

THE AMERICAN ACADEMY OF
NEUROLOGICAL SURGERY



78TH ANNUAL SCIENTIFIC MEETING
FOUR SEASONS RESORT | JACKSON HOLE, WYOMING
SEPTEMBER 14 - 17, 2016



American
Association of
Neurological
Surgeons

Jointly Provided by the AANS



FUTURE MEETING

2017

Santa Barbara, California

Septembers 12 – 16, 2017



Mark your calendars now!

GENERAL INFORMATION

HOTEL INFORMATION

Four Seasons Resort
7680 Granite Loop Road,
Teton Village, Wyoming 83025
Phone: 307.732.5000
Website: <http://www.fourseasons.com/jacksonhole/>



REGISTRATION DESK LOCATION & HOURS:

Wednesday, September 14 Aspen Willow Foyer	12:00 pm – 6:00 pm
Thursday, September 15 Aspen Willow Foyer	6:00 am – 2:00 pm
Friday, September 16 Aspen Willow Foyer	6:00 am – 2:00 pm
Saturday, September 17 Aspen Willow Foyer	7:00 am – 12:00 pm

PROGRAM SUMMARY



THE AMERICAN ACADEMY OF NEUROLOGICAL SURGERY

78TH ANNUAL MEETING

WEDNESDAY, SEPTEMBER 14

12:00 – 6:00 pm	Registration	Aspen Willow Foyer
2:00 – 4:00 pm	AAcNS Executive Committee Meeting	Alder Room
6:30 pm	Welcome Reception <i>Attire: Business Casual</i>	Cottonwood Terrace

THURSDAY, SEPTEMBER 15

6:00 am	Registration	Aspen Willow Foyer
6:30 – 7:30 am	Members Breakfast & Business Meeting	The Handle Bar
6:30 – 8:30 am	Spouse & Guest Breakfast	Willow Room
9:30 – 10:30 am	Spouses Program <i>Henry H. Holdsworth, Wildlife Photographer</i>	Aspen Room
7:30 am – 1:00 pm	General Scientific Session <i>9:00 – 9:30 am Special Lecture: Michael Slive</i>	Cottonwood Ballroom
1:00 pm	Golf	Teton Pines Country Club
2:00 – 4:30 pm	Academy Scholars Program	Aspen Room
6:00 – 9:30 pm	“Snake River Round-Up” Cocktail Reception and Dinner <i>Attire: Casual; Jeans & cowboy boots</i>	Rendezvous Lodge Jackson Hole Mountain Resort

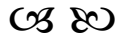
FRIDAY, SEPTEMBER 16

6:00 am	Registration	Aspen Willow Foyer
6:30 – 7:20 am	Members Breakfast & Business Meeting	The Handle Bar
6:30 – 8:30 am	Spouse & Guest Breakfast	Willow Room
7:30 am – 1:00 pm	General Scientific Session 9:15 – 9:45 am <i>Special Lecture: Edward Deveau</i> 12:20 – 1:00pm <i>Presidential Address</i>	Cottonwood Ballroom
1:30 pm	Golf	Shooting Star Country Club
2:00 – 5:00 pm	Academy Scholars Program	Aspen Room
6:00 – 6:30 pm	New Member Welcome Reception with AAcNS Executive Committee	Cottonwood Ballroom
6:30 pm	Reception and Dinner <i>Attire: Black Tie Optional</i>	Cottonwood Ballroom

SATURDAY, SEPTEMBER 17

7:00 am	Registration	Aspen Willow Foyer
6:30 – 8:30 am	Breakfast	The Handle Bar
7:30 – 11:15 am	General Scientific Session	Cottonwood Ballroom

Meeting Adjourned!



*A Special Thanks
to the following companies for providing
educational grants supporting the*

**AMERICAN ACADEMY OF NEUROLOGICAL SURGERY
78TH ANNUAL MEETING**

Carl Zeiss Meditec

Eleka

Integra Foundation

K2M

Synaptive



ABOUT THE AACNS



AMERICAN ACADEMY OF NEUROLOGICAL SURGERY
2015 – 2016 OFFICERS

PRESIDENT

Mark N. Hadley, MD

PRESIDENT – ELECT

William T. Couldwell, MD

VICE PRESIDENT

James M. Markert, Jr., MD

SECRETARY

Daniel L. Barrow, MD

TREASURER

E. Antonio “Nino” Chiocca, MD, PhD

EXECUTIVE COMMITTEE

Mark N. Hadley, MD

William T. Couldwell, MD

James M. Markert, Jr., MD

Daniel L. Barrow, MD

E. Antonio “Nino” Chiocca, MD, PhD

Michel S. Berger, MD

Michael T. Lawton, MD

HISTORIAN

Donald Quest, MD

AMERICAN ACADEMY OF NEUROLOGICAL SURGERY
2015 – 2016 COMMITTEES

ACADEMY AWARD COMMITTEE

Ann-Christine Duhaime, MD – Chair
Michael D. Taylor, MD
Mark Shaffrey, MD

AUDIT COMMITTEE

Vincent Traynelis, MD – Chair
Carl Heilman, MD
Aviva Abosch, MD

FUTURE SITES COMMITTEE

Anil Nanda, MD, MPH – Chair
Bob S. Carter, MD, PhD
John Golfinos, MD

MEMBERSHIP ADVISORY COMMITTEE

Fredric B. Meyer, MD – Chair
Mitchel Berger, MD
Daniel L. Barrow, MD
E. Antonio “Nino” Chiocca, MD
Mark N. Hadley, MD
Shenandoah Robinson, MD (2015-2017)
Robert Heary, MD (2015-2017)

