



2018 ASET
Annual Conference
Hyatt Regency New Orleans | August 16-18, 2018

PRELIMINARY PROGRAM & REGISTRATION BROCHURE

GETTING EMPLOYER SUPPORT>>

Hospitals and healthcare facilities are facing stricter financial constraints and reduced travel and training budgets.

Here are some helpful tips on getting employer support for attending ASET's 2018 Annual Conference.

- Your attendance at the conference will benefit the lab as a whole with the information that you'll bring back with you.
- As a result of attending the Annual conference, you will earn ASET continuing education credits (ASET - CEUs). *A full 3-day registration is worth about 21.5 ASET CEUs.*
- Offer to deliver a short presentation and Q&A to your co-workers on what you learned at the conference.
- As an attendee you will be given a flash drive with the course handouts. This is material that you can potentially share with your coworkers.
- Review the course schedule in advance and share your personal itinerary, and explain how it will help you and your fellow faculty members.
- Offer to share a hotel room with another attendee to help decrease costs for your employer.
- Create a plan for who will cover your work while you are away.
- Plan ahead and register at the early-bird rate before July 6.

NOLA
300

DID YOU KNOW...
that 2018 marks the 300th Anniversary of the City of New Orleans. *While you're in town, you'll be able to join the tricentennial celebration!*

NETWORK. ORGANIZE. LEARN. ASET.

Join us in New Orleans, an all-American city with deep cultural roots and an infectious spirit, for ASET's 59th Annual Conference. We have brought the ASET meeting to this charming and vibrant city many times in the past, and it is always a favorite destination for our members. With more than 600 professionals expected from the Neurodiagnostic field, this is a must-attend event for all in the profession.

We have a great program in store for you this year, packed with opportunities to network with others, organize your career goals, and learn about the latest trends in Neurodiagnostics. Each day begins with a plenary session, where you will have the opportunity to be a part of a very thought-provoking experience. You can read the synopsis for these sessions on pg. 6.

You will have a choice of four concurrent sessions each day to allow you to customize your learning experience. You may find the full conference schedule starting on pg. 2.

You'll be able to view posters in the Exhibit Hall and visit with our wonderful sponsors and vendors for this event. Please join us in the Exhibit Hall on Thursday evening, as we'll be giving you a warm welcome to the conference. As always, there will be ASET Foundation's silent auction with a diverse array of items on display for your bidding pleasure in the Exhibit Hall as well.

Don't forget to sign up for a Sundown Seminar (see pg. 14) on Friday, as we've provided you with three great workshops to choose from.

The final event of the conference will be a symposium covering best practices in the industry and will include a dynamic discussion with our expert panelists and members of the audience (see pg. 13 for details).

Our conference hotel is the Hyatt Regency New Orleans on Loyola Avenue, convenient to the nostalgic street car and minutes from the lovely French Quarter and lively Bourbon Street. You'll be able to spend your evenings exploring the many famous dining spots offering Creole and Cajun cuisine, browsing through unique shops and boutiques, and perhaps enjoying the signature drink of NOLA, the Hurricane!



ASET Welcomes neurodiagnostic technologists, students, physicians, other healthcare providers as well as vendors that supply products and services to the profession to our 59th Annual Conference. This is the premiere event for all disciplines of neurodiagnostics, including electroencephalography (EEG), evoked potentials (EP), intraoperative neuromonitoring (IONM), long-term and ICU monitoring, nerve conduction studies (NCS), transcranial doppler (TCD), magnetoencephalography (MEG), autonomic function testing, and pediatric/neonatal neurodiagnostics.

See you in **NOLA!**

SCHEDULE OF EVENTS — DAY ONE

8/16/2018

Platform Presentations	LTM/Epilepsy	Trends in Neurodiagnostics	Evoked Potentials
Program Committee: Kelly Clement, R. EEG T., CNIM & Anna-Marie Beck, R. EEG T., MOL	Course Director: Patricia Trudeau, R. EEG T., CLTM, FASET	Course Director: Emily Kale, R. EP T., CNIM, BS	Course Director: Aaron James, R. EEG/EP T., R.NCS.T.
8:00 a.m. - 8:15 a.m. Welcome and Opening Remarks			
8:15 a.m. – 9:15 a.m. Plenary Session: Lewis Kull Memorial Keynote Address <i>Critical Thinking for the Health Care Team: Accelerated Skill Building</i> by Cynthia Christie, CLM Sponsor: ABRET			
9:20 a.m. – 9:45 a.m. <i>IONM During Hip Arthroscopic Repair Surgery</i> by Kathryn Overzet, CNIM, MS	9:20 a.m. – 10:15 a.m. <i>Epilepsy in the Aging Population</i> by Nikesh I. Ardeshta, M.D., MS	9:20 a.m. – 10:15 a.m. <i>Critical Communications in Medicine: Finding Your Professional Voice</i> by David Scoville, R. EEG T., CNIM	9:20 a.m. – 10:15 a.m. <i>Clinical Evoked Potentials: How to Use Them Today</i> by Jeffrey Nicholl, M.D.
9:50 a.m. - 10:15 a.m. <i>Examples of Technically Exquisite Monitoring of Motor Eloquent Cortex During Tumor Resections in Anesthetized Patients</i> by Mitale Bose, CNIM			
10:15 a.m. – 11:00 a.m. Break/Poster Viewing in the Exhibit Hall			
11:00 a.m. – 11:30 a.m. <i>Identifying the Best Stimulation Configuration to Use for Linked Quadripolar MEPs</i> by Stephanie Schwartz, CNIM	11:00 a.m. – 11:55 a.m. <i>ROSA the Robot: Computer Assisted Epilepsy Surgery</i> by Cheryl Plummer, R. EEG T., CLTM, FASET, BS	11:00 a.m. – 11:55 a.m. <i>Neuroinformatics and the Emerging Role of Neurodiagnostics in Integrated Neurological & Mental Healthcare</i> by William J. Bosl, Ph.D.	11:00 a.m. – 1:55 p.m. <i>Visual Evoked Potentials: It's All About Checks and Flashes</i> by Cynthia Gregg, R. EEG/EP T., CNIM
11:30 a.m. - 11:55 a.m. <i>Intraoperative Airgap Occurrence after Gross-Portion Tumor Resection in Craniotomy Patient</i> by Marcus Sherer, CNIM, BS			
12:00 p.m. – 1:30 p.m. Annual Business Meeting Luncheon			
1:30 p.m. - 2:00 p.m. <i>A Sailor's Unseen Storm: A Glioblastoma Multiform Case Study</i> by Jessica Potter, BA	1:30 p.m. – 2:15 p.m. <i>Advanced LTM Analyst: ACNS Guidelines</i> by Amanda Ritchey, R. EEG T., CNIM, CLTM, BS	1:30 p.m. – 2:15 p.m. <i>EEG Quality Assurance Methods for Neurodiagnostics</i> by Zachary Cantor, R. EEG T., BS	1:30 p.m. – 2:15 p.m. <i>Brainstem Auditory Evoked Potentials: Pathway, Technique and Findings</i> by Mark Ryland AuD, R. EP T., RPSGT, R.NCS.T., CNCT, FASET
2:00 p.m. - 2:30 p.m. <i>Variability in Cleaning Reusable EEG Electrodes</i> by Nancy Albert, Ph.D.			
2:30 p.m. – 3:00 p.m. <i>The Utility and Safety of Monitoring Trapezius Muscle During ACDF is Questionable</i> by Richard Vogel, CNIM, DABNM, FASNM, Ph.D. and Adam Doan, DABNM, DC	2:15 p.m. – 3:00 p.m. <i>You be the Judge – LTM Case Studies</i> by Kirsten Yelvington, R. EEG T., CLTM	2:15 p.m. – 3:00 p.m. <i>Responsive Neurostimulation</i> by Saurabh Sinha, M.D., Ph.D.	2:15 p.m. – 3:00 p.m. <i>Nuts & Bolts of SSEPs: Indications, Recording, Troubleshooting</i> by Clare Gale R. EEG/EP T., CNIM., FASNM, FASET, BS
3:00 p.m. – 3:45 p.m. Poster Viewing/Break in Exhibit Hall			
3:45 p.m. – 4:15 p.m. <i>Landmark Spinal Muscle Atrophy Study in Pediatric Patients & Nerve Conduction Monitoring</i> by Margo Gadsden, R.EEG T.	3:45 p.m. – 4:30 p.m. <i>New Approach to the Epilepsy Monitoring Unit</i> by Erik Padilla, R. EEG/EP T., CNIM, CLTM, MBA	3:45 p.m. – 4:30 p.m. <i>Trans-Cranial Doppler Theory and Technique</i> by Heather Nicoletto, R.VT	3:45 p.m. – 5:15 p.m. <i>Hands-on Evoked Potential Workshop</i> by All Faculty
4:15 p.m. – 4:45 p.m. <i>Incidence of IONM Data Changes Due to Patient Positioning in 4577 Surgeries</i> by Kathryn Overzet, CNIM, MS	4:30 p.m. – 5:15 p.m. <i>International League Against Epilepsy: Seizure Classification & Treatments</i> by Evan Sandok, M.D.	4:30 p.m. – 5:15 p.m. <i>Hands-on TCD Workshop</i> by Heather Nicoletto, R.VT	
4:45 p.m. – 5:15 p.m. <i>Motor Evoked Potential (TcMEP) Recordings from Urethral Sphincter Muscles (USMEP)</i> by Faisal Jahangiri, M.D, CNIM, DABMN, FASNM			
5:15 p.m. – 6:30 p.m. Welcome Reception in Exhibit Hall			

