

You are invited to the
21st Annual Meeting
of the
American Society of
Neurophysiological Monitoring



April 23-25, 2010
GAYLORD OPRYLAND HOTEL
Nashville, TN



21ST ANNUAL MEETING OF THE AMERICAN SOCIETY OF NEUROPHYSIOLOGICAL MONITORING



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Michael McCaffrey, PhD, CNIM, DABNM, FASNMM

Local Chairperson:

Kiara Ebinger PhD, FAAA, CNIM, DABNM

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To register for the ASNMM 21st Annual Meeting
visit our website at: www.asnm.org

The American Society of Electroneurodiagnostic Technologists has granted ASET Continuing Education (ACE) credits for this program. Such crediting, however, should not be construed by program participants as an endorsement of any type of instrument or supplies mentioned or involved in these presentations.

OUR 2010 PROGRAM

THURSDAY / APRIL 22ND / 2010

ROOM A

6:00pm-8:00pm	CNIM Board Prep Sessions Rebecca Clark-Bash, R.EEG/EP T. CNIM, CLTM, FASNM President, Knowledge Plus, Inc. Lincolnshire, IL Clare Gale, CNIM, R.EEG T. President, SpineMon Inc., Baltimore, OH	5:00pm-7:00pm	DABNM Oral Board Prep Tod Sloan, MD, MBA, PhD, FASNM Professor and Associate Chair of Development Department of Anesthesiology The University of Colorado at Denver and Health Science Center, Denver, CO
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FRIDAY / APRIL 23RD / 2010

TECHNICAL SESSION / ROOM A

7:50am	Welcome and Announcements
8:00am-8:40am	Intraoperative Artifacts A-Z Vernon L. Towle, PhD, FASNM Professor of Neurology, Surgery, Pediatrics and Psychiatry University of Chicago, Chicago, IL
8:45am-9:20am	Anesthetic Goals, Anesthetic Agents, Mechanisms of Action and Contraindications to Neuromonitoring Antoun Koht, MD Professor of Anesthesiology, Neurological Surgery & Neurology Chief, Neurosurgical Anesthesia / Director, Neurosurgical Anesthesia Fellowship Northwestern University Feinberg School of Medicine
9:25am-9:55am	Electrode Cable and Equipment Layout in the Operating Room: Managing the Landmines Brett Netherton, MS, CNIM Technical Director ROCWorks, LLC Columbia, SC
9:55am-10:35am	EMG Stanley Skinner, MD Abbott Northwestern's Neuroscience institute Minneapolis, MN
10:35am-10:55am	BREAK
10:55am-12:00noon	Soleus H-Reflex Excitability Changes in Spinal Intact and Injured Subjects at Rest and During Locomotion Maria Knikou, PT, PhD Associate Professor College of Staten Island / CUNY & Rehabilitation Institute of Chicago, Northwestern University

**DIGITIMER
LECTURE**

FRIDAY / APRIL 23RD continued

12:00am-1:30pm

LUNCH

1:30pm-3:00pm

**Real Time Data Interactive: What do the Tracings Tell Us:
Differentiating Horses from Zebras**

Antoun Koht, MD

Professor of Anesthesiology, Neurological Surgery & Neurology
Chief, Neurosurgical Anesthesia / Director, Neurosurgical Anesthesia Fellowship
Northwestern University Feinberg School of Medicine

Tod Sloan, MD, MBA, PhD, FASNMM

Professor and Associate Chair of Development / Department of Anesthesiology
The University of Colorado at Denver and Health Science Center, Denver, CO

3:00pm-3:25pm

BREAK

3:30pm-3:55pm

Properties of Filters and Amplifiers and Their Effect on EEG and EP Signals

James Higgins, MA, BA, AS, REEGT, REPT, CNIM

Harrington Biomedical Institute
Arizona State University, Phoenix, AZ

4:00pm-4:25pm

Gray Matter vs. White Matter: Why Does It Matter?

