🏆 CONVENIENT ACCESS TO THESE CNS EVENTS – TAKING PLACE AT THE HILTON SAN FRANCISCO!

Opening Reception – Sunday evening in the Hilton Grand Ballroom.

Thursday General Scientific Session in the Hilton Continental Ballroom.



*Dedicated to Neurosurgical Education*

## SUPPORT THE CNS

The CNS asks you for your support by reserving your guest room through the official CNS Housing, Registration, and Travel Service/I.T.S. 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 can 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.

# CNS Housing, Registration, and Travel Service/I.T.S.





## CNS Rewards Program

Make your arrangements through CNS and you'll be automatically enrolled in the CNS Rewards Program. (see page 74 for details).

## ONE-STOP SERVICE FOR ALL YOUR MEETING NEEDS

The CNS, in conjunction with International Travel Services (I.T.S.) offers you one-stop service for all your hotel, registration, and air travel needs.

### MAKE YOUR ARRANGEMENTS TODAY

|  |  ONLINE                           |  FAX |  PHONE |  MAIL            |
|--|--|---|---|---|
| <b>Ways to Register, Reserve Housing &amp; Air Travel</b>  | <a href="http://www.neurosurgeon.org">www.neurosurgeon.org</a>   | In U.S. 800-521-6017<br>Outside U.S. 847-940-2386                                     | In U.S. 800-424-5249<br>Outside U.S. 847-940-2155   | CNS Annual Meeting/I.T.S.<br>108 Wilmot Road, Suite 400<br>P.O. Box 825<br>Deerfield, IL 60015-0825 |
| <b>Payment Type Accepted</b>   | Credit Card only   | Credit Card only  | Credit Card only  | Credit Card or Check<br>(No WireTransfers)  |
| <b>Use of this Service</b>   | Not available to Residents or Fellows  | Available to All  | Not available to Residents or Fellows   | Available to All  |
| <b>Registration for Practical Courses, Luncheon Seminars, Optional Events, Tours</b>                             | Available to All   | Available to All  | Not available through this service.   | Available to All  |
| <b>Registration Confirmation Notification</b><br>(sent to you via email, fax or regular mail)                    | Immediate confirmation   | Allow 7 business days   | Allow 2 business days   | Allow 2 business days   |
| <b>If meeting confirmation is not received within 2 weeks of posting, contact I.T.S. at phone numbers above.</b> |  |   |   |   |
| <b>Special Feature</b>   | Allows you to check availability of Practical Courses, Luncheon Seminars, Optional Events, and Tours in real-time. |   |   |   |

#### Fax & Mail

- Type or print all information on the registration / housing form in black ink. Do not use a cover sheet.
- CNS / I.T.S. is not responsible for faxes not received due to mechanical failure or circumstances beyond our control.
- Due to the high volume of forms received, I.T.S. cannot confirm receipt of faxed or mailed forms.

#### Phone

- Have your completed registration / housing form and credit card information in front of you when placing your call.

#### Credit Card Payments

- For Advance Registration      Visa    MasterCard    American Express    Discover
- Accepted On-Site                  Visa    MasterCard    American Express

#### Payment by Check

- Checks must be drawn on a U.S. bank in U.S. dollars. Make checks payable to: CNS Annual Meeting / I.T.S.
- Include \$200 per unit hotel deposit plus appropriate fees for registration and any optional items purchased.

## CNS Rewards Program

Make your arrangements through CNS and earn **BIG REWARDS**.  
(see page 74 for details).

# CNS Hotel Reservations

## THE HILTON SAN FRANCISCO IS THE OFFICIAL CNS HEADQUARTERS HOTEL

### Making Your Reservations

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 74-79.

Don't Wait. Rooms are limited and fill up quickly.

### Using the CNS Housing, Registration, and Travel Housing Service/I.T.S.

Contact I.T.S., the official CNS Housing and Registration Service, to reserve your guest rooms.

Hotel will not accept reservations from CNS meeting attendees directly.

Reservations may be made Online or via Fax, Phone or Mail – See page 75.

Be sure to complete the entire housing section of the registration form.

### Deposits

A deposit is required and due at the time your hotel reservation is made.

This payment must be submitted with your registration fees. 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.

Deposits: Standard Room = \$200

One-Bedroom Suite = \$400

Two-Bedroom Suite = \$400

### Complimentary Housing for CNS Resident 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).
- Register for the CNS Annual Meeting by September 8, 2004.
- Become a member by August 1.

NOTE: All Resident attendees must register and make housing arrangements via Fax or Mail.

