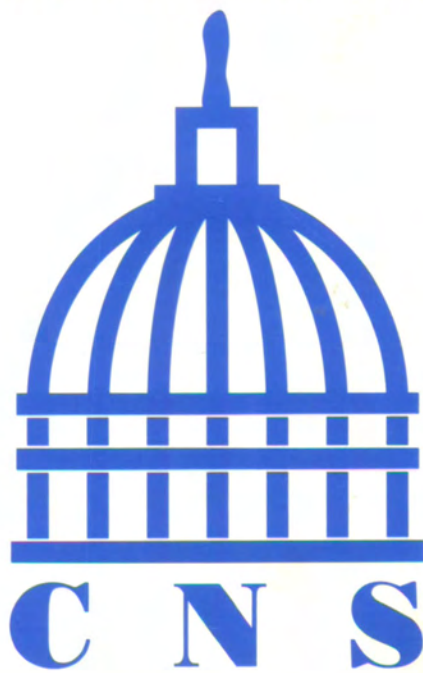


**PRELIMINARY PROGRAM**  
**Congress of**  
**Neurological Surgeons**



**42nd Annual Meeting**



**1 9 9 2**

**Sheraton Washington Hotel**  
**Washington, D.C.**  
**October 31 - November 5, 1992**





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Dear Colleague:

The 42nd Annual Meeting of the Congress of Neurological Surgeons will be held in our Nation's most exciting and historic city during the high point of its political life. Washington, DC offers members, guests and their families an unlimited mix of contemporary and historic sites to visit and enjoy. Feel the excitement of our Nation's Capital during election week in Washington, October 31 - November 5, 1992.

For the first time, our Honored Guest, Robert Ojemann, is a Past President of the Congress of Neurological Surgeons. It is truly a pleasure to have Dr. Ojemann serve as our Honored Guest and to provide us with three inspiring and informative lectures. Dr. Ojemann is a man of many talents who will share with us his wealth of experience in several diverse aspects of practical neurosurgery.

An increased number of Practical Courses and a number of new and innovative Luncheon Seminar topics will be featured in the Scientific Program. Hundreds of neurosurgeons from around the United States and around the world will be involved in various aspects of the Scientific Program. The popular and educational General Scientific Sessions will focus on contemporary vascular surgery, practical pain management, spinal instrumentation for the practicing neurosurgeon, radiosurgery and socioeconomic issues. All of these important and complex subjects will be presented in a thoughtful and practical manner by our colleagues who have acquired exceptional expertise.

The Opening Reception will be at one of the great halls in Washington, the site of many inaugural balls. The social program will provide tours both to the well known and the out of the way sites of Washington. The Auxiliary Luncheon will feature an outstanding speaker with an insider's view of Washington.

Remember to order your absentee ballots and join us for an election week celebration in Washington, DC. This promises to be an exciting and educational meeting for neurosurgeons at all levels of experience and in all types of practices. Susan and I hope you will join us for a memorable stay in Washington.

Sincerely,

William F. Chandler, MD  
President  
Congress of Neurological Surgeons



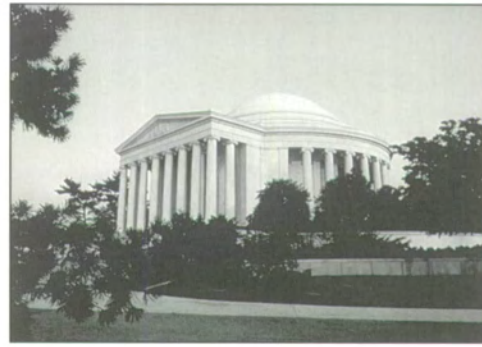
## WELCOME TO WASHINGTON, DC!

In 1790, George Washington, the nation's founding father and first president, chose the area beneath the fall-line of the Potomac River as the country's capital city, just 18 miles from his Mount Vernon estate. A year later, Pierre L'Enfant, a former member of Washington's Continental Army staff, was commissioned to design the new capital city.

Because of tremendous growth, especially in the past 20 years, Washington has become both a federal city and a local community, with many diverse neighborhoods and cultures. Referred to as the U.S. city with the most international flavor, Washington offers so much to see and do that many of its attractions take up a day in themselves. One can visit one of the 13 Smithsonian Institution museums, or roam the halls of the National Gallery of Art, which houses one of the most impressive collections of art in the world. And of course, the monuments, the U.S. Capitol, and the White House are waiting to be toured. Wherever your interests take you, take advantage of the "greatest free show in the world". Most of the attractions are open seven days a week, and virtually all of them are free.

The various neighborhoods of Washington, DC also have something for everyone. Capitol Hill is known for its government buildings, but one can also find unique shops and charming restaurants in the area. Georgetown, a combination of the old and the new, is the hotspot for trendy nightclubs and restaurants, as well as little specialty shops. Eclectic Adams Morgan is probably the most diverse neighborhood in DC, with multi-cultural restaurants, cafes, and grocery stores. Chinatown, about midway between Capitol Hill and the White House is only eight blocks long, but has over 25 Oriental restaurants.

Election week 1992 should prove to be an exciting time as the Congress of Neurological Surgeons convenes in Washington, DC.





# GENERAL INFORMATION

## REGISTRATION INFORMATION

Enclosed with this preliminary program are the following materials:

- Registration Form
- Housing Form
- Photography Exhibition Entry Form

Please complete the registration form, returning it and the necessary fees in the small envelope provided.

All registrants will receive a registration confirmation letter, confirming meeting attendance and assignment to courses. Please allow three weeks for processing.

**PLEASE NOTE:** The deadline for advance registration is October 1. Because course capacities are limited, early registration is recommended. All attendees wishing to register after this date should register at the on-site registration desk at the meeting.

Registration will open at 2:00 p.m. on Saturday, October 31, at the Sheraton Washington, and will remain open until 7:00 p.m. On Sunday, registration will be open from 8:00 a.m. - 7:00 p.m. Registration will be open from 7:30 a.m. - 5:30 p.m. Monday, 7:00 a.m. - 5:30 p.m. on Tuesday and Wednesday, and from 7:30 a.m. - 11:00 a.m. on Thursday.

All meeting registrants will receive one complimentary ticket to the Opening Cocktail Party and admittance to the exhibitor-sponsored continental breakfasts on Tuesday and Wednesday mornings.

With the Spouse/Guest registration, attendees will receive complimentary use of the Hospitality Suite, including daily continental breakfasts (admittance to the Hospitality Suite is by Spouse/Guest badge only). Upon request, the registration fee also includes admittance to the Auxiliary Educational Seminar, "THINK FIRST".

Children, over the age of 12, may register as a guest at the Spouse/Guest Registration Fee. This will allow full participation in the Spouse Program activities.

## REFUND POLICY

**Pre-registration Fees:** A letter requesting cancellation of pre-registration must be received by the CNS Annual Meeting Office, 22 South Washington, Park Ridge, Illinois 60068, by October 1 in order to receive a full refund. Cancellation requests received after October 1 and before October 27 will be refunded less a \$75.00 processing fee. No refunds will be made if received in the CNS Annual Meeting Office after October 27, 1992. Cancellations may be telefaxed to 708/692-2589.

**Course and Event Tickets:** Course and Event tickets will be refunded in full until October 27, 1992. Because of facility guarantees, there can be no refund for tickets cancelled after October 27. There will be no on-site return or exchange of tickets for courses.

## IMPORTANT DATES

**October 1, 1992:** Last day for receipt of Advance Registration applications at the CNS Annual Meeting Office. Registration cancellations postmarked on or before this date will receive a full refund.

**October 2 - 31, 1992:** Advance registration forms postmarked on or after this date pay full price registration fees.

**October 2 - 27, 1992:** Registration cancellations postmarked between these dates will receive a refund less a \$75 service fee.

**October 27, 1992:** No registration fee refunds will be allowed after this date. Requests must be received at the Annual Meeting Office by this date.

**October 31, 1992:** Opening day of the 42nd CNS Annual Meeting.

**November 5, 1992:** Last day of the 42nd CNS Annual Meeting.



## MEETING PURPOSE

The purpose of the 1992 Annual Meeting of the Congress of Neurological Surgeons is to provide continuing medical education for practicing neurosurgeons, neurosurgical residents, and fellows in the form of didactic lectures, practical (hands-on) courses demonstrating neurosurgical techniques, small group sessions to provide in-depth coverage of selected topics, and posters to provide the latest information regarding clinical and laboratory advances in neurological surgery.

## NURSING SEMINAR

Attendees at Sunday's Neurosurgical Nursing Update will receive 6.0 CEU credits. Program approval has been granted by the Florida State Board of Nursing, sponsored by Memorial Hospital, Hollywood, Florida, Nursing Education Department. Provider #27H0088.

## CONTINUING MEDICAL EDUCATION

This Joint Committee on Education of the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS) designates this continuing medical education activity for 22 credit hours in Category I toward the Continuing Education Award in Neurosurgery and the Physician's Recognition Award of the American Medical Association. Participation in ticketed courses provides additional Category I credit as follows:

Practical Courses 001, 002, 003: 7 hours  
All other Practical Courses: 3 hours  
Consultant's Corner: 2.5 hours  
Luncheon Seminars: 1.5 hours

The Joint Committee on Education of the AANS/CNS is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

## RESIDENT INFORMATION

### REGISTRATION

Meeting registration for residents and their spouses is complimentary. All scientific course numbers followed by an "R", i.e., 102R, are complimentary or discounted courses to residents. Please indicate the appropriate resident course number on the registration form to register for these courses. Special resident activities scheduled include the Resident Luncheon on Tuesday with the Honored Guest, Dr. Robert G. Ojemann and the leadership of the Congress. Reduced room rates for residents have been obtained at the Sheraton Washington. The official resident housing form must be used to obtain these rooms. Because of limited availability of resident tickets for some courses, early registration is suggested. On-site availability of complimentary course tickets can be determined at the Resident Desk in the Registration Area.

### RESIDENT GREETING

On behalf of the Residents' Committee of the Congress, I would like to extend a warm welcome to all Neurosurgery Residents to the Annual Meeting in Washington, DC. The Scientific Program of the Annual Meeting is particularly focused on the education of young neurosurgeons. Each morning of the meeting a specific, often controversial, topic is discussed in detail by leading experts from throughout the world. You will have an opportunity to meet and question many of these leaders in neurosurgery at small luncheon seminars and special courses. A special "Residents Luncheon" will be available free to all residents during which you will have the opportunity to meet personally with our Honored Guest, Dr. Robert G. Ojemann. Dr. Ojemann has a truly exceptional experience to share and is looking forward to meeting with the residents.

Along with the Scientific Program is an exciting Social Program and the opportunity to talk to the many commercial exhibitors and see the latest in modern neurosurgical instrumentation and imaging. We look forward to seeing you at the meeting.

William A. Friedman, MD  
Chairman, Residents' Committee



## POSTER BREAKFASTS

Complimentary breakfast with poster authors will be available on Tuesday and Wednesday mornings, from 7:00-7:45 a.m. Plan to use this time to review the posters or to examine the many products and services available in the Exhibit Area.

## SCIENTIFIC MEETING

All scientific meetings and exhibits will take place at the Sheraton Washington and the Omni Shoreham Hotel. Over 250 exhibits featuring the latest neurosurgical products, will be on view beginning Monday morning at 9:30 a.m.

## SPEAKER READY ROOM

The Speaker Ready Room will be available daily from 7:00 a.m. - 5:00 p.m., for speakers wishing to pre-view their slides. The Speaker Ready Room is located in the Washington Ballroom Balcony, accessible across from the Presidential meeting rooms, one level above the Washington Ballroom.

## SMOKING

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

## MESSAGE CENTER

The Message Center will be located in the registration area during registration hours. Messages will be posted.

## Program Summary

	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
Morning	Arrival	Practical Courses Nurses Workshop	International Breakfast and Program General Scientific Session I: Contemporary Concepts in Cerebrovascular Surgery Honored Guest Presentation	Posters/Exhibits Breakfast Fun Run and Walk General Scientific Session II: Pain Management/Socioeconomic Issues Presidential Address	Posters/Exhibits Breakfast General Scientific Session III: Spinal Instrumentation Honored Guest Presentation	General Scientific Session IV: Radiosurgery Honored Guest Presentation Adjournment
Afternoon	Registration Open at 2:00 p.m.	Practical Courses Nurses Workshop	<b>Luncheon Seminars</b>	<b>Luncheon Seminars</b>	<b>Luncheon Seminars</b>	
			Special Course I: Pituitary Tumors Joint Section on Stereotactic & Functional Neurosurgery Workshop Pediatric Section Workshop	Special Course II: History of Neurosurgery Joint Section on Spine and Peripheral Nerves Workshop Joint Section on Tumors Workshop	Special Course III: Skull Base Surgery Joint Section on Cerebrovascular Surgery Joint Section on Neurotrauma and Critical Care	
Evening	Dinner and the Symphony at the Kennedy Center Ghosts of Washington with Dinner at America Restaurant	Opening Cocktail Party at National Building Museum	Publik Table at Gadsby's Tavern	Washington After Dark	Annual Reception and Banquet	



## **SOCIAL AND AUXILIARY ACTIVITIES**

The pink pages of this brochure contain complete details of all planned social and Auxiliary activities. It is recommended that this information be shared with your spouse in order to register for all of the week's extensive programming. Tours and activities have been selected to provide the opportunity to explore the Washington, DC area. Babysitting service references are available through the Concierge desk of the hotels.

## **HOTEL RESERVATIONS**

To ensure room reservations at the discounted convention rate, rooms must be reserved on an official CNS Housing Form. Please see page 31 of this brochure for complete hotel information. NOTE: The deadline for room reservations is October 1, 1992.