Chris Slaymaker, R.EEG/EP T, CNIM

Manager of Neurosciences
Methodist Medical Center, Oak Ridge, TN

4:30pm-4:55pm

Intraoperative Neurophysiology During Brachial Plexus Surgery

David Houlden, PhD

Coordinator of Surgical Neuromonitoring
Associate Researcher, Sunnybrook Health Sciences Centre
Assistant Professor, Department of Surgery, University of Toronto
President, Canadian Association of Neurophysiological Monitoring (CANM)

FRIDAY / APRIL 23RD / 2010

ADVANCED SESSION / ROOM B

7:50am

Welcome and Announcements

8:00am-8:40am

IONM During Tumor and Vascular Surgery of the Brain

Antoun Koht, MD

Professor of Anesthesiology, Neurological Surgery & Neurology
Chief, Neurosurgical Anesthesia / Director, Neurosurgical Anesthesia Fellowship
Northwestern University Feinberg School of Medicine

8:45am-9:20am

Monitoring During Spinal Deformity Surgery

Gene Balzer, PhD, FAAA, FASNMM

President and Chief Executive Officer
the Biotronic NeuroNetwork
Medical Staff, Twin Cities Shriners Hospital for Children

9:25am-9:55am

Cranial Nerve Monitoring

Dr. George R. "Trey" Lee, MD

Assistant Professor of Neurology Vanderbilt University Medical Center
President, Real Time Neuromonitoring Associates, Nashville, TN

FRIDAY / APRIL 23RD continued

- 9:55am-10:35am** **3-D Images of Current Pathways of Transcranial Stimulation**
Michael J. Russell, PhD
Chief Executive Officer and Director of Research
Aaken Laboratories, Davis CA
- 10:35am-10:55am** **BREAK**
- 10:55am-12:00noon** **Soleus H-Reflex Excitability Changes in Spinal Intact and Injured**
DIGITIMER
LECTURE
Maria Knikou, PT, PhD
Associate Professor
College of Staten Island / CUNY & Rehabilitation Institute of Chicago,
Northwestern University
- 12:00noon-1:30pm** **LUNCH**
- 1:30pm-1:55pm** **Complications in Neuromonitoring for Pedicle Screw Placement**
Miriam Donohue, BS
Departments of Anatomy/Cell and Development Biology and Neurosurgery
SUNY Upstate Medical University, Syracuse, NY
- 2:00pm-2:25pm** **Broca's Area and Language - New Monitoring Method**
M.Sc. Maja Rogić
Department for Neuroscience
Laboratory for Human Experimental Neurophysiology School of Medicine,
University of Split, Coratia
- 2:30pm-2:55pm** **Mapping and Monitoring the Corticospinal Tract from Cortex to Spine**
Charles Yingling PhD, DABNM, FASNM
Director of Education, Sentient, Hunt Valley, MD
Presidential and Chief Scientific Center
California Neuromonitoring Services, San Francisco, CA
Professor of Otolaryngology / Head and Neck Surgery
Stanford School of Medicine, Palo Alto, CA
- 3:00pm-3:25pm** **BREAK**
- 3:30pm-3:55pm** **Electrophysiological Simulator for Intraoperative Monitoring Training**
Michael J. Russell, PhD
Chief Executive Officer and Director of Research
Aaken Laboratories, Davis CA
- 4:00pm-4:25pm** **Monitoring During Spinal Cord Stimulation Placement**
Jay L. Shils PhD, DABNM, FASNM
Assistant Professor and Director of Intraoperative Monitoring
Department of Neurosurgery / The Lahey Clinic / Burlington, MA
- 4:30pm-4:55pm** **Safety and Accuracy Issues in Transcranial Electrical Stimulation**
Louis Journee MD, PhD
Department of Neurosurgery / UMCG Groningen
The Netherlands
- 5:00pm-8:00pm** **ASNM Evening Reception**