SCHEDULE OF EVENTS — DAY TWO

8/17/2018

Platform Presentations	IONM Foundational Topics	NCS Key Topics	EEG & Clinical Correlations
Program Committee: Kelly Clement, R. EEG T., CNIM & Anna-Marie Beck, R. EEG T., MOL	Course Director: Jeremy Bamford, CNIM, Ph.D.	Course Director: Aaron James, R. EEG/EP T., R.NCS.T.	Course Director: Barbara Goode, R. EEG T.
8:00 a.m. – 9:00 a.m. Plenary Session: Ellen Grass Memorial Lecture <i>Clinical Neurophysiology in the Treatment of Diseases</i> by Aatif M. Husain, M.D., FACNS			
9:05 – 9:35 a.m. <i>The Golden Key to Justifying More Staff in your Department</i> by Ryan Lau, R.EEG/EP T, CNIM, CLTM, FASET, MS	9:05 a.m – 10:00 a.m. <i>Spinal Cord Vasculature</i> by Leo T. Happel, Ph.D.	9:05 a.m. – 10:00 a.m. <i>The Value of NCS through Case Studies</i> by Anthony Chiodo, M.D.	9:05 a.m. – 10:00 a.m. <i>Name That Pattern: Interactive EEG Review Session</i> by Nikesh I. Ardeshtna, M.D., MS
9:35 a.m. – 10:00 a.m. <i>Responsive Neurostimulator gives HOPE</i> by Marcia Hawthorne, R. EEG T., CAP			
10:00 a.m. – 10:45 a.m. Poster Viewing/Break in the Exhibit Hall			
10:45-11:15 a.m. <i>EEG Artifact Unique to the Neuropace™RNS system</i> by Mallory Schmidt, R.EEG T, BS	10:45 a.m. – 11:40 a.m. <i>Mysteries and Misconceptions in IONM</i> by David Allison, Ph.D., CNIM	11:00 a.m. – 11:55 a.m. <i>Neuroinformatics and the Emerging Role of Neurodiagnostics in Integrated Neurological & Mental Healthcare</i> by William J. Bosl, Ph.D.	11:00 a.m. – 1:55 p.m. <i>Non-Convulsive Seizures</i> by Vishwanath Sagi, M.D.
11:15 – 11:40 a.m. <i>Case Presentation: Tools of the Trade to Seizure Freedom, One Man's Journey</i> by Stephanie Jordan, R.EEG/EP T.,CNIM, CLTM			
11:45 a.m. – 1:00 p.m. Luncheon and Awards Ceremony			
1:00 p.m. – 1:30 p.m. <i>EMU Ictal SPECT Admission Model for Increased Injection Efficiency and SPECT-acular Savings!</i> by Brian Galdis, R.EEG T., CLTM, BS	1:00 p.m. – 1:45 p.m. <i>Transforming Resistance to Acceptance of Neuromonitoring in the OR</i> by Richard Vogel, CNIM, DABNM, Ph.D.	1:00p.m. – 1:45 p.m. <i>Uncommon Nerve Conduction Studies</i> by Brian Markley R. EEG/EP T., R.NCS.T., FASET	1:00 p.m. – 1:45 p.m. <i>EEG Down the Rabbit Hole</i> by Edward C. Mader, Jr., M.D.
1:30 p.m. – 2:00 p.m. <i>Utilization of Intraoperative Electrocorticography During Epilepsy Surgery for Cavernous Angioma</i> by Jessica Bernatos, R.EEG T., AS			
2:00p.m. – 2:30p.m. <i>Participatory Action Research: A Qualitative Case Study of Leadership Styles</i> by Elizabeth Mullikin, R.EEG/EP T., CNIM, RDMS, MPA, MNM, MA, FACHE, FASET	1:45 p.m. – 2:30 p.m. <i>Radiology Safety- Dose of Healthy Caution Required</i> by Patty Warf, RN, CNIM, FASNM, FASET, MS	1:45 p.m. – 2:30 p.m. <i>Is That Your Junction or Are You Just Slow?</i> by Teresa Spiegelberg, R. EEG T., R.NCS.T., BS	1:45 p.m. – 2:30p.m. <i>Movement Disorders vs. Seizures</i> by Camilla Kilbane, M.D.
2:30 p.m. – 3:15 p.m. Poster Viewing/Break in the Exhibit Hall			
3:15 p.m. – 3:45 p.m. <i>Crowdsourcing to Enable Evaluation of EEG Reader Accuracy and Expert Annotation of Research EEG Data</i> by William Bosl, Ph.D.	3:15 p.m. – 4:00 p.m. <i>A Historical View of Neuroanesthesia</i> by Bobby Taskey, R. EEG T., CNIM	3:15 p.m. – 4:45 p.m. <i>Hands-on NCS Workshop</i> All Faculty	3:15 – 4:00 p.m. <i>Reflex Epilepsy</i> by Daniella Miller, M.D.
3:45 p.m. – 4:15p.m. <i>NAPA: A Task Force Cultivating Recognition for you</i> by Judy Ahn Ewing, R.EEG/EP T., CNIM, CLTM, FASET, BA	4:00 p.m. – 4:45 p.m. <i>SSEP: Knowing the Pathways and Recording Sites</i> by Faisal Jahangiri, M.D., CNIM, DABNM, FASNM		4:00 p.m. – 4:45 p.m. <i>It's a Bug's Life – Update on Infection Control in the EEG Lab</i> by Jitka Janecek, BSN, RN, R. EEG/EP T., CNIM, R.NCS.T., RPSGT
4:15 p.m. – 4:45p.m. <i>Developments in Credentialing and Accreditation</i> by Sabrina Faust, R.EEG/EP T., CNIM, CLTM			Sponsor: CONSOLIDATED NEURO SUPPLY
5:00 p.m. to 6:30 p.m. Sundown Seminars (ticketed event)			

SCHEDULE OF EVENTS — DAY THREE

8/18/2018

MEG & Autonomic Testing Mini-Courses	Advanced IONM	Pediatric Neurodiagnostics	Critical Care EEG
Course Director: Emily Kale, R. EP T., CNIM, BS	Course Director: Jeremy Bamford, CNIM, Ph.D.	Course Director: Patricia Trudeau, R. EEG T., CLTM, FASET	Course Director: Barbara Goode, R. EEG T.
8:00 a.m. – 9:00 a.m. Plenary Session: Kathleen Mears Memorial Lecture <i>How Can We Solidify the Future of Neurodiagnostic Technology?</i> by Cathy Boldery, R. EEG/EP T., RPSGT, CNIM, CCT, FASET			
9:05 a.m. – 10:00 a.m. <i>The Principles of MEG</i> by Susan Bowyer, Ph.D.	9:05 a.m. – 10:00 a.m. <i>Technique Review: D-wave Motor Evoked Potential Monitoring</i> by Kent Rice, CNIM, DABNM, MSc	9:05 a.m. – 10:00 a.m. <i>sEEG in Pediatrics With Case Studies</i> by Jun T. Park, M.D.	9:05 a.m. – 10:00 a.m. <i>Status Epilepticus in the ICU</i> by Eugene Ramsay, M.D.
10:00 a.m. – 10:20 a.m. Coffee Break			
10:20 – 11:15 a.m. <i>Meet MEG: How to Run a MEG Study</i> by Shawn Walls, MA, CMEG	10:20 a.m. – 11:15 a.m. <i>State of the Art Neuromonitoring for Thyroid Surgeries</i> by Emad Kandil, M.D., FACS, FACE, MBA	10:20 a.m. – 11:15 a.m. <i>Benign Pediatric Epilepsy: Characterization, Classification & EEG Features</i> by Amy Caccamo, R. EEG/EP T., CLTM	10:20 a.m. – 11:15 a.m. <i>Detection of Seizures in Ischemia</i> by Guadalupe Fernandez-Baca Vaca, M.D.
11:15 a.m. – 12:00 p.m. <i>How the Physician Utilizes MEG Results</i> by Michael Funke, M.D., Ph.D.	11:15 a.m. – 12:00 p.m. <i>Innervation of Cricothyroid Muscle by the RLN & Implications for IONM During Thyroidectomy</i> by Carly Kleynen, CNIM, BS	11:15 a.m. – 12:00 p.m. <i>Tuberous Sclerosis: Neurophysiological Assessment and Clinical Findings</i> by James Riviello, M.D.	11:15 a.m. – 12:00 p.m. <i>Case Presentations in the ICU with Video</i> by Fawad Khan, M.D.
12:00 p.m. - 1:00 p.m. Interest Section Luncheon			
1:00 p.m. – 1:45 p.m. <i>Anatomy and Disorders of the Autonomic Nervous System</i> by Paul LeLorier, M.D.	1:00 p.m. – 1:45 p.m. <i>The Fundamentals of Microelectrode Recording for Deep Brain Stimulation Surgery</i> by Robert Dallapiazza, M.D.	1:00 p.m. – 1:45 p.m. <i>Malignant Pediatric Epilepsies</i> by Jeremy Toler, M.D.	1:00 p.m. – 1:45 p.m. <i>Multi-modality Monitoring During Continuous Video EEG</i> by Stephan Schuele, M.D., MPH
1:45 p.m. – 2:30 p.m. <i>Autonomic Reflex Screening Techniques</i> by Jeff Goihl, R. EEG T., CAP	1:45 p.m. – 2:30 p.m. <i>Microelectrode Recordings from Novel Targets for Novel Conditions</i> by Jonathan Norton, Ph.D.	1:45 p.m. – 2:30 p.m. <i>Choosing Electrodes and Application Methods + Tips and Tricks for Pediatric Patients</i> by Crystal Keller, R. EEG T., CLTM, BA	1:45 – 2:30 p.m. <i>The Value of EEG in the ICU</i> by Uma Menon, M.D.
2:40 p.m. – 4:10 p.m. Plenary Session: 2018 ASET Symposium <i>Best Practices in Neurodiagnostics for Staffing, Productivity & Patient Safety</i> — Panel Discussion			
4:10 p.m. – 4:20 p.m. Closing Ceremony			

WE'LL BE LIVE TWEETING DURING THE CONFERENCE. Tweet along with us!

Use the hashtag #ASET2018 when posting on social media.

Then track the conversation online to see what others have to say.

PRE-CONFERENCE SESSION 1 >>



Epilepsy 911: An Educational Event for First Responders

Master of Ceremonies: Julie Trott, CNIM, MS

As a community service, ASET is hosting an afternoon of education about epilepsy for local Emergency Medical Service Providers and first responders. We recognize that we are all on the same team when it comes to the treatment of patients with epilepsy, and technologists often start an EEG recording soon after the patient arrives in the emergency room. Our goal is to build a relationship with those who offer pre-hospital care so that together we can improve patient outcome.

This course will include four contact hours on topics related to the emergency care of patients with epilepsy. The goal is to ensure that EMS providers will be able to rapidly recognize various seizure types, conduct a comprehensive initial assessment, and provide appropriate emergency management of seizures. This course will award 4 EMT CEUs and 4 ASET CEUs for technologists. There is a nominal additional registration fee of \$75 for technologists to attend this session.

When: Wednesday, August 15, 2018, 1:00 p.m. to 5:15 p.m.

Where: Hyatt Regency, 601 Loyola Ave., New Orleans, L.A.

