Meeting Objectives

Attendees should come away with:

1. A clearer understanding of the methodologies and practice of IONM from the neurophysiologist, technologist, anesthesiologist and surgeon perspective.

2. A stronger understanding of how IONM data can be used to advance the field of IONM.

3. Information about the current research and evidence for IONM.

4. How Cross-collaboration can strengthen IONM effectiveness.

Target Audience

Beginner to advanced IONM practitioners, which includes technologists, neurophysiologists, physicians, anesthesiologists, surgeons and individuals involved in the business aspect of intraoperative neuromonitoring.

Planning Committee

Faisal R. Jahangiri, MD, CNIM, DABNM, FASNM
Lawrence Wierzbowski, AuD, DABNM, FASNM
Carol Ingmanson, MBA - Executive Director, ASNM

2018 Fall Symposium

September 15 -16
DoubleTree by Hilton Nashville Downtown - Nashville, Tennessee
ASNM Continuing Education Credit

ASNM is an ABRET approved provider of continuing education for their IONM related credentials. ABRET is the credentialing board for Electroencephalographic (EEG) Technologists, Evoked Potential (EP) Technologists, and Neurophysiologic Intraoperative Monitoring (CNIM) Technologists, Long Term Monitoring (CLTM) Technologists, and Autonomic Testing Professionals (CAP). Such crediting, however, should not be construed by program participants as endorsement of any type of instruments or supplies mentioned or involved in these presentations. Please be advised that for continuing education hours to apply towards the EEG test, they must be ASET CEUs; however, ASNM CEUs are eligible for the recertification of the EEG credential as well as towards CNIM and EP credentials and recertification.

Continuing Medical Education Credit (CME)

The American Society of Neurophysiological Monitoring (ASNM) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. ASNM designates this live activity for a maximum of 19.5 AMA PRA Category 1™ Credits. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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The American Society of Neurophysiological Monitoring is approved by the American Academy of Audiology to offer Academy CEUs for this activity. The program is approved for a maximum 1.8 CEUs. Academy approval of this continuing education activity is based on course content only and does not imply endorsement of course content, specific products, or clinical procedure, or adherence of the event to the Academy’s Code of Ethics. Any views that are presented are those of the presenter/CE Provider and not necessarily of the American Academy of Audiology.

Photographs taken during the meeting by ASNM staff and contractors will be used in future ASNM marketing materials. Personal cameras, audio recording and video equipment are prohibited.
### Thursday, February 22nd

8:00 AM - 5:00 PM  
**ASNM Board of Directors Meeting**  
Swan 7-9

6:00 PM - 8:00 PM  
**Registration Open**  
Swan Lobby

6:00 PM - 8:00 PM  
**ABNM Board Prep (additional charge)**  
Jeffrey Balzer, PhD, FASNM, DABNM  
Macaw I

6:00 PM - 8:30 PM  
**CNIM Board Prep (additional charge)**  
James Watt, Jr., CNIM, R.EPT  
Macaw II

### Friday, February 23rd

6:45 AM - 7:30 AM  
**Breakfast with Exhibitors**  
Swan 5 & 6

#### Track I  
Swan 7-10  
**Peripheral Nerve Monitoring**  
Moderators: Matthew Eccher, MD, MS  
Zahid Abro, MD, CNIM

- 7:30 AM *Anesthesia*: Christoph Seubert, MD, PhD, DABNM
- 7:45 AM *Surgeon*: Lynda Jun-San Yang, MD, PhD
- 8:15 AM *Technique*: Leo Happel, PhD
- 8:45 AM *E-poster*: Kathryn Overzet, MS, CNIM
- 8:50 AM *Panel Discussion*

#### Track II  
Mockingbird  
**Principals of IONM for Carotid Endarterectomies for the Beginners & Experts**  
Moderator: Clare Gale, CNIM, R.EEG/EPT, FASNM, FASET

- 7:30 AM *Anesthesia*: Laura Hemmer, MD
- 7:45 AM *Technique*: Jeffrey Balzer, PhD, DABNM, FASNM
- 8:45 AM *Panel Discussion*

9:15 AM - 10:00 AM  
**Break with Exhibitors**  
Swan 5 & 6

#### Endovascular Surgeries  
Moderator: W. Bryan Wilent, PhD, DABNM

- 10:00 AM *Anesthesia*: Antoun Koht, PhD
- 10:15 AM *Technique*: Joshua Mergos, MS, CNIM
- 10:45 AM *Surgeon*: Aaron S. Dumont, MD
- 11:15 AM *E-poster*: Tom Epplin-Zapf, MS, MA, CNIM
- 11:20 AM *Panel Discussion*