SATURDAY / APRIL 24TH / 2010

GENERAL SESSION

- 7:00am-7:45am** **Breakfast with the Experts**
- 7:50am** **Welcome and Announcements**
- 8:00am-8:25am** **Non-Surgical Changes in Neurophysiological Monitoring: Technical, Physiological, Pharmacological and Anesthetic Related Changes**
Antoun Koht, MD
Professor of Anesthesiology, Neurological Surgery & Neurology
Chief, Neurosurgical Anesthesia / Director, Neurosurgical Anesthesia Fellowship
Northwestern University Feinberg School of Medicine
- 8:30am-9:25am** **What's New in Neuromonitoring**
Mark Stecker MD, PhD, DABNM, FASNM
Professor of Neuroscience and Director of Neurophysiology
Marshall University School of Medicine / Cabell Huntington Hospital, Huntington, WV
- 9:30am-9:55am** **Billing for Intraoperative Monitoring**
Marianna Hegedus, BA, CPC
Operations, Department of Neurological Surgery
University of Pittsburgh Medical Center, Pittsburgh, PA
- 10:00am-10:20am** **BREAK**
- 10:30am-10:55am** **Movement Disorders Surgery**
Terry Patterson, MD
Associate Professor / Department of Neurosurgery
Penn State University, Hershey, PA
Patterson NeuroConsulting, Ltd.
- 11:00am-12:00noon** **Intraoperative Neurophysiology in Pediatric Neurosurgery: A Tailored Approach**
PRESIDENTIAL LECTURER
Francesco Sala, MD
Assistant Professor of Neurosurgery / Head Intraoperative Neurophysiology Unit
Department of Neurological Sciences and Vision
University of Verona, Italy
- 12:00am-1:30pm** **21st ANNUAL ASNM BUSINESS LUNCHEON**
- 1:30pm-2:10pm** **Multimodality Functional Mapping of the Sensorimotor Cortex**
Jehuda P. Sepkuty, MD
Medical Director, Epilepsy Center and Clinical Neurophysiology
Swedish Neuroscience Institute, Seattle, WA
- SUBMITTED PAPERS**
- 2:15pm-2:35pm** **"Triggered EMG Monitoring during Fixation of the Cervical Spine: Different Outcomes for Lateral Mass and Pedicle Screws"** by Robert N. Holdefer, PhD^{1,3}, Dan S. Heffez, MD², Bernard A. Cohen, PhD³ from ¹Dept. Rehabilitation Medicine, University of Washington, Seattle, WA; ²Milwaukee Neurological Institute, SC, Milwaukee, WI; ³Neurological Monitoring Associates, LLC, Milwaukee, WI, USA

SATURDAY / APRIL 24TH continued

- 2:40pm-3:00pm** " False Positive Rate of Transcranial Motor Evoked Potential Monitoring During Spine Surgeries When Inhaled Anesthetic Agents Were Used: Retrospective Cohort Study of 1497 Cases" by Arvydas Tamkus, MD, PhD, CNIM, D.ABNM and Kent Rice, MS, REPT, CNIM, D.ABNM from Biotronic.
- 3:00pm-3:25pm** **BREAK**
- SUBMITTED PAPERS**
- 3:30pm-3:45pm** "Multimodality Intraoperative Neurophysiologic Monitoring During Cervical Spine Surgery: Analysis of 261 Consecutive Cases" by Li Huang, PhD, CNIM^{1,2}, Jeffrey S. Oppenheim, MD, DABNS¹, Daniel E. Spitzer, MD, DABNS¹, G. Alexander Jones, MD¹, and Jeffrey W. Degen, MD, DABNS¹ from ¹Hudson Valley Neurosurgical Associates, Suffern NY; ²American Society of Neurophysiological Monitoring.
- 3:45pm-4:00pm** "Protecting the Genitofemoral Nerve during Direct Lateral Interbody Fusion (DLIF/XLIF) Procedures" by Faisal Jahangiri, M.D., CNIM, D.ABNM¹, Jonathan Sherman, MD², Robert Louis, MD², Jeff Elias, MD², Francisco Vega-Bermudez, MD³, from ¹Impulse Monitoring Inc., Columbia, MD; ²University of Virginia Medical Center, Department of Neurosurgery, Charlottesville, VA; ³American Neuromonitoring Associates, Columbia, MD.
- 4:00pm-4:15pm** **The neurophysiology research and education consortium (NREC)**
Mark Stecker, Jay Shils, Terry Patterson, Jefferson Slimp.
- 4:15pm-4:30pm** "Mapping and Monitoring of Motor Cortex in Awake Surgery" by Andrea Szelényi, MD PhD, Ines Kropff MD, Rüdiger Gerlach MD PhD, Hartmut Vatter MD PhD, Ági Oszvald MD, and Volker Seifert MD, PhD from Department for Neurosurgery, Hospital of the Johann Wolfgang Goethe University.
- 4:30pm-4:45pm** "Magnetoneuronography (MNoG)" by Q. Yue, MD, PhD, from Department of Audiology, Bloomsburg University of Pennsylvania, Bloomsburg, PA.
- 4:45pm-5:00pm** "Density spectral array processing of spontaneous electromyography: A preliminary investigation" by Lawrence R. Wierzbowski, Au.D., D.ABNM, Baoqing Wang, MD, D.ABNM, Alice M. Kamp B.S., CNIM., Tracey Lacey CNIM., Yutong Zhang, MD, from Neurological Monitoring Services, West Reading, PA.
- 5:30pm-7:00pm** **"New" Member Reception in the Presidential Suite**

