



# ASNMM

American Society of  
Neurophysiological Monitoring

# 2019 ASNMM/WSET JOINT WINTER SYMPOSIUM

February 22- 24  
Four Seasons Hotel  
Westlake Village, California



**22**  
**FEB**

**FRIDAY**

3:00p - 6:00p Registration Open | Exhibitor Installation

6:00p - 7:00p Welcoming Remarks by ASNM & WSET Officers with Welcome Cocktail | Grand Ballroom B

**23**  
**FEB**

**SATURDAY**

7:00a - 7:55a Continental Breakfast with Exhibitors | Grand Ballroom B

| ASNM   Grand Ballroom AE |   | WSET   Grand Ballroom CD |  |
|--------------------------|---|--------------------------|--|
| 7:55a-8:00a              | ASNM Welcome and Introduction of Session and Speakers   | 7:55a-8:00a              | WSET Welcome and Introduction of Session and Speakers  |
| 8:00a-8:50a              | Joseph Moriera, MD:<br>Communication in IONM, Lets Talk   | 8:00a-8:50a              | Simon Griffin, CEO Lifelines<br>Neurodiagnostic Solutions Inc.:<br>CPT Codes/HIPAA                         |
| 9:00a-9:50a              | Jay Shils, PhD, DABNM, FASNM, FACNS:<br>Theory and Practice of Cortical and Subcortical Stimulation     | 9:00a-9:50a              | Patricia Santos, CNRN, RN:<br>Administrator Perspective on How Hospitals are Dealing with Tech Shortages   |
| 9:50a-10:20a             | Break with Exhibitors<br>Grand Ballroom B   | 9:50a-10:20a             | Break with Exhibitors<br>Grand Ballroom B  |
| 10:20a-11:10a            | Faisal Jahangiri, MD, CNIM, DABNM, FASNM:<br>SSEP - Knowing the Pathways, Genertors and Recording Sites | 10:20a-11:10a            | Ken Jordan, MD, FACP, FACNS, FAAN, FAHA:<br>Acute EEG  |
| 11:10a-12:00a            | Gene Balzer, PhD, FASNM, FAAA:<br>Megatrends of IONM History  | 11:10a-12:00a            | Marc Nuwe, MD, PhD:<br>ICU EEG   |
| 12:00p-1:15p             | Buffet Lunch<br>HAMPTONS  | 12:00p-1:15p             | Buffet Lunch<br>HAMPTONS   |
| 1:30p-2:20pe             | Marc Nuwer, MD, PhD:<br>Journey Through Intraoperative Neuromonitoring: Past, Present, & Future         | 1:15p-1:30p              | WSET Business Meeting  |
|                          |   | 1:30p-2:20p              | Jeffrey Gold, MD:<br>Neonatal EEG/Trending   |
| 2:30p-3:20p              | John King:<br>Monitoring for Auditory Brainstem Implant   | 2:30p-3:20p              | Brett Netherton, MS, CNIM, FASNM, FASET:<br>Safety/Infection Control Concerns with Reusable EEG Electrodes |
| 3:20p-3:50p              | Break with Vendors<br>Grand Ballroom B  | 3:20p-3:50p              | Break with Vendors<br>Grand Ballroom B   |
| 3:50p-4:40p              | Rich Vogel, PhD, DABNM, FASNM:<br>Update on IONM Literature for 2018                                    | 3:50p-4:40p              | Bruce Goddard, Dipl T., R. ET, RT(EMG), R. RP T., CLTM, BHSc:<br>Multi-Modality Case Presentation          |
| 4:45p-5:35p              | Yafa Minazad, DO:<br>Business of IONM/Hospital Approach to NDx  | 4:45p-5:35p              | Panel Discussion   |
| 5:35p-7:05p              | Evening Reception with Exhibitors<br>Grand Ballroom B   | 5:35p-7:05p              | Evening Reception with Exhibitors<br>Grand Ball room B   |