#### CPA Tumor  
Moderator: Jeffrey R. Balzer, PhD, DABNM, FASNM

- 10:00 AM *Anesthesia*: Laura Hemmer, MD
- 10:15 AM *Cranial Nerves IONM*: Laura Hemmer, MD
- 10:45 AM *Technique*: Lawrence Wierzbowski, AuD, DABNM, FASNM
- 11:15 AM *E-poster*: M. Ángeles Sánchez-Roldán, MD

11:45 AM - 1:45 PM  
**Lunch on your own**

#### Cervical Spine Surgeries  
Moderator: Lawrence Wierzbowski, AuD, DABNM, FASNM

- 1:45 PM *Anesthesia*: Christoph Seubert, MD, PhD, DABNM
- 2:00 PM *Technique*: Marat Avshalumov, PhD, DABNM, CNIM
- 2:30 PM *Surgeon*: Daniel Hoh, MD
- 3:00 PM *E-poster*: Maria Zuccaro, PhD, CNIM
- 3:05 PM *Panel Discussion*

#### Pediatric Neurosurgical Procedures  
Moderator: Faisal R. Jahangiri, MD, CNIM, DABNM, FASNM

- 1:45 PM *Anesthesia*: Veronica Busso, MD
- 2:00 PM *Technique*: Anthony Sestokas, PhD, DABNM, FASNM
- 2:30 PM *Surgeon*: George Jallo, MD
- 3:00 PM *E-poster*: Yinchen Song, PhD
- 3:05 PM *E-poster*: Shuiping Dai, PhD, CNIM
- 3:10 PM *Panel Discussion*
Friday, February 23rd

**3:30 PM - 4:00 PM**
**Break with Exhibitors**  
Swan 5 & 6

**Cortical Mapping**  
Moderator: Christopher Pace, PhD, CNIM  
4:00 PM Anesthesia: Nasser Tawfek, MD, FRCP  
4:15 PM Neurologist: Matthew Eccher, MD, MS  
4:40 PM Technique: Faisal Riaz Jahangiri, MD, CNIM, DABNM, FASNM  
5:05 PM E-poster: James Zuccaro, DC, DABNM, CNIM  
5:10 PM Panel Discussion

**Deep Brain Stimulation**  
Moderator: Marat Avshalumov, PhD, DABNM, CNIM  
4:00 PM Anesthesia: Antoun Koht, MD  
4:15 PM Neurologist: Claire Henchcliffe, MD, DPhil  
4:40 PM Technique: Jay Shils, PhD  
5:05 PM Panel Discussion

**5:30 PM - 7:00 PM**  
**Networking Reception with Exhibitors**  
Swan 5 & 6

Saturday, February 24th

**6:45 AM - 7:30 AM**  
**Breakfast with Experts**  
Macaw 1 & 2

**Neuromonitoring for Intracranial Aneurysms**  
Jeffrey Balzer, PhD, DABNM, FASNM

**Alternative Electrode Placement: Optimization of IONM Data**  
Clare Gale, CNIM, R.EEG/EPT, FASNM, FASET

**Neuromonitoring for Awake Surgeries**  
Jeff Gertsch, MD

**Real-Time Monitoring for IONM**  
George R. "Trey" Lee, III, MD

**Neuromonitoring for Interventional Procedures**  
Joshua Mergos, MS, CNIM

**Technical Issues during Neuromonitoring**  
Brett Netherton, MS, CNIM, FASNM, FASET

**Pediatric Spine Surgeries**  
Moderator: Gene Balzer, PhD  
Swan 7-10

7:30 AM Neurologist: Gloria Galloway, MD, MBA, FACNS  
7:45 AM Technique: James Watt, Jr., CNIM, REPT  
8:15 AM Surgeon: Jahangir Asghar, MD  
8:45 AM E-poster: Chen-Ya Yang  
8:50 AM E-poster: Maria Zuccaro, PhD, CNIM  
8:55 AM Panel Discussion
Saturday, February 24th

9:15 AM - 10:00 AM
Break with Exhibitors
Swan 5 & 6

All subsequent presentations will take place in Swan 7 - 10

IONM - A Multidisciplinary Cross Collaboration Approach
Moderator: Joseph Moreira, MD
10:00 AM - Aatif M. Husain, MD