PRE-CONFERENCE SESSION 2 >>



Committee on Accreditation for Education in Neurodiagnostic Technology (CoA-NDT)

Sponsored by: ASET | AAN | ACNS | ASNM

Leading an NDT Program with the 2017 Standards and Guidelines

This educator's workshop is focused on leadership characteristics and how leadership styles appear to factor in to program quality. The challenges of implementing new Standards in the NDT program will be explored using various leadership approaches.

Objectives:

1. Identify leadership styles encountered in Neurodiagnostic Technology program directors.
2. Discuss the impact of leadership style on program quality.
3. Explore leadership strategies that may be used when transitioning to a new set of accreditation standards and guidelines.

To register for this workshop, visit: <http://bit.ly/CoA-NDT2018>.

When: Wednesday, August 15, 2018, 1:00 p.m. to 5:15 p.m.

Where: Hyatt Regency, 601 Loyola Ave., New Orleans, L.A.



PLENARY SESSION SPEAKER

Thursday, August 16, 2018

Lewis Kull Memorial Keynote:

Cynthia Christie, CLM

Critical Thinking for the Health Care Team: Accelerated Skill Building

In our work in Neurodiagnostics we are often faced with a patient care situation that requires an urgent course of action and accurate communication with other members of the medical staff. It might be the loss of waveforms in an intraoperative neuromonitoring case, or a patient having a major seizure in the outpatient EEG lab. In such situations critical thinking skills are essential. We need to know when to initiate an alarm, how to describe the situation, and how to assist during the intervention. During this very interactive presentation, you will have an opportunity to observe the critical thinking process and improve the outcome of the decision-making steps through a simulation problem-solving exercise. The goal of the exercise is to build a skill: working with a team to make rapid, appropriate critical thinking decisions under pressure. Cynthia will explain her connection to Neurodiagnostics and share her motivational thoughts, and will conduct a simulation exercise. The audience will work in small teams, attempting to solve the problem in timed rounds with an analysis of the process between rounds to improve performance.

With a devotion to healthcare, Cynthia Christie has led teams from many hospital departments to improve the processes they use and improve the patient experience. She brings her passion for healthcare along with 20-plus years of experience in performance improvement. For over 10 years, her sessions have brought incredible inspiration and heart to health care workers. Raised by a surgeon and a nurse, she was immersed in healthcare in childhood watching her parents' devotion through compassionate patient centered care. Later in life Cynthia adopted a beloved child from Russia with special needs, and she shares these touching stories along with an exceptional 45-minute interactive series of exercises which enhance the habits of higher critical thinking in stressful environments. This Keynote address is sponsored in part by ABRET.



PLENARY SESSION SPEAKER

Friday, August 17, 2018

Ellen Grass Lecture

Dr. Aatif Hussain, M.D.

Clinical Neurophysiology in the Treatment of Diseases

Clinical neurophysiology has a long standing history and value in the diagnosis of neurologic diseases. Because of their unique ability to assess physiology and function of the nervous system, EEG, evoked potentials and (NCS/EMG) have long been used in the diagnostic evaluation of epilepsies, demyelinating disorders, neuromuscular disorders and other diseases. The role of these tests and clinical neurophysiology in general has usually ended upon diagnosis. New applications of these trusted techniques are changing old perceptions. Continuous EEG monitoring has found new value in not only diagnosis but in treatment of non-convulsive seizures and status epilepticus. VEPs have been shown to be a biomarker for assessment of demyelination and remyelination associated with treatment of multiple sclerosis. Various EMG techniques can be used to assess improvement or otherwise of many neuromuscular diseases. The use of these techniques in the treatment of various neurologic disorders is the next frontier for clinical neurophysiology. It is time that clinical neurophysiology transforms from neurodiagnostic to therapeutic.

Aatif M. Husain, M.D. is a professor of Neurology at Duke University Medical Center and director of the Neurodiagnostic Center of the Veterans Affairs Medical Center in Durham, N.C. He is also the director of the Evoked Potentials Laboratory at Duke University Medical Center. Dr. Husain attended medical school in Pakistan. After doing an Internship at Henry Ford Hospital in Detroit, MI, he completed Neurology residency at the Medical College of Pennsylvania in Philadelphia, PA. After residency, he did fellowships in Clinical Neurophysiology, Sleep Medicine and Neuromuscular Medicine at Duke University. His practice now involves neurophysiologic intraoperative monitoring, EEG, epilepsy, and sleep medicine. He is past president of the American Clinical Neurophysiology Society and the American Board of EEG and EP Technologists. He is currently the Editor-in-Chief of the Journal of Clinical Neurophysiology and the Treasurer of the International Federation of Clinical Neurophysiology. Dr. Husain has authored more than 100 articles and edited and written several books on Clinical Neurophysiology.



PLENARY SESSION SPEAKER

Saturday, August 18, 2018

Kathleen Mears Memorial Lecture:

**Cathy Boldery, R.EEG/EP T.,
RPSGT, CNIM, CCT, FASET**

How Can We Solidify the Future of Neurodiagnostic Technology?

The first R. EEG T. credential was awarded to Marion Menzel in 1964. Now, 53 years later there are less than 6500 registered technologists to serve 5534 hospitals in the United States allowing just one per facility. Will we survive? Lack of recognition, educational programs and the advancement of EEG technologists to higher ranks in our profession is leading to an impending personnel crisis. Other allied health professions are growing and gaining recognition through licensure as we fall behind. Networking is a means of survival and essential as we enter into the future. The theme of the ASET's 2018 Annual Conference is NOLA: Network, Organize, Learn with ASET. Though we come from various backgrounds, we must stand together and determine what is needed for the survival of our profession. Please attend this presentation which is dedicated to the memory of Kathleen Mears who was a mentor, educator and motivator to others throughout her career.

Cathy Boldery, CCT, R. EEG/EP T., CNIM, CLTM, RPSGT, FASET, President/CEO of Neurodiagnostic TEX has over 30 years of experience and has earned credentials in several areas of Neurodiagnostics. She received her training at the Indiana University School of Medicine and Duke University. She is a well-respected educator in her field, having provided many lectures, publications and volunteer research. She has served on many national boards and committees and held positions within local, regional, and national societies. Cathy developed the Ethics Program at Neurodiagnostic TEX, which received the Greater Dallas Business Ethics Award in 2007. She was inducted as an ASET Fellow for her service and contributions to the field. Currently she is president of the Texas Neurodiagnostic Society to support local education for technologists, and is actively working with a lobbyist towards licensure in the state.

SESSION DESCRIPTIONS

THURSDAY, AUGUST 16

Plenary Session: Lewis Kull Memorial

Keynote Address, *Critical Thinking for the Health Care Team:*

Accelerated Skill Building by Cynthia Christie, CLM

Sponsored by: ABRET

PLATFORM PRESENTATIONS

IONM During Hip Arthroscopic Repair Surgery — Kathryn Overzet, CNIM, MS

Arthroscopic hip surgery is routinely performed for treatment of various hip disorders. Leg traction during labral tear repair for hip stabilization can stretch the sciatic nerve. This may cause temporary or permanent sciatic nerve injury. This study illustrates the benefit of utilizing multimodality IONM during hip surgical procedures.

Examples of Technically Exquisite Monitoring of Motor Eloquent Cortex During Tumor Resections in Anesthetized Patients — Mitale Bose, CNIM

Mapping is often performed during the resection of tumors in motor eloquent cortex. However, relatively continuous monitoring via transcranial and direct electrical motor evoked potentials (TceMEPs, DceMEPs) is ideal for dysfunction detection and avoidance. The goal is to optimize the avoidance of false negatives while limiting false positives to guide clinical decision making to allow for maximal resection versus dysfunction avoidance. Motor evoked potential monitoring techniques can be optimized to exquisitely monitor the function of primary motor cortex.

Identifying the Best Stimulation Configuration to Use for Linked Quadripolar MEPs — Stephanie Schwartz, CNIM

Neurophysiologic intraoperative monitoring (NIOM) utilizes motor evoked potentials (MEP) to assess the corticospinal tract during surgery. In most patients, 200V or higher stimulation intensity is needed to elicit reliable MEP in the foot muscles. High stimulation intensity may result in more patient movement and adverse events such as tongue lacerations. This study is a continuation of the linked-quadripolar study that couples multiple electrodes over the scalp to assess which combination results in the most robust MEP response.

Intraoperative Airgap Occurrence after Gross-Portion Tumor Resection in Craniotomy Patient — Marcus Sherer, CNIM, BS

Airgaps that occur because of brain “sagging” during craniotomies can mimic serious iatrogenic SSEP changes, and result in waveform morphology aberrations as well. A fascinating case study will illustrate how the brain sagging into the resection cavity can alter the SSEP signal and, and the importance of an experienced IONM team that can discern such occurrences from significant events.

A Sailor’s Unseen Storm: A Glioblastoma Multiforme Case Study — Jessica Potter, BA

Glioblastoma Multiforme (GBM), also referred to as a grade IV astrocytoma, is a fast-growing type of central nervous system tumor that forms from the glial tissue of the brain and spinal cord. This case study will include the medical history, symptoms and initial workup for this patient, including EEG, MRI, and CT scan. The discussion will provide a perspective on the cancer as a whole, available treatment options, and why both pathological and physiological testing are essential in patient care. With a terminal diagnosis, patients deserve to have access to life sustaining treatment options and earlier detection testing.

Variability in Cleaning Reusable EEG Electrodes — Nancy Albert, Ph.D.

A study was performed to determine the efficacy of cleaning methods for reusable EEG electrodes. Of 124 reusable electroencephalography cup-electrodes/lead wires from four epilepsy monitoring units, 25% had bacterial growth. Positive culture prevalence could be based on cleaning practices. Disinfection time, cleaning time and drying time are some of the factors considered in this study.

The Utility and Safety of Monitoring Trapezius Muscle During ACDF is Questionable — Richard Vogel, Ph.D. CNIM, DABNM, FASNM, and Adam Doan, DC, CNIM, DABNM,

During anterior cervical spine surgery, it is common practice to monitor C3 and C4 nerve root motor function with EMG electrodes placed in the upper trapezius muscle (TM). The utility of monitoring these nerve roots remains unknown. We examined 1100 patients undergoing ACDF surgery over a 6-month period and analyzed clinical outcomes, with EMG, MEP or both. None of the patients in the study had postoperative TM weakness. In a separate study, we analyzed all needle stick injury (NSI) data for all surgical procedure types practice-wide. Given the low prevalence of postoperative TM weakness, coupled with the increased risk of NSI and increased cost

associated with monitoring motor data recorded from this muscle, we recommend eliminating the routine use of TM monitoring during procedures where an anterior approach is taken to the extradural cervical spine.

