
SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES

of

The American Association
of Neurological Surgeons
and

Congress of Neurological Surgeons



14TH ANNUAL MEETING **PROGRAM BOOK**

February 11-14, 1998

Westin Mission Hills Resort
Rancho Mirage, California

Jointly Sponsored by
The American Association of Neurological Surgeons

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Loc: 05101

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Disclaimer

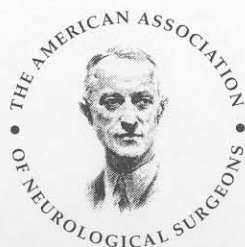
All drugs and medical devices used in the United States are administered in accordance with Food and Drug Administration (FDA) regulations. These regulations vary depending on the risks associated with the drug or medical devices compared to products already on the market, and the quality and scope of the clinical data available.

Some drugs and medical devices demonstrated or described on the print publications of the AANS/CNS Spine Section Annual Meeting have a FDA clearance for use for specific purposes or for use only in restricted research settings. The FDA has stated that it is the responsibility of the physician to determine the FDA status of each drug or device he or she wishes to use in compliance with applicable law.

Continuing Medical Education Credit

This activity has been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education through the joint sponsorship of The American Association of Neurological Surgeons and the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. The Accreditation Council for Continuing Medical Education (ACCME) accredits The American Association of Neurological Surgeons to sponsor continuing medical education for physicians.

The American Association of Neurological Surgeons designates this educational activity for a maximum of 19 hours in category 1 credit toward the AMA Physician's Recognition Award. Additional hours may be earned by attending Special Courses. Each physician should claim only those hours that he/she actually spent in the educational activity.



Officers

Chairman:
Chairman Elect:
Secretary:
Treasurer:
Immediate Past Chairman:
Members-at-Large:

Richard G. Fessler, MD
Stephen M. Papadopoulos, MD
Vincent C. Traynelis, MD
Curtis A. Dickman, MD, PhD
Edward C. Benzel, MD
Charles L. Branch, Jr., MD, PhD
Mark N. Hadley, MD
John E. McGillicuddy, MD

1998 Annual Meeting Committee

Annual Meeting Chairman:

Nevan G. Baldwin, MD
Albuquerque, NM

Scientific Program Chairman:

H. Louis Harkey, MD
Jackson, Mississippi

Exhibit Chairman:

Charles L. Branch, Jr., MD
Winston-Salem, NC

Scientific Program Committee:

Standing Members, Officers:

Richard G. Fessler, MD, *President*
Nevan G. Baldwin, MD,
Annual Meeting Chairman
H. Louis Harkey, MD,
Scientific Program Chairman
Gerald E. Rodts, Jr., MD,
CME Liaison
(1999 Scientific Program Chairman)
Brian G. Cuddy, MD, *Sergeant-at-Arms*

Standing Members, Education Committee:

Kevin T. Foley, MD, *Chairman*
Paul C. McCormick, MD
Noel I. Perin, MD,
AANS CME Joint Sponsorship
Subcommittee Representative
Lloyd Zucker, MD

Members at Large:

Russell P. Nockels, MD
Donald D. Dietze, Jr., MD
Michael G. Fehlings, MD
Richard Tippetts, MD
Gary L. Rea, MD
Christopher G. Paramore, MD
Joseph T. Alexander, MD
Allan J. Belzberg, MD
Robert L. Tiel, MD

Past Officers

1996

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Immediate Past Chairman:
Members-at-Large:

Edward C. Benzel, MD
Richard Fessler, MD
Stephen Papadopoulos, MD
Peter Klara, MD, PhD
Arnold H. Menezes, MD
Gary L. Rea, MD
Nancy Epstein, MD
John McGillicuddy, MD
Kevin T. Foley, MD
Mark Hadley, MD

Ex-Officio Members:

1995

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Immediate Past Chairman:
Members-at-Large:

Arnold Menezes, MD
Edward Benzel, MD
Stephen Papadopoulos, MD
Peter Klara, MD, PhD
Russell Travis, MD
Gary L. Rea, MD
Nancy Epstein, MD
John McGillicuddy, MD
Kevin T. Foley, MD
Mark Hadley, MD

Ex-Officio Members:

1994

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Immediate Past Chairman:
Members-at-Large:

Russell Travis, MD
Arnold H. Menezes, MD
Stephen Papadopoulos, MD
Peter Klara, MD, PhD
Edward C. Tarlov, MD
Edward C. Benzel, MD
Gary L. Rea, MD
Nancy Epstein, MD

1993

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Immediate Past Chairman:
Members-at-Large:

Edward C. Tarlov, MD
Russell Travis, MD
Arnold H. Menezes, MD
Russell Travis, MD
Volker K.H. Sonntag, MD
Edward C. Benzel, MD
Gary L. Rea, MD

1992

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Members-at-Large:

Volker K.H. Sonntag, MD
Edward C. Tarlov, MD
Arnold H. Menezes, MD
Russell Travis, MD
Donald J. Prolo, MD
Melville P. Roberts, MD

1991

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Members-at-Large:

Carole A. Miller, MD
Volker K.H. Sonntag, MD
Arnold H. Menezes, MD
Russell Travis, MD
Donald J. Prolo, MD
Melville P. Roberts, MD

1990

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Members-at-Large:

Edward S. Connolly, MD
Carole A. Miller, MD
Volker K.H. Sonntag, MD
Russell Travis, MD
Arnold H. Menezes, MD
Donald J. Prolo, MD