SUBCOMMITTEE ON CORRESPONDING MEMBERSHIP

Nelson M. Oyesiku, MD, PhD – Chair
James Rutka, MD
Robert Heary, MD

NOMINATING COMMITTEE

Mitchel Berger, MD – Chair

Mark N. Hadley, MD

William T. Couldwell, MD

SCIENTIFIC PROGRAM COMMITTEE

Robert Spinner, MD – Chair

Frederick G. Barker, II, MD

Michael McDermott, MD

ROUND ROBIN EDITOR

Daniel L. Barrow, MD

LOCAL ARRANGEMENTS

Douglas Kondziolka, MD

AANS JOINT SPONSORSHIP EDUCATION REPRESENTATIVE

Howard Riina, MD

WFNS DELEGATES

Robert Spetzler, MD – Senior Delegate

Jacques Morcos, MD – Second Delegate

RESEARCH ADVISORY COMMITTEE

Murat Gunel, MD – Chair

Richard Ellenbogen, MD

Russell R. Lonser, MD

PAST-PRESIDENTS

Dean H. Echols	1938 - 39	Robert L. McLaurin	1972
Spence Braden	1940	Lyle A. French	1973
Joseph P. Evans	1941	Benjamin B. Whitcomb	1974
Francis Murphey	1942	John R. Green	1975
Frank H. Mayfield	1943	William H. Feindel	1976
A. Earl Walker	1944	William H. Sweet	1977
Barnes Woodhall	1946	Arthur A. Ward	1978
William S. Keith	1947	Robert B. King	1979
Howard A. Brown	1948	Eben Alexander, Jr.	1980
John Raaf	1949	Joseph Ransohoff II	1981
E. Harry Botterell	1950	Byron C. Pevehouse	1982
Wallace B. Hamby	1951	Sidney Goldring	1983
Henry G. Schwartz	1952	Russel H. Patterson, Jr	1984
J. Lawrence Pool	1953	Thomas Langfitt	1985
Rupert B. Raney	1954	Phanor L. Perot, Jr	1986
David L. Reeves	1955	Shelley N. Chou	1987
Stuart N. Rowe	1956	James T. Robertson	1988
Arthur R. Elvidge	1957	Thoralf M. Sundt, Jr.	1989
Jess D. Herrmann	1958	Robert Ojemann	1990
Edwin B. Boldrey	1959	Nicholas Zervas	1991
George S. Baker	1960	Henry Garretson	1992
C. Hunter Shelden	1961 - 62	George Tindall	1993
Samuel R. Snodgrass	1963	William A. Buchheit	1994
Theodore Rasmussen	1964	David L. Kelly, Jr	1995
Edmund J. Morrissey	1965	John M. Tew, Jr	1996
George Maltby	1966	Julian T. Hoff	1997
Guy L. Odom	1967	Edward Connolly	1998
James G. Galbraith	1968	J. Charles Rich	1999
Robert H. Pudenz	1969 - 70	George A. Ojemann	2000
William B. Scoville	1971	Roberto C. Heros	2001

Donald O. Quest	2002
David G. Piepgras	2003
Volker K.H. Sonntag	2004
Martin B. Camins	2005
L. Nelson Hopkins	2006
Richard Morawetz	2007
Robert F. Spetzler	2008
Ralph G. Dacey, Jr.	2009
Steven Giannotta	2010
Robert A. Solomon	2011
James T. Rutka	2012
Griffith R. Harsh	2013
Fredric B. Meyer	2014
Mitchel S. Berger	2015

PAST VICE-PRESIDENTS

Francis Murphey	1941	Frank E. Nulsen	1976
William S. Keith	1942	Robert S. Knighton	1977
John Raaf	1943	Robert G. Fisher	1978
Rupert B. Raney	1944	H Thomas Ballantine, Jr.	1979
Arthur R. Elvidge	1946	George Ehni	1980
F. Keith Bradford	1949	Courtland H. Davis, Jr.	1981
David L Reeves	1950	John F. Mullan	1982
Henry G. Schwartz	1951	Hugo V. Rizzoli	1983
J. Lawrence Pool	1952	James W Correll	1984
Rupert B. Raney	1953	E. Bruce Hendrick	1985
David L. Reeves	1954	Griffith R Harsh, III	1986
Stuart N. Rowe	1955	Ellis B Keener	1987
Jess D. Hermann	1956	Robert Grossman	1988
George S. Baker	1957	Jim Story	1989
Samuel R. Snodgrass	1958	John Jane, Sr.	1990
C. Hunter Shelden	1959	Stewart Dunsker	1991
Edmund Morrissey	1960	Burton M Onofrio	1992
Donald F. Coburn	1961 - 62	Martin H Weiss	1993
Eben Alexander, Jr.	1963	John M. Tew, Jr.	1994
George L Maltby	1964	John C. VanGilder	1995
Robert Pudenz	1965	Edward Connolly	1996
Francis A. Echlin	1966	George Ojemann	1997
Benjamin Whitcomb	1967	Charles H. Tator	1998
Homer S. Swanson	1968	Donald O. Quest	1999
Augustus McCravey	1969 - 70	Howard M. Eisenberg	2000
Edward W. Davis	1971	Richard B. Morawetz	2001
John R. Green	1972	Martin B. Camins	2002
George J. Hayes	1973	Arthur L. Day	2003
Richard L. DeSaussure	1974	William F. Chandler	2004
Ernest W. Mack	1975	Steven L. Gianotta	2005

Robert F. Spetzler	2006	Jeffrey Bruce	2011
Griffith R. Harsh IV	2007	James Drake	2012
Daniel L. Barrow	2008	Corey Raffel	2013
M. Sean Grady	2009	Alan R. Cohen	2014
Warren Selman	2010	Michael T. Lawton	2015

PAST SECRETARY-TREASURERS

Francis Murphey	1938 - 40
A. Earl Walker	1941 - 43
Theodore C. Erickson	1944 - 47
Wallace B. Hamby	1948 - 50
Theodore B. Rasmussen	1951 - 53
Eben Alexander	1954 - 57
Robert L. McLaurin	1958 - 62
Edward W. Davis	1963 - 65
Robert G. Fisher	1966 - 68
Byron C. Pevehouse	1969 - 72

PAST SECRETARIES

Byron C. Pevehouse	1973
Russel H. Patterson, Jr	1974 - 76
Phanor L. Perot, Jr	1977 - 80
John T. Garner	1981 - 83
James T. Robertson	1984 - 86
Nicholas T. Zervas	1987 - 89
William A. Buchheit	1990 - 92
Julian T. Hoff	1992 - 95
Roberto C. Heros	1995 - 98
David G. Piepgras	1999 - 2001
L. Nelson Hopkins	2002 - 2004
Ralph G. Dacey, Jr	2005 - 2007
James Rutka	2008 - 2010
Mitchel S. Berger	2011 - 2013

