AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY

FEBRUARY 5–9, 2020

2020 Annual Meeting & Courses

New Orleans, Louisiana

Final Program

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WELCOME TO THE 2020 ACNS ANNUAL MEETING & COURSES

Dear Colleagues,

On behalf of the American Clinical Neurophysiology Society (ACNS) Council, we are thrilled to welcome you to the 2020 Annual Meeting & Courses in historic New Orleans, Louisiana.

The ACNS Annual Meeting & Courses are designed to provide a review of the fundamentals as well as the latest scientific advances in central and peripheral neurophysiology.

The Program Committee is pleased to present an impressive selection of sessions for delegates to attend throughout the weekend. There was an outstanding set of session proposals submitted for consideration this year and we are confident that the program content will provide an exciting educational opportunity for all in attendance. This year, the Annual Courses include more sessions throughout the meeting and expanded offerings in peripheral neurophysiology. Also, the courses are organized along tracks that should minimize conflicts for most attendees.

Following the success of previous year's Joint International Symposia, we are pleased to again include sessions co-organized by our colleagues outside the United States. We are honored to welcome representatives from the Brazilian Society of Clinical Neurophysiology, the British Society of Clinical Neurophysiology, the Mexican Society of Clinical Neurophysiology, the Canadian Society of Clinical Neurophysiology, the Spanish Society of Clinical Neurophysiology and the Austrian Society of Clinical Neurophysiology. We look forward to the opportunity to learn from and collaborate with our international colleagues.

In addition to the scientific sessions, there will be opportunities for educational entertainment and networking. See page 18 for a complete list of these events.

Overall, the 2020 Annual Meeting & Courses will provide an opportunity for education, networking, and interaction with the latest technologies across the fields of clinical neurophysiology. We wish everyone in attendance an enjoyable week in New Orleans!

Sincerely,

Frank W. Drislane, MD, FACNS
Course Committee Co-Chair

Courtney J. Wusthoff, MD, FACNS
Course Committee Co-Chair

Leslie Lee, MD, FACNS
Program Committee Co-Chair

Nicholas S. Abend, MD, MSCE, FACNS
Program Committee Co-Chair

ACNS INFORMATION

ACNS Officers and Council

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Mission Health

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Northwestern University

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Brigham & Women's Hospital

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Mayo Clinic

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Medical University of South Carolina

Tammy Tsuchida, MS, PhD, FACNS
Children's National

Courtney J. Wusthoff, MD, FACNS
Stanford University

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Marc R. Nuwer, MD, PhD, FACNS
University of California Los Angeles

Journal Editor
Aatif M. Husain, MD, FACNS
Duke University Medical Center

About the American Clinical Neurophysiology Society (ACNS)

Founded in 1946 and originally named the American Electroencephalographic Society (AEEGS), ACNS is the major professional organization in the United States devoted to the establishment and maintenance of standards of professional excellence in clinical neurophysiology in the practice of neurology, neurosurgery and psychiatry. ACNS members utilize neurophysiology techniques in the diagnosis and management of patients with disorders of the nervous system and in research examining the function of the nervous system in health and disease.

ACNS' mission is to serve patients and society by empowering members to advance the science, practice and profession of clinical neurophysiology. This mission serves to fulfill the vision to optimize neurologic health through understanding of nervous system function.

Past Presidents

1947 *Herbert H. Jasper, MD, PhD
1948 *Herbert H. Jasper, MD, PhD
1949 *Frederic A. Gibbs, MD
1950 *Hallowell Davis, MD
1951 *Robert Schwab, MD
1952 *James O'Leary, MD
1953 *Robert B. Aird, MD
1954 *Mary A.B. Brazier, DSc
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1956 *Reginald G. Bickford, MD
1957 *John R. Knott, PhD
1958 *Robert S. Dow, MD
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1963 *Cosimo Ajmone-Marsan, MD
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1965 *Donald B. Lindsley, PhD
1966 *David D. Daly, MD
1967 Kenneth A. Kooi, MD
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2002 Bruce J. Fisch, MD, FACNS
2003 Charles M. Epstein, MD, FACNS
2004 Donald L. Schomer, MD, FACNS
2005 Ronald G. Emerson, MD, FACNS
2006 Richard P. Brenner, MD, FACNS
2007 Mark A. Ross, MD, FACNS
2008 Alan D. Legatt, MD, PhD, FACNS
2009 Gareth J. Parry, MD, FACNS
2010 Peter W. Kaplan, MB, FRCP, FACNS
2011 Douglas R. Nordli, Jr., MD, FACNS
2012 Susan T. Herman, MD, FACNS
2013 Frank W. Drislane, MD, FACNS
2014 Aatif M. Husain, MD, FACNS
2015 William O. Tatum, IV, DO, FACNS
2016 Jonathan C. Edwards, MD, MBA, FACNS
2017 Aatif M. Husain, MD, FACNS
2018 Stephan U. Schuele, MD, MPH, FACNS
2019 Tobias Loddenkemper, MD, FACNS

** Deceased*

ANNUAL MEETING AND COURSES PLANNING COMMITTEES

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Co-Chairs:
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Jong Woo Lee, MD, PhD, FACNS

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Frank W. Drislane, MD, FACNS
Susan T. Herman, MD, FACNS
Leslie Lee, MD, FACNS
Courtney J. Wusthoff, MD, FACNS

Course Committee

Co-Chairs:
Frank W. Drislane, MD, FACNS
Courtney J. Wusthoff, MD, FACNS

Members:
Elizabeth Gerard, MD, FACNS
Hiba A. Haider, MD, FACNS
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William O. Tatum, DO, FACNS
Gregory Worrell, MD

Ex-Officio:
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Meriem Bensalem-Owen, MD, FACNS
Leslie Lee, MD, FACNS
Jong Woo Lee, MD, PhD, FACNS

Program Committee

Co-Chairs:
Nicholas S. Abend, MD, MSCE, FACNS
Leslie Lee, MD, FACNS

Council Liaison:
Saurabh R. Sinha, MD, PhD, FACNS

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M. Brandon Westover, MD, PhD, FACNS
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Ex-Officio:
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Jong Woo Lee, MD, PhD, FACNS
Courtney J. Wusthoff, MD, FACNS

GENERAL MEETING INFORMATION

Business Meeting

The ACNS Annual Business Meeting will be held in Salon 4 & 5, from 5:30-6:00pm on Saturday, February 8, 2020. This meeting is open to all attendees, but only ACNS Members may vote.

Internet

Wireless internet access is available to Annual Meeting & Courses delegates throughout the meeting space. To access the internet, use the following network credentials:
Network: ACNS2020, Password: ACNS2020

Wireless internet supported in the form of an unrestricted educational grant from Persyst Development Corporation.

Poster Sessions

Authors will be present between 7:30–9:00pm on Friday, February 8 and 12:30–2:00pm on Saturday, February 9 for discussion. Poster abstracts and presentation dates can be found in the Poster Abstract Supplement included in registration materials.

Publication of Abstracts

Speaker abstracts and poster abstracts will be published in the *Journal of Clinical Neurophysiology*.

ACNS Meeting Policies

The American Clinical Neurophysiology Society (ACNS) is committed to providing a safe, productive, and welcoming environment for all meeting participants and ACNS/EDI staff. All participants, including, but not limited to, attendees, speakers, volunteers, exhibitors, ACNS/EDI staff, service providers, and others are expected to abide by this Meeting Safety & Responsibility Policy. This Policy applies to all ACNS meeting-related events, including those sponsored by organizations other than ACNS but held in conjunction with ACNS events, in public or private facilities.

Responsible Drinking

At most ACNS networking events both alcoholic and non-alcoholic beverages are served. ACNS expects participants at our events to drink responsibly. ACNS and Meeting host event staff have the right to deny service to participants for any reason, and may require a participant to leave the event.

Personal Safety and Security

ACNS works diligently to provide a safe and secure environment at its meetings and events by working with venue staff to make sure meeting participants are safe. We ask that all attendees report any questionable or concerning activity to ACNS/EDI staff so that they can take immediate action. No concern is too small, if you see something, say something.

- Be aware of your surroundings at all times.
- Use the buddy system when walking to and from the event venue, networking event locations during early or late hours.
- Don't wear your meeting badge on the street. Take it off as soon as you leave the building/venue.
- Don't carry a lot of cash or credit cards. Leave these items in your hotel room safe.
- Don't leave personal property unattended anywhere, anytime.

If it is an emergency or if you need immediate assistance, you should ask any ACNS/EDI staff member or the on-site security personnel to help you.

Unacceptable Behavior

- Harassment, intimidation, or discrimination in any form.
- Physical or verbal abuse of any attendee, speaker, volunteer, exhibitor, ACNS/EDI staff member, service provider, or other meeting guest.
- Examples of unacceptable behavior include, but are not limited to, verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, national origin, inappropriate use of nudity and/or sexual images in public spaces or in presentations, or threatening or stalking any attendee, speaker, volunteer, exhibitor, ACNS/EDI staff member, service provider, or other meeting guest.
- Disruption of presentations at sessions, in the exhibit hall, or at other events organized by ACNS at the meeting venue, hotels, or other ACNS-contracted facilities.

ACNS has zero-tolerance for any form of discrimination or harassment, including but not limited to sexual harassment by participants or our staff at our meetings. If you experience harassment or hear of any incidents of unacceptable behavior, ACNS asks that you inform the ACNS President or ACNS Executive Director Megan M. Hille, CMP, CAE (mhille@acns.org) so that we can take the appropriate action.

ACNS reserves the right to take any action deemed necessary and appropriate, including immediate removal from the meeting without warning or refund, in response to any incident of unacceptable behavior, and ACNS reserves the right to prohibit attendance at any future meeting.

Smoking Policy

Smoking is not permitted during any Annual Meeting & Courses activity or event.

Cell Phone Protocol

Please ensure that cell phone ringers, pagers and electronic devices are silenced or turned off during all sessions.

Photography and Recording Policy

Photography or video or audio recording of sessions, materials presented in session, or exhibits without written permission from ACNS is strictly prohibited. Please note that photographs and video taken by or on behalf of ACNS of event activities and attendees shall be property of ACNS.

Speaker Ready Room

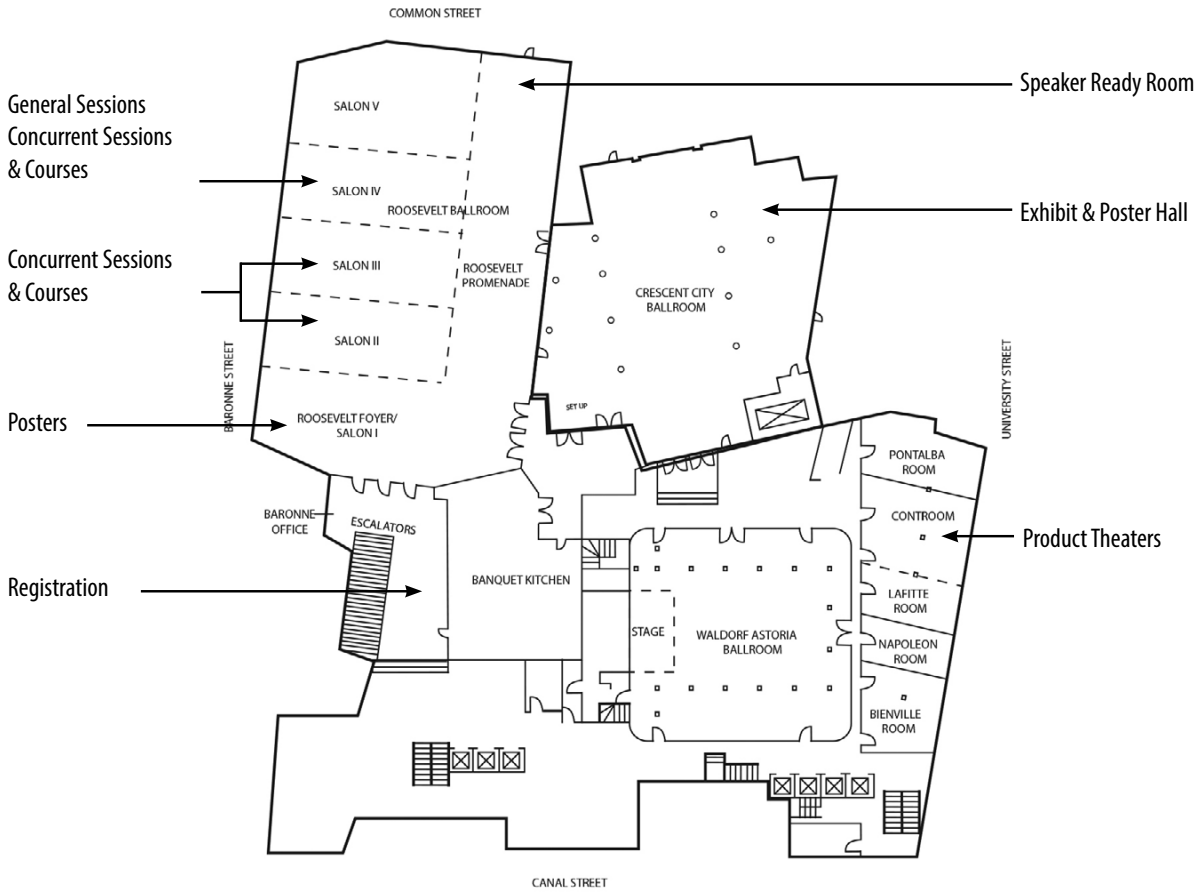
Location: Crescent City Ballroom

Presenters must upload their PowerPoint presentations in the Speaker Ready Room. Any changes must be uploaded 24 hours prior to your presentation. Presentations may not be uploaded in individual rooms. Since all presentations are pre-loaded, speakers are not permitted to use personal laptops during presentation.

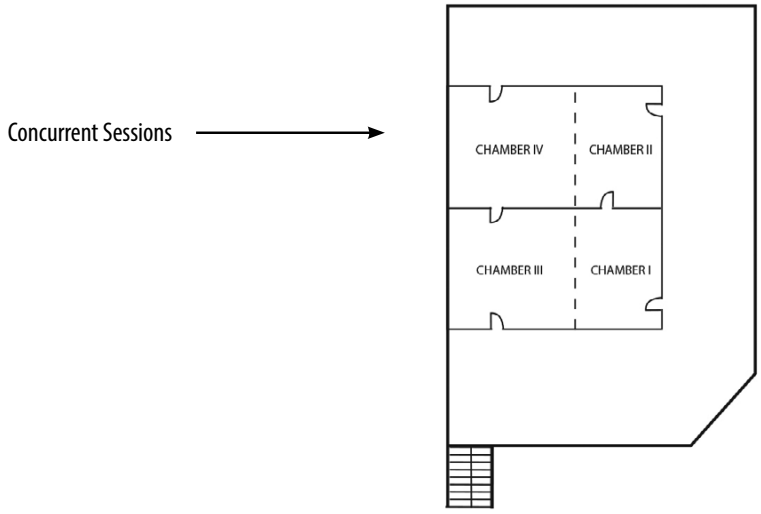
Tuesday, February 4	4:00 – 6:00pm
Wednesday, February 5	8:00am – 5:00pm
Thursday, February 6	6:00am – 5:00pm
Friday, February 7	6:00am – 5:00pm
Saturday, February 8	7:00am – 5:00pm
Sunday, February 9	7:30 – 10:00am

THE ROOSEVELT HOTEL FLOORPLANS

Mezzanine Level



Mayor Suite Level



NEARBY RESTAURANTS

Fast-Casual Options

AMERICAN

Starbucks
700 Canal Street
504.524.9582

Jimmy J's Cafe
115 Chartres Street
504.309.9360

Café Beignet-Royal
334 Royal Street
504.524.5530

Crescent City Pizza Works
407 Bourbon Street
504.569.3664

SOUTHERN & CAJUN

Killer PoBoys
219 Dauphine Street
504.462.2731

ASIAN

Poke-Chan
2809 St. Claude Avenue
504.571.5446

Fine Dining Options

CAJUN & CREOLE

M Bistro
The Ritz Carlton New Orleans
921 Canal Street
504.524.1331

Gallier's Restaurant and Oyster Bar
129 Carondelet Street
504.267.5672

Restaurant August
301 Tchoupitoulas Street
504.299.9777

Broussard's
819 Rue Conti
504.581.3866

Bourbon House
144 Bourbon Street
504.522.0111

Toups South
1504 Oretha Castle Haley Blvd.
504. 304. 2147

Galatoire's Restaurant
209 Bourbon Street
504.525.2021

AMERICAN

Bywater American Bistro
2900 Chartres Street
504.605.3827

Domenica
The Roosevelt New Orleans
123 Baronne St
504.648.6020

SoBou
W New Orleans
310 Chartres Street
504.552.4095

Green Goddess
307 Exchange Place
504.301.3347

STEAKHOUSE

Desi Vega's Steakhouse
628 St. Charles Avenue
504.523.7600

Chophouse New Orleans
322 Magazine St.
504.522.7902

ITALIAN

Marcello's New Orleans
715 St. Charles Avenue
504.581.6333

Irene's
529 Bienville Street
504.529.8811

Avo
5908 Magazine Street
504.509.6550

LATIN AMERICAN

NOLA Cantina
437 Esplanade Ave
504. 266. 2848

Espíritu – Mezcaleria and Cocina
520 Capdeville Street
504. 267. 4975

Palm&Pine
308 N. Rampart St.
504.814.6200

Get the #ACNS2020 App!