1989

Chairman:
Chairman-Elect:
Secretary:
Treasurer:
Members-at-Large:

Edward S. Connolly, MD
Carole A. Miller, MD
Volker K.H. Sonntag, MD
Russell Travis, MD
Arnold H. Menezes, MD
Donald J. Prolo, MD

1988

Chairman:
Secretary:
Treasurer:
Members-at-Large:

Stewart B. Dunsker, MD
Carole A. Miller, MD
Edward C. Tarlov, MD
Phanor L. Perot, Jr., MD
Volker K.H. Sonntag, MD

1987

Chairman:
Secretary:
Treasurer:
Members-at-Large:

Stewart B. Dunsker, MD
Carole A. Miller, MD
Edward C. Tarlov, MD
Phanor L. Perot, Jr., MD
Volker K.H. Sonntag, MD

1986

Chairman:
Secretary:
Treasurer:
Member-at-Large:

George W. Sybert, MD
Henry H. Schmidek, MD
Edward S. Connolly, MD
Carole A. Miller, MD

1985

Chairman:
Secretary:
Treasurer:
Member-at-Large:

Russell W. Hardy, MD
Henry H. Schmidek, MD
Edward S. Connolly, MD
George W. Sybert, MD

1984

Chairman:
Secretary:
Treasurer:
Members-at-Large:

Russell W. Hardy, MD
Stewart Dunsker, MD
Edward S. Connolly, MD
Henry H. Schmidek, MD

1983

Chairman:
Secretary:
Treasurer:
Members-at-Large:

Sanford J. Larson, MD, PhD
Stewart Dunsker, MD
Edward S. Connolly, MD
Henry H. Schmidek, MD

1982

Chairman:
Secretary:
Treasurer:
Members-at-Large:

Sanford J. Larson, MD, PhD
Stewart Dunsker, MD
Edward S. Connolly, MD
Henry H. Schmidek, MD

1981

Chairman:
Secretary:
Treasurer:
Members-at-Large:

Sanford J. Larson, MD, PhD
Stewart Dunsker, MD
Edward S. Connolly, MD
Henry H. Schmidek, MD

1980

Chairman:
Secretary:
Treasurer:
Members-at-Large:

Sanford J. Larson, MD, PhD
Stewart Dunsker, MD
Edward S. Connolly, MD
K. Smith, MD

Previous Meetings

1985 — Greenleaf, Florida
1986 — San Diego, California
1987 — Boca Raton, Florida
1988 — Phoenix, Arizona
1989 — Cancun, Mexico
1990 — Captiva Island, Florida
1991 — Rancho Mirage, California
1992 — Miami, Florida
1993 — Tucson, Arizona
1994 — Fort Lauderdale, Florida
1995 — Phoenix, Arizona
1996 — Lake Buena Vista, Florida
1997 — Newport Beach, California

Future Meetings

1999 — Lake Buena Vista, Florida • February 10–13
2000 — Palm Springs, California • February 23–26

Past Program Committees

1985

Barth A. Green, MD
George W. Sybert, MD

1986

Randall W. Smith, MD
Philip R. Weinstein, MD
John F. Howe, MD
Stanley J. Goodman, MD
Barth A. Green, MD
Volker K.H. Sonntag, MD
Hector E. James, MD

1987

Volker K.H. Sonntag, MD
Robert S. Hood, MD
Joel N. Abromovitz, MD
Timothy Harrington, MD

1988

Melville P. Roberts, MD
Volker K.H. Sonntag, MD
Russell Travis, MD
Harold A. Wilkinson, MD
Richard Saunders, MD

1989

Arnold H. Menezes, MD
Carole A. Miller, MD
Russell Travis, MD
John C. Godersky, MD
Patrick W. Hitchon, MD

1990

Edward Tarlov, MD
Bennett Blumenkopf, MD
Paul D. Dernbach, MD
Nancy Epstein, MD

1991

Nancy Epstein, MD
Joy Aprin, MD
Lawrence Borges, MD
Emily Friedman, MD
Ben Benner, MD

1992

Gary Rea, MD
Bennett Blumenkopf, MD
Charles Branch, Jr., MD
David Cahill, MD
Richard Fessler, MD, PhD
Stephen Papadopoulos, MD

1993

Stephen Papadopoulos, MD
Charles Branch, Jr., MD
David Cahill, MD
Curtis Dickman, MD
Richard Fessler, MD, PhD
Regis Haid, Jr., MD
Robert J. Martin, MD
Gary Rea, MD
Moris Senegor, MD
John McGillicuddy, MD
Noel Perin, MD

1994

Richard Fessler, MD, PhD
David Cahill, MD
Curtis Dickman, MD
Peter Gianaris, MD
H. Louis Harkey III, MD
Paul McCormick, MD
Russ Nockels, MD
Moris Senegor, MD
Vincent C. Traynelis, MD

1995

Curtis Dickman, MD
David Cahill, MD
Charles Branch, Jr., MD
Paul Cooper, MD
Michael Fehlings, MD
Regis Haid, Jr., MD
H. Louis Harkey III, MD
James Hollowell, MD
Peter Klara, MD
John Knightly, MD
John McGillicuddy, MD
Eugene Rossitch, Jr., MD
Charles B. Stillerman, MD
Vincent C. Traynelis, MD