Landmark Spinal Muscle Atrophy Study in Pediatric Patients & Nerve Conduction Monitoring — Margo Gadsden, R.EEG T.

In the past, patients with Spinal Muscular Atrophy Type I would be unable to lift a finger or arm and would not be able to manipulate a computer apparatus. In addition, this genetic neuromuscular disorder is often associated with shortened life expectancy, respirator dependence and complete immobility. The only approved treatment is Spinraza TM. Nerve Conduction Studies and Electrical Impedance Myography are done to evaluate the improvement after treatment and improved outcome is anticipated.

Incidence of IONM Data Changes Due to Patient Positioning in 4577 Surgeries — Kathryn Overzet, CNIM, MS

Patient positioning during various types of surgeries may cause stretching, compression or ischemia of peripheral nerves. SSEPs and TceMEPs can be beneficial for identifying positioning issues. Repositioning the limb can prevent nerve damage. This study reviews 4577 surgeries performed with IONM and identified 142 patients with data changes related to positioning. We conclude that multimodality IONM is a protective tool that can detect positioning injuries and indicate the need for repositioning to prevent neuropathy.

Motor Evoked Potential (TceMEP) Recordings from Urethral Sphincter Muscles (USMEP) — Faisal Jahangiri, M.D., CNIM, DABNM, FASNM

Bowel and bladder function are at risk during tumor resection of the conus, cauda equina and nerve roots. This study demonstrates the ability to acquire MEPs from the urethral sphincter muscles (USMEP) by utilizing a urethral catheter with an electrode attached. A retrospective multimodality IONM data analysis from six intradural tumors and one laminectomy for stenosis procedure was performed. The patients consisted of three females and four males, with median age of 50 years. A catheter with urethral electrodes attached was used for recording MEPs and s-EMG from external urethral sphincters. USMEP were obtained in all seven patients. The reliability of TceMEP from the EAS was variable across all patients. In this small series, we were able to acquire MEP in 100% of patients when recorded from the urethral sphincters, concluding that USMEPs can be attempted in surgeries which put the function of the pelvic floor at risk.

Epilepsy in the Aging Population — *Nikesh Ardeshta, M.D.*

It is predicted that in the future, the largest segment of the population who will develop seizures will be the elderly. Many medical conditions that occur as we grow older, also include an increased risk of seizures. However, seizures may go unrecognized and undiagnosed as they may be mistaken for symptoms related to memory impairment or confusion, movement disorders, or dizziness. We will see more of these patients in the EEG lab and admitted for long term monitoring. Special considerations must be included when working with the elderly to diagnosis and treat seizures: the risk for falls and safety precautions, hearing and visual deficits, and awareness of possible additional side effects from anti-epileptic medications prescribed in addition to others that may be in use. Dr. Ardeshta will also discuss sorting out EEG findings related to seizures vs. other abnormalities related to aging.

ROSA the Robot: Computer Assisted Epilepsy Surgery —

Cheryl Plummer, R. EEG T., CLTM, FASET, BS

Cheryl works at the University of Pittsburgh Medical Center, one of the first institutions in the country to use ROSA (Robotized Surgical Assistant) technology to perform epilepsy surgery. This device makes it possible to resect brain tissue with extreme precision. Computer components of the robot create 3-D maps of the patient's brain to help guide the path of the surgery. ROSA's robotic arm, equipped with the finest of surgical instruments can then perform procedures with refined precision, from placing depth electrodes to excision of brain tissue. She will explain what it is like to work with ROSA and include some case studies.

The Advanced LTM Analyst: ACNS Guidelines — *Amanda*

Ritchey, R. EEG T., CNIM, CLTM, B.S.

In the field of neurophysiology, we are experiencing tremendous growth in the need for our services with continuous bedside monitoring of EEG being conducted in the Epilepsy Monitoring Unit, at the bedside and in the ICU. These prolonged recording sessions generate a vast amount of data that must be sorted through and reviewed multiple times per day in order to ensure that significant changes are addressed promptly. The interpreting physicians need the assistance of highly skilled technologists to manage the data, to review raw files and edit data so that the most pertinent portions of the recording are immediately available for interpretation. This has led to the development of an advanced practice category, the

"Technologist Reader/Data Analyst". ABRET is preparing an advanced certification exam in this area and ACNS has addressed this skill set within their guidelines.

You Make the Call – Interactive LTM Case Studies — *Kirsten*

Yelvington, R. EEG T., CLTM

This promises to be a lively review and discussion of LTM case studies. The audience will become the team of attending physicians that must decide how to handle each work-up in the epilepsy monitoring unit. You will make the call, based on details of each case study. Who should have an invasive workup? Who should go on to epilepsy surgery? What area of the brain would you resect? What reasons would you give the patient for not going on to surgery? Kirsten manages the LTM lab at Mayo Clinic in Jacksonville, FL and will use real case studies for this presentation.

New Approach to the Epilepsy Monitoring Unit — *Erik Padilla,*

R. EEG/EP T., CNIM, CLTM, MBA

Eric is the Director of Neurodiagnostics and Neurology at the Lurie Children's Hospital in Chicago and he manages the Epilepsy and Sleep Centers there. Eric has initiated measures to improve efficiency and cost savings for the Epilepsy Monitoring Unit and EEG services. One program he has implemented allows for an HL7 (Health Level Seven) interface between the hospital's medical record system and their video EEG equipment. This makes it possible to streamline the process from ordering, scheduling, technologist work, and physician reporting functions. He has also moved his Epilepsy Center from solely in-patient to 80% out patient monitoring, representing a significant cost savings for the diagnostic process.

International League Against Epilepsy: Seizure Classification & Treatments — *Evan Sandok, M.D.*

The International League Against Epilepsy recently published new seizure classifications with updates to categories and definitions of seizure types. Dr. Sandok will provide an overview of the new classifications, and discuss the latest treatments for these seizure types as well as help us differentiate between seizure types with examples and case studies. Dr. Sandok has a busy practice as an epileptologist at the Marshfield Clinic and promises to share an interesting collection of seizure types.

Critical Communications in Medicine: Finding Your Professional Voice — *David Scoville, R. EEG T., CNIM*

David is a neurodiagnostic practitioner with a unique insight into our ability to speak and communicate effectively, as he has had professional voice training. He will share his very creative and artistic view of how we communicate. The bottom line is that you cannot mumble when you need to explain waveforms to a physician or describe a patient's seizure! This presentation will be uplifting and will also provide informative tips on how to say what you mean, choose the right words and get the idea across!

Neuroinformatics and the Emerging Role of Neurodiagnostics in Integrated Neurological and Mental Healthcare —

William Bosl, Ph.D.

Mental, neurological, and neurodevelopmental disorders account for nearly one-quarter of global disease morbidity, more than any other class of disorders. Evidence continues to mount that many symptoms that characterize mental disorders are the late manifestations of much earlier impairments in neural processing and neurodevelopment. This suggests that early detection of atypical brain development through routine monitoring may open a window for preventive intervention that does not currently exist. Dr. Bosl will discuss the future of EEG as a tool for early detection of autism spectrum disorders using digital biomarkers derived from EEG measurements. He will explore a possible new role for neurodiagnostic technologists in an integrated care setting, with particular focus on early detection and monitoring of brain (including mental) disorders.

EEG Quality Assurance Methods for Neurodiagnostics —

Zachary Cantor, R. EEG T.

Quality Assurance in the Neurodiagnostic Department has become more important than ever to ensure a high standard of care, and compliance with Joint Commission requirements. Everyone who is involved in the work of the lab must be involved in the quality assurance process to make it successful. A Neurodiagnostic specific quality assurance program is challenging to design. Zachary is a lab manager at Duke University, and he has been working with quality assurance projects that are specific to Neurodiagnostics. He will explain his methods and measurements with you, so that you can implement similar programs in your lab.

TRENDS IN NEURODIAGNOSTICS

Responsive Neurostimulation — Saurabh Sinha, M.D.

The Responsive Neurostimulation device, once implanted in the brain of a patient with seizures, monitors the brain activity and can detect the onset of seizure activity and responds to that activity by generating electrical pulses to abort a clinical seizure. This device promises to change the lives of patients who have not had seizures well controlled with medication. Dr. Sinha will describe the function of the device, and the implantation process, and will explain the programming and follow-up required to ensure that it is working properly. The technologist can play a role in this advanced treatment, from implantation to follow-up visits.

Trans-Cranial Doppler Theory and Technique — Heather Nicoletto, R.VT

Transcranial Doppler is a diagnostic tool that is increasingly performed by neurodiagnostic technologists, most often during intraoperative neuromonitoring or in the ICU. Expand your skill set and learn about TCD! Heather has many years' experience performing TCDs at Duke University and has written several articles on the topic for the ASET Journal in the past. She will review the anatomy of the blood supply to the brain and explain the theory and techniques essential to Trans-Cranial Doppler imaging.

Hands-On TCD Workshop — Heather Nicoletto, R.VT

During this workshop there will be TCD equipment available for participants to use to learn the basics of trans-cranial doppler, and an opportunity to try some of the studies most commonly associated with Neurodiagnostics.

EVOKED POTENTIALS

Clinical Evoked Potentials: How We Use Them Today — Jeffrey Nicholl, M.D.

Evoked Potentials have been used as a diagnostic tool for decades, but utilization of these studies changed with the emergence of advanced imaging technology. However, they still have a place in the clinical setting and can be used to assess the neurological function of specific nerve pathways. This presentation will provide an overview of the current value of clinical evoked potentials.

Visual Evoked Potentials: It's All About the Checks and Flashes

— Cynthia Gregg, R.EEG/EP T., CNIM

This presentation will include a review of the structure and function visual pathway and the basics of recording VEPs: recording parameters, stimulator setting options and how to change settings to obtain optimal waveforms.

Brainstem Auditory Evoked Potentials: Pathway, Technique and Findings — Mark Ryland AuD, R. EP T., RPSGT, R. NCS T., CNCT, FASET

Mark is everyone's favorite Doctor of Audiology, and he will share his expertise in the most dynamic discussion about the structures of the ear and brainstem, and the theory behind recording auditory evoked potentials. He will include an overview of typical waveforms and abnormal findings.