Presidential Speaker Session
Moderator: Joseph Moreira, MD
10:45 AM Presidential Speaker: Larry Badler, MBA, LSS-BB
11:15 AM Panel Discussion

| Larry Badler, MBA, LSS-BB | Aatif Husain, MD | Faisal Riaz Jahangiri, MD, CNIM, DABNM, FASNM |
| Joseph Moreira, MD | Brett Netherton, MS, CNIM, FASNM, FASET | Lawrence Wierzbowski, AuD, DABNM, FASNM |

12:00 PM - 2:00 PM
Business Luncheon
Swan 1 - 4

Minimally Invasive Procedures
Moderator: James Watt, Jr., CNIM, R.EPT
2:00 PM Anesthesia: Adam Schiavi, MD, PhD
2:30 PM Technique: James Zuccaro, DC, DABNM
3:00 PM Panel Discussion:

4:00 PM - 4:30 PM
Break with Exhibitors
Swan 5 & 6

Neuromonitoring During Spinal Surgeries - Case Studies
Moderator: Jay Shils, PhD
4:30 PM Technique: Justin Silverstein, DHSc, CNIM
5:00 PM Case Reports: Faisal Riaz Jahangiri, MD, CNIM, DABNM, FASNM
Justin Silverstein, DHSc, CNIM
5:30 PM E-poster: Faisal Riaz Jahangiri, MD, CNIM, DABNM, FASNM
5:35 PM: E-poster: Kathryn Overzet, MS, CNIM
5:40 PM Panel Discussion
Sunday, February 25th

6:45 AM - 7:30 AM
Breakfast
Swan Lobby

Optimizing IONM
Moderator: Faisal Riaz Jahangiri, MD, CNIM, DABNM, FASNM

7:30 AM - 8:00 AM
The Future of IOM, How Do We Prepare Ourselves for the Coming Ten Years
Antoun Koht, MD

8:00 AM - 8:30 AM
TCD for Beginners: Role of TCD in the Operating Room
Alexander Razumovsky, PhD, FAHA

8:30 AM - 9:00 AM
Professional Neurophysiologic Oversight
Joseph Moreira, MD

9:00 AM - 9:30 AM
Panel Discussion
Faisal Riaz Jahangiri, MD, CNIM, DABNM, FASNM
Antoun Koht, MD
Joseph Moreira, MD
Alex Razumovsky, PhD, FAHA

9:30 AM - 10:00 AM
Break
Swan 5 & 6

10:00 AM - 10:30 AM
Practice Management for IOM Professionals
Denise Bates, REPT, CNIM, MBA/HCM, DHAc
Shashivadan Kerai, CNIM

10:30 AM - 11:00 AM
IONM Stimulation
Brett Netherton, MS, CNIM, FASNM, FASET

11:00 AM - 11:30 AM
Radiation Exposure During Surgical Procedures: Who is Safe?
Patty Warf, RN, MS, CNIM, LSSGB, FASNM, FASET
Sunday, February 25th

11:30 AM - 12:00 PM
Future and Planning for the IONM Research
Robert Holdefer, PhD

12:00 PM - 1:00 PM
Research Presentations
Moderator: Lawrence Wierzbowski, AuD, DABNM, FASNM
12:00 PM Lanjun Guo, MD, MSc, DABNM
12:05 PM James Zuccaro, DC, DABNM
12:10 PM Peguy Luma, DDS, CNIM, SFA
12:15 PM Maria Zuccaro, PhD, CNIM
12:20 PM James Zuccaro, DC, DABNM
12:20 PM Maria Zuccaro, PhD, CNIM

1:00 PM - 1:30 PM
Award Presentations

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ABR Evaluation Under General Anesthesia For Young Children With Pervasive Developmental Disorders
Lawrence R. Wierzbowski, AuD, DABNM, FASNM

Advances in Neurophysiological Intraoperative Monitoring During Selective Dorsal Rhizotomy
Yinchen Song, PhD; Stephanie A. Ferri, CNIM; Erik J. Kobylarz, MD, PhD; George P. Thomas Jr., MD, PhD; David F. Bauer, MD

Bladder Manometry and Multiple Modalities of Intraoperative Neurophysiological Monitoring in a Tethered Cord Release Surgery
Shuiping Dai, PhD, CNIM

Changes in Neuromonitoring Data Resulting from Spinal Cord Perfusion
Maria Zuccaro, PhD, CNIM; James Zuccaro, DC, DABNM