Download the **"ACNS Events"** app from the Apple App Store or Google Play Store.

Search for **"ACNS 2020"** or find the event icon and click to open the app. Follow the login instructions provided in the email sent by the ACNS Executive Office to begin using the app.

As long as you have an internet connection, you can access the app through your **laptop** via this link:

https://tinyurl.com/ACNS2020

***Download before you go!** On-Site WiFi service can affect the functionality of the app.

2020 Annual Meeting & Courses | *New Orleans, Louisiana* FEBRUARY 5-9, 2020

support@eventscribe.com | 410.638.9239

CONTINUING MEDICAL EDUCATION (CME) INFORMATION

Educational Mission Statement

Purpose

The American Clinical Neurophysiology Society (ACNS) is a professional association dedicated to fostering excellence in clinical neurophysiology and furthering the understanding of central and peripheral nervous system function in health and disease through education, research, and the provision of a forum for discussion and interaction.

Content

ACNS is committed to providing continuing medical education to its members and others interested in clinical neurophysiology. Educational objectives include 1) Reviewing current knowledge of clinical neurophysiology including: electroencephalography, evoked potentials, electromyography, nerve conduction studies, intraoperative monitoring, polysomnography and other sleep technology, quantitative neurophysiological methods, magnetoencephalography, sleep disorders, epilepsy, neuromuscular disorders, brain stimulation, brain-computer interfacing, and related areas; and 2) Informing course and meeting attendees of recent technological developments and their implications for clinical practice.

Target Audience

The Society's educational activities are directed to clinical neurophysiologists, neurologists, psychiatrists, physiatrists, neurosurgeons, trainees in these disciplines and other physicians and researchers who utilize clinical neurophysiological techniques and knowledge in the diagnosis and management of patients with disorders of the nervous system.

Expected Result

Attendees will improve competence in clinical neurophysiology procedures and incorporate new technological advancements into their practice.

Gaps and Needs

In compliance with the Updated Accreditation Criteria of the Accreditation Council for Continuing Medical Education (ACCME), the Continuing Medical Education Committee of the ACNS has identified "professional practice gaps." Definition: A "professional practice gap" is the difference between what a health professional is doing or accomplishing compared to what is achievable on the basis of current professional knowledge.

The following professional practice gaps and educational needs were identified by a combined effort of the Program, Course and CME Committees.

Gap 1. Emerging Areas of Practice

Several emerging areas of clinical neurophysiology have significant practice gaps in which the opportunities for training and mentoring fall short of the need for experienced and trained neurologists. Intraoperative monitoring, intensive care unit EEG monitoring ,Video and Quantitative EEG and invasive evaluation for epilepsy surgery with Stereo EEG are growing areas of clinical neurophysiology with few practicing neurologists having adequate training in these techniques. Adult and pediatric physicians as well as neurodiagnostic technologists with competence in these areas are in great demand. Without additional specialized training, neurologists will not be competent to conduct these types of monitoring.

Gap 2. General Practice of Clinical Neurophysiology

Clinical neurophysiology procedures are performed by a large proportion of practicing US neurologists, many of whom have little or no formal training in clinical neurophysiology. Many clinical neurophysiology procedures (e.g. evoked potentials, invasive EEG, advanced EMG procedures) are performed at low volume at many centers and a forum for review and hands-on interpretation are essential to improve and maintain competence in these areas.

Several specific topics with significant gaps between current practice and ideal practice have been identified via review of the literature, review of clinical neurophysiology fellowship curricula, and surveys of ACNS members and Annual Meeting attendees.

These include:

- Peripheral neurophysiology, Pediatric EMG, critical illness related neurophysiology, and muscle ultrasound
- Basic EEG: Identification of normal variants, identification of artifacts, clinical correlation
- Pediatric EEG, especially neonatal EEG
- Digital EEG processing, e.g. quantitative EEG and trends for use in the intensive care unit, source localization, coregistration with neuroimaging, etc.
- Full band EEG, Ultrafast and ultraslow EEG
- NIOM: Motor evoked potentials, guidelines and standards of care for NIOM (e.g. indications, cost effectiveness)
- Evoked potentials: Current role of short-and long-latency EPs
- Video-EEG monitoring, especially invasive EEG
- Sleep, Use of new scoring system, implications for patient care

Changes in Behavior/Practice

It is intended that, as a result of attending the meeting and/ or courses, physician attendees will be able to identify changes in competence or performance that are desirable. Definitions: "Competence" is knowing how to do something. "Performance" is what the physician would do in practice, if given the opportunity.

Evaluation

The updated ACCME accreditation criteria are designed to integrate with the new requirements for maintenance of certification (for more information see www.ABPN.org). Physicians are expected to perform self-assessments of their practice, but the ACNS, as an organization accredited by the ACCME, is expected to measure how its educational activities assist physicians in this activity. Thus, there are new questions in the evaluation form. These questions address your intended changes in competence or performance. In a few months, we will contact all physician meeting attendees to ask you if you actually HAVE experienced changes in competence or performance. Your responses, now and in the future, will assist us and ultimately you in determining educational activities that are most useful to you.

Policy on Financial Disclosures

It is the policy of ACNS to ensure balance, independence, objectivity and scientific rigor in all its individually sponsored or jointly sponsored educational programs. In order to comply with the ACCME's Updated Standards for Commercial Support, ACNS requires that anyone who is in a position to control the content of an educational activity discloses all relevant financial relationships with any commercial interest pertaining to the content of the presentation. Should it be determined that a conflict of interest exists as a result of a financial relationship of a planner of the CME activity, the planner must recuse himself or herself from the planning for that activity or relevant portion of that activity. All presentations for which the presenter disclosed a potential conflict of interest are peer reviewed by two members of the ACNS CME Committee with no relationships. If bias is found, the presenter is asked to make changes to the presentation and it is re-reviewed for bias before final approval. Refusal to disclose a conflict or the inability to resolve an identified conflict precludes participation in the CME activity. Complete conflict of interest disclosure information is printed in the final program for the activity. A learner may request additional information regarding the nature of a planner or speaker's disclosure if "No Relevant Relationships" has been indicated below. To request additional information, contact the ACNS Executive office at info@acns.org.

CONTINUING MEDICAL EDUCATION (CME) INFORMATION

Meeting Description

The ACNS Annual Meeting & Courses are designed to provide a solid review of the fundamentals and the latest scientific advances in both "central" and "peripheral" clinical neurophysiology. Presentations at the Annual Meeting & Courses are given by leading experts in the field and have value for health care professionals who utilize clinical neurophysiology. Sessions include symposia, workshops, courses and Special Interest Groups, featuring didactic lectures, expert panels, debates and interactive formats. Poster presentations at the Annual Meeting highlight the latest work conducted at clinical neurophysiology centers around the country.

Target Audience

The Society's educational activities are directed to clinical neurophysiologists, neurologists, psychiatrists, physiatrists, neurosurgeons, trainees in these disciplines and other physicians and researchers who utilize clinical neurophysiological techniques and knowledge in the diagnosis and management of patients with disorders of the nervous system.

Annual Courses Learning Objectives

At the conclusion of the Annual Courses, the participant will be able to:

1. Describe the indications for use of clinical neurophysiology techniques in diagnosis of disorders of the nervous system;
2. Incorporate new neurophysiology procedures and technological advances into his/her own clinical practice; and
3. Perform and interpret a broad range of clinical neurophysiology procedures, and integrate the results of these tests into comprehensive patient management plans.

Annual Meeting Learning Objectives

At the conclusion of the Annual Meeting, the participant will be able to:

1. Discuss recent advances in electroencephalography, evoked potentials, ALS, magnetoencephalography, practice technologies, nerve conduction studies and other clinical neurophysiology techniques; and
2. Apply advances in clinical neurophysiology techniques to improve the diagnosis of neurologic disorders.

Accreditation Statement

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Educations (ACCME) through the sponsorship of ACNS. ACNS is accredited by ACCME to provide continuing medical education for physicians.

Credit Designation

ACNS designates the Annual Meeting for a maximum of 17 *AMA PRA Category I Credit(s)*™. Physicians should claim only credit commensurate with the extent of their participation in the activity.

ACNS designates the Annual Courses for the maximum number of *AMA PRA Category 1 Credit(s)*™ indicated below.

Surgery/Stereo EEG Part I
6.5 *AMA PRA Category I Credit(s)*™

Neurophysiologic Intraoperative Monitoring (NIOM) Part I
6.5 *AMA PRA Category I Credit(s)*™

Intensive Care Unit EEG Monitoring (ICU EEG) Part I
6.5 *AMA PRA Category I Credit(s)*™

Video-EEG Basic
2 *AMA PRA Category I Credit(s)*™

EMG/Peripheral Nervous System
6.5 *AMA PRA Category I Credit(s)*™

Epilepsy Surgery/Invasive EEG Course Part II
1.5 *AMA PRA Category I Credit(s)*™

Neurophysiologic Intraoperative Monitoring (NIOM) Part II
5 *AMA PRA Category I Credit(s)*™

Intensive Care Unit EEG Monitoring (ICU EEG) Part II
3 *AMA PRA Category I Credit(s)*™

Autonomic Neurophysiology
2 *AMA PRA Category I Credit(s)*™

6th Annual CNP Program Director's Symposium
2 *AMA PRA Category I Credit(s)*™

Basic EEG
3 *AMA PRA Category I Credit(s)*™

Video-EEG Advanced
2 *AMA PRA Category I Credit(s)*™

Evoked Potentials
1.5 *AMA PRA Category I Credit(s)*™

Neonatal EEG Workshop: Year of the Premie
1.5 *AMA PRA Category I Credit(s)*™

CPT Coding Changes
2 *AMA PRA Category I Credit(s)*™

Neuromodulation/Stimulation in Human Brain
3 *AMA PRA Category I Credit(s)*™

Ultrasound Workshop
3 *AMA PRA Category I Credit(s)*™

Certificates of Attendance & CME Certificates

CME certificates will be available to pre-registered delegates immediately upon the close of the meeting at www.acns.org. Delegates who registered on-site will receive an email with further information within 3 weeks of the end of the meeting.

Delegates are REQUIRED to complete session evaluations to obtain a CME Certificate or Certificate of Attendance. Delegates should log on to the website listed above and enter their last name and the ID# listed at the top of their Annual Meeting & Courses confirmation form (included in this packet). The system will then ask delegates to indicate which sessions they attended, to complete evaluation forms for each of those sessions, and then will generate a PDF certificate which may be printed or saved to the delegate's computer. Session attendance and evaluation information are saved in the database, and certificates may be accessed again, in the event the certificate is lost or another copy is required.

Please note that certificates will not be mailed or emailed after the meeting. The online certificate program is the only source for this documentation. Please contact ACNS at info@acns.org for any questions. ACNS asks that all CME certificates be claimed no later than April 1, 2020.

CONFLICT OF INTEREST DISCLOSURES

Policy on Financial Disclosures

It is the policy of ACNS to ensure balance, independence, objectivity and scientific rigor in all its individually sponsored or jointly sponsored educational programs. In order to comply with the ACCME's Updated Standards for Commercial Support, ACNS requires that anyone who is in a position to control the content of an educational activity discloses all relevant financial relationships with any commercial interest pertaining to the content of the presentation. Should it be determined that a conflict of interest exists as a result of a financial relationship of a planner of the CME activity, the planner must recuse himself or herself from the planning for that activity or relevant portion of that activity. All presentations for which the presenter disclosed a potential conflict of interest are peer reviewed by two members of the ACNS CME Committee with no relationships. If bias is found, the presenter is asked to make changes to the presentation and it is re-reviewed for bias before final approval. Refusal to disclose a conflict or the inability to resolve an identified conflict precludes participation in the CME activity.

Complete conflict of interest disclosure information is printed in the final program for the activity. A learner may request additional information regarding the nature of a planner or speaker's disclosure if "No Relevant Relationships" has been indicated below. To request additional information, contact the ACNS Executive office at info@acns.org.

a. Grants/Research Support; b. Consultant; c. Stock/Shareholder (self-managed); d. Speaker's Bureau; e. Advisory Board or Panel; f. Salary, Contractual Services; g. Other Financial or Material Support

Name	Organization	Role	Financial Disclosures
Nicholas S. Abend, MD, MSCE, FACNS	The Perelman School of Medicine at the University of Pennsylvania, The Children's Hospital of Philadelphia, Philadelphia	Speaker, Planner, Reviewer	No Relationships
Jayant N. Acharya, MD, DM, FACNS, FAES, FAAN	Penn State University Hershey Medical Center	Speaker, Planner	SK Life Science (e)
Susan D. Agostini, R. EEG, CLTM	Mayo Clinic Arizona	Speaker	No Relationships
Edilberto Amorim, MD	Massachusetts General Hospital	Speaker	No Relationships
Brian L. Appavu, MD	University of Arizona College of Medicine - Phoenix, Barrow Neurological Institute at Phoenix Children's Hospital	Speaker	Moberg ICU Solutions (a)
Jeff Arle, MD, PhD, FAANS	Beth Israel Deaconess Medical Center, Department of Neurosurgery Boston MA	Speaker	Abbott Labs (b); Boston Scientific (b); Medtronic (b); Wenzel Spine (e)
Ravindra Arya, MD, DM	Cincinnati Children's Hospital Medical Center	Speaker, Reviewer	No Relationships
Eishi Asano, MD, PhD	Wayne State University	Speaker	No Relationships
Luca Bartolini, MD	Brown University	Speaker	No Relationships
Lisa M. Bateman, MD	Columbia University	Speaker	No Relationships
Selim R. Benbadis, MD, FACNS	University of South Florida	Speaker	Ceribell, Inc. (e, b)
Meriem Bensalem-Owen, MD, FACNS	University of Kentucky	Speaker, Planner, Reviewer	Neuropace (a); UCB Biopharma (a)
Adriana Bermeo-Ovalle, MD, FACNS, FAES	Rush Medical Center	Speaker	No Relationships
Tom P. Bleck, MD, FACNS	Northwestern Medicine	Speaker	No Relationships
Leonardo Bonilha, MD, PhD	Medical University of South Carolina	Speaker	Medtronic (a)
Anna M. Bonner, REEGT	ASET - The Neurodiagnostic Society	Planner	No Relationships
William J. Bosl, PhD	University of San Francisco	Planner	No Relationships
Geraldine Boylan, MD	University of Cork,	Speaker	No Relationships
Benjamin H. Brinkmann, PhD	Mayo Systems Electrophysiology Laboratory, Department of Neurology, Mayo Clinic	Speaker	Cadence Neuroscience (c)
Richard C. Burgess, MD, PhD, FACNS	Cleveland Clinic Epilepsy Center	Speaker, Planner	No Relationships
Neil A. Busis, MD	University of Pittsburgh Physicians	Speaker	No Relationships
Isabel Camacho, MD	Universidad de Antioquia	Speaker	No Relationships
Patrick Chauvel, MD	Cleveland Clinic Foundation	Speaker	No Relationships
Thomas Chelimsky, MD	Medical College of Wisconsin	Speaker	PainSTakers, LLC (f)

CONFLICT OF INTEREST DISCLOSURES, CONTINUED

a. Grants/Research Support; b. Consultant; c. Stock/Shareholder (self-managed); d. Speaker's Bureau; e. Advisory Board or Panel; f. Salary, Contractual Services; g. Other Financial or Material Support