Nuts & Bolts of SSEPs: Indications, Recording, Troubleshooting

— Clare Gale R. EEG/EP T., CNIM, FASNIM, FASET, BS

Clare has a talent for making concepts easy to understand. Her presentation will start with an overview of the anatomy and function of the somatosensory pathway. She will include an explanation of the recommended instrument setting and stimulation parameters. Her toolkit will include examples of waveforms, expected latencies and abnormal findings.

Hands-On Evoked Potential Workshop — All Faculty

There will be three work stations, one for each Evoked Potential modality. Workshop participants may spend as much time as they wish at each station, practicing the hands-on skills of recording BAEPs, VEPS and SSEPs, with the guidance of the course faculty.

SESSION DESCRIPTIONS

FRIDAY, AUGUST 17

Plenary Session: Ellen Grass Memorial Lecture

Clinical Neurophysiology in the Treatment of Diseases
by Aatif M. Husain, M.D., FACNS

PLATFORM PRESENTATIONS

The Golden Key to Justifying More Staff in Your Department

— Ryan Lau, R.EEG/EP T., CNIM, CLTM, MS

Justifying additional staff in this new world of healthcare reform has become increasingly challenging with general reductions in reimbursements from private insurance, government, and state entities to healthcare systems. These revenue stream changes require more critical thought and evidence to validate added staffing for your departments. An effective way to justify supplemental staff is to calculate a relief factor (RF) in a full-time equivalent (FTE) number. For general purposes, 1.0 FTE equals 40 hours of productive work in a week. RF can be calculated by compiling all departmental leave hours from staff that includes paid and unpaid leave from work. The RF calculation cannot guarantee your ability to justify additional staff in your department, however it will absolutely give you further hard evidence to your FTE justifications to executive leadership in your institution.

Responsive Neurostimulator gives HOPE — Marcia Hawthorne, R. EEG T., CAP

The NeuroPace™ Responsive Neurostimulator is a surgically implanted device for patients with intractable focal onset epilepsy. This device is FDA approved for patients 18 years of age or older with an average of 3 seizures per month. This case presents a pediatric patient, 14-years old at time of implantation with improvement in her seizure frequency. In 2016, patient was able to have RNS implanted. Since then patient has gone from daily seizures to approximately four per month. This procedure improved her seizure frequency dramatically.

Artifact Unique to the Neuplace™RNS system

— Mallory Schmidt, R.EEG T., BS

Surgically implantable devices are used to manage conditions such as Epilepsy and Parkinson's disease. Awareness of the newest implantable technology and its impact on the recording EEG is essential to clinicians. We identified and described artifacts appearing in postoperative EEGs and cEEGs of patients with Neuplace™RNS systems. Preoperative and postoperative EEGs and cEEGs of epileptic patients with Neuplace™RNS were reviewed for the presence of artifacts we believed to be unique to the device. A literature survey yielded no published articles discussing said artifacts. We reviewed data from six patients whose EEGs provided previously unseen electrographical occurrences when compared to preoperative

records. Technical information from each patient's RNS record was evaluated alongside recorded EEG data. Our findings demonstrated the presence of electrographical artifacts uniquely generated by the Neuropace™RNS system.

Case Presentation: Tools of the Trade to Seizure Freedom, One Man's Journey

— *Stephanie Jordan, R.EEG/EP T., CNIM, CLTM*
An outpatient had an EEG for possible discontinuation of levetiracetam after seizure freedom since epilepsy surgery. This case study highlights the tools of our trade used in Neurodiagnostics. In 2010 the patient was admitted to the epilepsy monitoring unit to confirm the suspected location of seizure onset and for ictal SPECT injection. He had a prior partial resection of a right frontal ependymoma with radiation and chemotherapy. His tumor was not growing but seizures were increasingly difficult to treat. Video EEG and ictal SPECT findings and other components of the pre-surgical work-up will be discussed, with the outcome that the decision was made to forego intracranial monitoring proceeding to resective surgery with cortical mapping to preserve primary motor tracks.

EMU Ictal SPECT Admission Model for Increased Injection Efficiency and SPECT-ocular Savings!

— *Brian Galdis, R.EEG T., CLTM, BS*
Ictal SPECT is a vital procedure in the pre-surgical work-up for patients with focal epilepsies which guides the epilepsy and neurosurgical team to increased precision in localization of the epileptogenic zone. In 2014 our Level IV adult Epilepsy Monitoring Unit installed an auto-injector to aid in localization efforts with ictal SPECT. Being of great importance for intractable epileptic patients seeking seizure freedom, the process to accomplish a high-quality injection is not without significant financial cost. Daily preparation and use of the radioisotope, Technetium-99m (Tc-99m), costs our facility \$1507.92 per kit. On non-injectable days, this cost is unable to be recuperated. By adjusting the admission structure injection efficiency can be raised. With raising health care costs, operating under Lean principles is imperative for any EMU.

Utilization of Intraoperative Electrocorticography during Epilepsy surgery for Cavernous Angioma

— *Jessica Bernatos, R. EEG T., AS*
Cavernous angiomas are vascular malformations of the brain associated with a high incidence of seizures. Surgery is performed when antiepileptic drugs (AEDs) fail to control seizures. The role of intraoperative electrocorticography (ECoG) in improving functional outcome in such patients has not been clearly established. A case

presentation will demonstrate that in patients with cavernous angiomas undergoing surgery for pharmacoresistant epilepsy, intraoperative ECoG is useful to identify additional epileptogenic areas, guide the extent of surgical resection and improve the functional outcome.

Participatory Action Research: A Qualitative Case Study of Leadership Styles

— *Elizabeth Mullikin, R.EEG/EP T., CNIM, FACHE, FASET, MPA, MNM, MA*

Service lines have been widely adopted in the health care industry. They are characterized by a horizontal management structure with matrix leadership within a collection of services. Service line leadership is commonly defined by management functions, skill sets and business competencies. Service line management styles are unknown. This participatory research action project investigates new, emerging leadership styles. Neurodiagnostic Technologists have an opportunity to participate in this study as the primary stakeholder group.

Crowdsourcing to Enable Evaluation of EEG Reader Accuracy and Expert Annotation of Research EEG Data

— *William Bosl, Ph.D.*

Crowdsourcing has become an increasingly interesting area of research in medicine in an effort to decrease the cost of labeling data and to increase the speed of labeling. The accurate annotation of training data is the cornerstone of any automatic algorithm development. Consequently, it is even more important to quantify the accuracy and expertise of annotators. A web-based tool, connected to a research database of EEG records, was implemented to enable crowdbased annotation of EEG data using ACNS standardized terminologies. Annotators can use this system for training while simultaneously annotating a research dataset. While a reader annotates data, the system keeps track of reader accuracy using embedded EEGs that already have 'gold standard' annotations attached. The combination of training, estimating individual accuracy, and production of annotated research data will provide the neurophysiology and neurodiagnostics community with a tool that serves all members on a variety of levels.

NAPA: A Task Force Cultivating Recognition for you

— *Judy Ahn Ewing, R.EEG/EP T., CNIM, CLTM, FASET, BA*

The ASET Neurodiagnostic Awareness and Patient Advocacy Task Force was created to build awareness about the need for professional competence as it relates to patient safety by developing goals and

strategies that will publicize the need for qualified, credentialed and licensed technologists. Judy will explain the projects this task force is conducting to inform patient advocacy groups, hospital administrators, risk managers, HR personnel, and the Joint Commission. Messaging will focus on the potential risks related to patient safety, quality and medico-legal aspects of performing neurodiagnostic procedures. She will discuss future plans to work with organizations such as the Epilepsy Foundation to further stress the importance of professional competence as demonstrated by professional credentials, national standards of practice, and, ultimately, state licensure.

Developments in Credentialing and Accreditation

— *Sabrina Faust, R.EEG/EP T., CNIM, CLTM*

ABRET Neurodiagnostic Credentialing & Accreditation has a 50 year history of credentialing in neurodiagnostics. This presentation will highlight recent developments and announce some future projects. ABRET offers five credentials, R. EEG T.®, R. EP T.®, CNIM®, CLTM®, CAP®, and a new certificate program, CMEG. Laboratories wanting to demonstrate their high standards and for competency in neurodiagnostics, accreditation programs are available, LAB-EEG, LAB-NIOM, and LAB-LTM.

This presentation will cover:

- future microcredentials
- eligibility requirements
- ABRET's Self-Assessment Program
- protection of ABRET-credentialed technologists
- updates in lab accreditation
- recertification
- digital badges

ABRET continues to seek ways to improve the credentialing process and to encourage excellence in neurodiagnostics.

IONM FOUNDATIONAL TOPICS

Spinal Cord Vasculature

— *Leo Happel, Ph.D.*

An in-depth understanding of the vasculature system of the spinal cord is essential for anyone involved in intraoperative neuromonitoring during spinal cord surgery. Dr. Happel is a professor emeritus of Louisiana State University, where he taught neuroscience for many years. He has many years' experience with monitoring for neurosurgical procedures at LSU Medical Center. He will be an expert guide during this tour of the blood supply to the spinal cord, and will share his insight into the risk for injury during surgery.

IONM FOUNDATIONAL TOPICS

Mysteries and Misconceptions in IONM — *David Allison, Ph.D.*
While the foundations of Intra-operative neuro-monitoring include a measurable scientific basis, there is always room for conjecture. Things are not always as they seem under the surgical drapes! This intriguing presentation will provide some insight into the enigmas we occasionally face during surgical cases and will help us dispel myths held by technologists, and the surgical team, so we can all start our cases with reasonable expectations.

Transforming Resistance to Acceptance of Neuromonitoring in the OR — *Richard Vogel, CNIM, DABNM, Ph.D.*

Everyone who ever walked into an O.R. to prepare a patient for intra-operative neuromonitoring has occasionally experienced a negative reception and unwillingness to cooperate from members of the surgical team. In some institutional cultures, surgeries that should be monitored are not, because the value of IONM is not understood. Dr. Vogel is an expert communicator and a patient advocate and he will share his ideas for promoting the worth of IONM and creating a positive perspective that will increase respect for the work we do.

Radiology Safety- Dose of Healthy Caution Required — *Patty Warf, RN, CNIM, FASNM, FASET, MS*

Radiology is an essential component of most surgical procedures. It is so common that we often forget that everyone in the O.R. is at risk for exposure to radiation, and we neglect to take appropriate precautions. This helpful presentation is essential for those who spend time in the O.R., and will include tips to avoid exposure and safeguard against the risks involved. Patty has many years' experience in Intra-operative Neuro-Monitoring and promotes safe practice for health care workers.