PAST TREASURERS

Russel H. Patterson, Jr.	1973
Phanor L. Perot, Jr	1974 - 76
John T. Garner	1977 - 80
James T. Robertson	1981 - 83
Nicholas T. Zervas	1984 - 86
William A. Buchheit	1987 - 89
Julian T. Hoff	1990 - 92
Roberto C. Heros	1992 - 95
David G. Piepgras	1996 - 98
L. Nelson Hopkins	1999 - 2001
Ralph G. Dacey, Jr.	2002 - 2004
James T. Rutka	2005 - 2007
Griffith Harsh	2008 - 2010
Daniel L. Barrow	2011 - 2013

ACADEMY AWARD WINNERS

Paul M. Lin	1955	James T. Rutka	1988
Hubert L. Rosomoff	1956	Christopher D. Heffner	1989
Byron C. Pevehouse	1957	Scott I. Gingold	1990
Norman Hill	1958	Mary Louise Hlavin	1991
Jack Stern	1959	Adam P. Brown	1992
Robert Ojemann	1960	Michael Tymianski	1993
Lowell E. Ford	1962	David Garrett, Jr.	1994
Charles H. Tator	1963	L. Brannon Thomas	1995
Earle E. Crandall	1964	John S. Yu	1996
Stephen Mahaley, Jr	1965	Gregory Canute	1997
Chun Ching Kao	1966	Nathan R. Selden	1998
John P. Kapp	1967	Robert M. Friedlander	1999
Yoshio Hosobuchi	1968	Tien T. Nguyen	2000
Gary G. Ferguson	1970	Peng Chen	2001
Richard L. Pressley	1971	Ganesh Rao	2002
David G. McLone	1972	Gelarch Zadeh	2003
Arden F. Reynolds, Jr.	1973	Eric C. Leuthardt	2004
Richard L. Rapport	1974	Manish Aghi	2005
Andrew G. Shetter	1975	Alfred T. Ogden	2006
John R. Howe	1976	Paul Kongkham	2007
Howard W. Blume	1977	Elias Rizk	2008
Howard J. Senter	1978	Costas Hadjipanayis	2009
Elisabeth M. Post	1979	Scellig Stone	2010
David Dubuisson	1980	Paul S.A. Kalanithi	2011
Dennis A. Turner	1981	Derek G. Southwell	2012
Marc R. Mayberg	1982	Nader Sanai	2013
David S. Baskin	1983	Hani Malone	2014
Kevin J. Kiwak	1984	Achal Achrol	2015
Terry Lichtor	1985		
Michael G. Nosko	1986		
Joseph R. Madsen	1987		

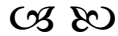
MEETINGS OF THE ACADEMY

Hotel Netherland Plaza, Cincinnati, Ohio	October 28 - 29, 1938
Roosevelt Hotel, New Orleans, Louisiana	October 27 - 29, 1939
Tudor Arms Hotel, Cleveland, Ohio	October 21 - 22, 1940
Mark Hopkins Hotel, San Francisco, California	November 11 - 15, 1941
Ambassador Hotel, Los Angeles, California	November 11 - 15, 1941
The Palmer House, Chicago, Illinois	October 16 - 17, 1942
Hart Hotel, Battle Creek, Michigan	September 17 - 18, 1943
Ashford General Hospital, White Sulphur Springs, West Virginia	September 7 - 9, 1944
The Homestead, Hot Springs, Virginia	September 9 - 11, 1946
Broadmoor Hotel, Colorado Springs, Colorado	October 9 - 11, 1947
Windsor Hotel, Montreal, Canada	September 20 - 22, 1948
Benson Hotel, Portland, Oregon	October 25 - 27, 1949
Mayo Clinic, Rochester, Minnesota	September 28 - 30, 1950
Shamrock Hotel, Houston, Texas	October 4 - 6, 1951
Waldorf-Astoria Hotel, New York City, New York	September 29 - October 1, 1952
Biltmore Hotel, Santa Barbara, California	October 12 - 14, 1953
Broadmoor Hotel, Colorado Springs, Colorado	October 21 - 23, 1954
The Homestead, Hot Springs, Virginia	October 27 - 29, 1955
Camelback Inn, Phoenix, Arizona	November 8 - 10, 1956
The Cloister, Sea Island, Georgia	November 11 - 13, 1957
The Royal York Hotel, Toronto, Canada	November 6 - 8, 1958
Del Monte Lodge, Pebble Beach, California	October 18 - 21, 1959
Copley Sheraton Plaza, Boston, Massachusetts	October 5 - 8, 1960
Royal Orleans, New Orleans, Louisiana	November 7 - 10, 1962
El Mirador, Palm Springs, California	October 23 - 26, 1963

The Key Biscayne, Miami, Florida	November 11 - 14, 1964
Terrace Hilton Hotel, Cincinnati, Ohio	October 14 - 16, 1965
Fairmont Hotel & Towers, San Francisco, California	October 17 - 19, 1966
The Key Biscayne, Miami, Florida	November 8 - 11, 1967
Broadmoor Hotel, Colorado Springs, Colorado	October 6 - 8, 1968
St. Regis Hotel, New York City	September 21, 1969
Camino Real, Mexico City, Mexico	November 18 - 21, 1970
Sahara-Tahoe Hotel, Stateline, Nevada	September 26 - 30, 1971
New College, Oxford, England	September 4 - 7, 1972
Huntington-Sheraton Hotel, Pasadena, California	November 14 - 17, 1973
Southampton Princess Hotel, Bermuda	November 6 - 9, 1974
The Wigwam (Litchfield Park), Phoenix, Arizona	November 5 - 8, 1975
Mills Hyatt House, Charleston, South Carolina	November 10 - 13, 1976
Mauna Kea Beach Hotel, Kamuela, Hawaii	November 2 - 5, 1977
Hotel Bayerischer Hof, Munich, Germany	October 22 - 25, 1978
Hyatt Regency, Memphis, Tennessee	November 7 - 10, 1979
Waldorf-Astoria Hotel, New York City, New York	October 1 - 4, 1980
Sheraton Plaza, Palm Springs, California	November 1 - 4, 1981
Ritz-Carlton Hotel, Boston, Massachusetts	October 10 - 13, 1982
The Lodge at Pebble Beach, California	October 23 - 26, 1983
The Homestead, Hot Springs, Virginia	October 17 - 20, 1984
The Lincoln Hotel Post Oak, Houston, Texas	October 27 - 30, 1985
The Cloister, Sea Island, Georgia	November 5 - 8, 1986
Hyatt Regency, San Antonio, Texas	October 7 - 10, 1987
Omni Netherland Plaza, Cincinnati, Ohio	September 13 - 17, 1988