Name	Organization	Role	Financial Disclosures
ShiNung Ching, PhD, MASc	Washington University in St. Louis	Speaker	No Relationships
Asim Choudhri, MD	Le Bonheur Children's Hospital, University of Tennessee Health Science Center	Speaker	No Relationships
Bernard Allen Cohen, PhD, FACNS, FASNM	Neurological Monitoring Associates, LLC	Planner	No Relationships
Amy Crepeau, MD	Mayo Clinic	Speaker, Reviewer	No Relationships
Nathan E. Crone, MD	Johns Hopkins University	Speaker	No Relationships
Monica B. Dhakar, MD, MS	Emory University/Grady Memorial Hospital	Speaker	Adamas Pharmaceuticals (b) : Marinus Pharmaceuticals (a)
Priya Dhawan, MD	Mayo Clinic Arizona	Speaker	No Relationships
Elliot Dimberg, MD, FACNS	Mayo Clinic	Planner	No Relationships
Daniel Drane, PhD	Emory University	Speaker	Medtronic (a); Neuropace (b)
Frank W. Drislane, MD, FACNS	Beth Israel Deaconess Medical Center	Planner, Reviewer	No Relationships
Francois Dubeau, MD	McGill University	Speaker	No Relationships
Jonathan C. Edwards, MD, FACNS	Medical University of South Carolina	Speaker, Planner	No Relationships
Dawn Eliashiv, MD, FACNS	David Geffen School of Medicine at UCLA	Speaker	Eisai Pharmaceuticals (d); Greenwich Biosciences (d); LivaNova (d); Neuropace (d): UCB Pharmaceuticals (d)
Ronald Emerson, MD, FACNS	Hospital for Special Surgery / Weill Cornel Med Ctr	Speaker, Planner	Amgen: (c); Bristol Myers Squibb: (c); Eli Lilly & Company: (c); General Electric: (c); Ice Neurosystems, Inc: (c); Johnson & Johnson, Inc.: (c); Neuropace : (c); Pfizer: (c); Quality Care Properties: (c); Reach Bionics: (c); Thermo Fisher Scientific: (c)
Jerome Engel Jr., MD, PhD, FACNS	UCLA	Speaker	No Relationships
Charles M. Epstein, MD, FACNS	Emory University School of Medicine	Reviewer	Neuronetics, Inc (d)
Guadalupe Fernandez-Baca, MD	UH Cleveland Medical Center	Speaker	No Relationships
Evan J. Fertig, MD, FAES	Providence Brain and Spine Institute	Reviewer	No Relationships
Robert S. Fisher, MD, PhD	Stanford University Medical Center	Speaker	Avails Medical (c); Cerebral Therapeutics (c); Cyberonics (b) Irody (c); Medtronic (b); Smart Monitor (c); Zeto (c)
Birgit Frauscher, MD	McGill University	Speaker	Eisai Inc. (e, d, g); UCB Canada (e, d)
France W. Fung, MD	Children's Hospital of Philadelphia & University of Pennsylvania	Speaker	No Relationships
Maria Moreno-Galera, MD	Fundación Jiménez Díaz Hospital	Speaker	No Relationships
William B. Gallentine, DO, FACNS	Stanford University	Speaker, Planner	No Relationships
Gloria M. Galloway, MD, MBA, FACNS	Ohio State University Wexner Medical Center	Speaker, Planner, Reviewer	No Relationships
Naiara Garcia-Losarcos, MD	UH Cleveland Medical Center	Speaker	No Relationships
Calvin Gardner, BS, MBA	Mission Health	Speaker	See Addendum
Nicolas Gaspard, MD, PhD	University Libre de Bruxelle	Speaker	No Relationships
Jay Gavvala, MD, MSCI, FACNS	Baylor College of Medicine	Speaker	No Relationships
Elizabeth Gerard, MD, FACNS	Northwestern University	Reviewer, Planner	Sunovian Pharmaceuticals, Inc. (a)

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Name	Organization	Role	Financial Disclosures
Steve Gibbs, MD, MSc, FRCPC	Center for Advanced Research in Sleep Medicine, University of Montreal	Speaker	No Relationships
Emily Gilmore, MD	Yale School of Medicine	Speaker	No Relationships
Brent Goodman, MD	Mayo Clinic Arizona	Speaker	No Relationships
Jean Gotman, PhD, FACNS	Montreal Neurological Institute, McGill University	Speaker	Precisis (e)
Robert E. Gross, MD,PhD	Emory	Speaker	Medtronic (a, b); Neuropace (a, b)
Christophe Grova	Concordia University	Speaker	See Addendum
Rejean M. Guerriero, DO	Washington University School of Medicine/ St. Louis Children's Hospital	Speaker	No Relationships
Cecil D. Hahn, MD, MPH, FRCPC, FACNS	The Hospital for Sick Children	Speaker, Planner	No Relationships
Hiba Haider, MD, FACNS	Emory University School of Medicine	Speaker, Planner, Reviewer	Ceribell, Inc. (b); UpToDate, Inc. (g)
Mark Hallett, MD, DM (hon), FACNS	NINDS, NIH	Speaker, Planner	Brainsway (e, g)
Ana Hamad, MD	Faculdade de Medicina de Ribeirão Preto	Speaker	No Relationships
Matti Hamalainen, PhD	Massachusetts General Hospital	Speaker	No Relationships
Roy Hamilton, MD	University of Pennsylvania	Speaker	No Relationships
Abeer J. Hani, MD, FACNS	Lebanese American University	Reviewer, Planner	No Relationships
Jed Hartings, PhD	University of Cincinnati	Speaker	No Relationships
Walter Heine, MD, PhD	Beth Israel Deaconess Medical Center, Harvard Medical School	Speaker	No Relationships
Susan T. Herman, MD, FACNS	Beth Israel Deaconess Medical Center, Harvard Medical School	Speaker, Reviewer	Epilepsy Therapy Development Project (a); Neuropace (g); UCB Pharmaceuticals (a)
Max J. Hilz, MD	Icahn School of Medicine	Speaker	Alnylam Pharmaceuticals (e); Amicus Therapeutics (d); Bayer Health Care Germany (d); Novartis Pharmacuticals (a); Sanofi-Genzyme (d, e)
Lawrence J. Hirsch, MD	Yale University	Speaker	Adamas Pharmaceuticals (b); Aquestive (b); Ceribell, Inc. (b); Marinus Pharmaceuticals (b; Medtronic (b); Neuropace (d); UCB Biopharma (b); Upsher Smith Laboratories, Inc. (a)
Sara Hocker, MD, PhD	Mayo Clinic	Speaker	No Relationships
Jennifer Hopp, MD	University of Maryland School of Medicine	Speaker	Gerolamo McNulty Divis & Lewbart A Professional Corporation Attorneys at Law (g)
Alexandra Hovaguimian, MD	Beth Israel Deaconess Medical Center	Speaker	No Relationships
Aatif M. Husain, MD, FACNS	Duke University Medical Center	Speaker, Planner	Eisai Pharmaceuticals (b, e); Jazz Pharmaceuticals (b, e); Marinus Pharmaceuticals (b, e)
Akio Ikeda, MD, PhD, FACNS	Kyoto University Graduate School of Medicine	Planner	Eisai (d, g); UCB (d, g); Diichi-sankyo (d); Nihon Kohden (g); Ohtsuka (g)
Monica P. Islam, MD, FACNS	Nationwide Children's Hospital/ The Ohio State University	Speaker, Reviewer	No Relationships
Lara E. Jehi, MD	Cleveland Clinic	Speaker	Eisai Inc. (a)
Barbara C. Jobst, MD, FACNS	Dartmouth Hitchcock Medical Center	Speaker	Eisai Inc. (a); Neuropace (a); Sunovion (a)

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Name	Organization	Role	Financial Disclosures
Giridhar P. Kalamangalam, MD, DPhil, FACNS	University of Florida	Speaker, Planner	No Relationships
Pongkiat Kankirawatana, MD, FACNS, FAES	Children's of Atlanta - UAB	Reviewer	No Relationships
Peter W. Kaplan, MD, FRCP, FACNS	Johns Hopkins University School of Medicine	Speaker, Planner	No Relationships
Ioannis Karakis, MD, PhD, MSc, FACNS	Emory University School of Medicine	Speaker, Planner	No Relationships
Hans Katzberg, MD, MSc, FRCPC	University of Toronto	Speaker	Akcea (b); Alexion (b); CSL Behring (a, b, e); Grifols (a, b, e); Octapharma (b, b, e; Pfizer (e); Shire (b); Terumo (b, e)
Fawad A. Khan, MD, FACNS	Oschner Medical Center	Reviewer	Engage Therapeutics (a); Sage Therapeutics (a)
Ammar Kheder, MD	Penn Epilepsy Center	Reviewer	No Relationships
David King Stevens, MD	Sutter Pacific Epilepsy Program	Speaker	Neuropace (b, e)
Robert Knowlton, MD, MPH	UCSF Medical Center	Speaker	Stratus (e)
Inga Koerte, MD, PhD	Ludwig Maximilian University	Speaker	Abbott Inc. (e, a); Expesicor (b); Siemens Healthineers (Spouse/Partner: f)
Cory J. Kogelschatz, MD	Intermountain Neurosciences Institute	Speaker	No Relationships
Saptharishi Lalgudi-Ganesan, MBBS, MD, DM	Hospital for Sick Children	Speaker	No Relationships
Alice D. Lam, MD, PhD	Massachusetts General Hospital, Harvard Medical School	Speaker	No Relationships
Suzette M.LaRoche, MD, FACNS	Mission Health	Speaker, Planner	Brain Sentinel (e)
Ruple S. Laughlin, MD, FAAN	Mayo Clinic Rochester	Speaker, Planner	No Relationships
Jong Woo Lee, MD, PhD, FACNS	Brigham and Women's Hospital	Planner, Reviewer	Advance Medical (g); Engage Therapeutics (g); SleepMed/DigiTrace (g)
Leslie Lee, MD, FACNS	Stanford University School of Medicine	Speaker, Planner, Reviewer	No Relationships
Alan D. Legatt, MD, PhD, FACNS	Montefiore Medical Center	Speaker	Brain Sentinel (b); General Electric (c); Glaxo SmithKline (c); Johnson & Johnson (c); Merck (c); Pfizer (c); Proctor & Gamble (c); TEVA (c)
Markus Leitinger, MD	Department of Neurology, Christian Doppler University Hospital, Paracelsus Medical University	Speaker	Eisai Inc. (f, g); Everpharma (f); Medtronic (a); UCB Pharmaceuticals (a)
Maria Fernanda Lengua, MD	Universidad del Sinu	Speaker	See Addendum
Jeffrey R. Leonard, MD	Nationwide Children's Hospital	Speaker	No Relationships
Jeffrey Liou, DO	Harvard Medical School	Speaker, Planner	No Relationships
Lynn Liu, MD, FACNS	University of Rochester School of Medicine	Speaker, Planner	No Relationships
Tobias Loddenkemper, MD, FACNS	Boston Children's Hospital	Planner	Lundbeck (a); Eisai (a, g); Upsher-Smith (a, g); Malinckrodt (a); Sage (a); Pfizer (a); Zogenix (g); Amzell (g); Advance Medical (g); Device Loans (g)
Eric Logigian, MD	University of Rochester School of Medicine	Speaker	No Relationships
Jaime R. Lopez, MD, FACNS	Stanford University	Speaker, Planner	No Relationships
Matthew W. Luedke, MD	Duke University Hospital	Speaker	Eisai Pharmaceuticals (a, b); Monteris (a)
Brian Lundstrom, MD, PhD	Mayo Clinic	Speaker	Philips, Inc.(a)

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Name	Organization	Role	Financial Disclosures
Matthew Mahoney, PhD	University of Vermont Larner College of Medicine	Speaker	No Relationships
Shavonne Massey, MD	The Children's Hospital of Philadelphia	Speaker, Planner	No Relationships
Luis Carlos Mayor-Romero, MD	Hospital Universitario Fundacion Santa Fe de Bogota	Reviewer	No Relationships
Jennifer McKinney, MD, FACNS	Nationwide Children's Hospital/ The Ohio State University	Speaker	No Relationships
Daniel L. Menkes, MD, FACNS	Beaumont Health System	Planner	CMTE (c)
Mitchell Miglis, MD	Stanford University	Speaker	VanCott Talamante LLC (g)
Yara Mikhaeil Demo, MD	Northwestern University	Speaker	No Relationships
Daniela N. Minecan, MD, FACNS, FAES	University of Michigan Health System	Planner	No Relationships
Ana L. Moreira, MD	Brazilian Society of Clinical Neurophysiology	Speaker, Planner	Surgical Line (Inomed Brazil) (Spouse/Partner: d)
Heidi M. Munger Clary, MD, MPH, FACNS	Wake Forest University	Planner	No Relationships
Srikanth Muppidi, MD	Stanford university	Speaker	Alexion Pharma (e)
Imad Najm, MD	Epilepsy Center, Neurology Department, Cleveland Clinic Foundation	Speaker	Eisai Pharmaceuticals (d, e)
Shalini Narayana, PhD	Le Bonheur Children's Hospital, University of Tennessee Health Science Center	Speaker	No Relationships
Marcus C. Ng, MD, FRCPC, CSCN, FACNS	University of Manitoba	Speaker, Planner	Eisai Pharmaceuticals (e)
Viet Nguyen, MD, FACNS	Stanford University	Planner	No Relationships
Lino Nobili, MD, PhD	G. Gaslini Institute, DINOGMI, University of Genova	Speaker	No Relationships
Douglas R. Nordli Jr., MD, FACNS	University of Chicago	Speaker	No Relationships
Jonathan A. Norton, PhD, FACNS	University of Saskatchewan	Planner	No Relationships
Peter Novak, MD, PhD	Brigham and Women's Hospital	Speaker	Dysimmune Foundation (b, f) Endonovo (e); KabaFusion (d) Lundbeck (e)
Marc R. Nuwer, MD, PhD, FACNS	University of California Los Angeles	Speaker, Planner	Corticare (c)
Cormac O'Donovan, MD, FACNS	Wake Forest University	Speaker	No Relationships
Joel Oster, MD, FACNS	Tufts University	Reviewer	No Relationships
Luis Otavio Caboclo, MD, MSc, PhD	Hospital Israelita Albert Einstein	Speaker	No Relationships
Guillermo Martin Palomeque, MD	Hospital Ramón y Cajal	Speaker	No Relationships
Jun T. Park, MD, FAES	Case Western Reserve University; Rainbow Babies and Children's	Reviewer	No Relationships
Jay S. Pathmanathan, MD, PhD	University of Pennsylvania	Speaker, Planner	No Relationships
Milena Pavlova, MD	Brigham and Women's Hospital, Harvard Medical School	Speaker	Biomobie (a); Jazz Pharmaceuticals (a); Lundbeck (a); Mass Medical (b); Oak Stone (f)
Phillip Pearl, MD, FACNS	Boston Children's Hospital	Speaker, Planner	No Relationships
Giovanni Pellegrino, MD	Montreal Neurological Institute and Hospital Montreal	Speaker	No Relationships
Juan Carlos Perez Poveda, MD	Pontifica Universidad Javeriana Y Hospital Universitario San Ignacio	Speaker	No Relationships
Elia Pestana-Knight, MD, FACNS	Cleveland Clinic Foundation	Speaker	No Relationships

CONFLICT OF INTEREST DISCLOSURES, CONTINUED

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Name	Organization	Role	Financial Disclosures
Jurriaan Peters, MD, PhD	Boston Children's Hospital	Speaker	Philips, Inc. (b)
Chris Plummer, MD	University of Melbourne	Speaker	No Relationships
Ronit M. Pressler, PhD, MD	Great Ormond Street Hospital	Speaker	Bial (Spouse/Partner: b, e); Esai (Both Myself and my Spouse/Partner: e); Glaxo SmithKline (Spouse/Partner: c); Johnson & Johnson (g); LivaNova (Spouse/Partner: e); Sanofi-Genzyme (Spouse/Partner: b, d); UCB Pharmaceuticals (Both Myself and my Spouse/Partner: a, b, d, e, g)
Claus Reinsberger, MD, PhD, FACNS	Paderborn University	Speaker, Planner	IOB (b); SleepMed/Digitrace (b); Westfalen Foundation (a)
Roozbeh Rezaie, PhD	Le Bonheur Children's Hospital, University of Tennessee Health Science Center	Speaker	No Relationships
Eva K. Ritzl, MD, FACNS	Johns Hopkins University	Speaker, Planner	InVivo (b): various lawfirms (b)
James J. Riviello, MD	Baylor College of Medicine	Speaker	Biomarin (e)
Andres Rodriguez-Ruiz, MD	Emory University School of Medicine	Speaker	No Relationships
Alexander Rotenberg, MD, PhD	Boston Children's Hospital	Speaker, Planner	Cavion (e); CRE Medical (a); Gamify (e); Kintai (a); Neuroelectrics (a); Neuromotion (e); Roche (a, e); Takeda (a)
Elayna Rubens, MD, FACNS	Memorial Sloan Kettering Cancer Center	Speaker, Planner	No Relationships
Devon I. Rubin, MD, FACNS	Mayo Clinic	Speaker, Planner	No Relationships
Daniel San Juan de Orta, MD, FACNS	National Institute of Neurology & Neurosurgery	Speaker	No Relationships
Arnold J. Sansevere, MD	Boston Children's Hospital	Planner	No Relationships
Emiliano Santarnecchi, PhD	Harvard Medical School	Speaker	Neuroelectrics (e)
Karl E. Sanzenbacher, MD, MS, FACNS	Eastern Maine Medical Center	Reviewer	No Relationships
Rani Sarkis, MD, MSc, FACNS	Brigham and Women's Hospital, Harvard Medical School	Speaker	Biogen (a); UCB Biopharma SPRL (a)
Mark S. Scher, MD	Rainbow Babies and Childrens Hospital	Speaker	No Relationships
Adam Schiavi, MD, PhD, MS	Johns Hopkins University School of Medicine	Speaker	No Relationships
Sarah E. Schmitt, MD, FACNS	Department of Neurology, MUSC	Speaker, Planner, Reviewer	No Relationships
Stephan U. Schuele, MD, MPH, FACNS	Northwestern University	Speaker, Planner	Eisai Inc. (d); Greenwich Biosciences (d); Sunovion Pharmaceuticals, Inc. (d)
Rodney Scott, MD, PhD	University of Vermont Larner College of Medicine	Speaker	No Relationships
Mouhsin Shafi, MD, PhD	Beth Israel Deaconess Medical Center, Harvard Medical School	Speaker	No Relationships
Raj D. Sheth, MD, FAAN, FACNS	Mayo Clinic / Nemours Clinic-Florida	Planner	No Relationships
Jay L. Shils, PhD, DABNM, FACNS	Rush University Medical Center, Dept. of Anesthesiology	Speaker, Planner	Medtronic (b); St. Jude Abbott (a)
Mirela V. Simon, MD, MSc, FACNS	Massachusetts General Hospital	Speaker, Planner	No Relationships
Saurabh R. Sinha, MD, PhD, FACNS	Duke University Medical Center	Speaker, Planner	Basilea Inc. (e); Eisai Inc. (a); Monteris Medical (a, b); UCB Pharmaceuticals (b)