## **AIRLINE INFORMATION**

Delta Airlines and United Airlines both offer discounted fares for persons attending the CNS Annual Meeting. The airlines may be called directly, or by travel agents. See page 32 for discount information.

### **DON'T FORGET TO VOTE!**

National elections will be held on Tuesday, November 3, during the CNS Annual Meeting. It will be necessary to vote by absentee ballot prior to the meeting. For information on voting requirements in your area, check your local phone book for your city or county Board of Election Commissioners.

## **CNS ANNUAL MEETING COMMITTEE**

### **ANNUAL MEETING**

**Chairman**  
**Daniel L. Barrow, MD**

**Exhibits**  
Mark H. Camel, MD

**Host**  
Craig A. Van Der Veer, MD

**Local Arrangements**  
Barton L. Guthrie, MD

**Public Relations**  
Linda L. Sternau, MD

**Registration**  
Eben Alexander, III, MD

**Residents' Registration**  
H. Carson McKowen, MD

**Sergeant-At-Arms**  
Charles L. Branch, Jr., MD

**Videotape Library**  
Julian E. Bailes, MD

**Clinical Neurosurgery**  
Warren R. Selman, MD

### **SCIENTIFIC PROGRAM**

**Chairman**  
**William A. Friedman, MD**

**General Scientific Session I**  
H. Hunt Batjer, MD

**General Scientific Session II**  
Kim J. Burchiel, MD

**General Scientific Session III**  
Stephen M. Papadopoulos, MD

**General Scientific Session IV**  
Robert J. Coffey, MD

**International Scientific Program**  
Raymond Sawaya, MD

**Luncheon Seminars**  
Mitchel S. Berger, MD  
Issam A. Awad, MD

**Open Scientific Sessions**  
Stephen J. Haines, MD

**Poster Session**  
Robert J. Maciunas, MD

**Practical Courses**  
Keith L. Black, MD

**Special Courses**  
Regis W. Haid, MD

**Joint Sections Workshop**  
Mark N. Hadley, MD

**Residents Program**  
Winfield S. Fisher, MD

**Program Evaluation**  
Thomas A. Lansen, MD



# PHOTOGRAPHY EXHIBITION

Dear Colleague:

You are invited to participate in the CNS Annual Meeting Photography Exhibition and Contest. In recognition of the widespread interest and skill in photography among neurosurgeons and in an effort to enhance the non-scientific aspects of our annual meeting, we are continuing this exhibition. Photographs submitted will be displayed in conjunction with the Poster Session. We hope that the number of entries and the quality of work will continue to make this event a highlight of our annual meetings.

To heighten interest and stimulate participation, the exhibition will be judged and ribbons awarded. There will be two categories: Medical and Non-Medical. Photographs may be in black and white or color and should be in the 8 x 10 format or larger.

If this is to be a successful aspect of our annual meeting, we need your input now. We solicit your early response in order to finalize space requirements for the exhibition. Please return the entry card by September 15 indicating the number of photographs you wish to exhibit. The entry form provides further details.

Help us make the CNS Photography Exhibition a special part of our annual meeting. Show off your hidden talents!

## PHOTOGRAPHY CONTEST RULES AND INFORMATION

- 1) Photographs should be taken by the entrant.
- 2) Any photograph is eligible. We hope to have an even mix of medical (intraoperative, microscopic, interesting pathology) and non-medical (landscape, action, close-up) photographs.
- 3) Submit title, category, and size of each entry by September 15, 1992.
- 4) Photographs may be mounted on standard mounting board with or without a matte. Entries with glass or wooden frames should not be submitted or the photograph will be removed from this frame for display at the exhibition.
- 5) Entries may be submitted by mail with the entry form or may be submitted at the Poster/Photography Registration Desk, before 12:00 p.m. on Sunday, November 1, 1992.
- 6) Photographs may be collected by the entrant on Wednesday, November 4, 1992, prior to 2:30 p.m. The CNS will not be responsible for theft, damage or return of the photograph.

Entries should be submitted to:  
Charles L. Branch Jr., MD  
Department of Neurosurgery  
Wake Forest University Medical Center  
Winston-Salem, NC 27157-1029  
919/748-4083  
FAX - 919/748-3065





# SUNDAY, NOVEMBER 1, 1992

## SCIENTIFIC PROGRAM

**8:30 a.m. - 5:00 p.m.**  
**Practical Courses**  
(limited enrollment)

001  
**ENDOVASCULAR/INTERVEN-  
TIONAL NEUROSURGERY**  
L. Nick Hopkins, MD  
*Course Director*

Stanley L. Barnwell, MD, Jacques E.  
Dion, MD, Randall T. Higashida, MD,  
Joseph A. Horton, MD, Mazen  
Khayata, MD, Kimberly Livingston, MD,  
Neil A. Martin, MD

002  
**THREE-DIMENSIONAL DIGITIZ-  
ERS FOR INTRACRANIAL LOCAL-  
IZATION IN NEUROSURGERY**  
M. Peter Heilbrun, MD  
*Course Director*

John R. Adler, Jr., MD, Gene H.  
Barnett, MD, Richard D. Bucholz, MD,  
Edward Ganz, MD, Barton L. Guthrie,  
MD, Bruce Leggett, MD, Robert J.  
Maciunas, MD, David W. Roberts, MD,  
Lucia Zamorano, MD

003  
**SURGICAL ANATOMY OF THE  
BRACHIAL PLEXUS**  
Buses for Practical Course 003 depart  
from the Sheraton Washington at 8:00  
a.m.  
John E. McGillicuddy, MD  
*Course Director*

Allan H. Friedman, MD, Alan R.  
Hudson, MD, David G. Kline, MD,  
Kevin O. Lillehei, MD, Suzie C. Tindall,  
MD

**8:30 a.m. - 12:00 p.m.**  
**Practical Courses**  
(limited enrollment)

004  
**SKULL BASE SURGERY -  
ANTERIOR APPROACHES**  
Jeffrey T. Keller, PhD  
*Course Co-Director*  
Harry R. Van Loveren, MD  
*Course Co-Director*

Magdy ElKalliny, MD,  
Murali Guthikonda, MD

005  
**SKULL BASE SURGERY -  
LATERAL AND INFRATEMPORAL  
APPROACHES**  
Laligam N. Sekhar, MD  
*Course Director*  
Chandranath Sen, MD  
*Course Co-Director*  
Donald C. Wright, MD  
*Course Co-Director*

Ossama Al-Mefty, MD, Keith L. Black,  
MD, Stephen Cass, MD, Jan Hart, MD,  
Albert L. Rhoton, Jr., MD

006  
**THORACOLUMBAR  
INSTRUMENTATION**  
Richard G. Fessler, MD, PhD  
*Course Director*

Steven M. Bailey, MD, Curtis A.  
Dickman, MD, H. Louis Harkey, MD,  
Michael MacMillan, MD, Gary L. Rea,  
MD

007  
**CERVICAL SPINE  
INSTRUMENTATION**  
Stephen M. Papadopoulos, MD  
*Course Director*

Ronald I. Apfelbaum, MD, Charles L.  
Branch, Jr., MD, Regis W. Haid, MD,  
Volker K.H. Sonntag, MD

008  
**INSTRUMENTATION FOR PAIN  
CONTROL**  
Richard B. North, MD  
*Course Director*

Jeffrey A. Brown, MD, Kim J. Burchiel,  
MD, Robert M. Levy, MD, PhD

009  
**TECHNIQUES IN ANEURYSM  
SURGERY**  
H. Hunt Batjer, MD  
*Course Co-Director*  
Arthur L. Day, MD  
*Course Co-Director*

Daniel L. Barrow, MD, Ralph G. Dacey,  
Jr., MD, Roberto C. Heros, MD, Albert  
L. Rhoton, Jr., MD, Duke S. Samson,  
MD, Robert A. Solomon, MD, Robert F.  
Spetzler, MD

010  
**RADIOSURGERY**  
William A. Friedman, MD  
*Course Director*

Eben Alexander III, MD, Frank J. Bova,  
PhD, Mark Carol, MD, Robert J.  
Coffey, MD, Sergio M. Gonzalez-Arias,  
MD, PhD, Tyrone L. Hardy, MD

011  
**STEREOTACTIC SYSTEMS**  
Raymond Sawaya, MD  
*Course Director*

Robert S. Bakos, MD, Samuel J.  
Hassenbusch, MD, Patrick J. Kelly, MD,  
Douglas Kondziolka, MD, Robert J.  
Maciunas, MD, Ian E. McCutcheon,  
MD, A. Angelo Patil, MD, Prem K.  
Pillay, MD, William D. Tobler, MD



012  
**SURGICAL MANAGEMENT OF  
ACOUSTIC NEUROMAS**

Steven L. Giannotta, MD  
*Course Director*

Derald Brackmann, MD, Takanori  
Fukushima, MD, Stephen J. Haines,  
MD, William Hitselberger, MD

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**9:00 a.m. - 12:00 p.m.**

013  
**CONSULTANT'S CORNER: SPINE  
SURGERY PROBLEM CASES -  
ASK THE EXPERTS**

Stewart B. Dunsker, MD  
*Moderator*

Gregory J. Bennett, MD, Randall M.  
Chesnut, MD, Paul R. Cooper, MD,  
Paul C. McCormick, MD, Arnold H.  
Menezes, MD, Noel Perin, MD, Charles  
B. Stillerman, MD, Dennis G. Vollmer,  
MD, Alexander S. Mark, MD

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**12:00 p.m. - 2:00 p.m.**  
**LUNCH BREAK**

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**2:00 p.m. - 5:30 p.m.**  
**Practical Courses**

(limited enrollment)

014  
**SKULL BASE SURGERY -  
ANTERIOR APPROACHES**

Jeffrey T. Keller, PhD  
*Course Co-Director*  
Harry R. Van Loveren, MD  
*Course Co-Director*

Magdy ElKalliny, MD, Murali  
Guthikonda, MD

015  
**SKULL BASE SURGERY -  
LATERAL AND INFRATEMPORAL  
APPROACHES**

Laligam N. Sekhar, MD  
*Course Director*  
Chandranath Sen, MD  
*Course Co-Director*  
Donald C. Wright, MD  
*Course Co-Director*

Ossama Al-Mefty, MD, Keith L. Black,  
MD, Stephen Cass, MD, Jan Hart, MD,  
Albert L. Rhoton, Jr., MD

016  
**THORACOLUMBAR  
INSTRUMENTATION**

Richard G. Fessler, MD, PhD  
*Course Director*

Steven M. Bailey, MD, Curtis A.  
Dickman, MD, H. Louis Harkey, MD,  
Michael MacMillan, MD, Gary L. Rea,  
MD

017  
**CERVICAL SPINE  
INSTRUMENTATION**

Stephen M. Papadopoulos, MD  
*Course Director*

Ronald I. Apfelbaum, MD, Charles L.  
Branch, Jr., MD, Regis W. Haid, MD,  
Volker K.H. Sonntag, MD

018  
**INSTRUMENTATION FOR PAIN  
CONTROL**

Richard B. North, MD  
*Course Director*

Jeffrey A. Brown, MD, Kim J. Burchiel,  
MD, Robert M. Levy, MD, PhD

019  
**TECHNIQUES IN ANEURYSM  
SURGERY**

H. Hunt Batjer, MD  
*Course Co-Director*  
Arthur L. Day, MD  
*Course Co-Director*

Daniel L. Barrow, MD, Ralph G. Dacey,  
Jr., MD, Roberto C. Heros, MD, Albert  
L. Rhoton, Jr., MD, Duke S. Samson,  
MD, Robert A. Solomon, MD, Robert F.  
Spetzler, MD

020  
**RADIOSURGERY**

William A. Friedman, MD  
*Course Director*

Eben Alexander III, MD, Frank J. Bova,  
PhD, Mark Carol, MD, Robert J.  
Coffey, MD, Sergio M. Gonzalez-Arias,  
MD, PhD, Tyrone L. Hardy, MD

021  
**STEREOTACTIC SYSTEMS**

Raymond Sawaya, MD  
*Course Director*

Robert S. Bakos, MD, Samuel J.  
Hassenbusch, MD, Patrick J. Kelly, MD,  
Douglas Kondziolka, MD, Robert J.  
Maciunas, MD, Ian E. McCutcheon,  
MD, A. Angelo Patil, MD, Prem K.  
Pillay, MD, William D. Tobler, MD

022  
**SURGICAL MANAGEMENT OF  
ACOUSTIC NEUROMAS**

Steven L. Giannotta, MD  
*Course Director*

Derald Brackmann, MD, Takanori  
Fukushima, MD, Stephen J. Haines,  
MD, William Hitselberger, MD

---

**2:00 p.m. - 5:00 p.m.**

023  
**CONSULTANT'S CORNER: SPINE  
SURGERY PROBLEM CASES -  
ASK THE EXPERTS**

Stewart B. Dunsker, MD  
*Moderator*

Gregory J. Bennett, MD, Randall M.  
Chesnut, MD, Paul R. Cooper, MD,  
Paul C. McCormick, MD, Arnold H.  
Menezes, MD, Noel Perin, MD, Charles  
B. Stillerman, MD, Dennis G. Vollmer,  
MD, Alexander S. Mark, MD



## NEUROSURGICAL NURSING UPDATE

Moderator - Aileen Staller, R.N., C.N.R.N.