Loews Ventana Canyon, Tucson, Arizona	September 27 - October 1, 1989
Amelia Island Plantation, Amelia Island, Florida	October 2 - 7, 1990
Salishan Lodge, Gleneden Beach, Oregon	September 22 - 26, 1991
Ritz-Carlton Hotel, Naples, Florida	October 21 - 25, 1992
The Wigwam, Phoenix, Arizona	October 27 - 30, 1993
The Cloister, Sea Island, Georgia	November 3 - 6, 1994
Loews Ventana Canyon Resort, Tucson, Arizona	November 1 - 5, 1995
The Greenbrier, White Sulphur Springs, West Virginia	September 18 - 22, 1996
Rimrock Resort, Banff, Alberta, Canada	September 10 - 14, 1997
Four Seasons Biltmore, Santa Barbara, California	November 4 - 7, 1998
Ritz-Carlton, Amelia Island, Florida	November 10 - 13, 1999
The Broadmoor, Colorado Springs, Colorado	October 11 - 14, 2000
The Breakers, Palm Beach, Florida	November 14 - 17, 2001
The Phoenician, Scottsdale, Arizona	October 16 - 19, 2002
Colonial Williamsburg, Williamsburg, Virginia	October 29 - November 1, 2003
Four Seasons Berlin & Hotel Taschenbergpalais, Dresden, Germany	October 3 - 8, 2004
Ritz-Carlton, Half Moon Bay, California	September 21 - 24, 2005
Ritz-Carlton, Reynolds Plantation, Greensboro, Georgia	October 18 - 21, 2006
Ritz-Carlton, Lake Las Vegas, Nevada	October 31 - November 3, 2007
Barrow Neurological Institute Phoenix; Enchantment Resort, Sedona Arizona	September 10 - 13, 2008
The Breakers, Palm Beach, Florida	November 4 - 7, 2009

The Inn at Spanish Bay, Pebble Beach, California	November 3 - 6, 2010
The Fairmont Scottsdale Princess, Scottsdale, Arizona	October 19 - 22, 2011
The Chatham Bars Inn, Chatham, Massachusetts	October 17 - 20, 2012
The Resort at Pelican Hill, Newport Coast, California	September 25 - 28, 2013
WaterColor Inn & Resort, Santa Rosa Beach Florida	September 17 - 20, 2014
Hotel Europäischer Hof, Heidelberg, Germany	October 7 - 10, 2015



*A Special Thanks
to the following companies for providing
educational grants supporting the*

**AMERICAN ACADEMY OF NEUROLOGICAL SURGERY
78TH ANNUAL MEETING**

Carl Zeiss Meditec

Eleka

Integra Foundation

K2M

Synaptive



MISSION & OBJECTIVES



MISSION STATEMENT

The purpose of the Academy meeting shall be to promote scientific and social interaction among its members, to foster neurological surgery as a specialty of medicine, to encourage and sponsor basic and clinical research activity in the neurological sciences, and to promote the knowledge and skill of those who devote themselves to neurological surgery in accordance with the high ideals of the medical profession.

This activity will include live presentations from faculty to include case presentations and discussion, as well as time for questions and answers.

AMERICAN ACADEMY OF NEUROLOGICAL SURGERY



American
Association of
Neurological
Surgeons

Jointly Provided by the AANS

LEARNING OBJECTIVES

- ✓ Identify new treatments for brain tumors using radiosurgery, oncolytic viral therapy, immunotherapy and CED.
- ✓ Demonstrate molecular and cell delivery treatments for spinal cord, nerve and brain injury.
- ✓ Recognize recent clinical trials for and new biologic agents that may assist in the treatment of cervical and lumbar spondylosis.

ACCREDITATION STATEMENT

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the AANS and the American Academy of Neurological Surgery. The AANS is accredited by the ACCME to provide continuing medical education for physicians.

DESIGNATION STATEMENT

The AANS designates this live activity for a maximum of **14.0 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

INTENDED AUDIENCE/BACKGROUND REQUIREMENT

The scientific program presented is intended for neurosurgeons either in training or in active practice.

AANS JOINT PROVIDERSHIP DISCLAIMER STATEMENT

The material presented at the 78th Annual Meeting of the American Academy of Neurological Surgery has been made available by the American Academy of Neurological Surgery and the AANS for educational purposes only. The material is not intended to represent the only, nor necessarily the best, method or procedure appropriate for the medical situations discussed, but rather it is intended to present an approach, view, statement, or opinion of the faculty, which may be helpful to others who face similar situations.

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

Neither the AANS nor the American Academy of Neurological Surgery makes any statements, representations or warranties (whether written or oral) regarding the Food and Drug Administration (FDA) status of any product used or referred to in conjunction with any course, seminar or other presentation being made available as part of the 78th Annual Meeting of the American Academy of Neurological Surgery. Faculty members shall have sole responsibility to inform attendees of the FDA status of each product that is used in conjunction with any course, seminar or presentation and whether such use of the product is in compliance with FDA regulations.

DISCLOSURE INFORMATION

The AANS and the American Academy of Neurological Surgery control the content and production of this CME activity and attempt to ensure the presentation of balanced, objective information. In accordance with the Standards for Commercial Support established by the ACCME, faculty, abstract reviewers, paper presenters/authors, co-authors, planning committee members, staff and any others involved in planning the educational content and the significant others of those mentioned must disclose any relationships they or their co-authors have with commercial interests which may be related to their content. The ACCME defines “relevant financial relationships” as financial relationships in any amount occurring within the past 12 months that create a conflict of interest.