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Name	Organization	Role	Financial Disclosures
Dong-In Sinn, MD	Stanford University	Speaker	No Relationships
Stanley Skinner, MD, FACNS	Abbott Northwestern Hospital	Speaker	Medtronic (g)
Elson Lee So, MD, FACNS	Mayo Clinic	Speaker	No Relationships
Michael R. Sperling, MD, FACNS	Jefferson University	Speaker	Eisai Pharmaceuticals (a, f); Engage Therapeutics (a); Medtronic (a, b); Neurelis (a); NeurologyLive (b)); SK Life Science (a); Takeda (a); UCB Pharmaceuticals (a); Xenon Pharmaceuticals (a)
Mark Stecker, MD, PhD, FACNS	UCSF/Fresno Division of Neurology Fresno CA	Speaker	No Relationships
Michael Stein, MD, FACNS	Barrow Neurological Institute	Speaker	Compumedics (b)
Claude Steriade, MD	NYU Langone	Speaker	The Epilepsy Study Consortium (f); UCB Pharmaceuticals (a, e)
Scellig Stone, PhD, MD	Harvard Medical School	Speaker	Alcyone Lifesciences, Inc. (b, g); PTC (Formerly Agilis Biotherapeutics) (b)
Travis Stoub, PhD	Rush Medical Center	Speaker	No Relationships
Aaron Struck, MD	University of Wisconsin	Speaker	No Relationships
Fahd Sultan, MD	University of Oklahoma College of Medicine	Reviewer	No Relationships
Christa Swisher, MD, FACNS	Duke University Medical Center	Speaker, Reviewer	No Relationships
Nitin Tandon, MD	Memorial Hermann Health System	Speaker	No Relationships
Olga Taraschenko, MD, PhD	University of Nebraska Medical Center	Speaker	No Relationships
Matthew Tate, MD, PhD	Northwestern University, Feinberg School of Medicine	Speaker	No Relationships
William O. Tatum, DO, FACNS	Mayo Clinic	Speaker, Planner	Esai (a); Mayo Clinic (a, g)
Jessica W. Templer, MD, FACNS	Northwestern University, Feinberg School of Medicine	Speaker	No Relationships
Parthasarathy Thirumala, MD, FACNS	University of Pittsburgh Medical Center	Speaker	No Relationships
Ron Tintner, MD	Houston Methodist Hospital	Reviewer	No Relationships
Eugen Trinka, MD, MSc, FRCP	Christian Doppler University Hospital, Paracelsus Medical University	Speaker	No Relationships
Melissa Tsuboyama, MD	Boston Children's Hospital	Speaker	No Relationships
Tammy Tsuchida, MD, PhD, FACNS	Children's National Health System	Speaker, Planner	No Relationships
Sedat Ulkatan	Mount Sinai West	Speaker	No Relationships
Michel van Putten, MD, PhD	Medisch Spectrum Twente & University of Twente	Speaker	Clinical Science Systems (b)
Rocio Vazquez do Campo, MD	Mayo Clinic	Speaker	No Relationships
Martin Veilleux, MD, FRCP(C), FACNS	Montreal Neurological Hospital	Planner	No Relationships
Ana L. Velasco-Monroy, MD, PhD	Hospital General de Mexico	Speaker	No Relationships
Dalila W. Lewis, MD	University of Wisconsin- Madison	Speaker	No Relationships
Richard Wennberg	University of Toronto Health Network	Speaker	No Relationships
M. Brandon Westover, MD, PhD, FACNS	Harvard Medical School	Speaker, Planner	No Relationships
James W. Wheless, MD, FAAP, FAAN, FAES	Le Bonheur Children's Hospital, University of Tennessee Health Science Center	Speaker	No Relationships

CONFLICT OF INTEREST DISCLOSURES, CONTINUED

a. Grants/Research Support; b. Consultant; c. Stock/Shareholder (self-managed); d. Speaker's Bureau; e. Advisory Board or Panel; f. Salary, Contractual Services; g. Other Financial or Material Support			
Name	**Organization**	**Role**	**Financial Disclosures**
Gregory Worrell, MD	Mayo Clinic	Speaker, Planner	Cadence Neuroscience (a, b, c); NeuroOne Inc. (a, b, c)
Courtney J. Wusthoff, MD, FACNS	Stanford Division of Child Neurology	Speaker, Planner, Reviewer	Ceribell (b); Persyst (b)
June Yoshii-Contreras, MD	UC San Diego	Speaker	No Relationships

SUPPORT ACKNOWLEDGEMENT

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Bronze Level

Brain Sentinel

Cadwell Industries, Inc *in the form of an in-kind donation of equipment for the Electromyography (EMG)/Peripheral Course.*

Ceribell

Greenwich Biosciences *in the form of an unrestricted educational grant.*

Persyst Development Corporation *in the form of an unrestricted educational grant.*

Bronze Level Exhibitors

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UCSF Health
University of Florida Health Shands Hospital
Wolters Kluwer
Zeto

SOCIAL AND NETWORKING EVENTS

Mentor Program Meet and Greet & Career Development Panel

Thursday, February 6, 2020
5:45–7:45pm
Location: Salon 3

This panel discussion will provide guidance to residents, fellows and early-stage neurologists to plan and build a successful career in Clinical Neurophysiology. A panel of experts will share their experience on various career pathways in clinical neurophysiology, including academia, transition to private practice, collaboration with industry and telemedicine. The audience will learn about the clinical duties, education, innovation and research, administration and leadership, finance, regulatory and medicolegal issues of different practice models and how each of them impacts quality of life.

Panelists:

Jeffrey Britton, MD, FACNS
Professor of Neurology, Mayo Clinic School of Medicine
Perspective: Clinician educator and division chief

Eric Anderson, MD, PhD
Chair of Neurology, SOC Telemed; Medical Director/Director of Telemedicine, Corticare; Owner, Intensive Neuromonitoring
Perspective: Working in Tele-CNP

M. Brandon Westover, MD, PhD, FACNS
Massachusetts General Hospital
Perspective: Clinician researcher about NIH funding in CNP

Jay S. Pathmanathan, MD, PhD
Assistant Professor, University of Pennsylvania
Perspective: Working and applying for funding at the VA

Andrea Hakimi, DO, FACNS, FAES
Epilepsy Director, UMG/Neuroscience Associates
Perspective: Working in a private/semiprivate setting

Martha J. Morrell, MD
Chief Medical Officer, Neuropace
Perspective: Working in and collaborating with industry

Professional Development Mentor Program

Participants in the ACNS Professional Development Mentor Program are welcome to make use of a designated meeting area in the common areas on Friday and Saturday during breaks and lunches. Please look for the designated tables as a place to meet up!

Welcome Reception

Friday, February 7, 2020
7:30–9:00pm
Location: Crescent City Ballroom

Dr. Cecil D. Hahn, MD, MPH, FACNS formally invites all Annual Meeting delegates to attend the ACNS Welcome Reception. There will be complimentary hors d'oeuvre and a cash bar, as well as the opportunity to connect with new and familiar exhibitors.

New Member Breakfast

Saturday, February 8, 2020
7:00–8:30am
Location: Conti Room

ACNS members who have joined the Society in the past year are invited and encouraged to attend the New Member Breakfast. ACNS leaders will be in attendance to welcome you to the Society and to discuss all the benefits ACNS membership has to offer.

International Attendee Breakfast

Saturday, February 8, 2020
7:00–8:30am
Location: Crescent City Ballroom

International meeting attendees are invited to join ACNS leadership for a breakfast and networking.

ANNUAL COURSES • OVERVIEW

Wednesday, February 5, 2020		
9:00am–5:00pm	Intensive Care Unit EEG Monitoring (ICU EEG) - Part I	Salon 3
9:00am–5:00pm	Neurophysiologic Intraoperative Monitoring (NIOM) - Part I	Salon 2
9:00am–5:00pm	Epilepsy Surgery/Stereo EEG - Part I	Salon 4
Thursday, February 6, 2020		
7:00–8:30am	Evoked Potentials	Salon 2
7:00–8:30am	Neonatal EEG Workshop: Year of the Premie	Salon 3
7:00–8:30am	Epilepsy Surgery/Invasive EEG Course - Part II: - SEEG/Case-Based Discussion	Salon 4
9:00am–12:00pm	Intensive Care Unit EEG Monitoring (ICU EEG) - Part II	Salon 3
9:00am–3:00pm	Neurophysiologic Intraoperative Monitoring (NIOM) - Part II	Salon 2
9:00am–5:00pm	Electromyography (EMG)/Peripheral	Salon 4
12:30–3:00pm	CNP Directors Symposium: Navigating the CNP Fellowship Landscape in the Era of Neuromuscular and Epilepsy Fellowships	Salon 5
1:00–3:00pm	Video EEG Basic	Salon 3
3:30–5:30pm	Autonomic Neurophysiology	Salon 3
3:30–5:30pm	CPT Coding Changes: EEG Monitoring and Neurostimulation	Salon 2
5:45-7:45pm	Mentor Program Meet and Greet & Career Development Panel	Salon 5
Friday, February 7, 2020		
7:00–10:00am	Basic EEG	Chamber 1, Mayor Suite Level
7:00–10:00am	Neuromodulation/Stimulation in Human Brain	Salon 3
7:00–10:00am	Ultrasound Workshop	Salon 2
8:00–10:00am	Video EEG Advanced	Chamber 3, Mayor Suite Level

ANNUAL MEETING • PROGRAM OVERVIEW

Friday, February 7, 2020		
10:30 - 11:30am	**General Session** - Presidential Address	Salons 4 & 5
11:30am–1:00pm	**Lunch Break | Exhibit Hall Open | Product Theater**	Crescent City Ballroom I Conti Room
1:00–2:30pm	**Concurrent Sessions**	
	Continuous EEG Findings in Refractory Status Epilepticus	Salons 4 & 5
	High Density EEG and Electrical Source Imaging in Clinical Practice	Salon 3
	Mastering EMG Motor Unit Potential Analysis: Learning the Skill of Deliberate Practice	Chamber 1, Mayor Suite Level
	Update on Non-Invasive Presurgical Functional Mapping Methods in Children	Chamber 3, Mayor Suite Level
	Wearables Against Death – SUDEP, Sleep, and Nocturnal Seizures	Salon 2
2:30–2:45pm	**Coffee Break**	
2:45–4:15pm	**Concurrent Sessions**	
	Continuous EEG of Hypoxic-Ischemic Brain Injury in The Era of Targeted Temperature Management	Salon 4 & 5
	Controversies in Neonatal Seizures (ACNS/British Society for Clinical Neurophysiology Joint Symposium)	Salon 2
	Complex Systems, Epilepsy and EEG	Salon 3
	Inpatient Weakness: Clinical and EDX Approach	Chamber 1
4:15–4:30pm	**Break**	
4:30–6:00pm	**Concurrent Sessions**	
	Nonconvulsive Status Epilepticus: Diagnostic Approach in Adults and Children (ACNS/Austrian Society for Clinical Neurophysiology Joint Symposium)	Salon 4 & 5
	It's Not All Child's Play: Presurgical Functional Mapping in Children Using Transcranial Magnetic Stimulation	Chamber 1, Mayor Suite Level
	Selective Dorsal Rhizotomy: Making the Cut	Chamber 3, Mayor Suite Level
	The Business of Clinical Neurophysiology	Salon 2
	The Postictal State: Clinical Neurophysiology and Implications	Salon 3
6:15–7:30pm	**General Session** – Jasper Award Presentation and Lecture | Gloor Award Presentation and Lecture	Salons 4 & 5
7:30–9:00pm	**Welcome Reception**	Crescent City Ballroom

ANNUAL MEETING • PROGRAM OVERVIEW

Saturday, February 8, 2020		
9:00–10:30am	**Concurrent Sessions** | Special Interest Groups (SIGs)	
	Clinical Neurophysiology Resident and Fellow SIG	Chamber 1, Mayor Suite Level
	How Slow Can the Brain Go? Investigating the Dynamics of Slow Oscillations Following Acquired Brain Injuries	Salon 2
	Comprehensive Introduction to Clinical Neuromoduluation	Salons 4 & 5
	High Density EEG SIG: The High Density EEG Research Consortium	Chamber 3, Mayor Suite Level
	Staffing Models for Continuous Visual Surveillance in EMU and ICU Monitoring Units	Salon 3
10:30–11:00am	**Coffee Break**	
11:00am–12:30pm	**Concurrent Sessions**	
	IOM in Vascular Procedures (ACNS/Spanish Society of Clinical Neurophysiology Joint Symposium)	Chamber 1, Mayor Suite Level
	Myoclonus: The Road Less Traveled	Salon 2
	Presurgical Language Localization with Stereo-EEG: Challenges and Opportunities	Salons 4 & 5
	Quantitative Electroencephalography: Applications in Pediatric Neurocritical Care	Salon 3
	Sleep-Related Epilepsy: Lessons from the Sleep Laboratory	Chamber 3, Mayor Suite Level
12:30–2:00pm	**Lunch Break | Exhibit Hall Open | Product Theater**	Crescent City Ballroom I Conti Room
2:00–3:30pm	**Concurrent Sessions**	
	Advanced Autonomic Testing	Chamber 3, Mayor Suite Level
	Approach to Surgery for Low Grade Glioma: Is an Epilepsy Evaluation Necessary?	Chamber 1, Mayor Suite Level
	Long-term Video EEG Monitoring: In the EMU, ICU and at Home	Salons 4 & 5
	Neuromodulation in Refractory Epilepsy (ACNS/Mexican Clinical Neurophysiology Society Joint Symposium)	Salon 3
	Prediction Analytics for Forecasting Seizure Risk in Critically Ill Patients	Salon 2
3:30–3:45pm	**Break**	
3:45–5:15pm	**Concurrent Sessions**	
	Clinical Neurophysiology of Repetitive Head Impacts	Salon 2
	How Deep in the Brain Can You See with EEG, MEG and EEG-fMRI? (ACNS/Canadian Society for Clinical Neurophysiology Joint Symposium)	Salons 4 & 5
	My Patient's Dizzy, Now What?: Autonomic Neurophysiology through Clinical Cases	Salon 3
	Neuromonitoring in Neonates with Critical Congenital Heart Disease	Chamber 1, Mayor Suite Level
	Spanish Symposium: Epilepsia de Inicio Temprano /Early Onset Epilepsies. The Colombian Experience	Chamber 3, Mayor Suite Level
5:30–7:00pm	**General Session** – ACNS Business Meeting | Schwab Award Presentation and Lecture | Voodoo Neurology	Salons 4 & 5
Sunday, February 9, 2020		
8:00–9:30am	**Concurrent Sessions**	
	Battle-Lines are Drawn: Is it HD-EEG vs MEG, or EEG with MEG?	Salons 4 & 5
	EEG in Epileptic Encephalopathies in Childhood (ACNS/Brazilian Clinical Neurophysiology Society Joint Symposium)	Salon 3
	SEEG Implantation Strategy in Epileptic Patients: Illustrative Cases	Salon 2
9:30–10:00am	**Coffee Break**	Salons Foyer
8:00–11:30am	**Diversity in Leadership Symposium**	Chamber 3, Mayor Suite Level
10:00–11:30am	**Concurrent Sessions**	
	Controversies in Neurostimulation and Epilepsy Surgery	Salons 4 & 5
	Stat EEGs: Use, Abuse, and the Role of New Rapid-EEG Devices	Salon 2
	The Neurophysiology of Alzheimer's Disease	Salon 3

AWARD RECIPIENTS & LECTURES

FRIDAY, FEBRUARY 7, 2020

2020 Herbert H. Jasper Award & Lecture

"Stimulation"

Ronald Lesser, MD, FACNS

The Jasper Award is presented annually to an individual who has made a lifetime of outstanding contributions to the field of clinical neurophysiology. Dr. Lesser will be recognized and present the 2020 Jasper Award Lecture during a general session on Friday, February 7, 2020.

Dr. Lesser grew up in Los Angeles, attending Hollywood High School, Pomona College, and the University of Southern California School of Medicine. He then did his PGY1 year in Pediatrics at Mayo Clinic, in Rochester, Minnesota and two years in the United States Indian Health Service in Rapid City, South Dakota. After training in Psychiatry and then Neurology at Columbia-Presbyterian Medical Center, New York City, he was at the Cleveland Clinic from 1979–1986. Since then, he has been at Johns Hopkins University School of Medicine, where he is Professor of Neurology and Neurosurgery.

2020 Pierre Gloor Award & Lecture

"What's the Pattern?"

Richard C. Burgess, MD, PhD, FACNS

The Gloor Award is presented annually for outstanding current contributions to clinical neurophysiology research. Dr. Burgess will be recognized and will deliver the 2020 Gloor Award Lecture on Friday, February 7, 2020.