1996

H. Louis Harkey, MD
Nevan G. Baldwin, MD
Kevin T. Foley, MD
Noel I. Perin, MD
James Hollowell, MD
Richard K. Osenbach, MD
Patrick W. Hitchon, MD
Regis W. Haid, Jr., MD
Richard H. Tippets, MD
Dennis G. Vollmer, MD
Robert B. Snow, MD
Allan H. Friedman, MD
Brian G. Cuddy, MD

1997

Nevan G. Baldwin, MD
Noel I. Perin, MD
Brian G. Cuddy, MD
H. Louis Harkey, MD
Paul M. Arnold, MD
Allan J. Belzberg, MD
Perry A. Ball, MD
Paul C. McCormick, MD
Curtis A. Dickman, MD
Christopher G. Paramore, MD
Kevin T. Foley, MD
James P. Hollowell, MD
David G. Kline, MD
Ronald I. Apfelbaum, MD
Charles B. Stillerman, MD

Mayfield Award Winners

1984

Mark N. Hadley, MD
Phoenix, AZ

1985

Ab Guha, MD
Toronto, Ontario

1986

No Award Presented

1987

John A. Feldenzer, MD
Ann Arbor, MI

1988

No Award Presented

1989

Richard K. Simpson, Jr., MD
Houston, TX

1990

John Hurlbert, MD, PhD
Toronto, Ontario

1991

Peter Gianaris, MD
Eau Claire, WI

1992

Rajiv Midha, MD
Toronto, Ontario

1993

Clinical Science
Gerald F. Tuite, MD
Ann Arbor, MI

Basic Science

Allan D.O. Levi, MD, PhD
Miami, FL

1994

Timothy C. Ryken, MD
Iowa City, IA

1995

Simcha J. Weller, MD
Boston, MA

1996

Clinical Science
Paul D. Sawin, MD
Iowa City, IA

Basic Science

Paul C. Francel, MD
Troy, VA

1997

Michael A. Marone
Atlanta, GA

1998

Tord D. Alden, MD
Charlottesville, VA

AANS/CNS Section on Disorders of the Spine and Peripheral Nerves Fellowship Award Winners

1993

Ziya L. Gokaslan, MD
Houston, TX

1994

Christopher Shaffrey, MD
Charlottesville, VA

1995

R. John Hurlbert, MD, PhD
Toronto, Ontario

1996

Simcha J. Weller, MD
Boston, MA

1997

No Award Given

1998

No Award Given

Meritorious Service Award Recipients (previously Lifetime Achievement Award)

1990

Ralph B. Cloward, MD

1991

Frank H. Mayfield, MD

1992

Charles Fager, MD

1993

Joseph A. Epstein, MD

1994

Sanford J. Larson, MD, PhD

1995

No Award Given

1996

No Award Given

1997

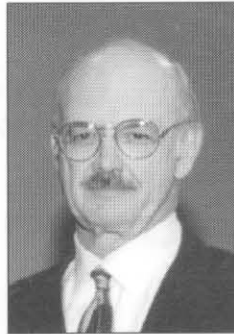
David G. Kline, MD

1998

Russell Travis, MD

1998

**Meritorious Service Award Recipient
Russell L. Travis, MD, FACS**



Russell L. Travis, MD, FACS, of Lexington, Kentucky has been chosen as the 1998 Meritorious Service Award Recipient.

Dr. Travis is in private practice in Lexington and is an attending neurosurgeon at Central Baptist Hospital, Lexington Hospital, Columbia Hospital and St. Joseph Hospital. He is also a consulting neurosurgeon for 11 hospitals throughout Kentucky.

Active in the AANS since 1974, Dr. Travis served as Director-at-Large of the AANS Board of Directors since 1993, and has also held such positions as Chairman of the Physician Reimbursement Committee and the Humanitarian Award Committee. For more than a decade, he played a key role in the leadership of the AANS/Congress of Neurological Surgeons (CNS) Washington Committee of Neurosurgery, speaking frequently before Congressional Committees in support of organized neurosurgery. He also served as Chairman of the Joint Section on Disorders of the Spine and Peripheral Nerves of the AANS and CNS, and of the Joint Council of State Neurosurgical Societies.

In addition to his volunteer service with the AANS, Dr. Travis recently served on the Board of Directors of the Lexington Chamber of Commerce and is a member of the American College of Surgeons Committee on Physician Recruitment. He previously served as President of both the Kentucky Epilepsy Association and the Kentucky Neurosurgical Society, as well as Chairman of the Kentucky Medical Association. He also has been on the Board of Directors of Acordia of Lexington Inc since 1995.

Dr. Travis earned his Bachelor's degree in 1957 from Centre College and received his medical degree from the University of Louisville in 1962. He served his general surgery internship at the University of Louisville Hospitals and his neurosurgical residency at the Medical College Hospital of South Carolina (MCHSC). He was appointed a teaching fellow in neurosurgery at MCHSC upon completion of his residency.

A frequent lecturer on numerous aspects of neurological surgery, Dr. Travis has spoken on such diverse topics as cerebral vascularization, carotid endarterectomy, lumbar disc disease, and management of spinal fractures.

In recognition of his achievements in the field neurosurgery, Dr. Travis received the 1993 Distinguished Service Award from the Congress of Neurological Surgeons; the 1992 Jack Trevey Award from the Fayette County Medical Society for his leadership in bringing health care to the underinsured and uninsured of Kentucky through the Kentucky Physicians Care Program; the 1992 Health Hero Award; and the 1990 Service to Mankind Award of the Kentucky Medical Association/Kentucky Health Care Access Foundation.