Co-Moderator - Greg Zorman, MD

**7:30 a.m. - 8:00 a.m.**

**REGISTRATION AND COFFEE**

**8:00 a.m. - 8:15 a.m.**

**Welcome**

Aileen Staller, RN, CNRN, *Planning Committee Co-Chairman*, Greg Zorman, MD, *Planning Committee Co-Chairman*

**8:15 a.m. - 9:00 a.m.**

Brain Tumors in Adults

Evangeline Martin-Thomson, RN

**9:00 a.m. - 9:45 a.m.**

Brain Tumors in Children

Laura Greif, RN, MSN

**9:45 a.m. - 10:30 a.m.**

The Unique Role of Brain Tumor Support Groups

Sharon A. Lamb, RN

**10:30 a.m. - 11:00 a.m.**

**COFFEE BREAK**

**11:00 a.m. - 11:45 a.m.**

Nursing Implications of Extra-cranial Complications in Severe Closed Head Injuries

Sharon Bowers Marshall, RN

**11:45 a.m. - 12:45 p.m.**

**LUNCH**

**12:45 p.m. - 1:30 p.m.**

Implantable Devices for Pain Control: Perioperative Nursing Assessment

Brigid Ham, RN, MPH

**1:30 p.m. - 2:15 p.m.**

Implantable Devices for Pain Control: Patient Selection and Surgical Techniques

Robert M. Levy, MD, PhD

**2:15 p.m. - 2:45 p.m.**

**COFFEE BREAK**

**2:45 p.m. - 3:30 p.m.**

Techniques in Craniofacial Surgery

James T. Goodrich, MD, PhD

**3:30 p.m. - 4:15 p.m.**

Craniofacial Surgery: Perioperative Nursing

Terry Fusco, RN, BS

**4:15 p.m. - 4:45 p.m.**

Summary and Evaluation





# MONDAY, NOVEMBER 2, 1992

## SCIENTIFIC PROGRAM

6:30 a.m. - 7:45 a.m.

100

### International Breakfast and Program

Title: The Impact of Japan on the Future of Neurosurgery

Speaker: Keiji Sano, MD

8:00 a.m. - 12:00 p.m.

### General Scientific Session I:

### CONTEMPORARY CONCEPTS IN CEREBROVASCULAR SURGERY

Presiding Officer: William F. Chandler, MD

Co-Moderators: Daniel L. Barrow, MD, H. Hunt Batjer, MD

8:00 a.m. - Natural History of Aneurysms and AVMs  
Daniel L. Barrow, MD

8:20 a.m. - Vasospasm, Bryce K. Weir, MD

8:40 a.m. - Endovascular Applications, L. Nick Hopkins, MD

9:00 a.m. - Carotid Endarterectomy, Marc R. Mayberg, MD

9:20 a.m. - HONORED GUEST PRESENTATION  
Management of Cranial & Spinal Cavernous  
Angiomas, Robert G. Ojemann, MD

10:00 a.m. - COFFEE AND EXHIBITS

10:30 a.m. - CNS Resident Award Paper  
Genetically-altered Embryonal Carcinoma-  
derived Neurons as a Potential Source of  
Alternative Donor Tissue for CNS Grafting,  
Dante J. Morassutti, MD

10:50 a.m. - Aneurysms - Surgical Management  
Duke S. Samson, MD

11:10 a.m. - Arteriovenous Malformations - Surgical  
Management, Roberto C. Heros, MD

11:30 a.m. - Controversies in Clinical Management - Panel  
Discussion - H. Hunt Batjer, MD, Moderator

12:15 p.m. - 2:15 p.m.

### Luncheon Seminars

Regular registrants should indicate the first number on registration form. Course numbers followed by "R" should be used by residents.

101/102R

### Treatment Options for Malignant Gliomas

Moderator: Michael Salzman, MD  
Speakers: Michael L. J. Apuzzo, MD, Henry Brem, MD, Charles B. Wilson, MD

103/104R

### Career Choices in Neurosurgery

Moderator: Julian T. Hoff, MD  
Speakers: Roy P. Baker, MD, Daniel L. Barrow, MD, Richard A. Roski, MD

105/106R

### Management Strategies for Cerebellopontine Angle Tumors

Moderator: Robert G. Ojemann, MD  
Speakers: Steven L. Giannotta, MD, Douglas S. Kondziolka, MD, Albert L. Rhoton, Jr., MD

107/108R

### Surgical Approaches to the Skull Base

Moderator: Laligam N. Sekhar, MD  
Speakers: Ossama Al-Mefty, MD, Keith L. Black, MD, Vinko Dolenc, MD

109/110R

### Critical Care in Neurosurgery

Moderator: Neil A. Martin, MD  
Speakers: Brian T. Andrews, MD, Craig A. Van Der Veer, MD, Clark Watts, MD

111/112R

### Surgical Management of Facial Pain

Moderator: Kim J. Burchiel, MD  
Speakers: Peter J. Jannetta, MD, Blaine S. Nashold, Jr., MD, John M. Tew, Jr., MD



113/114R

**Epilepsy and Tumors: Lesion Resection or More?**

*Moderator:* Issam A. Awad, MD  
*Speakers:* Mitchel S. Berger, MD, Itzhak Fried, MD, Sidney Goldring, MD

115/116R

**Interventional and Intraoperative Neuroradiologic Techniques**

*Moderator:* L. Nick Hopkins, MD  
*Speakers:* Lon F. Alexander, MD, Stanley L. Barnwell, MD, PhD, Jonathon E. Hodes, MD

117/118R

**Asymptomatic Cerebrovascular Disease - To Operate or Not**

*Moderator:* Eugene D. George, MD  
*Speakers:* John R. Mangiardi, MD, Daniele Rigamonti, MD, Robert R. Smith, MD

119/120R

**The Role of Electrical Stimulation for Chronic Pain**

*Moderator:* Richard B. North, MD  
*Speakers:* Nicholas M. Barbaro, MD, Robert M. Levy, MD, PhD, Roberto Spiegelmann, MD

121/122R

**Frameless Stereotaxy**

*Moderator:* Robert J. Maciunas, MD  
*Speakers:* John R. Adler, Jr., MD, Barton L. Guthrie, MD, David W. Roberts, MD

123/124R

**Management of Spasticity**

*Moderator:* Leslie D. Cahan, MD  
*Speakers:* Tae Sung Park, MD, Warwick J. Peacock, MD, Richard D. Penn, MD

125/126R

**Management of Peripheral Nerve Lesions**

*Moderator:* David G. Kline, MD  
*Speakers:* Charles L. Branch, Jr., MD, Alan R. Hudson, MD, Michel Kliot, MD

127/128R

**Management of Difficult Shunt Problems**

*Moderator:* Fred J. Epstein, MD  
*Speakers:* Robert C. Dauser, MD, Arno H. Fried, MD, Harold L. Rekate, MD

131/132R

**Severe Head Trauma Management**

*Moderator:* Austin R. T. Colohan, MD  
*Speakers:* Howard M. Eisenberg, MD, Nazih Moufarrij, MD, Thomas G. Saul, MD, Peter M. Shedden, MD

133/134R

**VIDEO LUNCHEON SEMINAR Technical Aspects of Aneurysm Surgery**

*Moderator:* Robert F. Spetzler, MD  
*Speakers:* Arthur L. Day, MD, Takanori Fukushima, MD, Robert A. Solomon, MD

CEREBROVASCULAR SURGERY	
115/116R	Neuroradiology
117/118R	Asymptomatic Cerebrovascular Disease
133/134R	Aneurysm Surgery
PAIN	
111/112R	Facial Pain
119/120R	Chronic Pain
PEDIATRIC	
123/124R	Spasticity
127/128R	Shunt Problems
SPINE AND PERIPHERAL NERVES	
125/126R	Peripheral Nerve
129/130R	Thoracic Spine
STEREOTACTIC AND FUNCTIONAL NEUROSURGERY	
113/114R	Epilepsy and Tumors
121/122R	Frameless Stereotaxy
TRAUMA	
109/110R	Critical Care
131/132R	Head Trauma
TUMORS	
101/102R	Malignant Gliomas
105/106R	Cerebellopontine Angle Tumors
107/108R	Skull Base Surgical Approaches
OTHER	
103/104R	Career Choices

129/130R

**Surgical Approaches to the Thoracic Spine**

*Moderator:* Volker K. H. Sonntag, MD  
*Speakers:* Richard G. Fessler, MD, James E. O. Hughes, MD, Dennis G. Vollmer, MD

**2:30 p.m. - 5:30 p.m.**

**Special Course I: PITUITARY MACRO-ADENOMAS AND CUSHING'S DISEASE**

*Moderator:* Edward R. Laws, Jr., MD

**2:30 p.m. - 3:00 p.m.**

Endocrine Evaluation of Patients with Non-functioning Adenomas and Cushing's Disease  
Michael O. Thorner, MD

**3:00 p.m. - 3:30 p.m.**

Transsphenoidal Surgery for Non-functioning Macroadenomas  
Charles B. Wilson, MD

**3:30 p.m. - 4:00 p.m.**

Visual Evaluation of Patients with Pituitary Macroadenoma  
Neil R. Miller, MD

**4:00 p.m. - 4:20 p.m.**

**COFFEE AND EXHIBITS**

**4:20 p.m. - 4:50 p.m.**

Neurosurgical Management of Cushing's Disease  
William F. Chandler, MD

**4:50 p.m. - 5:20 p.m.**

Pathology of Cushing's Disease and Null-cell Adenomas  
Kalman Kovacs, MD



**2:30 p.m. - 5:30 p.m.**

**Joint Section on Stereotactic and Functional Neurosurgery Workshop**

Moderators: Michael L.J. Apuzzo, MD, Roy A.E. Bakay, MD

**2:30 p.m. - 3:30 p.m.**

Seminar: Management of Arteriovenous Malformations: Microsurgery vs. Radiosurgery  
Ladislau Steiner, MD, Robert F. Spetzler, MD, Michael Sisti, MD

**Open Scientific Session**

**3:30 p.m. - 3:40 p.m.**

Characterization of Medial and Lateral Thalamic Hyperactivity in a Deafferentation Model  
Miguel Antonio Lis-Planells, MD, Patricia Rinaldi, PhD, Ronald F. Young, MD

**3:40 p.m. - 3:50 p.m.**

Management of Post-herpetic Neuralgia with Chronic Intrathecal Morphine  
Timothy J. Johans, MD, Kim J. Burchiel, MD

**3:50 p.m. - 4:00 p.m.**

Neuronal Transformation of Chromaffin Cells by Co-culture with Purified Schwann Cells  
Christopher G. Paramore, MD, Dennis A. Turner, MD, Roger D. Madison, PhD

**4:00 p.m. - 4:30 p.m.**

**COFFEE AND EXHIBITS**

**4:30 p.m. - 4:40 p.m.**

Use of a Frameless Stereotactic Navigational Device During Resection of Skull Base Lesions  
Brian C. Fitzpatrick, MD, Thomas M. Wascher, MD, John Stewart, BS, Robert F. Spetzler, MD

**4:40 p.m. - 4:50 p.m.**

Activation-PET Scanning for the Assessment of Cerebral Arteriovenous Malformations  
Richard Le Blanc, MD, FRCS, Ernst Meyer, PhD, Robert Zatorre, PhD, Daniel Bub, PhD, Alan Evans, PhD

**4:50 p.m. - 5:00 p.m.**

An In Vitro Analysis of the Dentate Gyrus as a Gate for Hippocampal Seizures: Mechanisms, Ionic Dependence, and Altered Function in a Chronic Seizure Model  
Jeffrey S. Schweitzer, MD, PhD, F. Edward Dudek, PhD

**5:00 p.m. - 5:10 p.m.**

Pre- and Post-operative Assay of Corpus Callosum Size, IQ, and Language Lateralization in Patients Undergoing Corpus Callostomy for Control of Generalized Seizures  
Adam N. Mamelak, MD, Nicholas Barbaro, MD, John A. Walker, PhD, Kenneth D. Laxer, MD

**5:10 p.m. - 5:20 p.m.**

Intrathecal Baclofen for Spasticity of Spinal Origin: Results of a Long-term U.S. Multi-center Study  
Robert J. Coffey, MD, David Cahill, MD, William Steers, MD, Tae Sung Park, MD, Joe Ordia, MD, Richard Herman, MD, Andrew Shetter, MD, Robert Levy, MD, PhD, Brian Gill, MD, Richard Smith, MD, Jack Wilberger, MD, John Loeser, MD, Charles Chabel, MD, James Robertson, MD, Richard Penn, MD, Aiden Clarke, MD, Kim Burchiel, MD, Lyal Leibrock, MD

**2:30 p.m. - 5:30 p.m.**

**Pediatric Section Workshop**

Moderator: Harold L. Rekate, MD

**2:30 p.m. - 2:50 p.m.**

Applications for Ventriculostomy in Pediatric Neurosurgery  
Marion L. Walker, MD

**2:50 p.m. - 3:10 p.m.**

Innovative Surgical Approaches to Pediatric Brain Tumors  
William M. Chadduck, MD

**3:10 p.m. - 3:30 p.m.**

Skull Base Surgery in the Child  
Arnold H. Menezes, MD

**Open Scientific Session**

**3:30 p.m. - 3:40 p.m.**

Neurosurgical Endoscopy: A Useful Adjunct in the Management of Ventricular Shunts  
Kerry R. Crone, MD

**3:40 p.m. - 3:50 p.m.**

Extratemporal Cortical Resections for Medically Intractable Seizures in Children  
Antonio R. Prats, MD, Glenn Morrison, MD, Raquel Pasaron, RN, BSN

**3:50 p.m. - 4:00 p.m.**

Corynebacterium Shunt Infections  
Andrew S. Zelby, MD, Yoon S. Hahn, MD, Ram Yogeve, MD

**4:00 p.m. - 4:20 p.m.**

**COFFEE AND EXHIBITS**

Moderator: R. Michael Scott, MD

**4:20 p.m. - 4:30 p.m.**

Pediatric Oligodendroglioma: Natural History, Treatment and Outcome. Experience at Boston Children's Hospital  
Liliana Goumnerova, MD, FRCS, R. Michael Scott, MD, H. Tice, MD, P. Barnes, MD, U. DeGirolami, MD

**4:30 p.m. - 4:40 p.m.**

Variation in Transferrin Receptor Status of Medulloblastoma in Vitro and in Vivo. Implications for Immunotoxin Therapy  
Dennis Y. Wen, MD, Walter Hall, MD, Aslak Godal, Oystein Fodstad, MD

**4:40 p.m. - 4:50 p.m.**

Symptomatic Postoperative Tethering of the Cervical Spinal Cord  
Kris A. Smith, MD, Harold L. Rekate, MD

**4:50 p.m. - 5:00 p.m.**

Sacral Agenesis and the Caudal Regression Syndrome  
Oisín R. O'Neill, MD, FRCSI, Joseph H. Piatt, Jr., MD

**5:00 p.m. - 5:10 p.m.**

Myelomeningocele  
Azedine Mekhkour, MD

**5:10 p.m. - 5:20 p.m.**

Total Calvarial Reconstruction for Sagittal Synostosis  
Roger J. Hudgins, MD, Fernando Burstein

**5:20 p.m. - 5:30 p.m.**

A Morphologic and Histochemical Study of Calvarial Bone in Multiple Suture Craniosynostosis  
Michael J. Burke, DVM, MD, Ken R. Winston, MD, Glenn W. Kindt, MD





# TUESDAY, NOVEMBER 3, 1992

## SCIENTIFIC PROGRAM

7:00 a.m. - 7:45 a.m.