SUNDAY / APRIL 25TH / 2010

GENERAL SESSION

- 7:55am** **Welcome and Announcements**
- 8:00am-10:25am** **Medical Deposition: Practical Tools for the IONM Practitioner**
Bernard Allen Cohen PhD, DABNM, CNIM
Neurological Monitoring Associates, LLC
Milwaukee, WI
- 10:25am-10:45am** **BREAK**
- 10:45am-11:30am** **Recurrent Laryngeal Nerve Monitoring: Surgical Perspective**
Denise Mugnol Carneiro-Pla, MD
Assistant Professor, Department of Surgery,
Medical University of South Carolina, SC
- 11:30am-12:15pm** **Recurrent Laryngeal Nerve Monitoring: Neuromonitorist Perspective**
Leo Happel PhD, DABNM, FASNM
Emeritus Professor, Department of Neurology and Neurosurgery
Louisiana State University Health Sciences Center, New Orleans, LA
- 12:15pm** **Closing Remarks**
Michael McCaffrey, PhD, CNIM, DABNM, FASNM
Executive Director, Clinical Services
US NeuroMonitoring
President, ASNM
2010-2011





REGISTRATION FORM
 THE 21ST ANNUAL MEETING OF THE AMERICAN SOCIETY OF NEUROPHYSIOLOGICAL MONITORING
 APRIL 23 – 25, 2010
 NASHVILLE, TN

Registration Fees

ASNM Member	<input type="checkbox"/> \$495
Non-Member	<input type="checkbox"/> \$595
Students – with written documentation	<input type="checkbox"/> \$295
Single Day Rate (select one only: <input type="checkbox"/> Friday <input type="checkbox"/> Saturday <input type="checkbox"/> Sunday)	<input type="checkbox"/> \$300
CNIM Board Prep Session (additional payment is required to attend)	<input type="checkbox"/> \$95
DABNM Oral Board Prep (additional payment is required to attend)	<input type="checkbox"/> \$95
Friday Reception (Single day registrants and guests of registered attendees must pay additional fee to attend reception)	<input type="checkbox"/> \$50
Printed Meeting Syllabus – Pre Order Only, Not Available for Purchase at the Meeting (Upon check in, all registered attendees will receive USB flash drive with preloaded syllabus at no additional charge)	<input type="checkbox"/> \$55

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ACCESSIBILITY

ASNM and The University of Chicago are committed to providing equal access appropriate to need and circumstance and complies fully with the legal requirements of the Americans with Disabilities Act. If you are in need of special accommodation, please contact The University of Chicago Center for Continuing Medical Education at 773-702-1056 or via email at cme@bsd.uchicago.edu

CANCELLATION POLICY

If you cancel your registration for ASNM 2010, the registration fee less a \$95 administrative processing charge, will be refunded when written notification is received by April 16, 2010. No refunds will be made after April 16, 2010.

Register online at <http://www.asnm.org/meetings.aspx> (credit card payments only)

Fax this form with payment to: 773/702-1736 (credit card payments only)

Mail this form with payment by check to:
 The University of Chicago
 c/o: ASNM 2010
 950 E. 61st Street, Suite 101
 Chicago, IL 60637

Telephone registrations cannot be accepted. Registration questions? Please call the University of Chicago at 773-702-1056.

SITES & SOUNDS OF NASHVILLE

Frist Center for the Visual Arts: Housed in a magnificent Art Deco building, the Frist Center for the Visual Arts is at the forefront of Nashville's burgeoning art scene. Both a museum and an interactive art center, the Frist offers something for everyone.



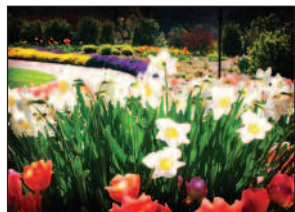
Country Music Hall of Fame: Spanning an entire city block, this must-see venue features live performances, miles of memorabilia and Elvis' '61 Cadillac.

Nashville Zoo at Grassmere: Covering 200 acres, the Nashville Zoo at Grassmere features animals from all over the world and unique animal habitats, such as the Giraffe Savannah, the African Wild Dog Habitat, and the Alligator Cove.



Parthenon: A full-scale replica of the original Parthenon in Athens, Greece, this grand structure is a monument to a pinnacle of classical architecture.

The Hermitage: Visit one of this country's most authentic early presidential sites at The Hermitage, the one-time home of President Andrew Jackson.



Cheekwood Botanical Gardens: This private home and estate encompasses acres of specialty gardens, greenhouses, and landscaped vistas and art museum.

Belle Meade Plantation: A 30-acre historic site that sits 6 miles west of downtown Nashville, the centerpiece of the Belle Meade Plantation is the Belle Meade Mansion.



Belmont Mansion: Built by one of America's wealthiest women, this 36-room "summer cottage" is famous for its gardens, statuary and ornate furnishings.