Dr. Travis is married to Jill Travis and they have four children, Glen, Lee, Barry and Britini.

Exhibitors

The Spine Section gratefully acknowledges the support of the following exhibitors for the 1998 Annual Meeting:

AcroMed

3303 Carnegie Avenue
Cleveland, OH 44115
(216)432-6851

Booth 37

Aesculap

1000 Gateway Blvd.
South San Francisco, CA 94080
(650)876-7000

Booth 19

American Surgical Sponges Div.

82 Sanderson Avenue
Lynn, MA 01902
(781)592-7200

Booth 23

The Anspach Companies

4500 Riverside Drive
Palm Beach Gardens, FL 33410
(561)627-1080

Booth 24

BrainLAB USA, Inc.

600 Glen Court
Moorestown, NJ 08057
(609)439-1615

Booth 2

Carl Zeiss, Inc.

One Zeiss Drive
Thornwood, NY 10594
(914)681-7792

Booth 49

Clarus Medical Systems, Inc.

1000 Boone Avenue North, #100
Minneapolis, MN 55427
(612)525-8418

Booth 3

Codman/Johnson & Johnson Professional, Inc.

325 Paramount Drive
Raynham, MA 02767
(508)880-8333

Booth 27

DePuy Motech

700 Orthopaedic Drive
Warsaw, IN 46581
(219)372-7147

Booth 10

EBI Medical Systems, Inc.
6 Upper Pond Road
Parsippany, NJ 07054
(973)299-9300

Elekta Instruments, Inc.
8 Executive Park West
Atlanta, GA 30329
(404)315-1225

Endius Incorporated
23 West Bacon Street
Plainville, MA 02762
(508)643-0983

GenSci Regeneration Sciences Inc.
2250-650 West Georgia Street
Vancouver, BC V6B 4N7
(604)683-8330

Gliatech Inc.
23420 Commerce Park Road
Cleveland, OH 44122
(216)831-3200

Interpore
181 Technology Drive
Irvine, CA 92618
(714)453-3200

Komet Medical
800 King George Blvd.
Savannah, GA 31419
(912)925-8525

Leica, Inc.
110 Commerce Drive
Allendale, NJ 07401
(800)526-0355

Linvatec/Hall Surgical
11311 Concept Blvd.
Largo, FL 33773
(813)399-5233

Medical Education & Research Institute
44 South Cleveland
Memphis, TN 38104
(901)722-8001

Booth 52

Booth 9

Booth 1

Booth 14

Booth 36

Booth 53

Booth 45

Booth 43

Booth 17

Booth 42

Medtronic, Inc.
800 53rd Avenue NE
Minneapolis, MN 55421
(612)514-5219

Midas Rex, L.P.
3000 Race Street
Fort Worth, TX 76111
(817)831-2604

Mosby-Williams & Wilkins
1530 Conestoga Ct.
Redlands, CA 92373
(909)793-7123

NeuroCare Group
8401 102nd Street, Suite 200
Pleasant Prairie, WI 53158
(414)947-4900

OMI Surgical Products
4900 Charlemar Drive
Cincinnati, OH 45227
(513)561-2241

OSI
30031 Ahern Avenue
Union City, CA 94587
(510)429-1500

Orthofix Inc.
250 E. Arapaho Road
Richardson, TX 75081
(972)918-8300

Osteotech, Inc.
51 James Way
Eatontown, NJ 07724
(732)544-6211

Picker International
595 Miner Road
Cleveland, OH 44143
(440)473-3000

Radionics
22 Terry Avenue
Burlington, MA 01803
(781)272-1233

Booth 35

Booth 46

Booth 4

Booth 48

Booth 18

Booth 25

Booth 15

Booth 40

Booth 11

Booth 29

Sofamor Danek
1800 Pyramid Place
Memphis, TN 38132
(901)396-3133

Spinal Concepts, Inc.
8200 Cameron Road, Suite B-160
Austin, TX 78754
(512)339-4800

Spinal Innovations, LLC
7850 Stage Hills Blvd., Suite 105
Bartlett, TN 38133
(901)373-8855

Spine-Tech
7375 Bush Lake Road
Minneapolis, MN 55439
(612)830-6242

Stryker Instruments
4100 E. Milham Avenue
Kalamazoo, MI 49001
(616)323-7700

Surgical Dynamics, Inc.
111 Glover Avenue
Norwalk, CT 06856
(203)845-8540

Surgical Enterprise Corporation
200 Industrial Road, Unit H
San Carlos, CA 94070
(800)810-6610

Surgical Navigation Technology
530 Compton Street
Broomfield, CO 80020
(303)439-9709

Synthes Spine
1690 Russell Road
Paoli, PA 19301
(610)647-9700

W.L. Gore & Associates
3750 West Kiltie Lane
Flagstaff, AZ 86001
(520)779-2771

Booth 31

Booth 41

Booth 16

Booth 13

Booth 47

Booth 39

Booth 51

Booth 20

Booth 5

Booth 50

Disclosure Information

The AANS/CNS Section on Disorders of the Spine and Peripheral Nerves and The American Association of Neurological Surgeons control the content and production of this CME activity and attempt to assure the presentation of balanced, objective information. In accordance with the Standards for Commercial Support established by the Accreditation Council for Continuing Medical Education, speakers and paper presenters are asked to disclose any relationship they or their co-authors have with commercial companies which may be related to the content of their lecture.