Dr. Burgess was responsible for bringing magnetoencephalography to the Cleveland Clinic in 2008. Since its inception at CCF, Dr. Burgess has conducted MEG assessments of more than 2,000 patients with complicated epilepsy, and has mentored many post-doctoral trainees in multi-year Magnetoencephalography Fellowships (including 9 international fellows). Since 2010, Dr. Burgess has been a member the Board of Directors of the American Clinical MEG Society (ACMEGS). As a leader of the ACMEGS Clinical Practice Guidelines taskforce, Dr. Burgess has promulgated magnetoencephalography clinical guidelines in 2011, which were also subsequently endorsed by the ACNS. From 2015 to 2018, Dr. Burgess served as President of the ACMEGS. He is also on the Executive Committee of the Intenational Society for the Advancement of Clinical Magnetoencephalography.

SATURDAY, FEBRUARY 8, 2020

2020 Robert S. Schwab Award & Lecture

"Shock, Listen or Look? The Evolution of Neuromuscular Ultrasound"

Francis O. Walker, MD, FACNS

The Schwab Award is presented annually to an individual who has made significant contributions in the area of clinical neurophysiology. Dr. Walker will be recognized and will deliver the 2020 Schwab Award Lecture on Saturday, February 8, 2020.

Dr. Walker earned his medical degree at Indiana University School of Medicine and completed residency and fellowship training at the Universities of Iowa and Michigan. He currently is a Professor of Neurology at Wake Forest School of Medicine where he established Diagnostic EMG Laboratory, The Section of Movement Disorders, the Deep Brain Stimulation Program for Parkinson's Disease, The Botulinum Toxin program, and The Victor T. Rogers Huntington's Disease Clinic. He has helped train 60 fellows and is the recipient of Wake Forest Medical Student Teaching and Faculty Mentoring Awards. He has authored or co-authored over 200 peer reviewed publications. His work in the field of Neuromuscular Ultrasound and his textbook are considered pioneering. Dr. Walker has also served on the ACNS Council and on the Editorial Boards of The *Journal of the Neurological Sciences*, the *Journal of Clinical Neurophysiology*, and *Muscle and Nerve* and he is a Past President of the American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM).

Marc R. Nuwer Service Award

Marc R. Nuwer, MD, PhD, FACNS

Dr. Nuwer is Professor of Neurology and the Director of the Clinical Neurophysiology Fellowship Program at UCLA.

Dr. Nuwer has served ACNS and field of Clinical Neurophysiology enormously over the past 35 years, having served as president of ACNS from 1993–94 and of IFCN from 1997–2001. Dr. Nuwer has been a tireless advocate for ACNS and his members, representing ACNS in the AMA House of Delegates, at RUC and CPT, and as the chair of the Advocacy Committee all for more than a decade. He has instrumental in advocating for reimbursement for clinical neurophysiology. He holds a "permanent" seat on the ACNS Council and is the most fervent of ACNS's supporters worldwide.

Dr. Nuwer is the inaugural recipient of the ACNS Service Award, which shall be known as the Marc R. Nuwer Service Award. The award will be presented during the ACNS Business Meeting on Saturday, February 8 at 5:30pm.

9:00am–5:00pm
502: Intensive Care Unit EEG Monitoring (ICU EEG) - Part I

Course Co-Chairs: Elizabeth Gerard, MD, FACNS and Courtney J. Wusthoff, MD, FACNS

LOCATION:

Salon 3

LEARNING OBJECTIVES:

At the conclusion of this course, participants should be able to:

1. Discuss current guidelines and evaluate various practice models for ICU EEG monitoring to improve patient care for both adults and children;
2. Apply the standard ACNS terminology to ICU EEG recordings, to improve standardization of ICU EEG reports and communication between providers;
3. Recognize controversial EEG patterns in ICU patients with altered mental status, and formulate a rational plan for treatment based on these EEG patterns;
4. Use QEEG to efficiently enhance ICU EEG interpretation; and
5. Discuss the role of amplitude-integrated EEG in neonatal ICUs.

AGENDA:

9:00am Welcome
Elizabeth Gerard, MD, FACNS, and Courtney J. Wusthoff, MD, FACNS

9:05am Logistics of ICU EEG Monitoring from Neonates to Adults
William B. Gallentine, DO, FACNS

9:30am Discussion

9:40am ACNS Terminology
Lawrence J. Hirsch, MD, FACNS

10:05am Discussion

10:15am Coffee Break

10:25am The Ictal-Interictal Continuum
Suzette M. LaRoche, MD, FACNS

10:50am Discussion

11:00am cEEG in Neonates
Tammy Tsuchida, MD, PhD, FACNS

11:25am Discussion

11:35pm Neonatal and Pediatric Cases
Dalila Watford Lewis, MD and Rejean Guerriero, DO

12:00pm Lunch Break (not provided. See pg.6 for a list of nearby restaurants)

1:00pm That's a Seizure…Is It? Definitions of Electrographic Seizures and When to Trust Your Instincts
Sarah E. Schmitt, MD, FACNS

1:25pm Discussion

1:35pm Treatment of Convulsive and Nonconvulsive Seizures and Status Epilepticus
Thomas Bleck, MD, FACNS

2:00pm Discussion

2:10pm NORSE, FIRES and Autoimmune Encephalitis
Olga Taraschenko, MD, PhD

2:35pm Discussion

2:45pm Background, Reactivity and Toxic Metabolic Encephalopathy
Peter W. Kaplan, MB, BS, FRCP, FACNS

3:10pm Discussion

3:20pm Coffee Break

3:30pm Anoxic Brain Injury and Myoclonic Status
Yara Mikhaeil-Demo, MD

3:55pm Discussion

4:05pm Name that Artifact – Adult EEG
Emily Gilmore, MD

4:20pm Name that Artifact- Peds EEG
Dalila Watford Lewis, MD and Rejean Guerriero, DO

4:35pm Adult ICU EEG Cases
Andres Rodriguez Ruiz, MD

4:55pm Discussion

9:00am–5:00pm
501: Neurophysiologic Intraoperative Monitoring (NIOM) - Part I

Course Co-Chairs: Eva K. Ritzl, MD, FACNS and Mirela V. Simon, MD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:

1. Design a comprehensive monitoring plan for individual patients, including multimodality intraoperative monitoring techniques (e.g. recordings of sensory and motor evoked potentials, EEG, EMG, and spinal reflex activity) to monitor segments of the nervous system at risk during surgery;
2. Recognize changes in intraoperative neurophysiologic tests which indicate damage to neural structures, and distinguish these from common technical artifacts;
3. Communicate effectively normal and abnormal results to the surgical team, and incorporate results into clinical recommendations that may alter the surgical technique to avoid, limit or reverse injury to neural structures;
4. Apply knowledge about effects of anesthesia on NIOM and designing optimal anesthetic strategies for effective monitoring; and
5. Recognize the medico-legal, billing and regulatory aspects in NIOM.

AGENDA:

9:00am	Welcome and Introductions
9:05am	SEP Monitoring *Aatif M. Husain, MD, FACNS*
9:45am	MEP Monitoring *Ronald Emerson, MD, FACNS*
10:25am	Coffee Break
10:40am	BAEP Monitoring *Alan D. Legatt, MD, PhD, FACNS*
11:20am	CEA Monitoring *Marc R. Nuwer, MD, PhD, FACNS*
12:00pm	Discussion
12:15pm	Lunch (not provided. See pg. 6 for a list of nearby restaurants)
1:15pm	EMG and Nerve Recordings *Stanley Skinner, MD, FACNS*
1:55pm	Anesthesia *Adam Schiavi, MD, PhD, MS*
2:35pm	Technical Troubleshooting *Jay Shils, PhD, DABM, FACNS*
3:15pm	Coffee Break
3:30pm	Medicolegal Issues *Jaime R. Lopez, MD, FACNS*
4:10pm	Billing Issues *Marc R. Nuwer, MD, PhD, FACNS*
4:50pm	Discussion

9:00am–5:00pm
503: Epilepsy Surgery/Stereo EEG - Part I

Course Co-Chairs: Stephan U. Schuele, MD, MPH, FACNS and Giridhar Kalamangalam, MD, DPhil, FACNS

LOCATION:
Salon 4

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:

1. Identify patients from noninvasive evaluations who merit intracranial EEG evaluation;
2. Decide which type of intracranial EEG recordings, if any, are most appropriate for a given patient;
3. Approach common and challenging surgical epilepsy syndromes using invasive EEG recordings;
4. Describe approaches to surgical resection and anticipate outcome; and
5. Outline knowledge of invasive stimulation therapy for intractable epilepsy.

AGENDA:

9:00am	Welcome and Overview *Giridhar Kalamangalam, MD, DPhil, FACNS*
9:05am	Understanding the Noninvasive Data *Stephan U. Schuele, MD, MPH, FACNS*
9:30am	Seizure Semiology: General Principle *Patrick Chauvel, MD*
10:15am	Coffee Break
10:30am	Intracranial EEG: Physics and Physiology *Jean Gotman, PhD, FACNS*
11:00am	Implant Strategy *Giridhar Kalamangalam, MD, DPhil, FACNS*
11:30am	Neuropsychology for the Surgical Epileptologist *Daniel Drane, PhD*
12:00pm	Stimulation Mapping *Birgit Frauscher, MD*
12:30pm	Lunch Break (not provided. See pg. 6 for a list of nearby restaurants)
1:00pm	PVNH & Complex Lesional Epilepsy *Francois Dubeau, MD*
1:30pm	Surgical Strategy in Adults *Nitin Tandon, MD*
2:00pm	Neuromodulation *Lawrence J. Hirsch, MD, FACNS*
2:30pm	Coffee Break
2:45pm	Pediatric Surgical Workup and SEEG *Deepak Lachhwani, MD*
3:15pm	Surgical Strategy in Pediatric Epilepsy *Scellig S.D. Stone, PhD, MD*
3:45pm	Was It All Worth It? Epilepsy Surgery Outcome *Lara E. Jehi, MD*
4:15pm	Summary Comments *Stephan U. Schuele, MD, MPH, FACNS*
4:30pm	Discussion

7:00–8:30am
601: Evoked Potentials

Course Co-Chairs: Elayna Rubens, MD, FACNS and Viet Nguyen, MD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Identify appropriate clinical applications of evoked potential testing;
2. Interpret accurately visual, brainstem auditory, and somatosensory evoked potentials; and
3. Correlate evoked potential results and clinical information to inform neurologic diagnosis and prognostication.

AGENDA:

7:00am Brainstem Auditory Evoked Potentials (BAEPs)
Alan D. Legatt, MD, PhD, FACNS

7:30am Visual Evoked Potentials (VEPs)
Aatif M. Husain, MD, FACNS

8:00am Somatosensory Evoked Potentials (SEPs)
Elayna Rubens, MD

7:00–8:30am
602: Neonatal EEG Workshop: Year of the Premie

Course Chair: Shavonne L. Massey, MD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Explain how the growing incidence of surviving premature neonates impacts neurologic insults and neuromonitoring indications in the neonatal intensive care unit;
2. Discuss the temporal progression of neonatal EEG background features and graphoelements from earliest stages of viability through term;
3. Describe the interpretation of epileptiform activity in the premature neonatal EEG; and
4. Identify the incidence of seizures in premature neonates and describe the proper practices to detect and manage seizures in the preterm neonate.

AGENDA:

7:00am Introduction 'Year of the Premie'
Shavonne L. Massey, MD

7:10am Ontogeny of the Neonatal EEG
Mark Scher, MD

7:35am Interictal and Ictal Patterns in Premature Neonates
Ronit Pressler, MD

8:00am Seizure Management
Courtney J. Wusthoff, MD, FACNS

7:00–8:30am
603: Epilepsy Surgery/Invasive EEG Course Part 2 - SEEG/Case-Based Discussion

Course Co-Chairs: Stephan U. Schuele, MD, MPH, FACNS and Giridhar Kalamangalam, MD, DPhil, FACNS

This course will feature real life case-based discussion and illustration of practical management decisions.

LOCATION:
Salon 4

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Demonstrate the principles underlying practical stereo-EEG planning;
2. Interpret the results; and
3. Identify the pitfalls, caveats and complications of sEEG-based epilepsy surgery.

9:00am–12:00pm
611: Intensive Care Unit EEG Monitoring (ICU EEG) - Part II

Course Co-Chairs: Elizabeth Gerard, MD, FACNS and Courtney J. Wusthoff, MD, FACNS

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Discuss current guidelines and evaluate various practice models for ICU EEG; monitoring to improve patient care for both adults and children;
2. Apply the standard ACNS terminology to ICU EEG recordings, to improve standardization of ICU EEG reports and communication between providers;
3. Recognize controversial EEG patterns in ICU patients with altered mental status, and formulate a rational plan for treatment based on these EEG patterns; and
4. Use QEEG to efficiently enhance ICU EEG interpretation.

AGENDA:

9:00am Welcome
Elizabeth Gerard, MD, FACNS and Courtney J. Wusthoff, MD, FACNS

9:05am Principles of Quantitative EEG Trends
Cecil D. Hahn, MD, MPH, FRCPC, FACNS

9:25am Discussion

9:35am qEEG for Seizure Detection
Hiba A. Haider, MD, FACNS

9:55am Discussion

10:05am aEEG in Neonates
Courtney J. Wusthoff, MD, FACNS

10:25am Discussion

10:35am Coffee Break

10:45am Role of qEEG in Prognosis and Ischemia Monitoring
M. Brandon Westover, MD, PhD, FACNS

11:10am Discussion

11:20am qEEG Cases: Adult
Susan T. Herman, MD, FACNS

11:40am qEEG Cases: Peds
Courtney J. Wusthoff, MD and Cecil D. Hahn, MD, MPH, FRCPC, FACNS

9:00am–3:00pm
612: Neurophysiologic Intraoperative Monitoring (NIOM) - Part II

Course Co-Chairs: Eva K. Ritzl, MD, FACNS and Mirela V. Simon, MD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:

1. Design a comprehensive monitoring plan for individual patients, including multimodality intraoperative monitoring techniques (e.g. recordings of sensory and motor evoked potentials, EEG, EMG, and spinal reflex activity) to monitor segments of the nervous system at risk during surgery;
2. Recognize changes in intraoperative neurophysiologic tests which indicate damage to neural structures, and distinguish these from common technical artifacts;
3. Communicate effectively normal and abnormal results to the surgical team, and incorporate results into clinical recommendations that may alter the surgical technique to avoid, limit or reverse injury to neural structures;
4. Apply knowledge about effects of anesthesia on NIOM and designing optimal anesthetic strategies for effective monitoring; and
5. Recognize the medico-legal, billing and regulatory aspects in NIOM.

AGENDA:

9:00am	Welcome and Introductions
9:05am	VEP Monitoring *Parthasarathy Thirumala, MD, FACNS*
9:45am	Monitoring for Brachial Plexus and Nerve Repair Surgery *Gloria M. Galloway, MD, MBA, FACNS*
10:25am	Coffee Break
10:40am	Monitoring for Spinal Cord Tumor Surgery *Eva K. Ritzl, MD, FACNS*
11:10am	Monitoring for Spinal Column Surgery *Ronald Emerson, MD, FACNS*
11:50am	Discussion
12:00pm	Lunch Break (not provided. See pg.6 for a list of nearby restaurants)
1:00pm	Corticobulbar MEP Monitoring with Cases and Brainstem Reflexes *Sedat Ulkatan, MD*
1:35pm	Functional Mapping of the Brain *Mirela V. Simon, MD, FACNS*
2:10pm	Monitoring for Vascular Surgery *Leslie H. Lee, MD, FACNS*
2:45pm	Discussion

9:00am–5:00pm
613: Electromyography (EMG)/Peripheral

Course Co-Chairs: Devon I. Rubin, MD, FACNS and Ruple S. Laughlin, MD, FAAN

LOCATION:
Salon 4

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:

1. Recognize the basic concepts of nerve conduction studies, the abnormalities that occur in different types of disorders, and the pitfalls that may occur during the performance of the studies;
2. Recognize normal and abnormal spontaneous and voluntary EMG waveforms and understand the significance of abnormal findings;
3. Explain the NCS techniques to perform reliable studies and avoid pitfalls;
4. Determine an appropriate EDX approach to patients with peripheral neuropathies, neuromuscular junction disorders, and myopathies; and
5. Summarize the techniques of repetitive nerve stimulation and unusual nerve conduction studies.

AGENDA:

9:00am	Basic Concepts of Nerve Conduction Studies and Patterns of Abnormalities *Ruple Laughlin, MD*
9:45am	Pitfalls of Nerve Conduction Studies *Devon I. Rubin, MD, FACNS*
10:30am	Coffee Break
10:45 am	NCS Demonstration: Basic Techniques and Pitfalls *Ruple Laughlin, MD and Devon I. Rubin, MD, FACNS*
12:00pm	Lunch Break (not provided. See pg.6 for a list of nearby restaurants)
1:00pm	EMG Waveforms – Recognition and Interpretation of Normal and Abnormal Waveforms *Devon I. Rubin, MD, FACNS*
2:00pm	EDX Approach to Peripheral Neuropathies *Rocio Vazquez do Campo, MD*
2:30pm	EDX Approach to Neuromuscular Junction Disorders *Hans Katzberg, MD, MSc, FRCP(c)*
3:15pm	EDX Approach to Myopathies *Priya Dhawan, MD*
3:45pm	Coffee Break
4:00pm	NCS Demonstration Advanced Techniques, Including Repetitive Stimulation, Unusual NCS, and Cranial Nerve Studies *Ruple Laughlin, MD and Devon I. Rubin, MD, FACNS*
	This course is supported by in-kind donation of equipment by Cadwell Industries, Inc.