Poster Session Breakfast (in the Exhibit Area)

8:00 a.m. - 12:00 noon

### General Scientific Session II: PAIN MANAGEMENT/ SOCIOECONOMIC ISSUES

Presiding Officer: Arthur L. Day, MD

Co-Moderators: Kim J. Burchiel, MD, Ralph G. Dacey, Jr., MD

#### NEUROSURGERY FOR PAIN - APPLICATIONS IN DAILY PRACTICE

8:00 a.m. - Pain Medicine: State of the Art 1992,  
Kim J. Burchiel, MD

8:20 a.m. - Pain Surgery Techniques for General Neurosurgical  
Practice, Richard B. North, MD

8:40 a.m. - Pain Surgery Techniques for Specialty  
Neurosurgical Practice, Andrew G. Shetter, MD

9:00 a.m. - Controversies in Clinical Management - Panel  
Discussion, Nicholas M. Barbaro, MD, Moderator

9:30 a.m. - COFFEE AND EXHIBITS

#### SOCIOECONOMIC CHANGES - PLANNING FOR THE 90'S

10:00 a.m. - Health Care Policy/Insurance Reform, Russell  
Travis, MD

10:20 a.m. - Professional Liability/Tort Reform,  
W. Ben Blackett, MD

10:40 a.m. - Resource Based Relative Value System,  
Merwyn Bagan, MD

11:00 a.m. - Panel Discussion - Ralph G. Dacey, Jr., MD,  
Moderator

11:20 a.m. - PRESIDENTIAL ADDRESS,  
William F. Chandler, MD

12:15 p.m. - 2:15 p.m.  
Luncheon Seminars

200R

Honored Guest/Residents'  
Luncheon featuring Robert G.  
Ojemann, MD

201

Management of Low Grade  
Gliomas

Moderator: Mark L. Rosenblum, MD  
Speakers: Edward R. Laws, Jr., MD, W.  
Mark McCollough, MD, Robert A.  
Morantz, MD

203

Applications of Molecular Biology  
to Brain Tumor Management

Moderator: Mitchel S. Berger, MD  
Speakers: Keith L. Black, MD,  
Timothy B. Mapstone, MD, Robert L.  
Martuza, MD

205

Computer Assisted Neurosurgery

Moderator: Michael L. J. Apuzzo, MD  
Speakers: Gene H. Barnett, MD, M.  
Peter Heilbrun, MD, Patrick J. Kelly, MD

207

Spinal Cord Injury: Management  
Strategies

Moderator: Volker K. H. Sonntag, MD  
Speakers: Paul R. Cooper, MD, Carole  
A. Miller, MD, Jack Wilberger, MD

209

Pediatric Epilepsy Surgery

Moderator: Warwick J. Peacock, MD  
Speakers: Arno H. Fried, MD, Robert E.  
Maxwell, MD, PhD, Jose L. Montes, MD

211

Craniosynostosis: Controversies  
and Techniques

Moderator: Marion L. Walker, MD  
Speakers: Derek A. Bruce, MD, Thomas  
A. Duff, MD, John A. Jane, MD



213

**Giant Cerebral Aneurysms**

Moderator: Douglas Chyatte, MD  
Speakers: Stanley L. Barnwell, MD, Howard R. Reichman, MD, Robert A. Solomon, MD

215

**Implantable Drug Devices for Pain Control**

Moderator: Richard D. Penn, MD  
Speakers: Robert J. Coffey, MD, Samuel J. Hassenbusch, MD, John C. Oakley, MD

217

**Update on Neural Transplantation**

Moderator: George S. Allen, MD  
Speakers: Roy A.E. Bakay, MD, Perry Black, MD, Fraser C. Henderson, MD

219

**Management of Post-hemorrhagic Hydrocephalus in the Newborn**

Moderator: Kim H. Manwaring, MD  
Speakers: J. Gordon McComb, MD, Harold L. Rekate, MD, Stephanie Rifkinson-Mann, MD

221

**Intracranial Arachnoid Cysts**

Moderator: Setti S. Rengachary, MD  
Speakers: Griffith R. Harsh, MD, Dachling Pang, MD, Jeffrey H. Wisoff, MD

223

**Surgical Approaches to the Cervical Spine**

Moderator: Mark N. Hadley, MD  
Speakers: Regis W. Haid, MD, Gary L. Rea, MD, Philip R. Weinstein, MD

225

**Comprehensive Management of Lumbar Disc Disease**

Moderator: Donlin M. Long, MD  
Speakers: Edward S. Connolly, MD, Joseph C. Maroon, MD, Hubert L. Rosomoff, MD

227

**VIDEO LUNCHEON SEMINAR  
Technical Aspects of Carotid Endarterectomy**

Moderator: Christopher Loftus, MD  
Speakers: Issam A. Awad, MD, Robert M. Crowell, MD, Marc R. Mayberg, MD

<b>CEREBROVASCULAR SURGERY</b>	
213	Giant Cerebral Aneurysms
227	Carotid Endarterectomy
<b>PAIN</b>	
215	Pain Control
<b>PEDIATRIC</b>	
209	Epilepsy
211	Craniosynostosis
<b>SPINE AND PERIPHERAL NERVES</b>	
223	Cervical Spine
225	Lumbar Disc Disease
<b>STEREOTACTIC AND FUNCTIONAL NEUROSURGERY</b>	
205	Computer Assisted Neurosurgery
217	Neural Transplantation
<b>TRAUMA</b>	
207	Spinal Cord Injury
<b>TUMORS</b>	
201	Low Grade Gliomas
203	Brain Tumor Management
221	Arachnoid Cysts

**2:30 p.m. - 5:30 p.m.**

**Special Course II:  
THE HISTORY OF  
NEUROSURGERY**

Moderator: Samuel H. Greenblatt, MD  
Co-Moderator: T. Glenn Pait, MD

**2:30 p.m. - 3:00 p.m.**

The Modern History of General Surgery - 19th and 20th Centuries  
Dale C. Smith, PhD

**3:00 p.m. - 3:30 p.m.**

Historiography of Modern Neurosurgery and Neurosciences - 19th Century  
Samuel H. Greenblatt, MD

**3:30 p.m. - 4:00 p.m.**

The Emergence of Cushing's Leadership - 1901 to 1919 and Beyond  
Stephen G. Reich, MD

**4:00 p.m. - 4:30 p.m.**

**COFFEE BREAK**

**4:30 p.m. - 5:00 p.m.**

Neurosurgical Techniques - Late 19th Century to the Present  
T. Glenn Pait, MD

**5:00 p.m. - 5:30 p.m.**

Books and Book Collecting - Bibliography of Neurosurgical History and Basics of the Antiquarian Book Trade  
James T. Goodrich, MD, PhD

**2:30 p.m. - 5:30 p.m.**

**Joint Section on Spine and Peripheral Nerve Workshop**

Moderator: Volker K.H. Sonntag, MD

**2:30 p.m. - 3:10 p.m.**

Osteoarthritis: New Concepts of Pathophysiology and Specific Therapy  
Roland Moskowitz, MD

**3:10 p.m. - 3:30 p.m.**

Research Opportunities and Grant Support for Investigators of Vertebral Column Pathology  
Larry Shulman, MD, PhD

**Open Scientific Session**

**3:30 p.m. - 3:40 p.m.**

Symptomatic Cervical Spine Pseudoarthrosis After Anterior Arthrodesis: Treatment by Posterior Laminoforaminotomies and Fusion - Report of 41 Cases  
Seth M. Zeidman, MD, Thomas B. Ducker, MD, Randy F. Davis, MD, Paul C. McAfee, MD



**3:40 p.m. - 3:50 p.m.**

Complications of Cervical Discography:  
Results in 3987 Diagnostic Cervical Disc  
Injections

Seth M. Zeidman, MD, Thomas B. Ducker, MD,  
Kerry Thompson, MD

**3:50 p.m. - 4:00 p.m.**

Spinal Cord Stimulation for Control of  
Ischemic Pain and Perfusion in

Advanced Peripheral Vascular Disease  
Krishna Kumar, MD, J.J. Burgess, MD, A.K. Verma,  
MD, R. Nath, MD

**4:00 p.m. - 4:20 p.m.**

**COFFEE BREAK**

*Moderator:* Mark N. Hadley, MD

**4:20 p.m. - 4:30 p.m.**

Anatomical Correlation of Posterior  
Lateral Mass Plating/Screw Fixation  
with Anatomical Structures

Kent L. Sauter, MD, T. Glenn Pait, MD, Phillip  
McAllister, MD

**4:30 p.m. - 4:40 p.m.**

Experimental Model of  
Noncommunicating Syringomyelia  
Produced in Rats by Inflammatory  
Occlusion of Central Canal

Thomas H. Milhorat, MD, F. Nobandegani, MD,  
J. I. Miller, MD

**4:40 p.m. - 4:50 p.m.**

Surgical Treatment of Thoracic Disc  
Herniation: Analysis of a Series of 44  
Patients

Jacques J. Morcos, MD, FRCS, Edward L. Seljeskog,  
MD

**4:50 p.m. - 5:00 p.m.**

MRI Signal Changes in Denervated  
Muscles following Peripheral Nerve  
Injury

Michel Kliot, MD, Andrew Bronstein, MD,  
Alexander West, MD, Robert Goodkin, MD

**5:00 p.m. - 5:10 p.m.**

Histopathological Changes in the  
Cervical Cord and Brainstem in End-  
stage Rheumatoid Arthritis

Fraser C. Henderson, MD, Jennian F. Geddes, John  
W. Stevens, MD, Alan Crookard, FRCS

**5:10 p.m. - 5:20 p.m.**

Outcome of Thoracic and Lumbar  
Fractures: Surgery vs. Recumbency  
Treatment

Patrick W. Hitchon, MD, J.C. Torner, PhD, S. Piper,  
RN, BSN, G. Stoner, RN, K. VanDenBosch, RN

**5:20 p.m. - 5:30 p.m.**

Magnetic Resonance Imaging After  
Lumbar Discectomy: The First Eight  
Months — Clinical and Legal

Implications  
Saul Balagura, MD, PhD, James Neumann, MD

**2:30 p.m. - 5:30 p.m.**

**Joint Section on Tumors  
Workshop**

*Moderators:* Dennis E. Bullard, MD,  
Frances K. Conley, MD

**Glioblastoma Revisited: Do Clinical  
Observations Match Basic Science  
Theory?**

**2:30 p.m. - 3:00 p.m.**  
**Clinical Observations**

Focused Radiation  
Eben Alexander III, MD

Interstitial Brachytherapy  
Philip H. Gutin, MD

**3:00 p.m. - 3:30 p.m.**  
**Basic Science Theory**

Single Focus vs. Disseminated Disease  
Peter C. Burger, MD

Factors Influencing Tumor Cell Traffic in  
the CNS

Mark L. Rosenblum, MD

**Open Scientific Session**

**3:30 p.m. - 3:40 p.m.**

*Preuss Award Paper*  
The Radiobiology of Human Vestibular  
Schwannoma Xenografts After  
Stereotactic Radiosurgery Evaluated in  
the Subrenal Capsule of Athymic Mice  
Mark E. Linskey, MD, A. Julio Martinez, MD,  
Douglas Kondziolka, MD, John C. Flickinger, MD,  
Ann H. Maitz, MSc, Theresa Whiteside, PhD, L.  
Dade Lunsford, MD

**3:40 p.m. - 3:50 p.m.**

*Mahaley Award Paper*  
Stereotactic High-activity Iodine-125  
Brachytherapy for Malignant Brain  
Tumors: The Toronto Experience with  
94 Cases

Mark E. Bernstein, MD, Normand Laperriere, MD,  
Phil Leung, PhD, Cindy Thomason, PhD

**3:50 p.m. - 4:00 p.m.**

In Situ Retroviral-mediated Gene  
Transfer for the Treatment of Brain  
Tumors

Zvi Ram, MD, K.W. Culver, MD, S. Walbridge, MD,  
R.M. Blaese, MD, E.H. Oldfield, MD

**4:00 p.m. - 4:20 p.m.**

**COFFEE BREAK**

**4:20 p.m. - 4:30 p.m.**

Gene Replacement Therapy in the  
Central Nervous System

Edward A. Neuwelt, MD, Michael A. Pagel, MD,  
Alfred Geller, MD, Leslie L. Muldoon, MD