Speakers and paper presenters/authors who have disclosed a relationship* with commercial companies whose products may have a relevance to their presentation will be designated by an "▲"

* Relationship refers to receipt of royalties, consultantship, funding by research grant, receiving honoraria for educational services elsewhere, or any other relationship to a commercial company that provides sufficient reason for disclosure.

Meeting Agenda

Wednesday, February 11, 1998

8:00 AM–5:00 PM	Special Course I—Peripheral Nerve Injury Coordinator: Allan J. Belzberg Faculty: Michel Kliot, Robert Tiel, Allen H. Maniker, James N. Campbell, John Laurent, Rajiv Midha, Allan Friedman, John McGillicuddy, Suzie Tindall, Eric Zager Location: Annenberg Center
1:00 PM–5:00 PM	Registration – Oasis Foyer
1:00 PM–9:00 PM	Speaker Preview Room – Polo Room
2:00 PM–5:00 PM	Special Course II—Management of Thoraco-lumbar Trauma Coordinator: Russell P. Nockels Faculty: Christopher I. Shaffrey, Perry A. Ball, Bruce M. McCormack, Edward C. Benzel, Andrea L. Halliday Location: Rancho Mirage Room
2:00 PM–3:00 PM	Special Course III—Basics of Microendoscopic Discectomy (Didactic Session only) Coordinator: Kevin T. Foley Faculty: Kevin T. Foley, Maurice Smith Location: Celebrity F-H
3:00 PM–6:00 PM	Special Course IV—Basics of Threaded Interbody Adjuncts for Lumbar Fusion (Didactic Session only) Coordinator: Curtis Dickman Faculty: Regis Haid, Gerald Rodts, Kenneth Yonemura, Richard Fessler, Peter Klara, Charles Branch, Kevin T. Foley Location: Celebrity F-H
6:30 PM–9:00 PM	Opening Reception – Masters Plaza

Thursday, February 12, 1998

6:30 AM–7:15 AM	Continental Breakfast with Exhibitors – Celebrity A-E
6:30 AM–4:30 PM	Registration – Oasis Foyer
6:30 AM–6:30 PM	Exhibits and Poster Viewing – Celebrity A-E
6:30 AM–6:30 PM	Speaker Preview Room– Polo Room
8:00 AM–11:00 AM	Spouse Hospitality Suite – 617
7:15 AM–7:25 AM	AANS/CNS Spine Section Chairman's Welcome – Oasis Ballroom Richard G. Fessler
7:25 AM–7:30 AM	AANS/CNS Spine Section Scientific Program Chairman's Welcome – Oasis Ballroom H. Louis Harkey
7:30 AM–9:50 AM	SYMPOSIUM I—PAINFUL DISORDERS OF PERIPHERAL NERVES – Oasis Ballroom Moderators: Allan J. Belzberg, James N. Campbell
7:30 AM–7:50 AM	Pathophysiology of Neuropathic Pain Allan J. Belzberg
7:50 AM–8:10 AM	Management of Neuropathic Pain Allen H. Maniker
8:10 AM–8:30 AM	Options for the Failed Nerve Decompression Michel Kliot
8:30 AM–8:50 AM	Cumulative Strain Disorder/Fact or Fiction Robert L. Tiel
8:50 AM–9:50 AM	Case Presentations and Panel Discussion Rajiv Midha, Allen H. Maniker, Michel Kliot, Robert L. Tiel, Allan Friedman, Eric L. Zager
9:50 AM–10:20 AM	Break with Exhibit and Poster Viewing – Celebrity A-E

10:20 AM–11:50 AM	Contributed Papers Moderators: Russell P. Nocklels, Donald D. Dietze
10:20 AM–10:28 AM	Paper #1 Posterior C1-C2 Transarticular Screw Fixation for Antlantoaxial Arothrodensis Curtis A. Dickman
10:28 AM–10:36 AM	Discussion
10:36 AM–10:44 AM	Paper #2 Outcome of Patients with Myelopathy in the Cervical Spine Research Society (CSRS) Study Prakash Sampath
10:44 AM–10:52 AM	Discussion
10:52 AM–11:00 AM	Paper #3 Surgical Treatment of Intramedullary Spinal Cord Tumors: Outcome Analysis of 152 Cases Paul D. Sawin
11:00 AM–11:08 AM	Discussion
11:08 AM–11:16 AM	Paper #4 Laminectomy and Immediate Instrumented Fusion for Cervical Spondylotic Myelopathy Mitchell R. Gropper
11:16 AM–11:24 AM	Discussion
11:24 AM–11:32 AM	Paper #5 Recombinant Human Bone Morphogenetic Protein-2 Reverses the Inhibitory Effect of Ketorolac, A Non-Steroidal Anti-Inflammatory Drug (NSAID) on Posterolateral Lumbar Intertransverse Process Spine Fusion [▲] George J. Martin
11:32 AM–11:40 AM	Discussion