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

SPEAKER DISCLOSURE LISTING

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

Those who have disclosed a relationship with commercial interests are listed below:

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Punit Agrawal	Speaker's Bureau	Teva
Manmeet Ahluwalia	University Grants/ Research Support	Care Comprehensive Cancer Center
	Industry Grant Support	Novocure, Novartis, Inc., Tracon Pharmaceuticals, Monteris Medical
	Consultant Fee	Incyte, Elsevier, Monteris Medical, BMS Prime
Kenneth Baker	Other Financial or Material Support	Distribution Rights From Intellectual Property: ATI and Cardionomics
Mitchel Berger	University Grants/ Research Support	NIH
	Stock or Shareholder	Rio Grande Neurosciences, Inc
Jeff Biernaskie	University Grants/ Research Support	AIHS CRIO Grant and Stem Cell Network
Nicholas Boulis	Industry Grant Support	Above and Beyond NB, LLC
	Employee	Above and Beyond, LLC
	Other Financial or Material Support	Dr. Boulis is the Inventor of technology that may be employed in human translation of this approach

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Atul Butte	University Grants/ Research Support	NIH, March of Dimes
	Consultant Fee	Genetech, Roche, Numedii, Personalis, Illumina, Geisinger, Regeneron
	Stock And Shareholder	Numedii, Carmenta, Personalis
	Honorarium	Roche, Genetech, Celgene
	Employee	UCSF
Susan Chang	Industry Grant Support	Agios, Quest, Novartis, Roche
	Consultant Fee	Agios, Blaze, Edge, Tocagen, Neu Onc
E. A. Chiocca	University Grants/ Research Support	National Institutes of Health
	Consultant Fee	Togalen, Merck, Stemgen, Nano Rx
	Employee	Brigham & Women's Hospital
	Fiduciary Position	Society For Neuro-Oncology
Kevin Cockroft	Consultant Fee	Medtronic
	Stock or Shareholder	Actuates Medical
Mark Cooper	Stock or Shareholder	Copernicus Therapeutics, Inc.
	Employee	Copernicus Therapeutics, Inc.
Mark Corriveau	University Grants/ Research Support	AOSpine North America
Boro Dropulic	Employee	Lentigen, Inc.
Michael Fehlings	University Grants/ Research Support	AOSpine North America

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Christian Freudiger	Stock or Shareholder	Invenio Imaging, Inc.
	Employee	Invenio Imaging, Inc.
G. Yancey Gillespie	Stock or Shareholder	Aettis, Inc.
Steven Glassman	University Grants/ Research Support	Norton Healthcare
	Stock or Shareholder	Medtronic
	Employee	Norton Healthcare
	Other Financial or Material Support	Past President Scoliosis Research Society – NuVasive provides funds to database company. No funds paid to individual or individual's institution.
Stanton Gerson	University Grants/ Research Support	Case Comprehensive Cancer Center
Ziya Gokaslan	University Grants/ Research Support	AOSpine (Paid To Ins.)
	Stock or Shareholder	Spinal Kinetics
	Honorarium	AOSpine
Andrew Goldberg	Stock or Shareholder	Siesta Medical, Inc; Apnicure, Inc.
	Honorarium	Stryker
	Other Financial or Material Support	UCSR Patent Pending, G1/G14,105 Sinus Diagnosis And Therapeutics
John Golfinos	Consultant Fee	Major League Baseball Players' Association
	Stock or Shareholder	Viewray, Inc.
Andrew Grande	Speaker's Bureau	Integra, Medtronic

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Gerald Grant	University Grants/ Research Support	NIH
Robert Gross	University Grants/ Research Support Consultant Fee Stock or Shareholder Honorarium Speaker's Bureau Employee Other Financial or Material Support	Sleep Research Society Foundation Medtronic, Inc., Speaker; Neuropace, Inc., Speaker; MRI Interventions, Inc., Speaker, Consultant Sanbio, Inc., Consultant Neuralstem, Inc., Consultant Emory University Hospital Willie Start-Up Funds
Michael Gustafson	Other Financial or Material Support	Mill Creek Life Sciences; Intellectual Property/Royalty
Daphne Haas-Kogan	University Grants/ Research Support	Novartis PI on Clinical Study
Robert Hart	University Grants/ Research Support Industry Grant Support Honorarium Consultant Fee Stock or Shareholder Speaker's Bureau Other Financial or Material Support	AOSpine North America Medtronic, ISSGF DePuy Synthes, Seaspine DePuy Synthes, Globus, Medtronic Spine Connect DePuy Synthes CSRS Board, ISSLS, ISSG Executive Committee

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Roger Hartl	University Grants/ Research Support	AOSpine, Baxter
	Consultant Fee	AOSpine, DePuy Synthes, Lanx, Brainlab
Amy Heimberger	University Grants/ Research Support	Merck, Abbvie, Curtana
	Other Financial or Material Support	Caris Life Sciences-Scientific Advisory Board
Alan Hilibrand	University Grants/ Research Support	AOSpine North America
	Stock or Shareholder	Amedica, Vertiflex, Benvenue, Lifespine, Paradigm Spine, PSD, Spinal Ventures
	Honorarium	Aesculap, Amedica, Biomet, Stryker, Alphatec
Joshua Hirsch	Consultant Fee	Medtronic
	Other Financial or Material Support	Codman Neurovascular

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
L. N. Hopkins	University Grants/ Research Support Consultant Fee Financial Interest Board, Trustee, or Officer Position Honorarium	Toshiba Boston Scientific, Cordis, Abbott, Covidien, Medtronic Boston Scientific, Valor Medical, Claret Medical, Inc, Augmenix, Endomation, Silk Road, Ostial, Apama, Stimsox, Photolititec, Valentx, Ellipse, Axtria, Nextplain, Ocular Claret Medical, Inc Memorial Healthcare System, Complete Conf. Management, Covidien
Douglas Kondziolka	University Grants/ Research Support Other Financial or Material Support	Brainlab Neuropoint Alliance Registry Support, Elekta
Sungho Lee	University Grants/ Research Support	AOSpine North America
Michael Levitt	Industry Grant Support Consultant Fee	Philips Volcano, Inc; Medtronic, Inc. Sanofi Pasteur; Novocure, Inc.
David Limbrick	Industry Grant Support	Medtronic, Inc; Karl Storz, Inc. <i>Both Basic Science Research Grants</i>
L. Dade Lunsford	Consultant Fee Stock or Shareholder	Elekta, Best Doctors, Advance Medical Elekta