**4:30 p.m. - 4:40 p.m.**

Identification of a Mechanism for Brain  
Invasion by Malignant Meningiomas and  
Preliminary Development of an Anti-  
invasive Therapy

Mark L. Rosenblum, MD, James McKerrow, MD,  
PhD, Donna Spencer, BA, Delores Dougherty, BA,  
John Wall, MD, Aman Patel, BS, Arun Amar, BS,  
Margaret Brown, MS, Peter Coopersmith, BS

**4:40 p.m. - 4:50 p.m.**

Pituitary Apoplexy in Endocrine Inactive  
Pituitary Adenomas

Griffith R. Harsh, MD, C. B. Wilson, MD

**4:50 p.m. - 5:00 p.m.**

Prolonged Survival by Topical  
Dexamethasone in a Rabbit Brain  
Tumor Model

Yukio Ikeda, MD, Benjamin S. Carson, MD, Donlin  
M. Long, MD

**5:00 p.m. - 5:10 p.m.**

Intracranial Meningiomas of the First  
Two Decades of Life

Isabelle Germano, MD, Michael Edwards, MD,  
Richard L. Davis, MD, Davide Schiffer, MD

**5:10 p.m. - 5:20 p.m.**

An Angiogenesis Inhibitor, AGM-1470,  
Inhibits the Proliferation of Human  
Glioblastoma Cell in Vitro and in Vivo  
Yoshiaki Takamiya, MD, Robert L. Martuza, MD,  
Harold Brem, MD

**5:20 p.m. - 5:30 p.m.**

Management of Benign Pineal Region  
Cysts

Joseph Stern, MD, Donald A. Ross, MD





# WEDNESDAY, NOVEMBER 4, 1992

## SCIENTIFIC PROGRAM

**7:00 a.m. - 7:45 a.m.**

**Poster Session Breakfast (in the Exhibit Area)**

**8:00 a.m. - 12:00 p.m.**

### **General Scientific Session III: SPINAL INSTRUMENTATION**

*Presiding Officer:* Richard A. Roski, MD

*Co-Moderators:* Stephen M. Papadopoulos, MD, Thomas G. Saul, MD

**8:00 a.m. - General Overview: Decision Making in Spinal Instrumentation,** Richard G. Fessler, MD, PhD

**8:20 a.m. - Craniocervical Stabilization,**  
Volker K. H. Sonntag, MD

**8:40 a.m. - Anterior Cervical Instrumentation,**  
Stephen M. Papadopoulos, MD

**9:00 a.m. - Posterior Cervical Instrumentation,**  
Paul R. Cooper, MD

**9:20 a.m. - THINK FIRST,** Thomas G. Saul, MD

**9:40 a.m. - COFFEE AND EXHIBITS**

**10:10 a.m. - HONORED GUEST PRESENTATION,  
The Management of Cranial and Spinal  
Meningiomas,**  
Robert G. Ojemann, MD

**10:50 a.m. - Spondylolysis and Spondylolisthesis,**  
Charles B. Stillerman, MD

**11:10 a.m. - Thoracolumbar Trauma,** Sanford J. Larson, MD

**11:30 a.m. - Controversies in Clinical Management - Panel  
Discussion,** Charles L. Branch, Jr., MD, *Moderator*

**12:15 p.m. - 2:15 p.m.**

### **Luncheon Seminars**

Regular registrants should indicate the first number on registration form.

Course numbers followed by "R" should be used by residents.

301/302R

### **Stereotactic Craniotomy: Indications and Techniques**

*Moderator:* Raymond Sawaya, MD

*Speakers:* Barton L. Guthrie, MD,  
Patrick J. Kelly, MD, A. Angelo Patil, MD

303/304R

### **Preparing a Scientific Manuscript for Publication**

*Moderator:* Stephen J. Haines, MD

*Speakers:* Michael L. J. Apuzzo, MD,  
Edward R. Laws, Jr., MD, Robert H.  
Wilkins, MD

305/306R

### **Treatment Strategies for Pituitary Tumors**

*Moderator:* Warren R. Selman, MD

*Speakers:* Edward H. Oldfield, MD,  
Kalmon D. Post, MD, George T.  
Tindall, MD

307/308R

### **Neurosurgical Options for Cancer Pain**

*Moderator:* Andrew G. Shetter, MD

*Speakers:* Ehud Arbit, MD, Robert J.  
Coffey, MD, Samuel J. Hassenbusch, MD

309/310R

### **Surgery for Intractable Epilepsy**

*Moderator:* George A. Ojemann, MD

*Speakers:* Michel F. Levesque, MD,  
Alain de Lotbiniere, MD, Lincoln F.  
Ramirez, MD



311/312R

**Craniopharyngiomas of Childhood**

*Moderator:* Derek A. Bruce, MD

*Speakers:* Peter W. Carmel, MD, J. Parker Mickle, MD, Harold L. Rekate, MD

313/314R

**Multidisciplinary Approach to Arteriovenous Malformations**

*Moderator:* Roberto C. Heros, MD

*Speakers:* H. Hunt Batjer, MD, L. Nick Hopkins, MD, Gary K. Steinberg, MD

315/316R

**Posterior Circulation Aneurysms**

*Moderator:* Robert F. Spetzler, MD

*Speakers:* Fernando G. Diaz, MD, Evandro de Oliveira, MD, Duke S. Samson, MD

317/318R

**Common Entrapment Neuropathies**

*Moderator:* Suzie C. Tindall, MD

*Speakers:* Charles L. Branch, Jr., MD, Kim J. Burchiel, MD, Setti S. Rengachary, MD

319/320R

**Management of Spinal Dysraphism**

*Moderator:* Leslie N. Sutton, MD

*Speakers:* William M. Chaddock, MD, Donald H. Reigel, MD, Shokei Yamada, MD

321/322R

**Surgical Options in Lumbar Disc Disease**

*Moderator:* Joseph C. Maroon, MD

*Speakers:* Edward C. Benzel, MD, Frances K. Conley, MD, Charles A. Fager, MD

323/324R

**Rheumatoid Arthritis and the Cervical Spine: Treatment Options**

*Moderator:* Stephen M. Papadopoulos, MD

*Speakers:* H. Alan Crockard, FRCS, Iain H. Kalfas, MD, Arnold H. Menezes, MD

325/326R

**Selecting the Proper Shunt Device**

*Moderator:* David G. McLone, MD, PhD

*Speakers:* Kerry R. Crone, MD, Mel H. Epstein, MD, Donald D. Horton, MD

**CEREBROVASCULAR SURGERY**

313/314R Arteriovenous Malformations

315/3168R Posterior Circulation Aneurysms

**PAIN**

307/308R Cancer Pain

**PEDIATRIC**

309/310R Intractable Epilepsy

311/312R Craniopharyngiomas

319/320R Spinal Dysraphism

325/326R Shunt Devices

**SPINE AND PERIPHERAL NERVES**

317/318R Entrapment Neuropathies

321/322R Lumbar Disc Disease

323/324R Arthritis and the Cervical Spine

329/330R Chiari Malformations

**STEREOTACTIC AND FUNCTIONAL NEUROSURGERY**

301/302R Stereotactic Craniotomy

331/332R Functional Mapping

**TUMORS**

305/306R Pituitary Tumors

327/328R Pineal Tumors

**OTHER**

303/304R Publishing Scientific Manuscripts

327/328R

**Pineal Tumors**

*Moderator:* Jeffrey N. Bruce, MD

*Speakers:* W. Mark McCollough, MD, J. Gordon McComb, MD, Marion L. Walker, MD

329/330R

**The Chiari Malformations**

*Moderator:* Richard B. Morawetz, MD

*Speakers:* Andrew D. Parent, MD, Albert L. Rhoton, Jr., MD, R. Michael Scott, MD

331/332R

**VIDEO LUNCHEON SEMINAR**

**Functional Mapping**

*Moderator:* Neil A. Martin, MD

*Speakers:* Mitchel S. Berger, MD, Youssef G. Comair, MD, Robert E. Maxwell, MD, PhD

**2:30 p.m. - 5:30 p.m.**

**Special Course III: SKULL BASE SURGERY**

*Moderator:* Ossama Al-Mefty, MD

**2:30 p.m. - 2:50 p.m.**

Cerebrovascular Evaluation in Skull Base Surgery

T.C. Oritano, MD, PhD

**2:50 p.m. - 3:10 p.m.**

Treatment of AVMs Along the Incisura

Evandro de Oliveira, MD

**3:10 p.m. - 3:30 p.m.**

Skull Base Approaches to Cerebral Aneurysms

Ossama Al-Mefty, MD

**3:30 p.m. - 3:50 p.m.**

Treatment of Brain Tumors Invading the Paranasal Sinuses

Rudolph Fahlbusch, MD

**3:50 p.m. - 4:10 p.m.**

**COFFEE BREAK**

**4:10 p.m. - 4:30 p.m.**

Living with the Otolaryngologist:

Diseases and Approaches that Require a Team

Chandranath Sen, MD

**4:30 p.m. - 4:50 p.m.**

Cerebral Vascularization Before, During, or After Surgery

Robert F. Spetzler, MD

**4:50 p.m. - 5:10 p.m.**

Problems Solved and Problems to be Solved

Laligam N. Sekhar, MD

**5:10 p.m. - 5:30 p.m.**

Skull Base Surgery: Is It Worth It? What Are the Results?

Madjid Samii, MD



**2:30 p.m. - 5:30 p.m.**

**Joint Section on  
Cerebrovascular Surgery  
Workshop**

Moderator: Winfield S. Fisher, MD

**2:30 p.m. - 2:50 p.m.**

The Molecular Biology of Cerebral Ischemia

Ralph G. Dacey, Jr., MD

**2:50 p.m. - 3:10 p.m.**

Animal Models and Human Studies  
Defining Thresholds of Cerebral Ischemia

H. Hunt Batjer, MD

**3:10 p.m. - 3:30 p.m.**

Managing Planned Reversible Cerebral Ischemia in the Operating Room

Fredric B. Meyer, MD

**Open Scientific Session**

**3:30 p.m. - 3:40 p.m.**

*Galbraith Award Paper*  
Loss of Nitric Oxide Synthase  
Immunoreactivity in Cerebral Vasospasm

B. Gregory Thompson, MD, Ted M. Dawson, MD,  
Ryszard M. Pluta, MD, Solomon H. Snyder, PhD,  
Edward H. Oldfield, MD

**3:40 p.m. - 3:50 p.m.**

Videomicroscopy of Cerebral  
Microvessels in Living Brain Slices  
Oren Sagher, MD, Neal F. Kassell, MD,  
X-Q Zhang, MD, Kevin S. Lee, PhD

**3:50 p.m. - 4:00 p.m.**

Complications Following Guglielmo  
Electrothrombotic Coil Treatment of  
Aneurysmal Lesions

Kimberly Livingston, MD, Lee R. Guterman, MD,  
PhD, Arvind Ahuja, MD, L. Nick. Hopkins, MD

**4:00 p.m. - 4:20 p.m.**

**COFFEE BREAK**

**4:20 p.m. - 4:30 p.m.**

Safety and Efficacy of Delayed  
Retrograde Transvenous  
Neuroperfusion in the Rescue of  
Ischemic Brain

John G. Frazee, MD, Sheldon E. Jordan, MD,  
Jacques E. Dion, MD, Shelia Kar, MD, Eve J. Norel,  
MD, Uttam Sinha, MD, David R. Hinton, MD

**4:30 p.m. - 4:40 p.m.**

Exploratory Aneurysm Surgery  
Jafar J. Jafar, MD, Howard Weiner, MD

**4:40 p.m. - 4:50 p.m.**

Novel Class of Neuroprotective Agents  
Discovered through an Analysis of the  
Mechanisms of Calcium Neurotoxicity  
Michael Tymianski, MD, Charles H. Tator, MD, PhD

**4:50 p.m. - 5:00 p.m.**

Treatment of Intraventricular  
Hemorrhage with Tissue Plasminogen  
Activator - A Preliminary Study  
J. Max Findlay, MD, Bryce Weir, MD, Michael  
Grace, MD

**5:00 p.m. - 5:10 p.m.**

Hyperglycemia and Cerebral Adenosine  
in Ischemia - Reperfusion Brain Injury  
Sean S. Hsu, MD, Joseph R. Meno, Jie-Gang Zhou,  
Ellen L. Gordon, H. Richard Winn, MD

**5:10 p.m. - 5:20 p.m.**

Intracranial Vertebral Endarterectomy  
via the Far Lateral Approach  
John A. Anson, MD, Robert F. Spetzler, MD

**5:20 p.m. - 5:30 p.m.**

Endovascular Treatment of Carotid  
Cavernous Fistulae  
Lon F. Alexander, MD, V.V. Alexeey, MD, G.M.  
Benashvili, MD, Y.N. Zubkov, MD, R.R. Smith, MD

**2:30 p.m. - 5:30 p.m.**

**Joint Section on  
Neurotrauma and Critical  
Care Workshop**

**2:30 p.m. - 3:30 p.m.**

Symposium: Have Neurosurgeons  
Abdicated Their Leadership Role in the  
Management of Head Injury?