A Historical View of Neuroanesthesia — *Bobby Taskey, R.EEG T., CNIM*

Bobby is a veteran IONM specialist who has devoted his professional life to this role. He has first-hand experience in working with various trends in anesthesia and has managed to monitor waveforms through it all! He will discuss the relationship between anesthesia and neuromonitoring over the years and the development of improvements which allow us to keep waveforms stable throughout the IONM process.

SSEP in the O.R.: Knowing the Pathways and Recording Sites — *Faisal Jahangiri, M.D., CNIM, DABNM, FASNM*

Somatosensory Evoked Potentials remain the standard modality for use during IONM for surgery of the spine. An in-depth understanding of the anatomy of the peripheral and central nerve pathways is essential. In many cases, alternate stimulation sites must be used when recording SSEPs during intraoperative neuromonitoring. With Dr. Jahangiri's help, you will be able to map the essential pathways and determine which stimulation and recording sites will be ideal for each case.

NERVE CONDUCTION STUDIES

The Value of NCS through Case Studies — *Anthony Chiodo, M.D.*

Dr. Chiodo come to us from the University of Michigan in Ann Arbor where he specializes in spinal cord injury and electrodiagnostic medicine. He will share a variety of his favorite Nerve Conduction Case Studies to illustrate the use of NCS to diagnose the diverse array of neurological disorders and injuries.

Common Mononeuropathies, CTS and so much more!

— *James Lewis R. NCS T., CNCT*

Many individual nerves are susceptible to injury and therefore, mononeuropathies are frequently in the differential diagnosis for patients referred to the EMG lab for Nerve Conduction Studies. Jim will review all of the most common nerve injuries and the best NCS techniques to diagnosis the problem. Jim is a professional educator in the field of NCS and a favorite speaker at our NCS courses.

Uncommon Nerve Conduction Studies — *Brian Markley, R. EEG/EP T., R. NCS. T., FASET*

This presentation will cover the opposite of the common studies, those Nerve Conduction Studies that are uncommonly seen in the EMG lab such as the blink reflex study, and NCS of the lateral cutaneous nerve. After participating in this session, you will be prepared when that uncommon case comes through the door!

Is That Your junction or Are You Just Slow?

— *Teresa Spiegelberg, R.EEG T., R. NCS. T., BS*

Nerve conduction studies of the neuromuscular junction are a key component of the medical work-up for disorders such as myasthenia gravis. Various immune mediated diseases, toxic and metabolic conditions and congenital syndromes are also considered to be

neuromuscular junction disorders. The NCS study most commonly used in these cases is repetitive nerve stimulation. Teresa will explain this technique and discuss findings seen in these most interesting NCS studies.

Hands-On NCS Workshop — *All Faculty*

Three workstations will be provided, with expert instructors serving as your guides and facilitators. You will have the opportunity to watch demonstrations, practice skills and ask for technical tips during the hands-on NCS workshop. Bring all your questions and problem cases!

EEG & CLINICAL CORRELATIONS

Name That Pattern: Interactive EEG Review Session

— *Nikesh Ardeshta, M.D.*

Dr. Ardeshta's interactive presentations are always crowd-pleasers! He has a way of getting the entire audience involved! He will be sharing some of his favorite EEG samples for you to analyze and determine the abnormalities and artifacts and clinical correlations. This will be the most fun you have ever had learning pattern recognition.

Non-Convulsive Seizures — *Vishwanath Sagi, M.D.*

A significant percentage of seizures are not motor events. These seizures can be misdiagnosed easily if a seizure disorder is not considered in the differential diagnosis. Nonconvulsive seizures can be psychic, somatosensory, or autonomic in their clinical presentation and have the potential to generalize into convulsive events. It is estimated that 25% of all cases of status epilepticus are nonconvulsive, with altered mental status being the primary clinical manifestation. The EEG is the essential tool for the assessment of non-convulsive seizures.

EEG Down the Rabbit Hole — *Edward Mader, M.D.*

Dr. Mader will bring his witty sense of humor to this discussion about the strange things you might see on an EEG that are challenging to explain. He will focus on the concept of a "physiologic field" as it is used to help us distinguish artifacts from cortical potentials. He will define "physiologic field" and demonstrate how we can identify artifacts and cortical potentials using this concept. Then he'll take us "down the rabbit hole" and include situations when this rule of thumb fails. As Alice said: "It gets curiouser and curiouser!"

Movement Disorders vs. Seizures — Camilla Kilbane, M.D.

Dr. Kilbane specializes in the treatment of movement disorders at University Hospital in Cleveland. She is an Associate Professor at Case Western Reserve University. She works with Parkinson's, disease functional movement disorders and deep brain stimulation. She will demonstrate how movement disorders may resemble seizures. Since patients are often referred for EEGs as part of the work-up, it is important for technologists to be aware of this connection and help to clarify the diagnosis.

Reflex Epilepsy — Daniella Miller, M.D.

Reflex epilepsy is, perhaps, the most fascinating seizure disorder. The patient's seizures are provoked by a specific stimulus. A great variety of stimuli have been documented in the medical literature over the years. There are cases of "reading" epilepsy, epilepsy provoked by music or a specific sound, or by doing specific motor tasks. It can be challenging to diagnose this seizure disorder. Dr. Miller's presentation will include an overview of the variety of provoking stimuli, the seizure semiology, and case studies.

It's a Bug's Life – Update on Infection Control in the EEG Lab

— Jitka Janecek, BSN, RN, R.EEG/EP T., CNIM, R. NCS. T., RPSGT
Jitka works with students at the Cuyahoga Community College Neurodiagnostic Program and is passionate about infection control standards in the clinical lab setting. She will discuss the importance of proper disinfection techniques for electrodes, equipment, and supplies. She will include tips for how to comply with the Joint Commission recommendations for infection control, and the concern for new antibiotic resistant bacteria. She has developed a cost comparison tool to assess the options for using disposable electrodes vs. sterilizing reusable electrodes.

SPONSORED BY: CONSOLIDATED NEURO SUPPLY

SESSION DESCRIPTIONS **SATURDAY, AUGUST 18**

Plenary Session: Kathleen Mears Memorial Lecture

How Can We Solidify the Future of Neurodiagnostic Technology?
by Cathy Boldery, R. EEG/EP T., RPSGT, CNIM, CCT, FASET

MINI-COURSE: MAGNETOENCEPHALOGRAPHY

The Principles of MEG — Susan Bowyer, Ph.D.

MEG is emerging as a valuable component of the comprehensive epilepsy work-up. MEG provides accurate functional neuro-imaging. Dr. Bowyer will explain how the MEG system works and how it can be used as part of the pre-surgical evaluation of epilepsy patients.

Meet MEG: How to Run a MEG Study — Shawn Walls, CMEG

Shawn is one of the most experienced MEG technologists in the country, and one of the first to pass the advanced practice CMEG credentialing exam. He conducts MEG studies at the University of Pittsburgh Medical Center. He will discuss the technologist's role in the recording of the MEG study, and share his insights into this career path.

How the Physician Utilizes MEG Results — Michael Funke, M.D.

Dr. Funke is the Director of the MEG Center at the University of Texas, in Houston. He will explain how the MEG test results are used in the clinical setting and will share some case studies to illustrate the usefulness of this specialized imaging process in the comprehensive pre-surgical epilepsy work-up.

MINI-COURSE: AUTONOMIC TESTING

Anatomy and Disorders of the Autonomic Nervous System

— Paul Le Lorier, M.D.

This is a very interesting diagnostic specialty that is increasingly recognized in neurodiagnostics. The symptoms patients report are often overlooked or not properly diagnosed as autonomic nervous system disorders. Dr. Le Lorier will start things off with an introduction to the anatomy and function of the autonomic system and the disease states that cause disturbances of this essential function. ABRET now offers a certification exam in autonomic testing and this lecture and the next will provide helpful information for those who plan to take this exam, and CEUs for those with the CAP credential.

Autonomic Reflex Screening Techniques — Jeff Gohl, R.EEG T., CAP

Jeff works in the autonomic testing center at the Mayo Clinic in Rochester, MN, one of the busiest autonomic labs in the country. He will explain the diagnostic tests done in the autonomic lab and how these diagnostic studies provide insight into the underlying disorders. While some technologists may be familiar with the tilt table test done with EEG monitoring, there are a variety of other tests, such as the sweat test that are used to diagnose autonomic nervous system dysfunction.

ADVANCED IONM

Technique Review: D-wave Motor Evoked Potential Monitoring

— Kent Rice, MSc, DABNM

D-waves are recorded during Intraoperative neuromonitoring using MEPs, with epidural electrodes placed on the dorsomedial surface of the spinal cord, as a result of direct activation of motor fibers in the brain. This is a less common IONM technique due to the invasive nature of the procedure, but has great value. This presentation will include a review of recording techniques, expected waveforms and interpretation of results.

State of the Art Neuromonitoring for Thyroid Surgeries

— Emad Kandil, M.D., MBA

Intraoperative neuromonitoring during thyroid surgery is done to reduce the risk of vocal cord injury by rapidly identifying the recurrent laryngeal nerve and can predict nerve variation in individual cases. Unique recording techniques must be employed and there are a variety of recording electrodes available. Dr. Kandil is Chief of Endocrine and Oncological Surgery at Tulane University and will share his wealth of experience incorporating IONM during thyroid surgeries.

Innervation of Cricothyroid Muscle By the RLN & Implications for IOM During Thyroidectomy — Carly Kleynen, CNIM, BS

This timely discussion will complement the previous presentation about IONM during thyroidectomy surgery. Carly has monitored many of these cases, and can map the innervation of the cricothyroid muscle, which is a key skill for successful monitoring. She will explain the significance of IONM for these cases and describe the use of needle electrodes in place of electrodes placed on the endotracheal tube, a more cost effective method.

The Fundamentals of Microelectrode Recording for Deep Brain Stimulation Surgery — Robert Dallapiazza, M.D.

Microelectrode recording is used to precisely identify the surgical site targeted for implantation of the deep brain stimulator electrodes. This recording technique allows the surgeon to hear and visualize neuronal activity to identify key structures. Dr. Dallapiazza is a neurosurgeon who specializes in DBS procedures and he is the author of scholarly articles on Deep Brain Stimulation. He will explain the features of the microelectrode and the recording techniques used to assist in the accurate placement of the DBS electrodes.