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Andre Machado	University Grants/ Research Support	NIH
	Consultant Fee	Emspace DBS, St. Jude
	Stock or Shareholder	Emspace DBS, Cardionomics, ATI
	Fiduciary Position	ASSFN Board
Nicholas Maragakis	Industry Grant	Above and Beyond NB, LLC
	Consultant Fee	Above and Beyond NB, LLC
James Markert	University Grants/ Research Support	NIH, NCI
	Industry Grant Support	Immunocellular Rally Foundation, Hyundai Hope On Wheels
	Stock or Shareholder	Aettis, Inc.
Raj Midha	University Grants/ Research Support	Alberta Innovates Health Solutions
Tom Mroz	University Grants/ Research Support	AOSpine North America
	Consultant Fee	Stryker, Ceramtec
	Stock or Shareholder	Pearl Diver
	Other Financial or Material Support	AOSpine

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Praveen Mummaneni	University Grants/ Research Support	AANS/CNS Spine Section, NREF, AOSpine
	Consultant Fee	DePuy Spine
	Stock or Shareholder	Spincity/ISD
	Honorarium	Globus
	Other Financial or Material Support	Board of Directors, Scoliosis Research Society, DePuy Spine
Daniel Orringer	Stock Or Shareholder	Invenio Imaging, Inc.
Ahmad Nassr	University Grants/ Research Support	AOSpine North America
Jill Ostrem	Industry Grant Support	Medtronic Inc., Boston Scientific, Inc.
Ian Parney	University Grants/ Research Support	NIH, Ivy Foundation, Brains Together for a Cure
Linas Padegimas	Employee	Abeona Therapeutics, Inc.
Aman Patel	Consultant Fee	Medtronic-Covidien, Penumbra
Anna Pavlick	Industry Grant Support	BMS, Merck, Celldex Roche, Amgen, Novartis
Bethany Peterson	Employee	Above and Beyond NB, LLC
	Consultant Fee	BMS, Merck, Amgen, Novartis
Ali Rezai	Consultant Fee	ATI (Autonomic Technologies, Inc.)
	Stock or Shareholder	ATI (Autonomic Technologies, Inc.)
	Fiduciary Position	Board of Directors, ATI, North American Neuromodulation Society
	Other Financial or Material Support	International Neuromodulation Society, Neurotechnology Innovations Translator

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Jonathan Pace	University Grants/ Research Support	AOSpine North America
	Industry Grant Support	AOSpine, Cerapedics, Medtronic
	Honorarium	AOSpine, Nass, Biomet, Medtronic
	Other Financial or Material Support	AOSpine International
Daniel Riew	University Grants/ Research Support	AOSpine North America
Howard Riina	Industry Grant Support	Helmsley Foundation and Tomorrow Foundation
	Stock or Shareholder	Evisio Medical Systems and Reach Bionic
Theodore Schwartz	Stock or Shareholder	Vision Sense
Gabriel Smith	University Grants/ Research Support	AOSpine North America
Ozge Sesenoglu-Laird	Employee	Copernicus Therapeutics, Inc.
Christopher Shaffrey	University Grants/ Research Support	NIH, Department of Defense, ISSG, NACTN, AO
	Industry Grant Support	DePuy Synthes, NuVasive Medtronic, NuVasive, Biomet, K2M, Stryker
	Stock or Shareholder	NuVasive
	Fiduciary Position	Treasurer, CSRS: Chair, ABNS
	Other Financial or Material Support	Patent: Biomet, Medtronic, NuVasive
Andrew Sloan	University Grants/ Research Support	Kimble Foundation; Peter A. Cristal, Chair

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Philip Starr	Industry Grant Support Consultant Fee Other Financial or Material Support	Medtronic, Inc. Medtronic Inc., Boston Scientific, Inc. NIH Grant R01NS069779
Michael Steinmetz	University Grants/ Research Support Honorarium Consultant Fee	AOSpine North America Biomet Spine, Stryker Spine, DePuy Synthes Intellirod
Jo Anne Stratton	University Grants/ Research Support	Alberta Innovates Health Solutions
Victor Valencia	Stock or Shareholder Employee	Spouse owns stock in Veracyte Spouse Is employee of Veracyte and receives full-time salary
Michael Vogelbaum	Stock or Shareholder Honorarium	Infusion Therapeutics (Options) Neuralstem
Jon Willie	University Grants/ Research Support Consultant Fee Stock or Shareholder Honorarium	Sleep Research Society Foundation Medtronic, Inc, Speaker Neuropace, Inc., Speaker MRI Interventions, Inc., Speaker, Consultant
Melissa Wilson	Consultant Fee	Advisory Boards-BMS
Timothy Witham	University Grants/ Research Support	Eli Lilly and Company; The Gordon and Marilyn Macklin Foundation

<u>NAME</u>	<u>DISCLOSURE</u>	<u>TYPE OF RELATIONSHIP*</u>
Sunney Xie	Stock or Shareholder	Invenio Imaging, Inc.
Albert Yoo	Industry Grant Support	Core Imaging Lab; Penumbra, Inc; Neuravi, Inc.
Corinna Zygourakis	Other Financial or Material Support	Received travel grants from NuVasive and Globus to attend resident spine education courses.

**Scientific Program Committee*

Those who have reported that they do not have any relationships with commercial interests:

Name

Abou-Antoun, T.
 Aguiar-Littig, Ingrid
 Albuquerque, Felipe
 Alleyne, Cargill
 Alli, Saira
 Altshuler, David
 Amani, Vladimir
 Amrami, Kimberly
 Anderson, Richard
 Aslibekyan, Stella
 Azad, Tej
 Baird-Daniel, Eliza
 Bass, David
 Beauchamp, Michael
 Beaumont, Thomas
 Belmont, Barry
 Benjamin, Carolina
 Bennet, Kevin
 Berendsen, Sharon
 Berkcan, Akpinar
 Berlin, Connor
 Bhambri, Ankur
 Bijanki, Kelly

Blaha, Charles
 Bonassar, Lawrence
 Borde, Brandon
 Boscardin, Christy
 Bosking, William
 Boyle, Julianne
 Branche, Marc
 Bragg, Taryn
 Brezzell, Amanda
 Bronisz, A.
 Bydon, Mohamad
 Camelo-Piragua, Sandra
 Cao, Yue
 Capek, Stepan
 Cavallo, Luigi
 Chagharvand, Sepideh
 Chang, Edward
 Choudhri, Omar
 Choudhry, Osama
 Church, Ephraim
 Cohen, Jonathan
 Collucia, Daniel
 Dacey, Ralph