[▲] *Disclosure Information*

11:40 AM–11:48 AM	Paper #6 Do Glutaraldehyde Tanning and Methyprednisolone Immunosuppression Improve Regeneration in Nerve Xenografts? Ghassan K. Bejjani
11:48 AM–11:56 AM	Discussion
11:56 AM–12:00 NOON	Introduction of Meritorious Service Award Richard G. Fessler
12:00 NOON–12:30 PM	Meritorious Service Award Recipient Lecture The Role of the Joint Section in Organized Neurosurgery Russell Travis
12:30 PM–1:30 PM	Lunch with the Exhibitors – Celebrity A-E
1:30 PM–3:30 PM	SYMPOSIUM II—SPONDYLOLISTHESIS – Oasis Ballroom Edward C. Benzel, Kevin T. Foley
1:30 PM–1:45 PM	Classification and Measurements Nevan G. Baldwin
1:45 PM–2:00 PM	Clinical Presentation Christopher G. Paramore
2:00 PM–2:20 PM	Non-operative Management James Porterfield, PT, ATC
2:20 PM–2:40 PM	Considerations for Surgical Management Glenn R. Rechtine
2:40 PM–3:10 PM	Case Presentations Edward C. Benzel, Kevin T. Foley
3:10 PM–3:40 PM	Break with Exhibit and Poster Viewing – Celebrity A-E
3:40 PM–5:00 PM	Contributed Papers Moderators: Michael G. Fehlings, Gary L. Rea

3:40 PM-3:48 PM	Paper #7 Sacral Chordoma: A 40-Year Experience at a Major Cancer Center Ziya L. Gokaslan
3:48 PM-3:56 PM	Discussion
3:56 PM-4:04 PM	Paper #8 Restoration of Bladder and Bowel Function by Electrical Stimulation in Patients with Spinal Cord Injury [▲] Yoshiro Takaoka
4:04 PM-4:12 PM	Discussion
4:12 PM-4:20 PM	Paper #9 Clinical and Radiological Evaluation of the Codman Anterior Cervical Plate: Interim One Year Results of a Porspective, Multicenter Study [▲] Michael G. Fehlings
4:20 PM-4:28 PM	Discussion
4:28 PM-4:36 PM	Paper #10 Anterior Cervical Surgery Without Plate Instrumentation in 245 Patients Nancy Epstein
4:36 PM-4:44 PM	Discussion
4:44 PM-4:52 PM	Paper #11 Percutaneous Vertebroplasty in the Treatment of Osteoporotic Compression Fractures: Technical Aspects and Long-term Outcome Mary E. Jensen
4:52 PM-5:00 PM	Discussion
5:00 PM-6:30 PM	Poster Viewing and Reception - Celebrity A-E

[▲] Disclosure Information

PARTICIPANT EVALUATION FORM

THURSDAY

Rating Scale Circle the letter which applies to the following.

A Excellent B Very Good C Good D Fair E Poor

OBJECTIVES

How well did the conference prepare you for meeting the following objectives in your practice:

SYMPOSIUM I: Painful Disorders of Peripheral Nerves

- Discuss management strategies for the patient who has not improved following peripheral nerve decompression.
A B C D E
- Evaluate the role of repetitive injuries in peripheral nerve disease.
A B C D E

INVITED SPEAKERS

SYMPOSIUM I:

- Allan J. Belzberg, MD was an effective speaker within the allotted time.
A B C D E
- Allen H. Maniker, MD was an effective speaker within the allotted time.
A B C D E
- Michel Kliot, MD was an effective speaker within the allotted time.
A B C D E
- Robert L. Tiel, MD was an effective speaker within the allotted time.
A B C D E
- Rajiv Midha, MD was an effective speaker within the allotted time.
A B C D E
- Allan Friedman, MD was an effective speaker within the allotted time.
A B C D E
- Eric L. Zager, MD was an effective speaker within the allotted time.
A B C D E

(Continued on next page.)

SYMPOSIUM II: Spondylolisthesis

- a. Recognize the management principles of spondylolisthesis.
A B C D E
- b. Discuss different therapeutic options..
A B C D E

INVITED SPEAKERS

SYMPOSIUM II:

Nevan G. Baldwin, MD was an effective speaker within the allotted time.

A B C D E

Christopher G. Paramore, MD was an effective speaker within the allotted time.

A B C D E

James Porterfield, MD was an effective speaker within the allotted time.

A B C D E

Glenn R. Rechtine, MD was an effective speaker within the allotted time.

A B C D E

Edward C. Benzel, MD was an effective speaker within the allotted time.

A B C D E

Kevin T. Foley, MD was an effective speaker within the allotted time.

A B C D E

Please return your completed form to the registration desk.
Thank you.

Friday, February 13, 1998

6:30 AM-7:25 AM	Continental Breakfast with Exhibitors - Celebrity A-E
6:30 AM-1:00 PM	Exhibits and Poster Viewing - Celebrity A-E
6:30 AM-2:00 PM	Registration - Oasis Foyer
6:30 AM-2:00 PM	Speaker Preview Room - Polo Room
8:00 AM-11:00 AM	Spouse Hospitality - Suite 617
7:25 AM-9:50 AM	SYMPOSIUM III—CONTROVERSIES - Oasis Ballroom
7:25 AM-7:30 AM	Introduction and Rules of the Debate Richard G. Fessler, Mark N. Hadley
7:30 AM-7:40 AM	Lumbar Fusion Is Appropriate Management of Discogenic Pain, Regional Back Pain Regis W. Haid, Jr.
7:40 AM-7:50 AM	Lumbar Fusion Is Inappropriate Management of Discogenic Pain Perry A. Ball
7:50 AM-8:00 AM	Discussion
8:00 AM-8:10 AM	Plating Following Anterior Cervical Discectomy and Interbody Fusion for Single Level Spondylosis with Unilateral Radiculopathy: The Case Against Paul R. Cooper
8:10 AM-8:20 AM	Plating Following Anterior Cervical Discectomy and Interbody Fusion for Single Level Spondylosis with Unilateral Radiculopathy: The Case For Ronald I. Apfelbaum
8:20 AM-8:30 AM	Discussion