ADVANCED IONM

Microelectrode Recordings from Novel Targets for Novel Conditions — *Honathan Norton, Ph.D.*

Dr. Norton is an assistant professor in the Division of Neurosurgery for the University of Saskatchewan, Canada. He is also actively involved in Intra-operative Neuro-monitoring and has many opportunities to work with innovative and state-of the art surgical procedures. Since the first Deep Brain Stimulators were implanted to treat Parkinson's Disease, additional uses for DBS have been discovered. During this fascinating discussion, you will hear about unique and novel uses for microelectrode recordings during neurosurgery.

PEDIATRIC NEURODIAGNOSTICS

Stereo EEG in Pediatrics with Case Studies — *Jun Park, M.D*

Stereo EEG is the latest technology available, used to precisely implant depth electrodes in the brain to record the EEG as part of the work-up for epilepsy surgery, to locate epileptic foci in deeper brain structures. He will include case studies to illustrate the effectiveness of this new surgical technique. Dr. Park is affiliated with the University Hospital and Rainbow Babies and Children's Hospital in Cleveland, OH.

Benign Pediatric Epilepsy: Characterization, Classification & EEG Features — *Amy Caccamo, R. EEG/EP T, CLTM*

While the parents of a child with a benign epilepsy diagnosis might argue that no seizure disorder is "benign", the epilepsies that fall in this category typically resolve later in childhood and do not lead to more severe forms of epilepsy. Amy will provide an overview of the pediatric epilepsies that are considered benign, with clinical correlations and EEG examples.

Tuberous Sclerosis: Neurophysiological Assessment and Clinical Findings — *James Riviello, M.D.*

Tuberous Sclerosis is a genetic disorder usually diagnosed soon after birth. Although tumors can arise on the skin and in many internal organs, when tumors occur in the brain, the child is likely to face a lifetime of neurological complications, including seizures. There is a spectrum of severity, from barely noticeable to intractable seizures and significant behavioral and cognitive changes. Dr. Riviello's presentation will provide an insight into the treatment of these patients and the testing they must undergo, from routine EEG assessment to LTM admissions to multiple epilepsy surgeries.

Malignant Pediatric Epilepsies — *Jeremy Toler, M.D.*

This category of epilepsies are extremely challenging to treat, include intractable seizures, often more than one seizure type, and may include complications that lead to a shortened life span. Dr. Toler is an epileptologist at the Children's Hospital of New Orleans, and he will share his expertise in the diagnosis and treatment of children with diagnosis malignant epilepsy. He will include EEG findings and clinical correlations.

Choosing Electrodes and Application Methods + Tips and Tricks for Pediatric Patients — *Crystal Keller, R.EEG T., CLTM, BA*

Crystal works at Duke University Medical Center, with all age groups, and has extensive experience working with pediatric patients. She is passionate about avoiding skin injury related to electrode placement. She will discuss the choice of electrodes for children and infants and pros and cons of application techniques, head wrap options and tips for how to avoid skin breakdown.

CRITICAL CARE EEG

Status Epilepticus in the ICU — *Eugene Ramsay, M.D.*

Status epilepticus is a life-threatening medical emergency which leads to an ICU admission, and patients in the ICU may be at high risk for status epilepticus due to serious medical conditions or traumatic brain injury. Patients in a medically induced coma may go into status epilepticus, but without movement or presence of clinical signs the only way to determine if the patient is in status is through the use of continuous EEG. EEG monitoring is also used to assess efficacy of treatment and has prognostic value. This presentation will include the features of status epilepticus, examples of ICU monitoring and treatment based on EEG findings.

Detection of Seizures in Ischemia

— *Guadalupe Fernandez-Baca Vaca, M.D.*

Insufficient blood flow to the brain, and subsequent loss of oxygen causes damage and may provoke seizures. Monitoring of the EEG is a key component in detecting the seizures which may be sub-clinical. Dr. Fernandez Baca-Vaca is an epileptologist at the University Hospital in Cleveland and has been involved in the assessment of many ICU cases involving ischemia and seizures. She will demonstrate the value of continuous EEG monitoring for this diagnosis and will include some case studies to illustrate how the EEG detects seizures that would otherwise go untreated.

Case Presentations in the ICU with Video — *Fawad Khan, M.D.*

Video is an invaluable tool when recording continuous EEG in the ICU, especially when there are periods of time when technologists are unable to be present to observe the patient and make notations. Artifacts may occur, related to things going on around the bedside that are easily identified with the help of the video. Everyone loves case presentations, and Dr. Khan will share his most interesting ICU case studies, proving just how essential video monitoring is!

Multi-modality Monitoring During Continuous Video EEG

— *Stephen Schuele, M.D.*

There are times when EEG monitoring alone does not provide the full picture of the patient's neurological condition. Multi-modality monitoring of the critically ill patient may be advantageous. Dr. Schuele will discuss which modalities are helpful and how the additional information can be integrated to provide adequate data and aid in the course of treatment.

The Value of EEG in the ICU — *Uma Menon, M.D.*

This presentation will serve as the capstone for the critical care ICU course by validating the role of EEG in ICU. Dr. Menon will provide statistics on the improved patient outcome with EEG monitoring, recount common diagnosis for which monitoring is helpful, and top off with case studies showing EEG findings with clinical correlations.

SYMPOSIUM: Best Practices in Neurodiagnostics for Staffing, Productivity & Patient Safety — *Stephen Schule, M.D., Susan Agostini, R.EEG/EP T, CLTM, FASET Sheryl Nehamkin, R. EEG/EP T, CNIM, CLTM, FASET, Connie Kubiak, R. EEG/EP T., CNIM, CLTM, FASET*

ASET receives many requests for information about standards and best practices on a number of topics, including: technologist to patient staffing ratios, reasonable expectations for the number of procedures a technologist can complete in a work day, and how to ensure patient safety by adequately staffing a neurodiagnostic service. As of date there have been no industry standards identified and there is no single-solution, especially when each institution serves a different patient population and has different staffing models. Our panel of experts represent different areas of the practice to provide a variety of perspectives, from medical director of neurodiagnostic services, to intraoperative services and epilepsy monitoring services, to a traveler who has worked in many clinical neurodiagnostic labs. Together we will discuss viable options for setting such standards to ensure patient safety.



SUNDOWN SEMINARS

Friday, August 17 | 5:00 p.m. - 6:30 p.m.

(separate registration fee of \$30 required to attend)

Trending Workshop for EEG in the LTM & ICU — *Mark Scheuer, M.D., Chief Medical Officer of Persyst*

Participants will be given access to trending software for hands-on practice during this workshop. For an ideal learning experience, please bring your laptop or tablet to this session. You may use either PCs or Macs, or Apple or android tablets. If using a PC, please make sure that the new Microsoft Edge browser or Chrome browser is running to download the app that will be used during the workshop. This workshop will provide an overview of the theory and application of trending software. Following the orientation to the process, you will work directly with the software to practice manipulating data and quantifying spike and seizure detection.

EEG Instrumentation Concepts Workshop — *Elizabeth Boufannie, R. EEG T., CNIM, MS*
This workshop is ideal for anyone who needs to brush up on EEG waveform measurement, determining polarity of waveforms and the use of filters. This will be an interactive session where you will work through exercises to practice skills. Exam candidates and technologists who are new to the field will benefit from attending this workshop.

Building Your Professional Image — *Tabitha Althoff, R. EEG T., RPSGT, RST, BS*
This workshop will help you develop an impressive professional image that will improve your chances of obtaining the promotions you desire! Would you like to be prepared when an opportunity comes up to apply for an advanced position in your workplace, or explore new career opportunities? This will be an interactive session. You are encouraged to bring items from your professional portfolio to help you build a first-rate resume. The facilitator will provide an opportunity to practice interview skills and create an outstanding impression.

{FREE SESSION} Open Forum for Educators

Facilitator: Marjorie Tucker, R. EEG/EP T., CNIM, R. NCS. T., CLTM, Chair of the Program Director's Council

This is a free event and all neurodiagnostic educators are invited to attend, including those who are interested in starting a new program, clinical site instructors and adjunct faculty. This is a very informal session, with brief presentations by ABRET, the CoA-NDT and ASET, followed by open discussion and the opportunity to network with others involved in education.

POSTER SESSIONS>>

ASET poster sessions visually present information on a variety of topics - from an original study or research, to evaluation of a method, device or protocol, to offering a report on an uncommon clinical case. Poster authors will be on hand to discuss their findings or data with attendees in an informal venue.

Whole Head High Density EEG Provides EEG Technologists New Techniques for Higher Definition Analysis of Brain Activity — Tara Gilbert, MS

Decreased Incidence of Skin Breakdown During Ambulatory EEG Monitoring — Christine Blodgett, R.EEG/EP T., CLTM, FASET, MA

Comparison of TcMEPs of Foot Recording Montages — Ricardo Bravo, REPT, CNIM, Laurence McKinley, MD, Peter Karzmark, Ph.D., Jaime Lopez, M.D.

Implementation of ASET Skin Safety Guidelines by the Lehigh Valley Health Network Committee Improves Extended EEG Related Skin Breakdown — Jo Ann Coryell, R.EEG T., CNIM, Alexis Gerber, R.EEG T., Sameh Morkous, M.D. FAAN

Sunflower Syndrome, Drawn to the Light — Christine Eber, R.EEG T., CLTM

How EEG Monitoring can Increase Survivability in Neonates with Hypoxic Ischemic Encephalopathy — Jason Haan, R.EEG T.

The Value of CEEG in Diagnosing Cardiac Related Non-Epileptic Events — Jill Mackey, R.EEG T., CLTM, RPSGT

Effects on Routine EEG when Deep Brain Stimulators are Turned On — Jennifer Mashni, AS

Psychogenic Nonepileptic Seizures in Children — Ameeta Grover, R. EEG T.

Brain-eating Amoeba (Naegleria Fowleri): A Case Study — Svetlana Nix, R. EEG T.; Rhonda Butler R. EEG T.

Scalp EEG vs. SEEG for Diagnosing Seizure Onset — Tatum Seldomridge, R. EEG T., CLTM

A Patient Fall Monitor Incompatible with EEG Recording — Daniel Sweeney, R. EEG/EP T., CNIM, CLTM

Normal EEG Variants — Metin Uvanik, NDT student, Hasan H. Sonmezturk, M.D.