12:30–3:00pm
621: CNP Directors Symposium: Navigating the CNP Fellowship Landscape in the Era of Neuromuscular and Epilepsy Fellowships

Course Co-Chairs: Lynn Liu, MD, FACNS and Ioannis Karakis, MD, PhD, MSc

LOCATION:
Salon 5

AGENDA:

12:30pm Welcome and Lunch
Lynn Liu, MD, FACNS and Ioannis Karakis, MD, PhD, MSc

1:00pm The Impact of ACGME Epilepsy and Neuromuscular Fellowship Accreditation on CNP Positions and ABNP Board Examinations
Lynn Liu, MD, FACNS and Ioannis Karakis, MD, PhD, MSc

1:15pm Navigating the CNP/EEG Fellowship Landscape in the Era of Epilepsy Fellowship
Jennifer Hopp, MD

1:50pm Navigating the CNP/EMG Fellowship Landscape in the Era of Neuromuscular Fellowship
Eric Logigian, MD

2:25pm Navigating the Mixed CNP Fellowship Landscape and Incorporating Other CNP Modalities (Sleep, IOM, Autonomic, etc)
Saurabh R. Sinha, MD, PhD, FACNS

1:00–3:00pm
631: Video EEG Basic

Course Co-Chairs: William O. Tatum, DO, FACNS and Phillip Pearl, MD, FACNS

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Recognize the indications for diagnostic video-EEG monitoring;
2. Discuss the differential diagnosis in patients suspected of epilepsy;
3. Explain the impact of video-EEG monitoring to classify and quantify seizures in patients with focal and generalized seizures/epilepsy syndromes; and
4. Recognize the impact of scalp EEG to characterize seizure type and epilepsy syndromes for the purposes of surgery.

AGENDA:

1:00pm The Approach to Video-EEG Monitoring in the Differential Diagnosis of Patients with Recurrent Spells (epileptic vs nonepileptic). - Indications
William O. Tatum, DO, FACNS

1:25pm Interpreting Semiological Signs During Video-EEG Monitoring Suggesting Focal and Generalized Seizure Onset (focal vs generalized). - Technique
Michael Sperling, MD, FACNS

1:50pm Ontogeny of Semiology: Transitional Signs from Pediatrics to Adulthood
Luca Bartolini, MD

2:15pm Classification of Epilepsy Syndromes for Treatment - Utility
Phillip Pearl, MD, FACNS

2:40pm Discussion

3:30–5:30pm
642: Autonomic Neurophysiology

Course Co-Chairs: Claus Reinsberger, MD, PhD, FACNS and Jeffrey Liou, DO

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Recognize the clinical features and patterns on autonomic testing in systemic and primary neurological disorders affecting central and peripheral autonomic pathways with their underlying anatomy and physiology; and
2. Summarize an approach to the diagnostic evaluation and management of disorders of the autonomic nervous system.

AGENDA:

3:30pm Introduction, Anatomy & Physiology of the Autonomic Nervous System
Claus Reinsberger, MD, PhD, FACNS

3:45pm Autonomic Testing
Jeffrey Liou, DO

4:15pm Neurological Disorders with Central Autonomic Failure
Alexandra Hovaguimian, MD

4:45pm Peripheral Autonomic Failure
Peter Novak, MD, PhD

5:15pm Discussion

3:30–5:30pm
641: CPT Coding Changes: EEG Monitoring and Neurostimulation

Course Chair: Marc R. Nuwer, MD, PhD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Explain the new 2020 CPT codes for EMU video-EEG monitoring;
2. Explain the new 2020 CPT codes for ICU EEG monitoring;
3. Explain the new 2020 CPT codes for ambulatory EEG monitoring;
4. Explain the new 2019 CPT codes VNS, RNS, and DBS;
5. Identify the associated coding instructions for using those codes; and
6. Describe how to apply those codes to their typical services.

AGENDA:

3:30pm RUC Process to Value New Codes
Eva K. Ritzl, MD, FACNS

3:50pm Neurostimulation Codes for VNS and RNS
Jonathan C. Edwards, MD, MBA, FACNS

4:15pm 2020 New CPT Codes for Video-EEG and EEG Monitoring
Marc R. Nuwer, MD, PhD, FACNS

5:00pm Discussion

5:45-7:45pm Mentor Program Meet and Greet & Career Development Panel

LOCATION:
Salon 3

7:00–10:00am
701: Basic EEG

Course Co-Chairs: Ioannis Karakis, MD, PhD, MSc, FACNS and Jay S. Pathmanathan, MD, PhD

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Explain the basics in electroencephalography (EEG);
2. It will include the fundamental tenets of signal generation, technical considerations of signal acquisition, types of EEG recordings and reporting standards;
2. Normal EEG examples and their variants across various age groups will be presented and contrasted with artifacts; and
3. Discuss both non epileptiform and epileptiform abnormalities that are demonstrated and their relationship with underlying neurologic disorders.

AGENDA:

7:00am Normal Adult EEG
Selim R. Benbadis, MD, FACNS

7:30am Normal Neonatal and Pediatric EEG
Tammy Tsuchida, MD, PhD, FACNS

8:00am Normal EEG Variants
Meriem Bensalem-Owen, MD, FACNS

8:30am Artifacts
Ioannis Karakis, MD, PhD, MSc, FACNS

9:00am Non Epileptiform Abnormalities
Hiba A. Haider, MD, FACNS

9:30am Epileptiform Abnormalities
Jay S. Pathmanathan, MD, PhD

7:00–10:00am
702: Neuromodulation/Stimulation in Human Brain

Course Co-Chairs: Gregory Worrell, MD and Alexander Rotenberg, MD, PhD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:
1. Comprehend some of the physics of electrical and magnetic brain stimulation;
2. Recognize currently available brain stimulation devices; and
3. Identify the clinical evidence for brain stimulation for epilepsy.

AGENDA:

7:00am Introduction: Electrical Stimulation of Brain
Greg Worrell, MD, PhD

7:05am Introduction: Non-Invasive Approaches
Alexander Rotenberg, MD, PhD

7:10am TMS in Clinical Practice
Melissa Tsuboyama, MD

7:30am Early Stage Clinical Transcranial Electrical Stimulation
Emiliano Santarnecchi, PhD

8:00am Translational Brain Stimulation and Drug-Device Coupling
Alexander Rotenberg, MD, PhD

8:30am Invasive Stimulation Approaches DBS for Epilepsy
Robert Fisher, MD, PhD

9:00am RNS for Epilepsy
Brian Lundstrom, MD, PhD

9:30am Next Generation Devices
Tim Denison, PhD

7:00–10:00am
703: Ultrasound Workshop

Course Co-Chairs: Ana Lucila Moreira, MD and Aatif M. Husain, MD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:

AGENDA:

7:00am Basics on Ultrasound Image and Artifacts
Ana Lucila Moreira, MD

7:20am Nerve Ultrasound: Upper Limb
Devon I. Rubin, MD, FACNS

7:40am Nerve Ultrasound: Lower Limb
Ana Lucila Moreira, MD

8:00am The Contribution of Ultrasound to ENMG: Making It Easier to Evaluate the Diaphragm
Ruple S. Laughlin, MD, FAAN

8:20am Discussion

8:30am Demonstration Stations, (30 Minutes Each - Rotation)
Median Nerve and Ulnar Nerve
Devon I. Rubin, MD, FACNS

Diaphragm
Ruple S. Laughlin, MD, FAAN

Radial Nerve and US Lower Limb
Ana Lucila Moreira, MD

8:00–10:00am
704: Video EEG Advanced

Course Co-Chairs: William O. Tatum, DO, FACNS and Phillip Pearl, MD, FACNS

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this course, participants should be able to:

1. Determine the predictive value of scalp-based video-EEG in patients with seizures;
2. Identify how to use invasive EEG to predict the surgical outcome based upon data obtained during video-EEG monitoring; and
3. Apply information from the lecture to appropriately localize the epileptogenic zone using video-EEG in pediatric patients.

AGENDA:

8:00am Localizing the Epileptogenic Zone Using Scalp-based Video-EEG Monitoring
William O. Tatum, DO, FACNS

8:35am Comparing the Techniques Using EEG During Intracranial Video-EEG Monitoring
Imad Najm, MD

9:10am Localizing the Epileptogenic Zone in Pediatric Patients with Video-EEG Monitoring
Phillip Pearl, MD, FACNS

9:45am Discussion

10:30–11:30am General Session

LOCATION:
Salons 4 & 5

Directors: Nicholas S. Abend, MD, MSCE, FACNS; Leslie Lee, MD, FACNS

10:30am Welcome

10:35am Ernst Rodin Distinguished Fellowship Award Presentation

10:40am Young Investigator Travel Award Recognition

10:45am Presidential Address: Seizures During Critical Illness: Consequence or Cause of Brain Injury?
Cecil D. Hahn, MD, MPH, FACNS

11:30am–1:00pm Lunch Break

Exhibit Hall Open

LOCATION:
Crescent City Ballroom
Complimentary boxed lunch will be provided for attendees in the Exhibit Hall.

Product Theater

Presented by: Ceribell

LOCATION:
Conti Room
See page 49 for complete information.

1:00–2:30pm Concurrent Sessions

711: Continuous EEG Findings in Refractory Status Epilepticus

Session Director: Teneille Gofton, MD, MSc, FRCPC, CSCN(EEG)

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize and interpret cEEG findings specific to critically ill adult and pediatric patients with RSE;
2. Analyze etiology-specific cEEG patterns and quantitative EEG in RSE; and
3. Describe an approach to weaning continuous and intermittent anticonvulsant medications based on EEG findings in critically ill patients with RSE throughout the illness trajectory.

AGENDA:

1:00pm Continuous EEG Findings in Adult and Pediatric Patients with Refractory Status Epilepticus.
Sarah E. Schmitt, MD, FACNS

1:30pm Applying Quantitative EEG to the Monitoring of Patients with Refractory Status Epilepticus
Nicolas Gaspard, MD, PhD

2:00pm Implications of cEEG Findings for Medication Prescribing and Weaning in Refractory Status Epilepticus
Derek B. Debicki, MD, PhD

712: High Density EEG and Electrical Source Imaging in Clinical Practice

Session Directors: Susan T. Herman, MD, FACNS and Catherine J. Chu, MD, MMSc

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe the indications, methods, and potential limitations for HD EEG acquisition and electrical source imaging;
2. Identify patients in whom HD EEG and ESI may aid in localization of the epileptogenic zone; and
3. Understand and incorporate the results of HD EEG and source localization techniques into epilepsy presurgical evaluations.

AGENDA:

1:00pm Clinical Indications for HD EEG and ESI
Susan T. Herman, MD, FACNS

1:20pm Electrical Source Imaging Techniques
Matti Hamalainen, PhD

1:40pm Validating HD EEG Results
Brian Lundstrom, MD, PhD

2:05pm Steps and Barriers to Setting Up an HD EEG / ESI Lab
Adriana Bermeo-Ovalle, MD, FACNS

713: Mastering EMG Motor Unit Potential Analysis: Learning the Skill of Deliberate Practice

Session Director: Devon I. Rubin, MD, FACNS

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe the changes in MUPs that occur in neuromuscular diseases;
2. Recognize firing rates of MUPs with accuracy; and
3. Recognize changes in MUP stability, phases, recruitment, and size.

AGENDA:

1:00pm Overview of Skills to Master MUP Analysis
Devon I. Rubin, MD, FACNS

1:15pm Interpretation of Individual MUP Parameters
Devon I. Rubin, MD, FACNS

2:15pm Putting It All Together: Analyzing Unknown MUPs
Devon I. Rubin, MD, FACNS

714: Update on Non-Invasive Presurgical Functional Mapping Methods in Children

Session Director: James W. Wheless, MD

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe the neurophysiology and technical principles of magnetoencephalography (MEG), functional magnetic resonance imaging (fMRI), and transcranial magnetic stimulation (TMS);
2. Discuss the advantages and disadvantages of each modality; and
3. Recognize the complementary utility of the combined non-invasive modalities in the context of presurgical mapping as it applies to pediatric cohorts.

AGENDA:
1:00pm Introduction to Non-Invasive Presurgical Functional Mapping Methods in Children
James W. Wheless, MD

1:15pm MEG: Background and Clinical Utility in Pediatric Clinical Populations
Roozbeh Rezaie, PhD

1:35pm fMRI: Background and Clinical Utility in Pediatric Clinical Populations
Asim Choudhri, MD

1:55pm TMS: Background and Clinical Utility in Pediatric Clinical Populations
Shalini Narayana, PhD

715: Wearables Against Death – SUDEP, Sleep, and Nocturnal Seizures

Session Director: Marcus C. Ng, MD, FRCPC, CSCN, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Identify the relation between SUDEP, breathing, and body position;
2. Describe the potential relation between SUDEP, dysautonomia, REM sleep, and muscle tone; and
3. Explain the current role and state of wearable device development in the recognition and prevention of SUDEP.

AGENDA:
1:00pm SUDEP and Breathing
Milena Pavlova, MD

1:30pm SUDEP, REM Sleep and Muscle Tone
Marcus C. Ng, MD, FRCPC, CSCN, FACNS

2:00pm SUDEP and Wearable Devices
Rani Sarkis, MD, MSc, FACNS

2:30–2:45pm Coffee Break

LOCATION:
Crescent City Ballroom

2:45–4:15pm Concurrent Sessions

721: Continuous EEG of Hypoxic-Ischemic Brain Injury in The Era of Targeted Temperature Management

Session Directors: Edilberto Amorim De Cerqueira Filho, MD and Jong Woo Lee, MD, PhD, FACNS

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Identify biochemical and histopathological correlates of EEG in patients with hypoxic-ischemic brain injury;
2. Learn the basis of an electroclinical assessment of myoclonus in hypoxic-ischemic brain injury; and
3. Describe the interaction between continuous EEG and MRI findings in patients undergoing TTM, and how to combine continuous EEG findings with neuroimaging studies, particularly MRI, in hypoxic-ischemic brain injury.

AGENDA:
2:45pm Biochemical and Histopathological Correlates of EEG
Michel van Putten, MD, MSc, PhD

3:15pm Electroclinical Assessment of Myoclonus and Myoclonus Status Epilepticus
Monica Dhakar, MD, MS

3:45pm Neuroimaging Correlates to Continuous EEG Monitoring: CCEMRC Collaborative Study
Edilberto Amorim, MD

722: Controversies in Neonatal Seizures ACNS/British Society for Clincial Neurophysiology Joint Symposium

Session Directors: Ronit Pressler, PhD, MD and Tammy Tsuchida, MD, PhD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize the clinical spectrum of neonatal seizures;
2. Identify the electrographic pattern of neonatal seizures; and
3. Explain the value of a seizure classification and its implication for clinical management.

AGENDA:
2:45pm EEG Characteristics and Minimum Seizure Duration in Neonatal Seizures
Tammy Tsuchida, MD, PhD, FACNS

3:15pm Value of Automatic Seizure Detection in the NICU
Geraldine Boylan, MD

3:45pm Role of Semiology and Classification in the Management of Neonatal Seizures
Ronit Pressler, PhD, MD

724: Complex Systems, Epilepsy and EEG

Session Director: Giridhar Kalamangalam, MD, PhD, FACNS

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize the importance of complex systems science to the defining phenomena of epilepsy;
2. Develop an appreciation of the promise and limitations of the approaches discussed; and
3. Explain the concepts presented to their own areas of research.

AGENDA:

9:00am Complexity Science, Epilepsy and Cognition
Rodney Scott, MD, PhD

9:30am From Complex to Simple and Back: State Changes in the EEG
Giridhar Kalamangalam, MD, DPhil, FACNS

10:00am The Promise of Complex Systems Science in Clinical Epilepsy
Matthew Mahoney, PhD

723: Inpatient Weakness: Clinical and EDX Approach

Session Director: Ruple S. Laughlin, MD, FAAN

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe EDX features supporting a neuromuscular transmission disorder;
2. Identify the risk factors, clinical and electrodiagnostic features of ICU-acquired weakness; and
3. Define clinical features and electrodiagnostic hallmarks of Guillian Barre syndrome and other acute inflammatory polyradiculoneuropathies.

AGENDA:

2:45pm Failure to Ween: Clinical and EDX Findings in Neuromuscular Junction Disorders
Ruple S. Laughlin, MD, FAAN

3:15pm Acute Inflammatory Polyradiculoneuropathies: Characteristic Findings and EDX Hallmark
Cory J. Kogelschatz, MD

3:45pm ICU-Acquired Weakness: Clinical and Electrodiagnostic Features
Brent Goodman, MD

4:30–6:00pm Concurrent Sessions

732: Nonconvulsive Status Epilepticus: Diagnostic Approach in Adults and Children ACNS/Austrian Society for Clinical Neurophysiology Joint Symposium

Session Directors: Markus Leitinger, MD and Eugen Trinka, MD, MSc, FRCP

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Identify NCSE and its mimics in adults and children in neurophysiology lab and ICU-EEG monitoring.