Online and Phone registration is not permitted.

### Hotel Change / Cancellation Policy

Note: When canceling a reservation by phone, record the date, cancellation number, and name of the person accepting the cancellation.

|   |   |   |
|---|---|---|
| Through September 22, 2004<br>5:00 pm CST | <ul style="list-style-type: none"> <li>• All changes and cancellations must be made through I.T.S.</li> <li>• Rooms are not transferable</li> </ul> | Refunds for deposits will be issued by I.T.S.   |
| Beginning Monday, September 27, 2004      | All changes and cancellations must be made directly with the hotel.   | <ul style="list-style-type: none"> <li>• If cancellation notice is not received according to hotel policy, the deposit may be forfeited.</li> <li>• Check your hotel confirmation or contact the hotel directly for information.</li> </ul> |

Save up to 10%\*

### Air Travel\*

The Congress of Neurological Surgeons has secured a special discount agreement with United Airlines. This discount is offered exclusively to CNS Annual Meeting attendees and is not available to the general public.

### Choose Your Savings & Book Early UNITED AIRLINES

Save 5% off the lowest available fare by calling United at 1-800-521-4041 – refer to **Meeting ID 523LG**

Save 10% off the unrestricted coach fare when purchased 7 days in advance.

Save an additional 5% when you purchase your tickets at least 30 days in advance.

Discounts apply on United, United Express, Ted, and United code share flight operated by US Airways, US Airways Express and Air Canada.

Reservations are accepted through: The airlines 7 days a week from 8:00 am – 10:00 pm EST.

I.T.S. – The CNS Housing, Registration, and Travel Service at 1-800-424-5249 or 847-940-2155, or through your travel agent.

# Hilton San Francisco

## STYLE AND LUXURY AWAIT YOU



Located in the heart of Union Square, the theater district, world-class shopping and entertainment, the Hilton San Francisco offers you a world of possibilities.



Stunning views of the San Francisco skyline and Bay

### Fine in-room amenities

Dual-line telephones with speakerphone, voicemail and dataports, coffeemaker, mini bar and more.

### Restaurants and bars:

- The Daily Cup – Premium and specialty coffees
- Intermezzo - Sidewake café with a mouthwatering Mediterranean menu
- Kiku of Tokyo - Authentic Japanese cuisine in an exotic setting
- Cityscape Bar & Restaurant - One-of-a-kind views of San Francisco, dancing and an extensive selection of California wines.



### Room Rate:

Standard Room –  
Single \$199, Double \$219

Deluxe Room –  
Single \$219, Double \$239

Executive Level –  
Single \$259, Double \$279

*All rates are subject to 14.05% occupancy tax.*

*A small portion of your room rate will be used to help defray the cost of housing and registration services.*

**Spa Fusion** – Hottest new Spa in town with an enticing menu of massages, facials, manicures, pedicures, and many specialized services. Hairstylist also available.

**Health Club** – Nautilus training, treadmills, a cardio theater viewing system, steam room and more! Personal trainer available.

Convenient transportation to the best of San Francisco and Bay Area via historic cable cars, antique trolleys, subway, buses, and ferry service.

# CNS Rewards Program

Make your arrangements through the CNS Housing, Registration and Travel Service/I.T.S. and earn BIG REWARDS.

### 🏆 DOUBLE HILTON HHONORS® POINTS

Earn double points when you stay at the Hilton San Francisco – the official CNS Headquarter Hotel. Redeem points for future hotel stays, airlines tickets or other Hilton Honors rewards.

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### 🏆 CONVENIENT ACCESS TO CNS EVENTS TAKING PLACE INSIDE THE HILTON SAN FRANCISCO

Opening Reception – Sunday evening.  
Thursday General Scientific Session.

# Reserve Your Room Today! 77

# Instructions

## B1-B2 ADVANCED REGISTRATION AND HOUSING FORM

1. 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 email. If international, please include country code for phone and fax.
2. PRINT or TYPE any spouse / guest / or children's badge information.
3. Hotel Reservations: 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. Book Early!
4. 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).
5. Add the \$200 Hotel Deposit to the cost of your registration – this is the balance due for Annual Meeting Registration and Housing Deposit. Registrations received without deposit payment cannot be processed.
6. Payment: If paying by check, please make check payable to CNS Annual Meeting / I.T.S. Any checks received on an overseas bank will be returned. Any checks returned for insufficient funds are subject to additional charges. If you are paying by credit card, write in full credit card number; print the cardholder name, expiration date and signature. NO WIRE TRANSFERS.