24  
FEB

SUNDAY

7:00a - 7:55a Continental Breakfast | Grand Ballroom B

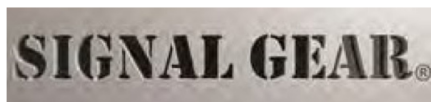
| ASNMM   Grand Ballroom AE |  | WSET   Grand Ballroom CD |   |
|---------------------------|--|--------------------------|---|
| 7:55a-8:00a               | ASNMM Welcome and Introduction of Session and Speakers                               | 7:55a-8:00a              | WSET Welcome and Introduction of Session and Speakers |
| 8:00a-8:50a               | Tim Davis, MD:<br>Train EMG and Post-Op Deficits                                     | 8:00a-8:50a              | WSET Business Meeting                                 |
| 9:00a-9:50a               | Arthur Lam:<br>Neuroanesthesia Topic Appropriate to IONM and Subcortical Stimulation | 9:00a-9:50a              | WSET Business Meeting                                 |
| 9:50a-10:20a              | Break<br>Grand Ballroom B  | 9:50a-10:20a             | Break<br>Grand Ballroom B                             |
| 10:20a-11:10a             | Lilit Mnatsakanyan, MD:<br>Update on Literature and Institutional Data               | 10:20a-11:10a            | WSET Business Meeting                                 |
| 11:10a-12:00a             | Parastou Shilian, DO:<br>MEPs for Nerve Root Monitoring                              | 11:10a-12:00a            | WSET Business Meeting                                 |
| 12:00p-12:10p             | Closing Remarks  | 12:00p-12:10p            | Closing Remarks                                       |

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# Continuing Education Credits

## ASNM Continuing Education Credit (CEU)

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.

**This activity is approved for 10 Hours**

## Continuing Medical Education Credit (CME)

This activity was 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 Interstate Postgraduate Medical Association and ASNM. The IPMA is accredited by the ACCME to provide continuing medical education for physicians.

### Credit Designations

**The Interstate Postgraduate Medical Association designates this live activity for a maximum 10 AMA PRA Category 1 Credit(s)™.** Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### Meeting Objectives

- Logistics of case management
- Pediatric IONM in neurosurgery
- Diagnostic accuracy and therapeutic potential of MEPs during extradural lumbosacral procedures
- Developing effective IONM plans
- The use of intraoperative monitoring from a spine surgeon's perspective
- Neuromonitoring experiences in radical robotic prostatectomy
- Value-Based Care: seven things neurophysiological monitoring providers and organizations need to know
- Transforming resistance to acceptance of neuromonitoring in the operating room

### 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

Jeffrey Gretsich, MD  
Rebecca Hubbs, R. EEG T., CNIM  
Michele Furman, B.S., R. EEG/EP T., CNIM

# 2018 ASNM Fall Symposium

## Meet The Board

### **President**

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Jay Shils, PhD, DABNM,  
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James Zuccaro, DC, CNIM,  
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DABNM, FASNM

John P. Ney, MD, MPH

Jeffrey R. Balzer, PhD,  
FASNM, DABNM

Leah Hanson, R.EEG/EPT

## Faculty

**Gene K. Balzer, PhD, FASNM, FAAA**

CEO, Real Time Neuromonitoring Associates

**Allison Bethoney, R EEG T**

**Tim Davis, MD**

**Brian Gladis, BS, R EEG T, CLTM**

**Bruce Goddard, Dipl T., R. ET,  
RT(EMG), R. RP T., CLTM, BHSc**

**Jeffrey Gold, MD**

Director of Neonatology,  
Ray Children's Hospital

**Simon Griffin**

CEO, Lifelines Neurodiagnostic Solutions

**Larry Head, R EEG T, CNIM, RPSGT,  
RST, F ASET**

**Faisal Jahangiri, MD, CNIM, DABNM,  
FASNM**

**Kenneth Jordan, MD, FACP, FACNS,  
FAAN, FAHA**

Founder & CEO, Jordan Neuroscience Inc.

**Jennifer Legler, BS, CNIM, R EP T**

**John King**

**Arthur Lam, MD**

**Diane Liesen, R EEG T, R EP T, CLTM**

**Yafa Minazad, DO**

**Lilit Mnatsakanyan, MD**

**Joseph Moriera, MD**

**Brett Netherton, MS, CNIM, FASNM,  
FASET**

**Marc Nuwer, MD, PhD**

Professor & Vice Chair, Dept. Head

**Connie Quigley, R EE T**

**Patricia Santos, CNRN, RN**

**Parastou Shilian, DO**

**Jay L. Shils, PhD, DABNM, FASNM,  
FACNS**

Director, Intraoperative Neuromonitoring  
Rush University Medical Center

**Richard Vogel, PhD, DABNM, FASNM**

Neurophysiologist  
NuVasive Clinical Services

# 2018 ASNM Fall Symposium

## Faculty Disclosure Statements

**Gene K. Balzer, PhD, FASNM, FAAA**

has disclosed no relevant financial relationships

**Tim Davis, MD**

has disclosed no relevant financial relationships

**Faisal Jahangiri, MD, CNIM, DABNM, FASNM**

has disclosed no relevant financial relationships

**John King**

has disclosed no relevant financial relationships

**Arthur Lam, MD**

has disclosed no relevant financial relationships

**Yafa Minazad, DO**

has disclosed no relevant financial relationships

**Lilit Mnatsakanyan, MD**

has disclosed no relevant financial relationships

**Joseph Moriera, MD**

has disclosed no relevant financial relationships

**Parastou Shilian, DO**

has disclosed no relevant financial relationships

**Jay L. Shils, PhD, DABNM, FASNM, FACNS**

has disclosed consultant income from Medtronic

**Richard Vogel, PhD, DABNM, FASNM**

has disclosed no relevant financial relationships

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## Reviewer Disclosure Statements