AGENDA:

4:30pm Diagnostic Criteria of Non-Convulsive Status Epilepticus (NCSE)
Markus Leitinger, MD

5:00pm Mimics and the Borderland of NCSE
Eugen Trinka, MD, MSc, FRCP

5:30pm NCSE - Pediatric Diagnosis and Management
Nicholas S. Abend, MD MSCE, FACNS

731: It's Not All Child's Play: Presurgical Functional Mapping in Children Using Transcranial Magnetic Stimulation

Session Director: Alexander Rotenberg, MD, PhD

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of the session, participants should be:
1. Explain the fundamentals of TMS methodology;
2. Describe the challenges and advantages of performing TMS in children with neurological disorders; and
3. Explain the advances in the use of TMS as a non-invasive functional mapping tool in children.

AGENDA:

4:35pm Fundamentals of TMS and Motor Mapping Protocols
Alexander Rotenberg, MD, PhD

5:00pm TMS Language Mapping in Children: Challenges and Opportunities
Shalini Narayana, PhD

5:25pm Clinical Utility of TMS and Its Integration with Other Noninvasive and Invasive Functional Mapping Modalities
James W. Wheless, MD

733: Selective Dorsal Rhizotomy: Making the Cut

Session Director: Monica P. Islam, MD, FACNS

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Design a comprehensive monitoring plan for patients undergoing selective dorsal rhizotomy;
2. Identify appropriate candidates for selective dorsal rhizotomy based on clinical history, physical exam and expected outcomes; and
3. Communicate patterns of EMG involvement to identify the spinal level and guide nerve rootlet sectioning.

AGENDA:

4:30pm Selective Dorsal Rhizotomy: A Set-Up for Success
Monica P. Islam, MD, FACNS

5:00pm Conus Rhizotomy: Why is it Better?
Jeffrey R. Leonard, MD

5:30pm Selective Dorsal Rhizotomy: Making the Grade
Jennifer L. McKinney, MD, FACNS

734: The Business of Clinical Neurophysiology

Session Directors: Matthew Luedke, MD and Suzette LaRoche, MD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize common business and administrative terms to more effectively understand and advocate with bureaucracies in healthcare;
2. Explain common quality management tools, discuss their relative benefits, and be able to identify critical quality measures for improving patient care; and
3. Identify the value of burnout prevention from a business perspective and identify strategies to advocate for provider resiliency with healthcare administrative bureaucracies.

AGENDA:

4:30pm Business Lingo for the Clinical Neurophysiologist
Calvin Gardner, BS, MBA

5:00pm Quality Measures for Clinical Neurophysiology
Matthew Luedke, MD

5:30pm The Value Proposition for Preventing Burnout
Cormac O'Donovan, MD, FACNS

735: The Postictal State: Clinical Neurophysiology and Implications

Session Directors: Elson So, MD, FACNS and Lisa Bateman, MD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Use postictal clinical and EEG features to help localize the seizure focus for epilepsy surgery;
2. Recognize the diagnostic and therapeutic implications in distinguishing between ictal and postictal states; and
3. Know the potential for psychosis, depression or sudden death to occur during the postictal state.

AGENDA:

4:35pm Boundaries of the Postictal State: Implications for Seizure Management
Lisa Bateman, MD

5:00pm Postictal Semiology and EEG: Role in Seizure Focus Identification
Amy Crepeau, MD

5:25pm Morbidities in the Postictal State: Recognition and Management
Elson So, MD, FACNS

6:15–7:30pm General Session

LOCATION:
Salons 4 & 5

6:15pm Cosimo Ajmone-Marsan Award Presentation
Aatif M. Husain, MD, FACNS

6:20pm Jasper Award Presentation
Saurabh R. Sinha, MD, PhD, FACNS

6:25pm Jasper Award Lecture: Stimulation
Ronald Lesser, MD, FACNS

6:50pm Gloor Award Presentation
Stephan U. Schuele, MD, MPH, FACNS

6:55pm Gloor Award Lecture: What's the Pattern?
Richard C. Burgess, MD, PhD, FACNS

7:30–9:00pm Welcome Reception

LOCATION:
Crescent City Ballroom

See page 9 for details.

9:00–10:30am Concurrent Sessions - Special Interest Groups

801: Clinical Neurophysiology Resident and Fellow Special Interest Group

Session Director: Andrea Hakimi, DO, FACNS, FAES

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe selected clinical neurophysiology cases or quality improvement projects completed by trainees;
2. Engage in an informal discussion of the selected cases or projects; and
3. Discuss his or her opinion regarding different approaches to each case or project with emphasis on learning points.

AGENDA:

9:00am SIG Introduction
Andrea Hakimi, DO, FACNS, FAES

9:05am Case Presentations

Location of Nodular Heterotopia is Related to Epileptogenicity
Presenter: Sarah Durica, MD

EEG Findings in Patients on CAR-T Therapy with CAR-T-cell Related Encephalopathy Syndrome (CRES): A Case Series
Presenter: Keerthana Akkineni, MD

Zip Seizures in Neonates: A Case Series
Presenter: Alexa M. King, MD

Congenital Myasthenic Syndrome: The Great Imitator
Presenter: Cecilia Kelly, MD

802: How Slow Can the Brain Go? Investigating the Dynamics of Slow Oscillations Following Acquired Brain Injuries

Session Directors: Rejean Guerriero, DO and Stuart Tomko, MD

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Define slow brain activity;
2. Describe the slow wave components of spreading depolarizations; and
3. Describe physiologic factors that underlie infra- and ultra-slow potentials.

AGENDA:

2:45pm Infraslow Activity in Postanoxic Encephalopathy
Michel van Putten, MD, MSc, PhD

3:15pm No Lower Limit: The Slow and Infinitely Slow Waves that Mediate Secondary Injury and Death of Cerebral Cortex
Jed Hartings, PhD

3:45pm Bilevel Spectral Analysis Reveals Millihertz Oscillary Modulation in the EEG of Young Children
ShiNung Ching, PhD, MASc

803: Comprehensive Introduction to Clinical Neuromoduluation

Session Director: Jay Shils, PhD, DABM, FACNS

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Discuss the various theories behind DBS and SCS mechanisms of action;
2. Describe the potential complications from applying electricity to neural tissue; and
3. Describe the difference between open and closed loop neuromodulation systems as well as safety.

AGENDA:

9:00am Theory of Neural Stimulation
Jay Shils, PhD, DABM, FACNS

9:30am Computational Models of Neuromodulation Systems
Jeff Arle, MD, PhD

10:00am Theory to Practice
Mark Stecker, MD, PhD, FACNS

804: High Density EEG SIG: The High Density EEG Research Consortium

Session Directors: Susan T. Herman, MD, FACNS, and Catherine J. Chu, MD, MMSc

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe the indications, methods, and potential limitations for HD EEG acquisition and electrical source imaging;
2. Identify patients in whom HD EEG and ESI may aid in localization of the epileptogenic zone; and
3. Incorporate the results of HD EEG and source localization techniques into epilepsy presurgical evaluations.

In this session, several consortium members will highlight their recent research findings and improvements in clinical practice.

Leonardo Bonilha, MD, PhD
June Yoshii-Contreras, MD
Travis Stoub, PhD
Benjamin Brinkmann, PhD
Michael Stein, MD
Jurriaan Peters, MD, PhD
Walter Heine, MD, PhD

805: Staffing Models for Continuous Visual Surveillance in EMU and ICU Monitoring Units

Session Director: Olga Selioutski, DO, FACNS, FAES

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe the need and define challenges in establishing continuous live monitoring for the ICU and EMU patients;
2. Identify opportunities to develop on-site training programs to engage technologists, RNs, APPs in event recognition and EEG interpretation; and
3. Conduct quality measures and outcome analysis of continuous visual surveillance.

AGENDA:

9:00am Visual EEG Surveillance and Timely Event Reporting. Is It a Necessity or a Luxury?
Christa Swisher, MD, FACNS

9:25am Training Technologists, RNs and APPs on Use of QEEG
Susan T. Herman, MD, FACNS

9:50am Visual EEG Surveillance and Timely Event Reporting. Administrative Challenges
Sarah E. Schmitt, MD, FACNS

10:15am Panel Discussion
Christa Swisher, MD, FACNS, Susan T. Herman, MD, FACNS, Sarah E. Schmitt, MD, FACNS and Suzette LaRoche, MD, FACNS

10:30–11:00am Coffee Break

11:00am–12:30pm Concurrent Sessions

812: IOM in Vascular Procedures ACNS/ Spanish Society of Clinical Neurophysiology Joint Symposium

Session Directors: Victoria Eugenia Fernandez Sanchez, MD, PhD; and Leslie Lee, MD, FACNS

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Discuss the technical and clinical challenges when performing IOM during these types of surgeries;
2. Review the clinical data available for the use of IOM in patients with vascular conditions; and
3. Describe useful strategies to improve the quality of IOM.

AGENDA:

11:00am IOM in Carotid Endarterectomies
Ma Moreno Galera, MD

11:30am IOM in Intracranial Vascular Procedures
Jaime R. Lopez, MD, FACNS

12:00pm IOM in Thoracoabdominal Aneurysms
Guillermo Martín Palomeque, MD

813: Myoclonus: The Road Less Traveled

Session Director: Jayant Acharya, MD, DM, FACNS, FAES, FAAN

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe clinical neurophysiological methods to diagnose different types of myoclonus;
2. Discuss the neurophysiological features of juvenile and progressive myoclonic epilepsies; and
3. Describe the clinical and EEG correlates of post-anoxic myoclonus.

AGENDA:

11:00am Neurophysiological Evaluation of Myoclonus
Mark Hallett, MD, DM, FACNS

11:30am Neurophysiology of Juvenile and Progressive Myoclonic Epilepsy
Jayant Acharya, MD, DM, FACNS, FAES, FAAN

12:00pm The Spectrum of Post-Anoxic Myoclonus
Peter Kaplan, MB, BS, FRCP, FACNS

811: Presurgical Language Localization with Stereo-EEG: Challenges and Opportunities

Session Director: Ravindra Arya, MD, DM

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Discuss various approaches to pre-surgical language mapping with stereo-EEG;
2. Describe technical aspects of signal acquisition with stereo-EEG for language mapping; and
3. Describe the challenges involved in analysis and visualization of brain language networks with stereo-EEG.

AGENDA:

11:00am Technical Aspects of Signal Acquisition and Planning of Stereo-EEG for Language Mapping
Eishi Asano, MD, PhD

11:20am Analysis and Visualization of Functional Networks in Human Brain: Translating the Methodology from Subdural to Stereo Electrodes
Nathan Crone, MD

11:40am Approaches to Pre-Surgical Language Mapping with Stereo-EEG and Their Diagnostic Performance
Ravindra Arya, MD, DM

814: Quantitative Electroencephalography: Applications in Pediatric Neurocritical Care

Session Director: Arnold Sansevere, MD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Integrate quantitative EEG with clinical care in the pediatric intensive care unit;
2. Apply quantitative EEG in context of multimodal neuromonitoring with special focus on young children and infants; and
3. Demonstrate methods of training bedside clinicians with limited neurophysiology experience for preliminary real-time analysis of quantitative electroencephalography trends.

AGENDA:
11:05am Beyond Seizures: Integrating EEG with Clinical Care in the Pediatric Intensive Care Unit
Rejean Guerriero, DO

11:30am Using Quantitative EEG as Part of Multimodality Neuromonitoring for Critically Ill Children
Brian Appavu, MD

11:55am Training Your Bedside ICU Team for Preliminary Analysis of Quantitative EEG
Rishi Lalgudi-Ganesan, MBBS, MD, DM

815: Sleep-Related Epilepsy: Lessons from the Sleep Laboratory

Session Director: Steve A. Gibbs, MD, MSc, FRCPC

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Summarize the influence of sleep states and the circadian rhythm on epileptic activity and seizure onset;
2. Identify clinical and electrophysiological features relevant to sleep-related hypermotor epilepsy (SHE) during video-EEG monitoring; and
3. Discuss the rationale for the use of stereo-EEG in specific drug-resistant sleep-related epilepsies to improve post-operative outcome.

AGENDA:
11:00am Seizures in the Sleep Laboratory
Marcus C. Ng, MD, FRCPC, CSCN, FACNS

11:30am Clinical and EEG Features of Sleep-Related Hypermotor Epilepsy
Steve A. Gibbs, MD, MSc, FRCPC

11:55am The Use of Stereo-EEG in Drug-Resistant Sleep Related Epilepsy
Lino Nobili, MD, PhD

12:30–2:00pm Lunch Break

Exhibit Hall Open

LOCATION:
Crescent City Ballroom
Complimentary boxed lunch will be provided for attendees in the Exhibit Hall.

Product Theater

Presented by: Brain Sentinel

LOCATION:
Conti Room
See page 49 for complete information.

2:00–3:30pm Concurrent Sessions

821: Advanced Autonomic Testing

Session Director: Peter Novak, MD, PhD

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Demonstrate the basic autonomic testing (deep breathing, Valsalva maneuver, tilt test, sudomotor testing and skin biopsy);
2. Identify common orthostatic syndromes; and
3. Recognize utility and limitations of autonomic testing.

AGENDA:
2:00pm Basic Autonomic Tests
Thomas C. Chelimsky, MD

2:30pm Testing of Central Autonomic Nervous System
Max J. Hilz, MD

3:00pm Update of Orthostatic Intolerance Syndromes, Grading of Dysautonomia and Inflammatory Small Fiber Neuropathies
Peter Novak, MD, PhD

822: Approach to Surgery for Low Grade Glioma: Is an Epilepsy Evaluation Necessary?

Session Director: Jessica Templer, MD

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. List surgical options with patients presenting with a first time seizure in the setting of a low grade glioma;
2. Identify patients who would benefit from an epilepsy evaluation prior to resection; and
3. Summarize the role of ECoG in low grade gliomas.

AGENDA:
2:00pm The Brain Tumor Surgeon Perspective
Matthew Tate, MD, PhD

2:20pm The Epileptologist Perspective
Jessica Templer, MD

2:40pm Resection: ECOG is Necessary
Doug Nordli, MD, FACNS

3:00pm Resection: ECOG is Not Necessary
William O. Tatum IV, DO, FACNS

823: Long-term Video EEG Monitoring: In the EMU, ICU and at Home

Session Director: Stephan U. Schuele, MD, MPH, FACNS

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Explain the differences in indication for video EEG monitoring;
2. Discuss best practices for patient monitoring; and
3. Discuss best practices for monitoring and reviewing multi-day EEG recordings.

AGENDA:

2:00pm EMU Monitoring
Susan Agostini, REEG, CLTM

2:30pm ICU Monitoring
Jay Gavvala, MD, MSCI

3:00pm Ambulatory Monitoring
Stephan U. Schuele, MD, MPH, FACNS

824: Neuromodulation in Refractory Epilepsy ACNS/Mexican Clinical Neurophysiology Society Joint Symposium

Sociedad Mexicana de Neurofisiología Clínica A.C

Session Directors: Daniel San Juan de Orta, MD, FACNS and Gregory Worrell, MD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recall some of the physics of electrical and magnetic brain stimulation;
2. Recognize currently available brain stimulation devices; and
3. Recognize the clinical evidence for brain stimulation for epilepsy.

AGENDA:

2:00pm Emerging Applications of Electrical Brain Stimulation in Brain and Mind
Gregory Worrell, MD

2:30pm Update in Deep Brain Stimulation in Epilepsy
Ana Luisa Velasco, MD, PhD

3:00pm Transcranial Direct Current Stimulation in Epilepsy
Daniel San Juan de Orta, MD, FACNS

825: Prediction Analytics for Forecasting Seizure Risk in Critically Ill Patients

Session Director: France W. Fung, MD

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Identify the clinical and EEG risk factors that portend increased risk for seizures and understand how they influence risk of seizure development over time;
2. Describe the panels of QEEG trends for seizure detection and understand the benefits and limitations to using them to facilitate interpretation of prolonged conventional EEG in the ICU setting; and
3. Assess the sensitivity and specificity of limited-channel EEG for detecting relevant pathological EEG features and seizures in select populations of critically ill patients, including neonates.

AGENDA:

2:00pm EEG Risk Factors for Seizures in the Critically Ill
Aaron Struck, MD

2:30pm Sensitivity of Quantitative EEG Tools for Seizure Detection in Critically Ill Patients
Hiba A. Haider, MD, FACNS

3:00pm Enhancing Feasibility of EEG Monitoring in Critically Ill Pediatric Patients
France W. Fung, MD

3:30pm Break

3:45–5:15pm Concurrent Sessions

831: Clinical Neurophysiology of Repetitive Head Impacts

Session Directors: Claus Reinsberger, MD, PhD, FACNS and Jonathan C. Edwards, MD, MBA, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize structural brain changes induced by repetitive head impacts;
2. Explain the role of EEG recordings in the assessment of repetitive head impacts; and
3. Explain the alteration and possible reparative mechanisms of sleep in the setting of repetitive head impacts.