Daniel, Andy
de Hemptinne, Coralie
Dempsey, Robert
Dhandapani, Krishnan
Diaz, Roberto
Dietz, Allan
Dlouhy, Brian
Dombrowski, S.
Donson, Andrew
Drew, Patrick
Dudley, R.
Dyck, P.
Dziura, James
Faraji, Amir
Fisher-Hubbard, Amanda
Flickinger, John
Foreman, Nicholas
Foreman, Paul
Frempong-Boadu, Anthony
Friedman, Gregory
Fung, Hua
Garrard, Mia
Garton, Hugh
Gephardt, Melanie
Gerber, Naamit
Ghogawala, Zoher
Godlewski, J.
Golby, Alexandra
Gonzales, Ralph
Gordon, David
Gorovets, Daniel
Griesinger, Andrea
Griessenauer, Christoph
Gross, Sarah
Guo, Hong
Hadley, Dexter
Hakimelahi, Reza
Hamann, Stephan

Handler, Michael
Hankinson, Todd
Harrigan, Mark
Hatcher, James
Hervey-Jumper, Shawn
Heth, Jason
Hewitt, Holley
Hodges, Tiffany
Hollon, Todd
Horga, Guillermo
Howard, Matthew
Huang, Judy
Huang, Paul
Inman, Cory
Iskandar, Bermans
Jantzie, Lauren
Johnson, Timothy
Kalakoti, Piyush
Karachi, Aida
Klimo, Paul
Kluin, Karen
Knopp, Michael
Kraemer, Mark
Lang, Frederick
Lang, Gernot
Laumonerie, Pierre
Lawton, Michael
Lazarus, Hillard
Lee, Kendall
Leslie-Mazwi, Thabele
Lewis, Spencer
Li, Chunyan
Lieberman, Andrew
Lim, Joshua
Link, Michael
Lu, Yi
Lujan, J.
Ma, Hongtao

Mahan, Mark
Maher, Cormac
Manns, Joseph
Mayberg, Marc
McCutcheon, Ian
McDermott, Michael*
McFadden, Kathryn
McKhann, Guy
Menger, Richard
Miller, Kai
Mineo, Marco
Mitchell, Duane
Mohammadi, Alireza Mohammad
Moen, Sean
Monaco, Edward
Moriates, Christopher
Moriguchi, Yu
Mousavi, Seyed
Nanda, Anil
Narayan, Raj
Niazi, Toba
Nielson, Dylan
Niknafs, Yashar
Niranjan, Ajay
O'Donnell, Lauren
Ozturk, Ali
Pacione, Donato
Pan, James
Pandey, Aditya
Pandian, Balaji
Patel, Anika
Parker Kerrigan, Brittany
Peereboom, David
Pennicooke, Brenton
Peterson, Timothy
Pitts, Lawrence
Pollock, Bruce
Rabinov, James

Rahman, Maryam
Rajkomar, Alvin
Ramkissoon, Shakti
Recinos, V.
Reese, Jane
Resnick, Daniel
Rich, Keith
Richerson, George
Robe, Pierre
Robinson, Shenandoah
Rolston, John
Rutka, James
Sagher, Oren
Sandoval-Garcia, Carolina
Savastano, Luis
Sawaya, Raymond
Scanlan, James
Scharre, Douglas
Schevon, Catherine
Schiff, Steven
Sederberg, Per
Seibel, Eric
Sen, Rajeev
Seute, Tatjana
Shah, Gaurang
Sheth, Sameer
Shim, Bo Sung
Shin, Samuel
Short, Kurt
Silverman, Joshua
Sloan, Stephan
Smith, Douglas
Smith, Elliot
Smith, Gabriel
Snuderl, Matija
Soo Hoo, Kent
Spinner, Robert*
Stapleton, Christopher

Suki, Dima
Sun, Ping
Suter, Yannick
Swann, Nicole
Tanweer, Omar
Thompson, Gregory
Tibbs, Phillip
Torok, Collin
Unterberg, A.
Venneti, Sriram
Wang, Doris
Wang, Lin
Wang, Thomas
Warner, Wesley
Weichart, Emily
Wemmie, John
Wesley, Uma
Wippold, Franz
Wilkinson, Andrew
Wolf, Amparo
Wu, Shengyang
Yeoh, Stewart
Yeom, Kristen
Yin, Hao
Yoshor, Daniel
Yurek, David
Yuste, Rafael
Zhang, Fan
Zhang, Jie
Zhang, Jun
Zhao, Mingrui