MRI Compatible and Standard EEG Leads – Kathleen Aniciete

Improving Quality of Video EEG Monitoring and Reducing Costs for Patients — Eric Padilla, R. EEG/EP T., CNIM, CLTM, MBA

Use of Auto-injector for SPECT Scans — Lisa Rhodes, R.EEG/EP T., CLTM

The Utility of Remote Monitoring and the Changing Landscape of Ambulatory EEG: A Case Study — Jason Gray, R. EEG T., BA

Rendering Intracranial Leads in Three Dimensional Space with Curry Software — James P. Lowe, R. EEG/EP T., CNIM, CLTM, BS

Stop by the Exhibit Hall on Thursday and Friday to view posters.



EXHIBIT HALL

STOP BY BETWEEN THESE HOURS:

THURSDAY, AUGUST 16

10:00 a.m. - 6:30 p.m.

FRIDAY, AUGUST 17

10:00 a.m. - 3:15 p.m.

Here's a partial listing of companies you can expect to see:

ABRET Neurodiagnostic Credentialing & Accreditation
Ad-Tech Medical Instrument Corporation
Ambu, Inc.
AMC Rochester Medical
American Society of Neurophysiological Monitoring
Aureus Medical Group
BJC HealthCare
Cadwell Laboratories, Inc.
Consolidated Neuro Supply, Inc.
CortiCare, Inc.
Ives EEG Solutions, Inc.
Max Neuro Supply
Mobile MedTek
KEGO
Knowledge Plus, Inc.
Lifelines Neurodiagnostic Systems, Inc.

National Neuromonitoring Services, LLC
Natus Neurology
NeuromonitoringTechnologies, Inc.
NMA
PMT Corporation
Procirca
RhythmLink International
SafePassage
Signal Gear
Speciality Care
Taylor & Francis
Trusted Neurodiagnostics Academy
UCSF Health
US Monitoring, LLC
VA Epilepsy Centers of Excellence
Weaver and Company

NETWORKING & SPECIAL ACTIVITIES

CONFERENCE MOBILE APP

To enhance your conference experience we are again providing a mobile conference app, which can be downloaded onto your smartphone or tablet. The conference app will give you access to all of the information you'll need to make the most of the ASET 2018 annual conference right at your fingertips! Information on how to download the app will be distributed to pre-registered attendees before the conference, once the app becomes available.

ASET FOUNDATION SILENT AUCTION

Preparations are now underway for the ASET Foundation Silent Auction. Items for the silent auction will be on display in the Exhibit Hall. Bidding will be open Thursday morning and continue during the Exhibit Hall hours. The silent auction will close - and all funds will be collected - during the last 20-minutes of the final afternoon break in the Exhibit Hall on Friday.

The Foundation's silent auction is its largest annual fundraising event and your help and generosity is needed to make this event successful. Please consider donating one or more items for the auction. Popular items in the past have included electronics (iPods, digital cameras, pocket camcorders, wireless reading devices), jewelry, and gift baskets. To make a donation, download the donation form (www.asetfoundation.org/downloads) and return to the Foundation no later than July 16, 2018.

ANNUAL BUSINESS MEETING LUNCHEON

Thursday, August 16 | 12:00 p.m. - 1:30 p.m.

The Annual Business Meeting Luncheon is an important event not to be missed. This is your opportunity to hear about the state of affairs of ASET and to bring up any new business for the Society. The annual reports of the ASET President, the Secretary-Treasurer, and ASET Foundation Chair will be

presented. The installation of newly elected officers and trustees to the ASET board will also take place. All conference attendees are invited to attend as the event is included in the full conference registration, as well as the Thursday-only registration. However, only ASET members in good standing with the Society and attending the meeting constitute the voting body.

EXHIBIT HALL WELCOME RECEPTION

Stop by the Exhibit Hall on Thursday, August 16, between 5:15 p.m. and 6:30 p.m. as we give you a warm welcome to ASET's 59th Annual Conference! The reception offers attendees an opportunity to meet new friends and old acquaintances as well as the chance to explore the Exhibit Hall in a relaxed and casual atmosphere. Take a minute to visit with leading companies in the industry and inquire about new products and services. The Exhibit Hall reception is included with a full 3-day registration and guest passes.

AWARDS CEREMONY LUNCHEON

Friday, August 17 | 11:45 a.m. - 1:00 p.m.

Join us to recognize your peers for their outstanding contributions to the Neurodiagnostic community. Induction to the 2018 Class of Fellows will take place and the 2018 graduating class of the ASET/ABRET Leadership Academy will also be honored. All conference attendees are invited to attend. This event is included in the full conference registration as well as the Friday-only registration.

LAST CALL WITH THE DENDRITES

Friday, August 19 | 8:30 p.m. - 10:00 p.m.

After dinner and before you retire for the night, join us for an evening of networking and entertainment. Bring your dancing shoes as live music will be provided by ASET's very own member band, *The Dendrites*.

SUNDOWN SEMINARS

Friday, August 17 | 5:00 p.m. - 6:30 p.m.

The Sundown Seminars are designed to promote customized learning experience in an informal setting. There is a separate registration fee of \$30 for the workshops with the exception of the Open Forum for Educators, which is a free event. We encourage you to register in advance, but will accept registrations on-site at a first-come, first-serve basis. A listing of the seminars is provided on pg. 14.

INTEREST SECTION LUNCHEON

Saturday, August 18 | 12:00 p.m. - 1:00 p.m.

The ASET Interest Section Briefings in our quarterly publication, *ASET News* and the Interest Section Forums on ASET.org are both great resources for ASET Members to engage in a discussion about the latest in Neurodiagnostics. ASET's Interest Sections are led by highly qualified and knowledgeable technologists who can help address your issues and questions as well as direct you to other invaluable resources. During this luncheon you will have the opportunity to ask questions in person. Simply pick a table representing the section that peaks your interest, then ask questions or share your feedback or suggestions. Separate registration is not required.

ANNUAL CONFERENCE T-SHIRTS

ASET has teamed up with Neurovative Diagnostics this year to provide all conference attendees with a complimentary 2018 Annual Conference t-shirt. Please choose your desired size when registering! The t-shirts are 100% pre-shrunk cotton with the 2018 Annual Conference logo on the front. Your registration must be received by July 6, 2018 to ensure that you receive your t-shirt.

CONFIRMATION NOTICE

Registrations are normally processed within seven business days of receipt. A confirmation letter will be emailed once the registration has been processed. Please bring a copy of your registration confirmation with you to the pre-registration booth.

REGISTRATION DESK

Registration will be open during the following hours:

Wednesday, August 15..... 6:00 p.m. - 8:00 p.m.
Thursday, August 16 7:00 a.m. - 6:00 p.m.
Friday, August 17..... 7:00 a.m. - 5:00 p.m.
Saturday, August 18 7:30 a.m. - 2:00 p.m.

REGISTRATION POLICIES

- To register, payment must accompany your registration form. No registrations will be processed without payment.
- The full meeting registration fee includes a flash drive containing the course handouts, attendance and tickets to the plenary session lectures, course learning labs, Exhibit Hall reception, and food functions Thursday through Saturday.
- Registration fees for one or two-day attendance includes a flash drive containing the course handouts, admittance to plenary session lectures and courses for the day registered, and applicable meals.
- Guest meal package includes admittance to the Exhibit Hall reception and lunch, Thursday through Saturday.
- Only those individuals who are registered and have an unaltered badge may attend ASET events.
- Additional fees apply for the Sundown Seminars; refer to the meeting registration form for additional details.
- Attendees who lose their badge may be subject to a replacement fee.

CANCELLATION POLICIES

- All cancellations must be made in writing and must be mailed, faxed or emailed to the ASET Executive Office.
- Written notice of cancellation received by ASET on or before July 13, 2018, will result in a refund of fees paid less a \$50 processing fee. There will be no refunds for cancellations received after July 13, 2018.

RECOMMENDED ATTIRE

Business casual attire is strongly encouraged. Please dress comfortably to create the best learning environment. The August average daily high in New Orleans is 90 degrees. Temperatures at night average around 73 degrees. Please note, the meeting rooms may be cooler than expected. We suggest dressing in layers and bring a light jacket or sweater to keep you comfortable.

SPECIAL ASSISTANCE NEEDS

If you require special assistance or dietary consideration, please complete the applicable section on the conference registration form, or call the ASET Executive Office at 816.931.1120, ext 102 or email info@aset.org.

CONTINUING EDUCATION CREDITS

ASET continuing education units will be awarded to participants. Approximately 7.5 ASET-CEUs will be awarded for Thursday, 7.5 credits for Friday and 6.5 for Saturday. The Sundown Seminars will be awarded an additional 1.5 credits. You can earn up to 23 ASET-CEUs during this conference. Such crediting, however, should not be construed by program participants as an endorsement of any type of instruments or supplies mentioned or involved in the presentations.

HOTEL & LODGING

The Hyatt Regency New Orleans is our conference hotel, located at 601 Loyola Avenue, New Orleans, Louisiana 70113.

Located right next door to the Mercedes-Benz Superdome, Smoothie King Center and Champions Square, Hyatt Regency New Orleans offers easy access to the area's most popular attractions. Hop on the Loyola Avenue Streetcar, or take a walk to the historic French Quarter, Arts District, Audubon Aquarium of the Americas and the scenic Mississippi Riverfront.

ASET members can reserve a single or double occupancy room at the rate of **\$155/night plus tax**. The hotel reservation deadline is July 17, 2018. Complimentary wireless internet is available in the guest and meeting rooms, so bring your mobile and/or tablet devices and plan on engaging in an interactive conference experience. Rooms may be reserved online at neworleans.regency.hyatt.com, or by calling (504) 561 - 1234.

TRANSPORTATION

The closest airport to our conference hotel is the Louis Armstrong New Orleans International Airport (MSY), about 22 minutes away. Airport Shuttle, Inc. (ASI) is the official ground transportation provider for the airport. ASET has arranged a group discount of \$40 round trip per person with ASI. To book your reservation, visit ASET.org/travel. Taxi services are available as well as ride sharing services, such as Uber and Lyft. For those driving to the conference or renting a car, valet parking is available at \$40/day. Self-parking is available in nearby lots. Once you arrive to the hotel, public transportation is available to the city's most popular attractions via the Loyola-UPT Streetcar Line, which passes approximately every 20 minutes across from the hotel. The cost to ride streetcars in New Orleans is \$1.25. 1-Day and 3-Day unlimited ride Jazzy Passes are also an option for \$3 and \$9.



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IMPORTANT DATES

Early Bird Registration Deadline	July 6
Registration Cancellation Deadline	July 13
Silent Auction Donation Forms Due	July 16
Hotel Reservation Deadline	July 17
Course Handouts Available Online	August 8
Advanced Registration Deadline	August 14



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