**J. Richard Toleikis, PhD, DABNM, FASNM**

has disclosed no relevant financial relationships

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## Planning Committee / Administration Disclosure Statements

**Jeffrey Gertsch, MD**

has disclosed no relevant financial relationships

**Heidi Ness, IPMA Director of Education and Accreditation**

has disclosed no relevant financial relationships

**Rebecca Hubs, R. EEG T, CNIM**

has disclosed no relevant financial relationships

**Cayla Marconi, Executive Director**

has disclosed no relevant financial relationships

**ASNM has not received any commercial support for this educational event.**



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| #10-20-1  | Single-Use Cups (24-pack)  |

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A-TP/PS-2



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# Medtronic

Medtronic is the world's largest medical technology company, offering an unprecedented breadth and depth of innovative therapies to alleviate pain, restore health, and extend life.

Surgical Technologies business comprises our Ear, Nose, and Throat; Neurosurgery; & Advanced Energy organizations. Our products and procedural solutions encompass a broad variety of surgical applications, including neurosurgical spine, cranial, and orthopaedics; ENT; and surgical oncology – more than any other Medtronic business. Our core products include advanced surgical navigation and imaging solutions, powered surgical tools and systems, intraoperative nerve monitoring devices, advanced energy-based tools for hemostatic sealing & tissue dissection, and implantable hydrocephalus management products.

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## Nihon Kohden America, Inc. ([www.nihonkohden.com](http://www.nihonkohden.com))



Nihon Kohden is the leading manufacturer, developer and distributor of medical electronic equipment, with subsidiaries in the U.S., Europe and Asia. The company is a trusted source

for patient monitoring, sleep assessment, neurology and cardiology instrumentation solutions, and has been recognized for the highest customer satisfaction among U.S. hospitals and health systems for 40 consecutive quarters (MD Buyline).

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## Rhythmink International, LLC. ([www.rhythmink.com](http://www.rhythmink.com))

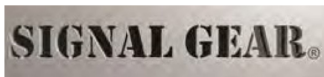


Rhythmink International is a medical device manufacturing company specializing in devices that help connect patients to machines to record or elicit physiologic information. Rhythmink designs, manufactures and distributes a variety of medical

devices for intraoperative neuromonitoring, electroencephalography, evoked potentials, polysomnography, long-term monitoring epilepsy and critical care units. Founded by neurodiagnostic technicians and engineers in 2002, Rhythmink enhances patient care worldwide by transforming medical device technology that links patients to equipment. Rhythmink also offers custom packaging, custom products, private labeling and contract manufacturing services.

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## Signal Gear ([www.signalgear.com](http://www.signalgear.com))



Signal Gear® is a medical device company focused on designing neurodiagnostic accessories. Founded on the premise that passionate, thoughtful study is key to innovation and creativity, we study the scientific literature, the patient and clinical practice. All Signal Gear® products will be the best or we won't sell them.

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Established. Focused. Global. At Cadwell®, we are passionate about enabling quality, informed outcomes for your patient care.

Our neurodiagnostic and neuromonitoring solutions are designed

to deliver efficient work-flow, quality data, reliable performance and easy reporting. Our brands include Arc EEG, LTM and ICU cEEG; Sierra® EMG and EP with integrated ultrasound; Cascade® IONM; Easy® PSG and CadLink™ data management. Our global sales and support teams serve physicians and medical centers worldwide. We take pride in combining customer input with our employees' expertise and USA-made components to provide the best solutions in the industry.

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## CortiCare Inc. ([www.corticare.com](http://www.corticare.com))



We founded CortiCare as a tele-EEG diagnostic company with a simple premise: to help clinicians determine real-brain functionality and abnormality in a timely and cost-effective manner. Along the way, we've helped redefine neuro-critical care.

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## LifeSync Corporation ([www.lifesynccorp.com](http://www.lifesynccorp.com))



Our business is devoted primarily to the continued development, marketing, and sale of the LifeSync® clean disposable ECG/ EKG technologies, the first wireless electrocardiogram data communication system appropriate for use in hospital and outpatient settings.