8:30 AM–8:40 AM	The Case for ALIF Curtis A. Dickman
8:40 AM–8:50 AM	The Case for PLIF Charles L. Branch
8:50 AM–9:00 AM	Discussion
9:00 AM–9:10 AM	Intrathecal Morphine Infusion Is the Best Available Therapy for Failed Back Syndrome Richard K. Osenbach
9:10 AM–9:20 AM	Intrathecal Morphine Infusion Is Never Appropriate Therapy for Failed Back Syndrome Lloyd Zucker
9:20 AM–9:30 AM	Discussion
9:30 AM–9:35 AM	Introduction of Chairman H. Louis Harkey
9:35 AM–9:50 AM	Chairman's Address Neurosurgery 2000: Who Will Make Our Decisions? Richard G. Fessler
9:50 AM–10:20 AM	Break with Exhibit and Poster Viewing – Celebrity A-E
10:20 AM–11:56 AM	Contributed Papers Moderators: Charles B. Stillerman, Richard Tippets
10:20 AM–10:28 AM	Paper 12 Thoracoscopic Microsurgical Excision of Herniated Thoracic Discs Curtis A. Dickman
10:28 AM–10:36 AM	Discussion
10:36 AM–10:44 AM	Paper 13 Outcome of Patients with Axial Neck Pain in the Cervical Spine Research Society (CSRS) Study John D. Davis
10:44 AM–10:52 AM	Discussion

10:52 AM–11:00 AM	Paper 14 Treatment of Thoracolumbar Trauma-Comparison of Complications of Operative Versus Nonoperative Treatment Glenn R. Rehtine
11:00 AM–11:08 AM	Discussion
11:08 AM–11:16 AM	Paper 15 Genetic Expression of Bone Morphogenetic Proteins During Lumbar Spinal Fusions Michael Morone
11:16 AM–11:24 AM	Discussion
11:24 AM–11:32 AM	Paper 16 A Controlled Prospective Outcome Study of Implantable Electrical Stimulation with Spinal Instrumentation [▲] Donald Kucharzyk, DO
11:32 AM–11:40 AM	Discussion
11:40 AM–11:48 AM	Paper 17 Neuroprotection by Cytokines and Neurotrophic Factors Following Spinal Cord Contusion Injury Thomas T. Lee
11:48 AM–11:56 AM	Discussion
11:56 AM–12:01 PM	Mayfield Award Presentation Charles B. Stillerman
12:01 PM–12:16 PM	Mayfield Award Presentation (Paper 18) Spinal Fusion Using Bone Morphogenetic Protein-2 in an Adenoviral Construct Tord D. Alden
12:16 PM–12:30 PM	Discussion
12:30 PM–1:00 PM	Annual Business Meeting
1:00 PM– 2:00 PM	Lunch on your own

[▲] Disclosure Information

2:00 PM-5:00 PM

Special Course V—Spinal Biomechanics

Coordinator: Edward C. Benzel

Faculty: Nevan G. Baldwin,
Vincent C. Traynelis,
Gregory J. Przybylski

Location: Celebrity F-H

2:00 PM-5:00 PM

Special Course VI—Management of Advanced Adult Lumbosacral Degenerative Deformity (Scoliosis and Spondylolisthesis)

Coordinator: Robert F. Heary

Faculty: Christopher I. Shaffrey,
Glenn R. Rechtine, David W. Cahill,
Philip V. McAllister, Peter M. Klara,
Gary L. Rea, Brian G. Cuddy,
Eric Woodard, Stephen Ondra,
Jack Knightly

Location: Rancho Mirage Room

2:00 PM-4:00 PM

Special Course VII—Consultants Corner: Cervical[▲]

Coordinator: Charles L. Branch

Faculty: Timothy Ryken, Paul Cooper,
Seth M. Zeidman, H. Louis Harkey

Location: Oasis Ballroom

2:00 PM-6:00 PM

Special Course VIII—Microendoscopic Discectomy[▲]
(*Cadaver course requires attendance at Wednesday lecture series, Special Course III*)

Coordinator: Kevin T. Foley

Faculty: Maurice Smith, Oliver D. W. Grin,
Gerald E. Rodts, Michael D. Fromke,
Richard G. Fessler, Ken Yonemura,
Charles S. Theofilus, Scott T. Dull,
James C. Robinson, Kenneth Rich

Location: Annenberg Center

[▲] Disclosure Information

PARTICIPANT EVALUATION FORM

FRIDAY

Rating Scale Circle the letter which applies to the following.

A Excellent B Very Good C Good D Fair E Poor

OBJECTIVES

How well did the conference prepare you for meeting the following objectives in your practice:

SYMPOSIUM III: Controversies

- a. Appreciate different philosophies for management of spinal disorders.
A B C D E
- b. Explain the implications of these techniques.
A B C D E

INVITED SPEAKERS

SYMPOSIUM III:

Richard G. Fessler, MD was an effective speaker within the allotted time.

A B C D E

Mark N. Hadley, MD was an effective speaker within the allotted time.

A B C D E

Regis W. Haid, Jr., MD was an effective speaker within the allotted time.