**PURCHASE TICKETED EVENTS ONLINE OR VIA FAX OR MAIL.  
PHONE ORDERS WILL NOT BE ACCEPTED.**

## 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 list is open, your credit card will be charged accordingly. You may pay and register via the methods outlined on page 75.

### Practical Course Registration (B3)

|          |            |  |
|----------|------------|--|
| Saturday | October 16 | Afternoon Practical Courses are available.                       |
| Sunday   | October 17 | 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    | October 18 |
| Tuesday   | October 19 |
| Wednesday | October 20 |

## B5 AUXILIARY TOURS / OPTIONAL EVENING EVENTS / T-SHIRTS

(See pages 59-64 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.



# CNS Meeting Registration

| CATEGORY                       | DISCOUNTED FEES<br>On or before September 15, 2004<br>at 5:00 pm CST<br>Register via:<br>Internet Fax Phone Mail<br>(see page 75 for details). | FULL PRICE FEES<br>After September 15, 2004<br>Register on-site at the Moscone<br>West Convention Center in<br>San Francisco |
|--------------------------------|--|--|
|                                | Member   | \$575  |
| 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            | \$400  | \$500  |
| Nurse                          | \$400  | \$500  |
| 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.  
 \*\*All domestic and international Fellows must attach letter from Program Coordinator verifying Fellow status.

| REGISTRATION MATERIALS<br>PICK UP  | ITEMS INCLUDED IN REGISTRATION FEE  |
|--|---|
| All materials should be picked up on-site at the Moscone West Convention Center. | <ul style="list-style-type: none"> <li>• One ticket to the Opening Reception on Sunday, October 17, 2004</li> <li>• Admission Monday – Thursday General Scientific Sessions</li> <li>• Admission Monday - Wednesday<br/>Special Courses<br/>Section Sessions</li> <li>• Morning Coffee Breaks &amp; Afternoon Beverage Breaks In Exhibit Hall:<br/>Monday – Wednesday</li> <li>• Morning Coffee Break<br/>Thursday Morning</li> </ul> |

## REGISTRATION CANCELLATION POLICY

All refund requests must be received in writing.

Requests accepted via:

Email: [cns@expoedge.com](mailto:cns@expoedge.com)

Fax: 847-940-2386

Mail: CNS Annual Meeting / I.T.S.  
108 Wilmot Road, Suite 400  
P.O. Box 825  
Deerfield, IL 60015-0825

| REQUEST RECEIVED BY                  | REGISTRATION   | COURSE & EVENT TICKETS                            |
|--------------------------------------|--|---|
| September 15, 2004                   | Full refund  | Full Refund                                       |
| September 22, 2004                   | Full refund, less \$75 processing fee                                      |   |
| After September 22, 2004 and no show | Absolutely no refunds will be issued after this date, regardless of cause. | Absolutely no refunds due to facility guarantees. |
| On-Site                              |  | No return or exchange of tickets allowed.         |

# IMPORTANT DATES TO REMEMBER

## SEPTEMBER 15 (5:00 PM CST)

Advance Registration  
Discount and  
Housing Deadline

Cancellation Deadline  
(Full refund with receipt of  
written cancellation request)

## SEPTEMBER 16 - 22

\$75 Processing fee will be  
charged for written  
cancellation requests  
received during this time.  
No refunds given after  
September 22, 2004.

## SEPTEMBER 22

Course and event tickets  
will be refunded in full  
until this date.  
No refunds after this date.

## SEPTEMBER 27

Any changes to  
hotel reservations must be  
made directly with hotel  
from this date on.



October 8 - 13, 2005

2005 CNS Annual Meeting

# BOSTON IN 2005...



Nelson M. Oyesiku, MD, PhD, FACS  
2005 CNS President



Honored Guest  
Roberto C. Heros, MD

Please plan to join us for the  
CNS 55TH ANNUAL MEETING

BOSTON IN 2005  
October 8-13, 2005 in Boston

# 2004 CNS Sponsors

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As of 4/1/04

# 2004 CNS Sponsors

# Congress of Neurological Surgeons

## 54th Annual Meeting

**President Mikhail Gorbachev**  
Fifth Annual Walter E. Dandy Orator



**Burt Rutan**  
Special Lecturer on Creativity and Innovation



**Join us in the city by the Bay...**



**San Francisco, California**  
**October 16-21, 2004**

**Register Today – [www.neurosurgeon.org](http://www.neurosurgeon.org)**

Congress of Neurological Surgeons  
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Schaumburg, IL 60173  
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