Moderators: Lawrence H. Pitts, MD,  
Raj K. Narayan, MD

**Open Scientific Session**

Moderators: Thomas G. Luerssen, MD,  
Jamshid Ghajar, MD

**3:30 p.m. - 3:40 p.m.**

Prospective Randomized Study of the  
Use of Moderate Hypothermia for  
Severe Head Injury: A Preliminary  
Report

Donald W. Marion, MD, Walter D. Obrist, PhD,  
Joseph M. Darby, MD, Patricia M. Carlier, RN

**3:40 p.m. - 3:50 p.m.**

Near Infrared Spectroscopy as a  
Monitor of Cerebral Oxygenation in  
Head-injured Patients

Shankar P. Gopinath, MD, Jeffrey D. Crouch,  
Claudia S. Robertson, MD, B. Chance, PhD, Robert  
G. Grossman, MD

**3:50 p.m. - 4:00 p.m.**

JOINT SECTION BUSINESS MEET-  
ING AND ANNOUNCEMENTS

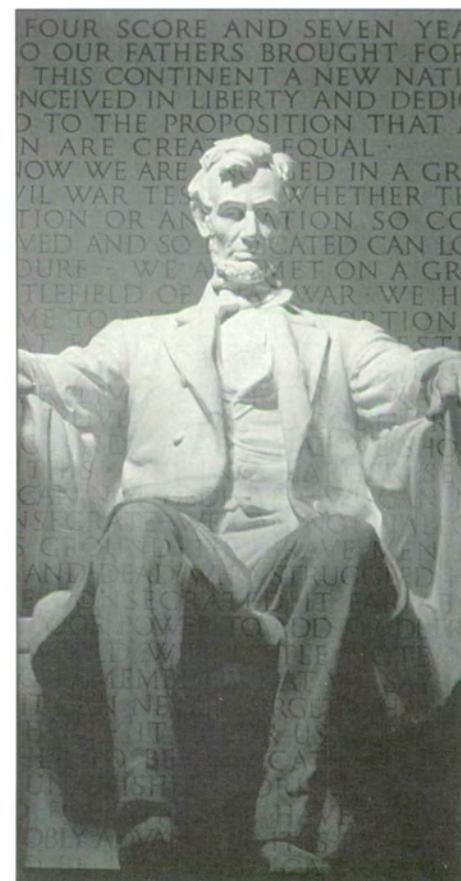
**4:00 p.m. - 4:20 p.m.**

**COFFEE BREAK**

**4:20 p.m. - 4:30 p.m.**

Reactive Axonal Change in  
Traumatically Brain-injured Man:  
Pathogenesis and Anatomical  
Distribution

Mark R. McLaughlin, MD, Alex B. Valadke, PhD,  
Carole W. Christman, PhD, M. Sean Grady, MD,  
John T. Povlishock, PhD





**4:30 p.m. - 4:40 p.m.**

Acute Subdural Hematomas - The Importance of Pre-Hospital Care: A Transatlantic Comparison  
A.T.H. Casey, B.A. Bell, D. Utley, MA,  
H. Richard Winn, MD

**4:40 p.m. - 4:50 p.m.**

Ominous Prognostic Indicators Following Head Injury  
Matthew R. Quigley, MD, Danko Vidovich, MD,  
James E. Wilberger, MD, Joseph C. Maroon, MD

**4:50 p.m. - 5:00 p.m.**

Cerebrospinal Fluid Norepinephrine Elevations in a Delayed Hyperadrenergic State Following Severe Closed Head Injury  
Richard G. Fessler, MD, PhD, Robert Knego, MD,  
Timothy Chris, MD

**5:00 p.m. - 5:10 p.m.**

Zinc Supplementation Improves Recovery Rate and Visceral Protein Levels in Patients with Severe Closed Head Injury  
Byron Young, MD, Linda Ott, MS, Kay Moles, RD,  
Robert Dempsey, MD, PhD, Phillip Tibbs, MD,  
Richard Kryscio, PhD, Craig McClain, MD

**5:10 p.m. - 5:20 p.m.**

Decompressive Craniectomy for Treatment of Severe, Refractory Traumatic Cerebral Edema  
Richard S. Polin, MD, Mark E. Shaffrey, MD, Nancy Tisdale, RN, Chris Bogaev, MD, John A. Jane, MD,  
PhD

**5:20 p.m. - 5:30 p.m.**

Outcome Following Decompressive Hemicraniectomy for the Treatment of Blunt Head Trauma  
J.Paul Elliott, MD, Peter D. LeRoux, MD, Matthew A. Howard, III, MD, M. Sean Grady, MD, David Newell, MD, H. Richard Winn, MD



## THURSDAY, NOVEMBER 5, 1992

### SCIENTIFIC PROGRAM

**8:00 a.m. - 10:50 a.m.**

**General Scientific Session IV: RADIOSURGERY**

*Presiding Officer:* William A. Friedman, MD

*Moderator:* Robert J. Coffey, MD

**8:00 a.m. - Devices, Principles, and Rationale**

David A. Larson, MD, PhD

**8:30 a.m. - Arteriovenous Malformations**

William A. Friedman, MD

**8:50 a.m. - Benign Tumors**

L. Dade Lunsford, MD

**9:10 a.m. - HONORED GUEST PRESENTATION**

**The Management of Acoustic Neuromas**

Robert G. Ojemann, MD

**10:00 a.m. - Malignant Tumors**

Robert J. Coffey, MD

**10:20 a.m. - Controversies in Clinical Management -**

Panel Discussion - Robert J. Coffey, MD, *Moderator*





CONGRESS OF  
NEUROLOGICAL  
SURGEONS

VOLUME 15, NO.1  
AUGUST 1992

## Auxiliary News

*Beautiful and Historic Washington*

We hope you will make plans to attend the 42nd Annual Meeting of the Congress of Neurological Surgeons in Washington, DC, from Saturday, October 31st to Thursday, November 5th. The meeting will be held at the beautiful and centrally located Sheraton Washington Hotel. The entire meeting will be held within the hotel with easy access by Metro and cab to the entire Washington area.

The Opening Reception will be held at one of the grand old halls in Washington, currently the site of the National Building Museum. This 1881 building has been the site of numerous Presidential Inaugural Balls and the 15-story Great Hall will provide a dramatic setting for our Opening Reception.

The Auxiliary Luncheon will be held at the National Press Club and will feature Sheila Tate. Former press secretary to Nancy Reagan and President Bush, Ms. Tate currently works with Jody Powell, President Carter's press secretary. On the day after election-day you will be hearing an insider's view of Washington's great events.

There will be exciting entertainment provided by Chezzam at the banquet and numerous provocative and innovative tours available throughout the week. We hope to see you in Washington!

### ABOUT THE PRESIDENT...

Bill and Sue Chandler live in Ann Arbor and are both natives of Michigan. They were married while Bill was in medical school at the University of Michigan. Bill stayed on for residency in Ann Arbor and Sue completed her Masters in Social Work at Michigan.

After completing residency, they traveled to Stockholm, Sweden, with their two year old to spend six months at the Karolinska Institute on the Van Wagenen Fellowship. They returned home with a new baby and spent two enjoyable years at Louisiana State University in New Orleans.

In 1979 they returned to Ann Arbor. Bill has enjoyed teaching and working on the faculty at the University of Michigan, where he is Professor of Surgery, Section of Neurosurgery. Sue is employed counseling families affected by substance abuse and leading support groups for children of alcoholics.

Their two sons, Scott and Jesse, are now 17 and 14 and thriving on school and sports activities. As a family, the Chandlers enjoy skiing, tennis and traveling together.







## **SATURDAY, OCTOBER 31, 1992**

### **451 DINNER AND THE NATIONAL SYMPHONY ORCHESTRA AT THE JOHN F. KENNEDY CENTER FOR THE PER- FORMING ARTS 6:00 p.m. - 11:00 p.m.**

Enjoy an elegant evening at the John F. Kennedy Center for the Performing Arts. While enjoying a formal dinner in the Roof Terrace Restaurant, the Georgetown waterfront, the Potomac River and the city's monuments and memorials create an ambience uniquely Washington. Under the direction of virtuoso Mstislav Rostropovich, the National Symphony Orchestra will be performing excerpts from Bizet's "L'Arlesienne" as well as Shostakovich's Symphony No. 11. This performance is part of the 1992-93 classical concert series held in the grand Kennedy Center Concert Hall.



### **452 THE GHOSTS OF WASHINGTON WITH DINNER AT AMERICA RESTAURANT 7:00 p.m. - 10:30 p.m.**

Enjoy a festive Halloween feast at one of Washington's most popular haunts, America Restaurant, located in bustling Union Station. An all American four course meal will be served by ghoulishly costumed waiters. Liquid spirits will be served on a cash basis. Following dinner, depart for

an evening of Washington tales and legends that have been handed down for generations. View Washington landmarks once visited regularly by the leading figures of the newly formed Capital city, some of whom still drop by from time to time. When the hour is late, look for Dolly Madison on the front porch of her home at Lafayette Square. Look for Evelyn Walsh McLean, a Washington socialite whose spirit returns to the present Indonesian Embassy. Listen to the tales of Lincoln who has been seen most often in our Capital City. Listen for the cries of Mary Surratt whose home is located in China Town. This supernatural tour is a must for even the faint of heart.

## **SUNDAY, NOVEMBER 1, 1992**

### **525 WELCOME TO WASHINGTON 9:00 a.m. - 12:00 p.m.**

Washington is a world capital known for its classical architecture, formal gardens and quaint neighborhoods. Capitol Hill, Pennsylvania Avenue, the Potomac River, Georgetown and Embassy Row serve as a backdrop for an exciting introduction to Washington. Your tour will take you through the federal district, the business district and residential areas as well as the historic monuments and landmarks. Stops at the Lincoln Memorial, Vietnam Memorial and the Kennedy Center will enable you to visit these popular landmarks and provide a sense of the city, its history, culture and vitality.

### **526 MOUNT VERNON AND OLD TOWN ALEXANDRIA 9:30 a.m. - 3:00 p.m.**

Travel back into 17th century Virginia, awaiting within the gates of Mount Vernon, home of George Washington. President Washington's presence can be felt throughout the plantation from the gardens and greens to the original furnishings





placed throughout the Georgian style manor house. Tour the mansion and service buildings, excellent examples of George Washington's brilliance as an architect, surveyor and gentleman farmer. After your tour of the Mansion, Dean Norton, Chief Horticulturist at Mount Vernon will take you on an exclusive tour of the gardens. Next you will follow along the Potomac River to Alexandria, Virginia where the original lots for the city were plotted in 1749 by a young George Washington. Visit Christ Church, where he served as a vestryman; ride by Gadsby's Tavern, where George and Martha dined and danced; Market Square, where Washington commanded his troops; and the Apothecary Shop he frequented. Alexandria was a bustling seaport then and served as his lifeline to news from the other colonies and Europe. There is time for lunch on your own and to browse in the shops and boutiques that line the streets of Old Town Alexandria.

**527**

**A DAY IN THE VIRGINIA COUNTRYSIDE**

**9:30 a.m. - 4:30 p.m.**



Fall is the ideal time to visit rural Loudoun County, Virginia's prestigious hunt county. One will soon find there is something for everyone from historic homes, to unique shops and rolling countryside ablaze like a patchwork quilt. Tour Meredyth Vineyard for a taste of Virginia wine making at its finest. Then on to Middleburg, a once famous colonial crossroad and now a popular respite for city dwellers. Enjoy lunch at the Red Fox Tavern which is often frequented by the foremost members of Loudoun Hunt. Following lunch enjoy the wonderful array of boutique and antique shops that line the streets of Middleburg. Next, travel to historic Oatlands Plantation, a handsome classical revival residence that is now operated by the National Trust for Historic Preservation. Oatlands was once the center of a 3,400-acre plantation. Docents will reconstruct the life and times of the eras and per-

sonalities which have given Oatlands life since 1800.

**528**

**WELCOME TO WASHINGTON**

**1:00 p.m. - 4:00 p.m.**

Repeat of Tour 525.

**529**

**VIP CAPITOL TOUR**

**1:00 p.m. - 4:30 p.m.**



Tour the United States Capitol Building with a Washington historian and rediscover great moments in history through architecture, statuary and portraiture. This three hour VIP program provides an intimate glimpse of the country's most cherished landmark and a retrospect of our nation's history. Visit the Rotunda, the portion of the Capitol that lies directly beneath the great iron dome, Statuary Hall, the original House and Senate Chambers and the original chambers of the Supreme Court. Travel the halls of Congress and view history in the making. Enjoy a lectured riding tour of Capitol Hill before returning to the hotel.

**501/502/503/504**

**OPENING RECEPTION AT THE NATIONAL BUILDING MUSEUM**

**7:00 p.m. - 9:30 p.m.**

Carry on the tradition of great Washington social occasions as you join your associates at the Great Hall of the National Building Museum. Built in 1881 to house the Pension Bureau, this stately building has served as the backdrop for Inaugural Balls, State Occasions and the annual Christmas in Washington Gala. Fifteen story Corinthian columns, skylights and a 28 foot interior fountain make this a truly unique architectural wonder.

Red, white and blue will set the stage for an evening of Americana. Strolling barbershop quartets will welcome you to the Great Hall with a medley of all American favorites. Journey through America experiencing California cuisine, sweet Virginia ham, and ethnic samplings from Little Italy







to South of the Border. Rally to the occasion with the spirited music of the Capital Band, pose with First Family look alikes and purchase an official personalized CNS Campaign button. There will be



a continuous bus shuttle from the 24th street entrance of the Sheraton Washington Hotel to the National Building Museum starting at 6:30 p.m. until 9:30 p.m.