The LifeSync® System is designed for use in all hospital and outpatient settings where cardiac ECG/EKG and respiration monitoring are required. The LifeSync® System quite simply

untethers patients from lead wires that traditionally connect them to bedside monitors. As a data communications system, the LifeSync® System uses medical-grade Bluetooth® technology and is compatible with most existing patient monitors. Finally, a clinically viable solution is available for health care facilities seeking a cost-effective, wireless solution for monitoring patients.

LifeSync Corporation has developed its current products based, in part, on patents purchased from Motorola. Generally, these patents cover the wireless transmission of patient vital signs from the patient to the first evaluator station using digital, two-way communication with error correction technology. LifeSync Corporation intends to license specific applications of our technology to third parties in certain areas where we do not intend to develop products ourselves.

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## PMT Corporation ([www.pmtcorp.com](http://www.pmtcorp.com))



PMT Corporation, established in 1979, is dedicated to the research and development of specialty products, devices and instruments used in the medical field including, but not exclusive to, Plastic and Reconstructive surgery, Neurosurgery, Orthopedic

medicine and Gastrointestinal Endoscopy. PMT Corporation manufactures and distributes many fine products such as AccuSpan® and Integra® tissue expanders, Cervical traction Halo systems, CervMax™ cervical collars, back braces, Endomark™ endoscopic ink marker, New Beginnings® GelShapes® for the treatment of keloid and hypertonic scars, MicroMat®, MacroVac®, MicroVac®, and InVac® surgical suction and irrigation, PMT Suction Instruments, Cortac® and Depthalon® epilepsy electrodes, UltraEssence and UltraEnhancer® micropigmentation machines, Permark® micropigmentation supplies including needles and pigments.

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### Spes Medica ([www.spesmedica.com/en/](http://www.spesmedica.com/en/))



Spes Medica's mission is to give a concrete contribution to the world of medical devices in order to develop and produce high- quality and high-tech devices, always trying to support the customer for every request

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### US Monitoring, Inc. (USMON) ([www.usmon.com](http://www.usmon.com))

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### Ideal Health Careers, Inc. ([www.idealhealthcareers.com](http://www.idealhealthcareers.com))



Ideal Health Careers is a specialty recruitment firm focused exclusively on clinical neurophysiology. Since 2005, we have helped over 200 professionals secure positions, from clinicians to

executives. Whether you are a candidate seeking a more meaningful career or an employer seeking top talent, please stop by and see how we can help.

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### Lifelines Neuro ([www.lifelinesneuro.com](http://www.lifelinesneuro.com))



The Lifelines Neuro group of companies brings together products and services from around the globe, to further our mission to change lives through neurodiagnostic innovation. Lifelines Neuro has design and manufacturing facilities in the United Kingdom and Ireland, and distributes products and services across the

globe. The Lifelines Neuro headquarters is in Troy, IL, which also serves as the US distributor site.

The company provides electroencephalography (EEG) solutions for a number of market niches, specializing in under-served segments where EEG is traditionally difficult to record. Our exceptional hardware and software breaks down barriers to performing EEG in the NICU, ED, ICU, veterinary practices and in patients' homes.

Lifelines' solutions empower physicians, EEG service providers, research leaders, EEG technologists, and veterinarians. Deep experience in the EEG community means unmatched customer service that helps clients improve patient care and safety, processes, research, operational efficiency, and financial performance.

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### Natus Medical Incorporated ([www.natus.com](http://www.natus.com))



We are your epilepsy specialists

Natus Medical Incorporated (Natus) offers medical equipment, software, supplies and services for the diagnosis, monitoring, and treatment of impairments and disorders affecting newborns, the brain, nerves, muscles, balance, mobility and hearing.

Our comprehensive product portfolio represents a heritage of innovation and leadership. Natus brands have been setting the standard for patient care for over eighty (80) years. Our products

are trusted by medical professionals in university medical centers, hospitals, private practices, clinics and research laboratories around the world.

We support our customers' evolving needs with clinical expertise, continuing education, and outstanding technical service.

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### UC San Francisco Health ([www.ucsfhealth.com](http://www.ucsfhealth.com))



The leading university exclusively focused on health, UC San Francisco is driven by the idea that when the best research, the best education and the best patient care converge, great breakthroughs are achieved.

# 2019 ASNMM MEETINGS



**ASNMM**  
American Society of  
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EDUCATION  
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## Annual Meeting

May 1-5, 2019

Chicago Downtown Marriott  
Magnificent Mile  
Chicago, Illinois

## Fall Symposium

September 13-15, 2019

Hyatt Regency Boston  
Boston, Massachusetts