Contraindications for TceMEPs
Maria Zuccaro, PhD, CNIM; James Zuccaro, DC, DABNM

Effects of Pre-surgical Muscle Grade on Baseline TceMEPs
James Zuccaro DC, DABNM; Maria Zuccaro PhD, CNIM

Incidence Of IONM Data Changes Due To Positioning In 4577 Surgeries
Kathryn Overzet, MS, CNIM; Faisal R. Jahangiri, MD, CNIM, DABNM, FASNM

IONM During Hip Arthroscopic Repair Surgeries
Kathryn Overzet, MS, CNIM; Mark Kazewych, MD; Faisal R. Jahangiri, MD, CNIM, DABNM, FASNM

Motor Evoked Potential Recordings from Urethral Electrodes
Faisal R. Jahangiri, MD, CNIM, DABNM, FASNM; Justin W. Silverstein, DHSC, CNIM; Zachariah M. George, MD; Sami Al Eissa, MD

Multimodality Monitoring: Prognostic Value of Neuromonitoring Alerts
Maria Zuccaro, PhD, CNIM; James Zuccaro, DC, DABNM

Perioperative Cerebrovascular Accidents: Frequent Multimodal Monitoring for Early Detection and Interpretation
Tom J. Epplin-Zapf, MS, MA, CNIM

Positioning Related SSEPs Changes
Peguy Luma, DDS, CNIM, SFA

Preoperative Motor Function Predicts Ability to Record Muscle Motor Evoked Potentials
Lanjun Guo; Yan Li; Ruquan Han; Adrain Gelb

Resection of Motor Strip Tumor with Neuromonitoring Mapping and Changes
James Zuccaro DC, DABNM; Maria Zuccaro PhD, CNIM

Somatosensory Evoked Potential Sensitivity
James Zuccaro, DC, DABNM; Maria Zuccaro, PhD, CNIM
Subcortical Stimulation Combining with Multiple Intraoperative Neurophysiological Modalities to Identify the Internal Capsule during Craniotomy of Tumor Resection (a case report)
Shuiping Dai PhD, CNIM

The Laryngeal Adductor Reflex Is A New Methodology For Monitoring Thyroid Surgeries That May Predict Long Term Outcome Of Vocal Fold Function
M. Ángeles Sánchez-Roldán, MD; Maria J. Téllez, MD; Catherine F. Sinclair, MD; Sedat Ulkatan, MD

Transcranial Electric Motor Evoked Potential Alert Criteria
Maria Zuccaro, PhD, CNIM; James Zuccaro, DC, DABNM

Using a Subdural Strip to Define Functional Sensory Nerves and the Most Inferior Functional Portion of the Conus Medullaris During Detethering Surgeries for Tethered Cord Syndrome
Chen-Ya Yang; Tsui-Fen Yang; Muh-Lii Liang; Hsin-Hung Chen²; Jan-Wei Chiu
All Webinars are approved for (1) hour of ASNM-CEUs and AMA PRA Category 1 Credit™

**Intra-operative Neuromonitoring for Neuromodulation Procedures**
Wednesday, March 14, 2018 • 7:00 PM Eastern

Steven M. Falowski, MD, FAANS
Director, Functional Neurosurgery, St. Lukes University Health Network

The use of IONM for neuromodulation is not only used as a modality for safety, but is also used as a confirmation of lead placement with spinal cord stimulators. It is this factor that is most important given the need to have a marker of proper lead position in an asleep patient. Newer protocols have also determined methods of lead placement with DRG stimulators. Newer research has examined the spinal and cortical responses of various programming waveforms, and has given an ability to have human spinal recording data.

**Spinal Cord Stimulator Placement for Treatment of Neuropathic Pain**
Date: TBA

Jay Shils, PhD, DABNM, FASNM, FACNS
Director, IONM and Associate Professor, Anesthesiology, Rush University Medical Center

**Essentials of Intraoperative Auditory Brainstem Response Monitoring**
Wednesday, August 22, 2018 • 7:00 PM Eastern

Lawrence Wierzbowski AuD, DABNM, FASNM
President & Owner, Avatrode, LLC
IONM Consulting and Education

**Transcranial Electric Stimulation Motor Evoked Potential Monitoring Update**
Date: TBA

David B. McDonald, MD, FRCP(C), ABCN
Section of Neurophysiology, Department of Neurosciences
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