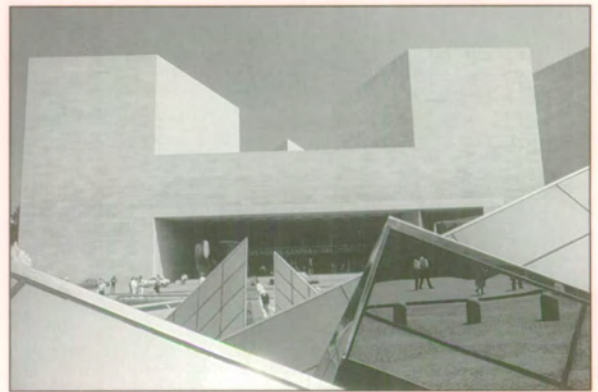
## **MONDAY, NOVEMBER 2, 1992**

### **530 BREAKFAST AT TIFFANY'S AND SHOPPING AT TYSONS CORNER CENTER 8:30 a.m. - 2:00 p.m.**

Travel to nearby McLean, Virginia for a memorable morning and breakfast at Tiffany's. The elegant showroom features Tiffany hallmarks, fine jewelry, china, crystal and silver that uniquely compliment the taste of every shopper. Enjoy a light breakfast of coffee and danish while listening to a Tiffany master in the Art of Entertaining. Time has been allowed for making that special purchase before continuing on to Tysons Corner Center, the largest shopping mall on the East Coast. Over 230 shops will welcome CNS spouses. Guests will enjoy a complimentary shopping bag filled with goodies, discount coupons and a mall directory.

### **531 CANVASING WASHINGTON (NATIONAL GALLERY OF ART TOUR) 9:30 a.m. - 12:30 p.m.**

Washington, DC offers a plethora of artistic expression spanning traditional masters to yet-to-be-discovered contemporary artists. Begin at the National Gallery of Art viewing America's finest collection of paintings, sculptures and graphic arts by world renown Masters. Enjoy a docent led tour highlighting the collection including Ginevra De Benci, the only Leonardo de Vinci painting outside of Europe. Browse through several special exhibits including: Art of the Eastern Woodlands and Great Northern Plains American Indian Frontier displaying decorative ceremonial objects, Alfred Stieglitz's photographs and Ellsworth Kelly's paintings and works on paper — The Years in France 1948-



1954. Next travel down Pennsylvania Avenue to the nearby Washington Center for the Arts to visit the Zenith Gallery, opened exclusively for members of CNS. The Gallery owner will welcome you with refreshments and an introduction to the contemporary art displayed in this unique setting.

### **532 A DAY IN THE VIRGINIA COUNTRYSIDE 9:30 a.m. - 4:00 p.m.**

Repeat of Tour 527, but does not include lunch.

### **533 TUDOR PLACE & THE GARDENS AT DUMBARTON OAKS WITH LUNCH AT THE GEORGETOWN CLUB 11:00 a.m. - 3:00 p.m.**

Visit historic Georgetown, noted for its fine architecture and formal gardens spanning 200 years of style and design. Tudor Place, one of the city's finest formal homes, is located on five acres

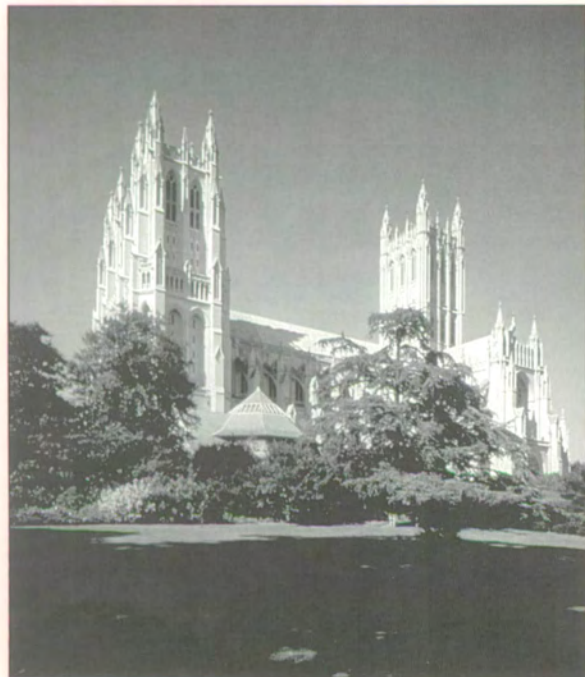


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nestled in the heart of Georgetown. The house was designed by the architect of the Capitol. Its architectural design is indicative of the prominence of the Peter family who built the house in 1806 and whose descendants have remained in the house ever since. All furnishings are original Peter family heirlooms including many treasures brought to Tudor Place by its first mistress, Martha Parke Custis, granddaughter of Martha Washington. Enjoy a formal luncheon at the exclusive Georgetown Club housed in an 18th century building once known as Suters Tavern, a common meeting place in colonial Georgetown. Following lunch, visit the exquisite gardens of Dumbarton Oaks designed by Beatrix Farrand, one of the world's finest landscape architects.

**534**  
**NATIONAL CATHEDRAL**  
**WITH CANNON FELLER**  
**2:30 p.m. - 5:30 p.m.**



Travel along Embassy Row to the National Cathedral. This massive Gothic Structure is the fifth largest church in the world and a wonder of architectural detail and design. Enjoy a private tour conducted by Cannon Dick Feller, the Cathedral's Clerk of the Works for over 40 years. He will point out the highlights of tenure through architectural detail, the intimate chapels, the stained glass windows, famous needlepoint accessories and the bishop's Garden. Join him in the Observatory Gallery for questions and answers before browsing through the Herb Cottage or participating in the traditional Monday afternoon evensong featuring the men and boys choir.

**505**  
**PUBLIK TABLE AT**  
**GADSBY'S TAVERN**  
**7:30 p.m. - 10:30 p.m.**

Enjoy a fun filled evening at Gadsby's Tavern, an original 18th century tavern in Alexandria, Virginia. It was a popular tavern at which George Washington celebrated his last birthday party and many of our colonial patriots gathered. Costumed barmaids and tavern boys will greet you upon arrival. Mistress Baker welcomes you with a toast to begin the festivities. The colonial personality shares with you the "news of the day" (200 years ago today, that is!) and sings songs of the period. Liquid libations will be served on a cash basis.

**TUESDAY,**  
**NOVEMBER 3, 1992**

**506**  
**FUN RUN AND WALK**  
**6:30 a.m. - 8:00 a.m.**

Walk or run a 5k course starting at the Sheraton Washington and winding through Washington's scenic Rock Creek Park. Enjoy juice and danish upon completing your walk/run.

**535**  
**VIP TOUR OF THE WHITE HOUSE AND**  
**LAFAYETTE PARK**  
**7:30 a.m. - 10:30 a.m.**  
*(limited attendance)*

You will begin your day with a VIP tour of the White House. The White House has been the scene of many great moments in American history yet the house endures as more than an object of historical interest. Here the President entertains his guests, holds meetings that decide national and international policy, and carries out the many duties connected with his office. Here, also, he and his family live their private lives, as every President







has done since 1800. The White House was designed by James Hoban, who was the winner in a contest conducted to find the best design for "President's Palace"; ironically, Thomas Jefferson was one of the losers in the contest. Today, special arrangements have been made for a VIP tour of this historic mansion. You will not only see the rooms that are on the general public tour - Library, East Room, Green Room, Blue Room, Red Room, and State Dining Room - but also the lower level rooms that are seen only during a VIP tour. These rooms are the Vermeil Room, the China Room, the Diplomatic Reception Room and the Jacqueline Kennedy Garden. *Note: All White House appointments subject to cancellation due to Presidential functions.*

**536  
HILLWOOD HOUSE  
AND GARDENS**

**8:30 a.m. - 11:00 a.m.**  
*(limited attendance)*

Enjoy a tour of Hillwood House, the former home of Marjorie Merriweather Post, cereal heiress and once one of the grande dames of Washington society. Built in 1926, this opulent 40-room Georgian mansion houses many fine art works and furnishings. Hillwood's collection of Russian icons, gold and silver pieces, porcelain and Faberge eggs has been called the most representative outside of the Soviet Union. The 25 acres of land bordering Rock Creek Park contains Japanese and formal French gardens, a small dacha or Russian summer house, and a greenhouse with over 5,000 orchids. The gardens were designed by Perry Wheeler, who helped establish the White House Garden.



**537  
CORCORAN GALLERY OF ART AND THE  
PHILLIPS COLLECTION**

**9:30 a.m. - 1:00 p.m.**

Enjoy a private tour of the Corcoran Gallery of Art, the oldest independent art museum in Washington. The museum possesses one of the finest American collections in the world, but also has a small, superb collection of European Masters, including Rembrandt, Degas, Renoir, and Rubens. The next stop is the Phillips Collection, the first museum of modern art in the United States which includes paintings by Renoir, Cezanne, Monet, Matisse, Whistler, and van Gogh. On display in November will be Theme and Improvisation: Kandinsky and the American Avant-garde: 1912 - 1950.

**538  
SHOPPING SHUTTLE TO  
TYSONS CORNER CENTER**

**12:15 p.m. - 5:15 p.m.**

There will be a continuous shuttle service between the Sheraton Washington Hotel and Tysons Corner Center for guests to enjoy an afternoon at one of the largest shopping centers on the east coast. Tysons corner has over 230 shops including Nordstroms, Lord & Taylor and Bloomingdales. Upon your arrival at Tysons, you will be presented with a shopping bag filled with goodies from many of the stores in the mall. In addition, the shuttle service will make stops at Tysons II featuring Neiman Marcus, Saks Fifth Avenue, Macys, and Fairfax Square which includes Tiffany and Company, Hermes, Fendi, Louis Vuitton and many other fine stores.

**539  
VIP CAPITOL TOUR**

**1:00 p.m. - 4:30 p.m.**  
Repeat of Tour 529.

**540  
HILLWOOD HOUSE  
AND GARDENS**

**2:30 p.m. - 5:30 p.m.**  
*(limited attendance)*

Repeat of Tour 536.

**513  
WASHINGTON AFTER DARK**

**7:00 p.m. - 9:30 p.m.**

Tour the city of Washington in perhaps the most enchanting way — by night. Your tour guide



will share with you fascinating material on the illuminated monuments and landmarks. In this all encompassing night view of Washington, you will pass such sites as the White House, the Capitol Building, the Supreme Court Building, the Library of Congress, the Old Post Office Building, and the Washington Monument. Stops will be made at the Lincoln, Jefferson and Vietnam Memorials, and the John F. Kennedy Center for the Performing Arts.

## WEDNESDAY, NOVEMBER 4, 1992

### 541 AUXILIARY EDUCATIONAL SESSION - "THINK FIRST"

9:45 a.m. - 10:15 a.m.

**Part I: Preventing the Nightmare**

10:30 a.m.-11:15 a.m.

**Part II: Establishing the THINK FIRST  
Program**

THINK FIRST, the Head and Spinal Cord Injury Prevention Program of America's neurosurgeons, will offer a unique opportunity for spouses to take a closer look at injury prevention for young people and how they can be a part of this award-winning program.

National Head & Spinal Cord Injury Prevention Program



The first 30-minute workshop entitled, "Preventing the Nightmare" will focus on the tragedy of head and spinal cord injury and what is being done to prevent these injuries. This workshop is a must for parents of the 90's.

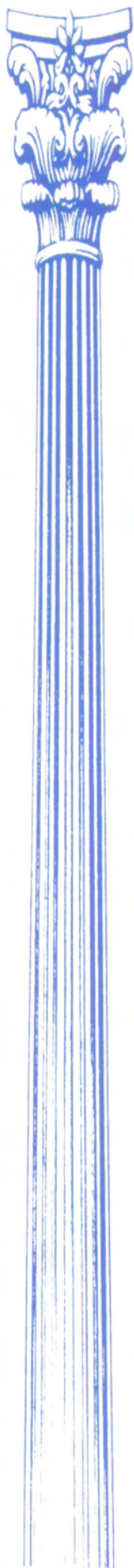
The second 45-minute workshop is designed for spouses who would like to use their skills and expertise to become a part of the THINK FIRST program through volunteer efforts. Spouses across the nation are becoming instrumental in mobilizing THINK FIRST programs in their communities, and they will share their experiences during the session.

### "THE WEEK AT A GLANCE"

	Saturday October 31	Sunday November 1	Monday November 2	Tuesday November 3	Wednesday November 4
Morning		Welcome to Washington 9:00 am-12:00 pm Mt. Vernon and Old Town Alexandria 9:30 am-3:00 pm Virginia Countryside 9:30 am-4:30 pm	Breakfast at Tiffany's and Shopping at Tysons Corner Center 8:30 am-2:00 pm Canvassing Washington 9:30 am-12:30 pm Virginia Countryside 9:30 am-4:00 pm	Fun Run and Walk 6:30 am-8:00 am VIP Tour of White House/Lafayette Park 7:30 am-10:30 am Hillwood House and Gardens 8:30 am-11:00 am Corcoran Gallery of Art and Phillips Collection 9:30 am-1:00 pm	Auxiliary Educational Session - "THINK FIRST" 9:45 am-11:15 am Auxiliary Luncheon 12:00 pm-2:00 pm (Buses depart at 11:30 am)
Afternoon		Welcome to Washington 1:00 pm-4:00 pm VIP Capitol Tour 1:00 pm-4:30 pm	Tudor Place & the Gardens at Dumbarton Oaks with Lunch at the George Town Club 11:00 am-3:00 pm National Cathedral with Cannon Feller 2:30 pm-5:30 pm	Shopping Shuttle to Tysons Corner Center 12:15 pm-5:15 pm VIP Capitol Tour 1:00 pm-4:30 pm Hillwood House and Gardens 2:30 pm-5:30 pm	Corcoran Gallery of Art and Phillips Collection VIP Capitol Tour <b>NOTE: Tours to leave from Press Club</b>
Evening	Dinner and the National Symphony Orchestra at the Kennedy Center 6:00 pm-11:00 pm The Ghosts of Washington with Dinner at America Restaurant 7:00 pm-10:30 pm	Opening Reception at National Building Museum 7:00 pm-9:30 pm	Publik Table at Gadsby's Tavern 7:30 pm-10:30 pm	Washington After Dark 7:00 pm-9:30 pm	Annual Reception and Banquet 7:00 pm-1:00 am







## AUXILIARY LUNCHEON FEATURING SHEILA TATE



### 542 11:30 a.m. - 2:00 p.m.

This year's Auxiliary Luncheon features Sheila Tate, former press secretary to Nancy Reagan and press secretary to President Bush during the 1988 campaign. Her insights on the previous day's Presidential election, Washington politics, the news media and the world of working women will be



presented with a large measure of humor. The National Press Club, the oldest, largest, and most prestigious press club in Washington, is the setting for this event. American Presidents, politicians and business leaders come here to make policy statements to the nation and relax socially with their peers. Buses depart from the Sheraton at 11:30 a.m.