**Scientific Program Committee*

MEETING LEADERSHIP

FACULTY

Aviva Abosch, MD, PhD

University of Colorado

Aurora, CO

Felipe Albuquerque, MD

Barrow Neurological Institute

Phoenix, AZ

Frederick Barker II, MD

Massachusetts General Hospital

Boston, MA

Daniel Barrow, MD

Emory University School of

Medicine | Atlanta, GA

Bernard Bendock, MD

Northwestern University

Chicago, IL

Mitchel Berger, MD

University of California SF

San Francisco, CA

Kim Burchiel, MD

Oregon Health & Science

University | Portland, OR

Bob Cater, MD, PhD

University of California, San Diego

La Jolla, CA

E. Antonio Chiocca, MD, PhD

Brigham & Women's Hospital

Boston, MA

Alan Cohen, MD

Johns Hopkins Hospital

Baltimore, MD

Ralph Dacey Jr., MD

Washington University

St. Louis, MO

Robert Dempsey, MD

University of Wisconsin | Madison

Madison, WI

Emad Eskandar, MD

Massachusetts General Hospital

Boston, MA

Michael Fehlings, MD, PhD

Toronto Western Hospital

Toronto, ON Canada

Peter Gerszten, MD

University of Pittsburgh Medical

Center | Pittsburgh, PA

Ziya Gokaslan, MD

Rhode Island Hospital

Providence, RI

Mark Hadley, MD

University of Alabama Birmingham

Birmingham, AL

Robert Harbaugh, MD

Pennsylvania State University

Hershey, PA

L. Nick Hopkins III, MD
University at Buffalo
Buffalo, NY

Bermans Iskandar, MD
University of Wisconsin | Madison
Madison, WI

Douglas Kondziolka, MD
NYU Langone Medical Center
New York, NY

Frederick Lang, Jr., MD
MD Anderson Cancer Center
Houston, TX

Elad Levy, MD, MBA
University of Buffalo
Amherst, NY

L. Dade Lunsford, MD
University of Pittsburgh
Medical Center | Pittsburgh PA

James Markert Jr., MD
University of Alabama Birmingham
Birmingham, AL

Marc Mayberg, MD
Seattle Neuroscience Institute
Seattle, WA

Michael McDermott, MD
University of California SF
San Francisco, CA

Rajiv Midha, MD, MS
Foothills Medical Center
Calgary, AB Canada

Anil Nanda, MD, MPH
LSU Health Sciences Center
Shreveport, LA

Raj Narayan, MD
North Shore University
Manhasset, NY

Nelson M. Oyesiku, MD, PhD
Emory University School of
Medicine | Atlanta, GA

Bruce Pollock, MD
Mayo Clinic
Rochester, MN

Daniel Resnick, MD
University of Wisconsin
Madison, WI

Ali Rezai, MD
Ohio State University
Columbus, OH

Howard Riina, MD
NYU Langone Medical Center
New York, NY

Shenandoah Robinson, MD
Johns Hopkins Hospital
Baltimore, MD

James Rutka, MD, PhD
University of Toronto
Toronto, ON Canada

Raymond Sawaya, MD
UT MD Anderson Cancer Center
Houston, TX

Steven Schiff, MD, PhD
Pennsylvania State University
University Park, PA

Theodore Schwartz, MD
Cornell University
New York, NY

Christopher Shaffrey, MD
University of Virginia
Charlottesville, VA

Mark Shaffrey, MD
University of Virginia
Charlottesville, VA

Sameer Sheth, MD, PhD
Columbia University
New York, NY

Andrea w Sloan, MD
University Hospitals
Cleveland, OH

Robert J. Spinner, MD
Mayo Clinic
Rochester, MN

Philip Starr, MD, PhD
University of California, SF
San Francisco, CA

B. Gregory Thompson, Jr., MD
University of Michigan
Ann Arbor, MI

Andreas Unterberg, MD, PhD
University of Heidelberg
Heidelberg, Germany

Michael Vogelbaum, MD, PhD
Cleveland Clinic
Cleveland, OH

GUESTS, LOCATIONS & HOSTS

Guest	City	Host
Azam Ahmed	Madison, WI	Robert Dempsey
S. Hassan Akbari	St. Louis, MO	Ralph Dacey
Zarina Ali	Philadelphia, PA	Eric Zager
Cargill Alleyne	Augusta, GA	Nelson Oyesiku
Sepideh Amin-Hanjani	Chicago, IL	Fady Charbel
Chetan Bettegowda	Baltimore, MD	Rafael Tamargo
Nicholas Boulis	Atlanta, GA	Daniel Barrow
Greg Bowden	Pittsburgh, PA	L. Dale Lunsford
Mohamad Bydon	Rochester, MN	Robert Spinner
Kevin Cockroft	Hershey, PA	Robert Harbaugh
Eyiymisi Damisah	New Haven, CT	Academy Winner
Edward Deveau	Boston, MA	Academy Invited Guest
Peter Fecci	Durham, NC	John Sampson
Paul Foreman	Birmingham, AL	James Markert
Zoher Ghogawala	Boston, MA	Fred Barker
Alexandra Golby	Boston, MA	E. Antonio Chiocca
Andrew Grande	Minneapolis, MN	Stephen Haines
Michael Haglund	Durham, NC	John Sampson
Casey H. Halpern	Stanford, CA	Academy Runner Up
Todd Hankinson	Aurora, CO	Lawrence Pitts
Mark Harrigan	Birmingham, AL	James Markert
Alia Hdeib	Cleveland, OH	Warren Selman
Shawn Hervey-Jumper	Ann Arbor, MI	Karin Muraszko
Paul Klimo	Memphis, TN	Jon Robertson
Wendell Lake	Madison, WI	Dan Resnick
Kendall Lee	Rochester, MN	Fredric Meyer

Guest	City	Host
James Liu	Newark, NJ	Robert Heary & Peter Carmel
Yi Lu	Boston, MA	E. Antonio Chiocca
Andre Machado	Cleveland, OH	Barnett
Mark Mahan	Salt Lake City, UT	Couldwell
Ian McCutcheon	Houston, TX	Frederick Lang
Jonathan Miller	Cleveland, OH	Warren Selman
Alim Mitha	Calgary AB, Canada	Rajiv Midha
Shahid Nimjee	Columbus, OH	Russell Lonser
Christina Nortarianni	Shreveport, LA	Anil Nanda
Daniel Orringer	Ann Arbor, MI	Karin Muraszko
Ali Ozturk	Philadelphia, PA	M. Sean Grady
Donato Pacione	New York, NY	Doug Kondziolka
Min Park	Salt Lake City, UT	William Couldwell
Ian Parney	Rochester, MN	Robert Spinner
Aman Patel	Boston, MA	Robert Martuza
Brenton Pennicooke	New York, NY	Philip Stieg
Pierpaolo Peruzzi	Boston, MA	E. Antonio Chiocca
Vikram Prabhu	Maywood, IL	Christopher Loftus
Maryam Rahman	Gainesville, FL	Brian Hoh
Pablo Recinos	Baltimore, MD	Gene Barnett
Elias Rizk	Hershey, PA	Bermans Iskandar
Marie Roguski	Boston, MA	Carl Heilman
Luis Savastano	Ann Arbor, MA	B. Gregory Thompson
Michael Slive	Birmingham, AL	Academy Invited Guest
Timothy Smith	Boston, MA	E. Antonio Chiocca
Hai Sun	Shreveport, LA	Anil Nanda

Guest	City	Host
Omar Tanweer	New York, NY	John Golfinos
Ajith Thomas	Boston, MA	Christopher Ogilvy
Shelly Timmons	Hershey, PA	Robert Harbaugh
Raul Vasquez	Lexington, KY	Phillip Tibbs
Beverly Walters	Birmingham, AL	Mark Hadley & James Markert
Doris Wang	San Francisco, CA	Philip Starr
David Weintraub	Charlottesville, VA	Michael Schulder
Jon Willie	Atlanta, GA	Robert Gross
Daniel Yoshor	Houston, TX	Raymond Sawaya
David Yurek	Lexington, KY	Phillip Tibbs
Brad Zacharia	Hershey, PA	Steven Schiff
Corinna Zygorakis	San Francisco, CA	Michael Lawton