A B C D E

Perry A. Ball, MD was an effective speaker within the allotted time.

A B C D E

Paul R. Cooper, MD was an effective speaker within the allotted time.

A B C D E

Ronald I. Apfelbaum, MD was an effective speaker within the allotted time.

A B C D E

Curtis A. Dickman, MD was an effective speaker within the allotted time.

A B C D E

Charles L. Branch, MD was an effective speaker within the allotted time.

A B C D E

Richard K. Osenbach, MD was an effective speaker within the allotted time.

A B C D E

Lloyd Zucker, MD was an effective speaker within the allotted time.

A B C D E

Please return your completed form to the registration desk.
Thank you.

Saturday, February 14, 1998

6:30 AM-7:25 AM	Continental Breakfast with Exhibitors – Celebrity A-E
6:30 AM-10:30 AM	Exhibits and Poster Viewing – Celebrity A-E
6:30 AM-2:00 PM	Registration – Oasis Foyer
6:30 AM-2:00 PM	Speaker Preview Room – Polo Room
8:00 AM-11:00 AM	Spouse Hospitality – Suite 617
7:30 AM-10:00 AM	SYMPOSIUM IV—INNOVATIONS IN SPINAL SURGERY – Oasis Ballroom Moderators: Gerald Rodts, Joseph T. Alexander
7:30 AM-7:50 AM	Microendoscopic Discectomy (MED) Maurice M. Smith
7:50 AM-8:10 AM	Threaded Cage Adjuncts to Lumbar Interbody Fusion (Indications) Peter M. Klara
8:10 AM-8:30 AM	Carbon Fiber Adjuncts to Lumbar Interbody Fusion Philip V. McAllistar
8:30 AM-8:50 AM	Dynamic Cervical Stabilization Edward C. Benzel
8:50 AM-9:10 AM	Advances and Pitfalls in Image-Guided Spinal Surgery Iain H. Kalfas
9:10 AM-9:30 AM	Spinal Cord Transplantation Richard G. Fessler

9:30 AM–10:00 AM	Discussion
10:00 AM–10:30 AM	Break with Exhibit and Poster Viewing – Celebrity A-E
10:30 AM–12:30 PM	Contributed Papers Moderators: Brian G. Cuddy, Christopher G. Paramore
10:30 AM–10:38 AM	Paper 19 Preliminary Experience with Intraoperative MRI in Spinal Surgery Steven P. Leon
10:38 AM–10:46 AM	Discussion
10:46 AM–10:54 AM	Paper 20 The Effect of Spinal Pathology on Successful Arthrodesis in Pedicle Screw Fusions Christopher H. Comey
10:54 AM–11:02 AM	Discussion
11:02 AM–11:10 AM	Paper 21 Surgical Treatment and Outcome of 40 Consecutive Patients with Herniated Thoracic Discs Bennett Blumenkopf
11:10 AM–11:18 AM	Discussion
11:18 AM–11:26 AM	Paper 22 Balloon-Assisted Endoscopic Retroperitoneal Gasless (B.E.R.G.) Lumbar Interbody Fusion [▲] John S. Thalgott
11:26 AM–11:34 AM	Discussion
11:34 AM–11:42 AM	Paper 23 Cauda Equina Syndrome Econdary to Lumbar Disc Herniation Scott A. Shapiro
11:42 AM–11:50 AM	Discussion

[▲] Disclosure Information

11:50 AM–11:58 AM	Paper 24 Timing of Decompression Following Spinal Cord Injury with Associated Spinal Canal Narrowing: A Rat Model Christopher B. Shields
11:58 AM–12:06 PM	Discussion
12:06 PM–12:14 PM	Paper 25 Spinal Cord Concussion: Clinical Presentation, Radiographic Features and Long-Term Outcome Gordon Tang
12:14 PM–12:22 PM	Discussion
12:22 PM–1:30 PM	SYMPOSIUM V: UPDATE ON SCI – Oasis Ballroom Vincent Traynelis, Robert Heary
12:22 PM–12:42 PM	Third National Acute Spinal Cord Injury Study (NASCIS III) Jack E. Wilberger
12:42 PM–1:02 PM	GM I Ganglioside Cooperative Study Fred H. Geisler
1:02 PM–1:22 PM	Cooperative Study for Surgical Management of SCI Michael G. Fehlings
1:22 PM–1:30 PM	Discussion
2:00 PM–4:00 PM	Special Course IX—Consultants Corner: Lumbar Coordinator: Stewart B. Dunsker Faculty: David W. Cahill, Eric J. Woodard, Randall Chesnut, Russell W. Hardy Location: Oasis Ballroom
2:00 PM–5:00 PM	Special Course X—Rheumatologic Disorders of the Cervical Spine Coordinator: Brian G. Cuddy Faculty: William E. Krauss, Richard Tippets, Gregory J. Przybylski, Fraser C. Henderson, Robert Heary Location: Rancho Mirage Room

2:00 PM-6:00 PM

**Special course XI—Threaded Interbody Adjuncts
for Lumbar Fusion Hands-On Lab**

*(Requires attendance at Wednesday lecture series,
Special Course 4)*

Coordinator: Curtis Dickman

Faculty: Gerald Rodts, Kenneth Yonemura,
R. John Hurlbert, Peter Klara,
Charles Ray, Christopher Paramore,
Paul Sawin, Scott Irwood,
Stephen Ondra, J. Patrick Johnson

Location: Annenberg Center