### 543 AUXILIARY LUNCHEON AND VIP CAPITOL TOUR 11:30 a.m. - 5:30 p.m.

Luncheon followed by Tour 529.

### 544 AUXILIARY LUNCHEON AND CORCORAN GALLERY OF ART AND THE PHILLIPS COLLECTION 11:30 a.m. - 5:30 p.m.

After the Auxiliary Lunch, enjoy a private tour of the Corcoran Gallery of Art, the oldest independent art museum in Washington. The museum possesses one of the finest American collections in the world, but also has a small, superb collection of European Masters, including Rembrandt, Degas, Renoir and Rubens. The next stop is the Phillips Collection, the first museum of modern art in the United States, which includes paintings by Renoir, Cezanne, Monet, Matisse, Whistler, and van Gogh. On display in November will be Theme and Improvisation: Kandinsky and the American Avant-garde: 1912-1950.

### 514 ANNUAL RECEPTION AND BANQUET 7:00 p.m. - 1:00 a.m.

Celebrate the Annual CNS Banquet by participating in a remarkable event. An excellent dinner will be punctuated with unique entertainment by Chezzam, a vibrant group of professional dancers whose appearance at the CNS Banquet in Atlanta was highly memorable. Within the elegant floral decor of the Sheraton Ballroom, you will see an extraordinary display of choreography featuring routines such as 'Russian Jubilee', the 'Can-Can' and 'Neon Vogue'. Not only will you watch, but those who dare may join these performers as they dance their way amongst the audience, providing a truly unforgettable experience. And for the more faint of heart, Sidney's Orchestra will provide contemporary dance music between Chezzam performances and late into the evening to round out the night.





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## **INTRODUCING KEY PLAYERS**

### **DAN AND MOLLIE BARROW ANNUAL MEETING CHAIRMEN**



Dan Barrow was born and raised in rural Illinois and his wife, Mollie, in rural east Texas. They met during their residency training at Emory University. Dan is an Associate Professor and Vice Chairman of the Department of Neurosurgery at Emory University School of Medicine. Mollie is an Oral and Maxillofacial Surgeon in private practice in Atlanta, Georgia.

Dan and Mollie were married in 1986 and are the parents of a four-year-old daughter, Emily, a two-year-old son, Jack, and a new baby boy, Tom.

### **WILLIAM AND RANSOM FRIEDMAN SCIENTIFIC AND EDUCATIONAL CHAIRMEN**



Bill Friedman grew up in Cincinnati, Ohio. He attended Oberlin College and the Ohio State University Medical School. He performed his internship and residency training at the University of Florida, where he remained as a faculty neurosurgeon. He currently is the Edward Shedd Wells Professor of Stereotactic Neurosurgery and Associate Chairman of the Neurosurgery Department.

Ransom Friedman grew up in Cocoa Beach, Florida, where her father was medical director (Cape Canaveral). She attended Columbia University Nursing School in New York City, then worked as a cardiovascular nurse clinician and, later, Assistant Professor of Nursing, at the University of Florida College of Nursing. Bill and Ransom met at the University of Florida. They have three children: Daniel (10), Abigail (7), and David (3).

### **BART AND CONNIE GUTHRIE LOCAL ARRANGEMENTS CHAIRMEN**



Bart and Connie are Alabama natives, displaced to Minnesota for a residency at the Mayo Clinic. They now reside with their son Bo and daughter Avera in Arlington, Virginia, just across the Potomac River from Washington, DC.

Connie is active in the Washington International School and in other volunteer activities. Bart is director of the Brain Tumor Program and Residency Program Director at the George Washington University Department of Neurosurgery.

They are looking forward to seeing you at the Washington meeting this November.







**VANCOUVER,  
BRITISH COLUMBIA,  
CANADA - 1993**

The 43rd Annual Meeting of the Congress of Neurological Surgeons will be held in Vancouver, B.C. This location combines the cosmopolitan charm of a world-class city, with the rugged, spectacular beauty of the Pacific Northwest. Art and Dana Day, as President-elect of the CNS and the CNS Auxiliary, have plans well under way for a superb scientific and social program. Bill Friedman will be the Annual Meeting Chairman. Hunt Batjer will be the Scientific Program Chairman. Mitch Berger and Paul Steinbok are the Local Arrangements Chairmen.

Mark your calendars now for the 43rd Annual Meeting in Vancouver, B.C., October 2 - 7, 1993.

The Auxiliary Board would like to take this opportunity to thank all the dedicated people who have worked so hard to make this meeting an informational and wonderful family event.

**ARTHUR AND DANA DAY  
PRESIDENT-ELECT AND  
AUXILIARY PRESIDENT-ELECT**



Art earned his M.D. degree at Louisiana State University in 1968, and completed his residency in Neurological Surgery at the University of Florida, Gainesville. He was appointed to the faculty at the University of Florida in 1977, and became a full professor in 1988. Dana is very involved with Gainesville Harvest, a volunteer organization that supplies food to families in need. Art and Dana have three children, Lauren, Steven, and Lindsey. Art likes to spend his free time on the links, biking, or working out.

**"TIDBITS"**

**DO NOT FORGET** - Deadline for Housing and for Advance Registration is October 1, 1992.

Name badges must be worn for entry into the Hospitality Suite. To help others get to know you, please register and wear your badge at all times. Additionally, they are required for admission into the General Sessions or the Exhibits Area, where you can view the latest neurosurgical products.

**FUTURE  
MEETINGS**

October 2-7, 1993  
Vancouver, British Columbia

October 1-6, 1994  
Chicago, Illinois

October 14-19, 1995  
San Francisco, California

September 28 - October 3, 1996  
Montreal, Quebec



# HOTEL RESERVATIONS



## OFFICIAL CNS HOTELS

## RATES

<b>Sheraton Washington Hotel</b>	Park Tower	Single	\$140.00
		Double	\$170.00
	Main Building	Single	\$160.00
		Double	\$190.00
	Wardman Tower	Single	\$180.00
		Double	\$210.00
	Residents (on special form only)	Single	\$130.00
		Double	\$160.00
<b>Omni Shoreham Hotel</b>		Single	\$150.00
		Double	\$170.00

- To receive the special CNS discounted convention rate, the enclosed form must be used to make your hotel reservations.
- All scientific meetings will be held at the Sheraton Washington Hotel and the Omni Shoreham Hotel.
- All room charges are subject to state and local taxes, currently 11%, and \$1.50 per night occupancy tax in the District of Columbia.
- Please mail your housing form to the Sheraton Washington. Upon receipt of your request, a confirmation will be mailed to you from the hotel of your choice. Please allow four weeks for processing.
- Upon receipt of your confirmation, changes in arrival/departure or cancellations should be made directly with the hotel of your choice:

Sheraton Washington Reservations: 202/328-2900

Omni Shoreham Hotel Reservations: 202/234-0700

- Reservations are held until 4:00 p.m. It is necessary to guarantee the reservation via credit card number on the housing reservation form for late arrival.
- Check out time is 12:00 noon.
- Early reservations are strongly suggested.
- "I'M HERE!" If you're a confirmed guest at the Sheraton Washington Hotel, you can call 202/328-5698 upon airport arrival in Washington and the Sheraton Guest Service Agent will check you into the hotel by phone. Your room key will be pre-packaged, and may be picked up at the Concierge desk at the "I'M HERE" sign upon arrival at the hotel. This time-saving service is only extended to those guests staying at the Sheraton Washington. Please have all pertinent information readily available (departure date, confirmed rate, and credit card number) when placing the call.



# IMPORTANT AIR TRAVEL NEWS

## FOR CONGRESS OF NEUROLOGICAL SURGEONS ANNUAL MEETING

WASHINGTON, DC - October 31 - November 5, 1992

The Congress of Neurological Surgeons has negotiated special rates with Delta Airlines and United Airlines to offer you savings on air travel to Washington, DC, October 31 - November 5, 1992.

A special 5% BONUS off all Delta and United Airlines published round trip fares\* within the United States and San Juan will be available (this ranges from first class to the lowest fare), providing all rules and conditions of the airfare are met.

AS AN ADDED BONUS, if you are unable to meet the restrictions of the many discounted airfares available from Delta and United Airlines, a special 40% discount off of the full coach fare will be offered. This will be based on published round trip coach rates (full Y fare). This special rate provides for greater flexibility in your travel plans with less restrictions.

Call Delta Airlines toll free 8:00 a.m. - 8:00 p.m. Eastern Time Daily or United Airlines toll free 7:00 a.m. - 1:00 a.m. Eastern Time Daily.

**SPECIAL NOTE:** If you prefer the services of a travel agent, have them call Delta Airlines or United Airlines toll free at the numbers above to obtain these special convention rates.

These discounts are available only through Delta or United Airlines toll free numbers, so call today! We look forward to welcoming you to Washington, DC!

\*Some promotional fares discounted greater than 75% off the normal round trip coach fares may not be included in this offer.



**DELTA**



**Mention the Special File Number when making reservations.**

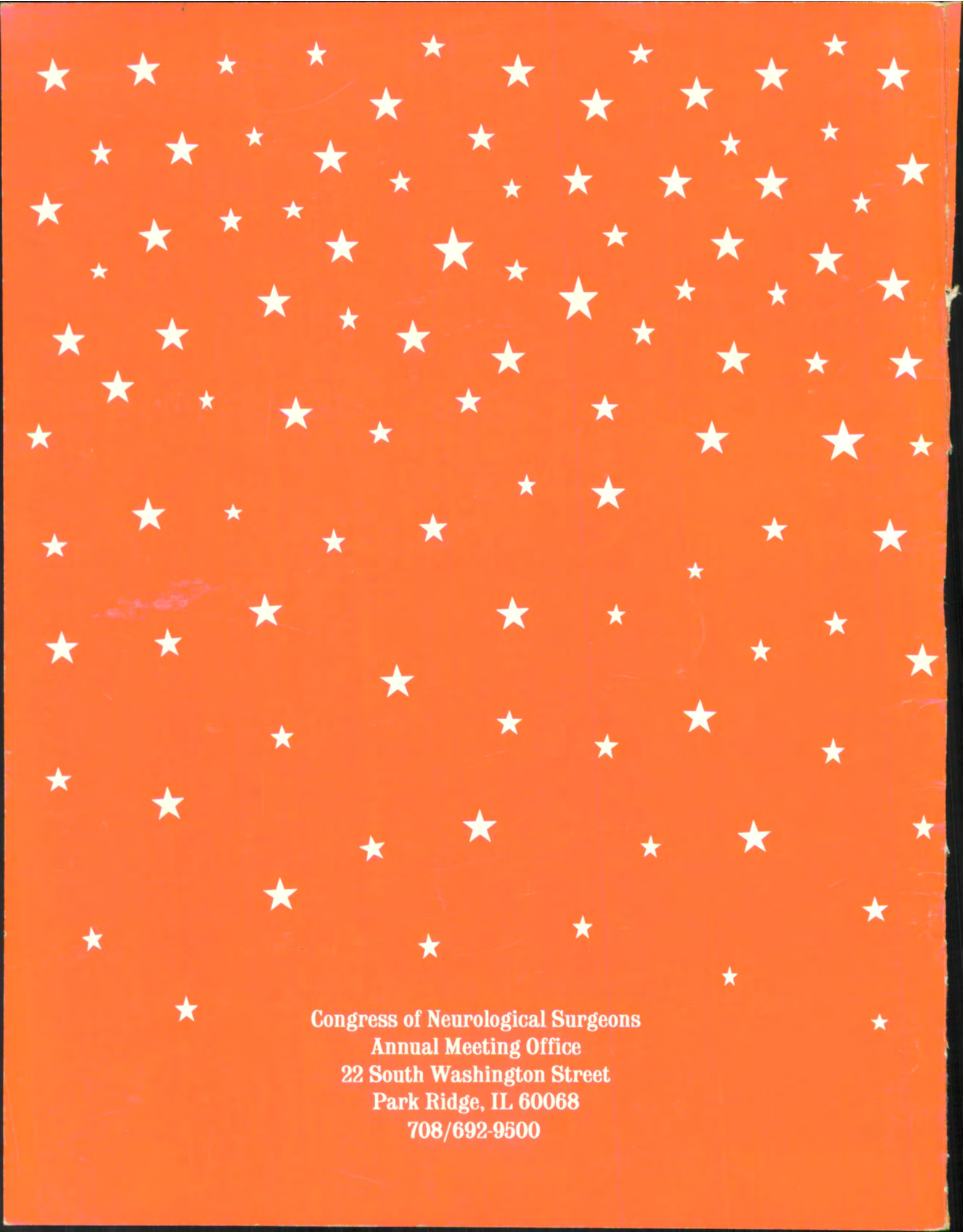
**DELTA AIRLINES**  
**800-241-6760**  
**File No. PO344**

**UNITED AIRLINES**  
**800-521-4041**  
**File No. 526VC**



**UNITED AIRLINES**





**Congress of Neurological Surgeons  
Annual Meeting Office  
22 South Washington Street  
Park Ridge, IL 60068  
708/692-9500**