AGENDA:
3:45pm Alterations of Brain Structure by Repetitive Head Impacts - Truth or Myth?
Inga Koerte, MD

4:15pm The EEG of Repetitive Health Impacts
Claus Reinsberger, MD, PhD, FACNS

4:45pm Alteration of Sleep by Repetitive Head Impacts
Jeffrey Liou, DO

832: How Deep in the Brain Can You See with EEG, MEG and EEG-fMRI? ACNS/ Canadian Society for Clinical Neurophysiology Joint Symposium

CSCN SCNC Canadian Society of Clinical Neurophysiologists Société canadienne de neurophysiologie clinique

Session Director: Eishi Asano, MD, PhD

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize some of the limitations of EEG-based source localization methods;
2. Recognize some of the limitations of MEG-based source localization methods; and
3. Explain the principles, advantages and limitations of EEG-fMRI to localize epileptogenic regions.

AGENDA:
3:45pm How Deep in the Brain Can You See with EEG?
Richard Wennberg, MD, MSc, PhD

4:15pm How Deep in the Brain Can You See with MEG?
Christophe Grova, PhD

4:45pm How Deep in the Brain Can You See with EEG-fMRI?
Jean Gotman, PhD, FACNS

833: My Patient's Dizzy, Now What?: Autonomic Neurophysiology through Clinical Cases

Session Director: Mitchell Miglis, MD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Interpret the results of autonomic cardiovascular reflex testing including heart rate variability with deep breathing, Valsalva maneuver and head up tilt testing in the setting of clinical cases;
2. Define typical presentations of disorders of autonomic hyperactivity and autonomic failure; and
3. Recognize patterns on thermoregulatory sweat testing associated with disorders of central and peripheral autonomic pathways.

AGENDA:
3:45pm Introduction to Autonomic Testing and Disorders of Autonomic Hyperactivity
Mitchell Miglis, MD

4:15pm Disorders of Autonomic Failure and the Utility of Sweat Testing in Clinical Practice
Dong-In Sinn, MD

4:45pm Autoimmune Autonomic Syndromes and Future Autonomic Measures
Srikanth Muppidi, MD

834: Neuromonitoring in Neonates with Critical Congenital Heart Disease

Session Director: Janette A. Mailo, MD, PhD

LOCATION:
Chamber 1, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize the use of continuous EEG and quantitative EEG in neuromonitoring of neonates with critical congenital heart disease;
2. Interpret quantitative EEG trend changes and recognize abnormal qEEG activity; and
3. Recognize continuous EEG and quantitative EEG markers associated with new brain injury. Future directions in using real-time non-invasive neuromonitoring will be discussed.

AGENDA:
3:45pm Continuous EEG Monitoring in Neonates with Critical CHD and ECMO
Shavonne L. Massey, MD

4:30pm Neuromonitoring Using Continuous EEG and Quantitative EEG in Critically Ill Neonates
James J. Riviello, MD

835: Spanish Symposium: Epilepsia de Inicio Temprano /Early Onset Epilepsies. The Colombian Experience

Session Directors: Elia Pestana-Knight, MD, FACNS and Adriana Bermeo-Ovalle, MD, FACNS

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:

1. Recognize the contribution of prenatal and perinatal infections to the development of early onset epilepsy and the electroclinical presentation of these cases;
2. Identify the electroclinical manifestation of neurometabolic disorders with epilepsy as an early onset feature; and
3. Discuss the strategies available for epilepsy surgery in children with early onset epilepsy in Colombia.

AGENDA:

3:45pm Hallazgos Electro-Clinicos en Ninos Con Epilepsia de Inicio Temprano Debido a Infecciones Perinatales
Maria Fernanda Lengua, MD

4:15pm Hallazgos Electro-Clinicos en Ninos con Epilepsia de Inicio Temprano Debido a Condiciones Metabolicos/Findings in Children with Early Onset Epilepsy Due to Pre and Perinatal Infections. The Columbian Experience.
Isabel Camacho, MD

4:45pm Cirugia Para Epilepsia de Inicio Temprano/Epilepsy Surgery for Early Onset Epilepsy. The Columbian Experience.
Juan Carlos Perez Poveda, MD

5:30–7:00pm General Session

LOCATION:
Salons 4 & 5

5:30pm ACNS Business Meeting
This meeting is open to all attendees, but only ACNS Members may vote

6:00pm Schwab Award Presentation
Aatif M. Husain, MD, FACNS

6:05pm Schwab Award Lecture: Shock, Listen or Look? The Evolution of Neuromuscular Ultrasound
Francis O. Walker, MD, FACNS

6:30pm The Neurology of Voodoo
Ann Tilton, MD

8:00–9:30am Concurrent Sessions

902: Battle-Lines are Drawn: Is it HD-EEG vs MEG, or EEG with MEG?

Session Director: Anto Bagic, MD, PhD, FACNS, FAES

LOCATION:
Salon 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Recognize the strengths and weaknesses of MEG and HDEEG when used in presurgical evaluation of DRE;
2. Explain the key practical aspects of individual and combined use of MEG and HDEEG;
3. Identify appropriate expectations from a MEG-EEG report vs. HDEEG report that supports clinical care effectively.

AGENDA:

8:00am I Tried, In My Hands, Both Work
Robert Knowlton, MD, MPH

8:30am I Combined Them and Got Best Results
Chris Plummer, MD

9:00am I Know What I Like, but the Data Tells a Story...
Giovanni Pellegrino, MD

903: EEG in Epileptic Encephalopathies in Childhood ACNS/Brazilian Clinical Neurophysiology Society Joint Symposium

Session Director: Luís Otávio Caboclo, MD, MSc, PhD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Identify the EEG patterns in epileptic encephalopathies that require immediate treatment.

AGENDA:

8:00am Hypsarrythmia
Luís Otávio Caboclo, MD, MSc, PhD

8:30am ESES - CSWS Spectrum
Rajesh Ramachandrannair, MD

9:00am Status Epilepticus Encephalopathies in Childhood
Ana Hamad, MD

904: SEEG Implantation Strategy in Epileptic Patients: Illustrative Cases

Session Director: Jun Park, MD, FAES

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Summarize the concepts of stereoelectroencephalography (SEEG);
2. Describe the indications of SEEG in adults and children; and
3. Apply the technique in selected patients with drug resistant focal epilepsy.

AGENDA:

8:00am Illustrative Case
Naiara Garcia-Losarcos, MD

8:30am Illustrative Case
Elia Pestana-Knight, MD, FACNS

9:00am Illustrative Case
Guadalupe Fernandez-Baca, MD

8:00–11:30am

901: Diversity in Leadership Symposium

Director: Gloria M. Galloway, MD, MBA, FACNS

LOCATION:
Chamber 3, Mayor Suite Level

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Discuss the current issues involved in gender disparity in leadership and career advancement;
2. Describe measures that can be utilized to overcome or work through challenges encountered in female career advancement; and
3. Demonstrate personal involvement and engagement in committees and task forces and seek out mentoring opportunities to shape the strategy and future of ACNS for everyone.

AGENDA:

8:00am Diversity in Neurology - Solutions Toward a More Integrated Workforce
Roy Hamilton, MD

8:30am Shared Knowledge from Experiences as an Academic Neurologist/Leader
Barbara Jobst, MD, FACNS

9:00am Burnout and Career Satisfaction Among Neurologists
Neil Busis, MD

9:30am Coffee Break

10:00am Roundtable Discussions

Career and Contract Negotiations
Barbara Jobst, MD, FACNS and Sarah E. Schmitt, MD, FACNS

Creating Balance in Work and Life
Gloria M. Galloway, MD, MBA, FACNS, and Neil Busis, MD

Establishing Networks
Susan T. Herman, MD, FACNS, and Suzette LaRoche, MD, FACNS

Planning Promotion
Roy Hamilton, MD

9:30–10:00am Coffee Break

10:00–11:30am Concurrent Sessions

912: Controversies in Neurostimulation and Epilepsy Surgery

Session Director: Dawn Eliashiv, MD, FACNS

LOCATION:
Salons 4 & 5

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Identify options available for the treatment of insular epilepsy;
2. Examine and summarize options for treatment of bilateral temporal lobe seizures; and
3. Assess the safety and efficacy of ablation versus resection in the surgical management of epilepsy.

AGENDA:

10:00am Pro: RNS Should be the New Standard of Care with Temporal Lobe Seizures Prior to Resective Epilepsy Surgery
David King Stevens, MD

10:15am Con: Resective Epilepsy is Potentially Curative and Should be Our First Aim
Jerome Engel, MD, PhD

10:30am Pro: Insular Resection is Feasible
Robert Gross, MD, PhD

10:450am Con: Neurostimulation is the Treatment of Choice for Insular Epilepsy
Dawn Eliashiv, MD, FACNS

11:00am Pro: MR Guided Ablation Should be the First Treatment for Mesial Temporal Lobe Epilepsy
Robert Gross, MD, PhD

11:15am Con: Standard Anteromesial Resection is the Preferred Treatment for MTLE
Jerome Engel, MD, PhD

913: Stat EEGs: Use, Abuse, and the Role of New Rapid-EEG Devices

Session Director: Selim R. Benbadis, MD, FACNS

LOCATION:
Salon 2

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe appropriate indications for stat EEGs;
2. Discuss the practical challenges of stat EEGs across various practice settings (academic institutions, community hospitals, etc.); and
3. Recognize the role (and pros and cons) of rapid EEG systems, and how to use CPT code with them.

AGENDA:

10:00am Use and Abuse of Stat EEG: Indications, Current Use, and Challenges
Selim R. Benbadis, MD, FACNS

10:20am The EEG in Non-Convulsive Status Epilepticus
Lawrence J. Hirsch, MD, FACNS

10:40am Rapid EEG Devices: Comparative Review of Various Systems
Selim R. Benbadis, MD, FACNS

11:00am Update in EEG CPT Codes and How They Apply to These New Rapid-EEG Options
Marc R. Nuwer, MD, PhD, FACNS

914: The Neurophysiology of Alzheimer's Disease

Session Directors: Rani Sarkis, MD, MSc and Alice Lam, MD, PhD

LOCATION:
Salon 3

LEARNING OBJECTIVES:
At the conclusion of this session, participants should be able to:
1. Describe the prevalence of subclinical epileptiform abnormalities in Alzheimer's disease, and describe EEG markers of hyperexcitability;
2. Recognize the changes in sleep architecture and physiology in Alzheimer's disease; and
3. Describe the role of TMS in evaluating cortical excitability in Alzheimer's disease.

AGENDA:

10:00am The Electroclinical Spectrum of Hyperexcitability in Alzheimer's Disease
Alice Lam, MD, PhD

10:30am The Neurophysiology of Sleep in Alzheimer's Disease
Rani Sarkis, MD, MSc

11:00am Measuring Cortical Hyperexcitability in Alzheimer's Disease with Transcranial Magnetic Stimulation
Mouhsin Shafi, MD, PhD

11:30am Adjourn

See you in Austin!
February 10-14, 2021

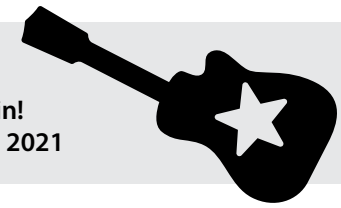
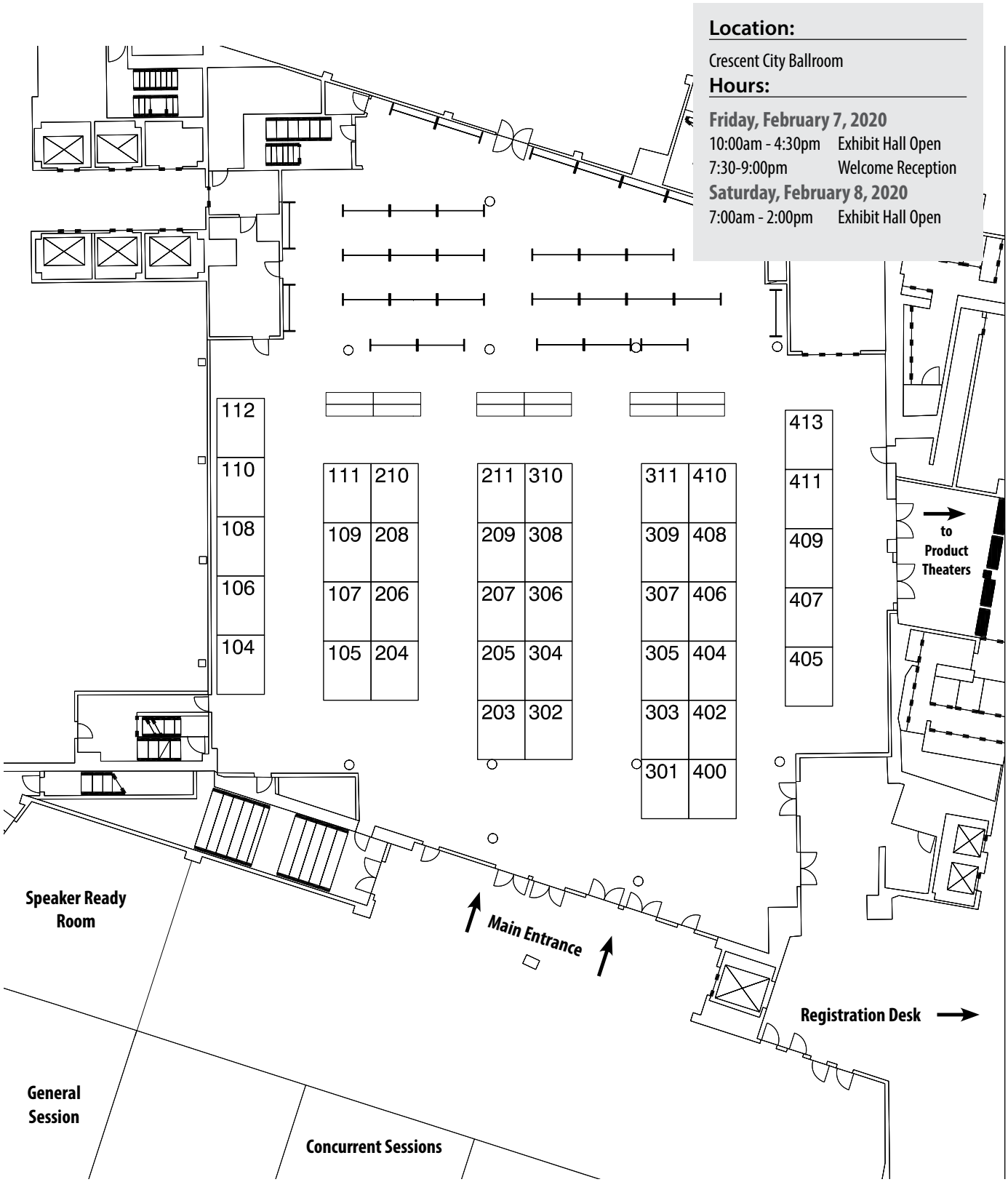


EXHIBIT HALL & SPONSORED SESSIONS



EXHIBITORS

Table A
ASET- The Neurodiagnostic Society

402 East Bannister Road, Suite A
Kansas City, MO 61131
Phone: 816–931–1120
Website: www.ASET.org
Email: info@aset.org

ASET – The Neurodiagnostic Society: With a membership base more than 6,000 strong, ASET – The Neurodiagnostic Society is the largest professional association representing Neurodiagnostics. We provide leadership, advocacy and resources that promote professional excellence, patient safety and quality care in Neurodiagnostics. Our vision is to ensure that neurologic health and quality of care is improved globally. Learn more about our educational resources, job descriptions, best practices, publications, upcoming events, career center and shop our online store at ASET.org.

Table B
ABCN/ABRET

2908 Greenbriar Dr.
Springfield, IL, 62704, USA
Phone: 217-726-7980
Fax: 217-726-7989
Email: Janice@abret.org
Website: abcn.org; abret.org

The American Board of Clinical Neurophysiology (ABCN) has a long history of promoting excellence in Clinical Neurophysiology and offers examinations with added competency in Epilepsy Monitoring, Neurophysiologic Intraoperative Monitoring, Critical Care EEG, or General Clinical Neurophysiology. International testing is available. Stop by to see the new on-line CNP Self-Assessment program! Coming soon – Pediatric EEG Track.

ABRET Neurodiagnostic Credentialing & Accreditation offers five credentials for technologists and practitioners (R. EEG T.®, R. EP T.®, CNIM®, CLTM®, CAP®) and a Certificate Program, CMEG®. Coming soon – NeuroAnalysit credential. For labs wanting to demonstrate a commitment to standards and quality, laboratory accreditation programs are available, LAB-EEG, LAB-NIOM, and LAB-LTM.

#309/311
Brain Sentinel Diagnostic Services, LLC

8023 Vantage Dr., Suite 216
San Antonio, TX 78230
Website: https://speacsystem.com/

Brain Sentinel is pioneering the use of Surface Electromyography (sEMG) technology to help physicians better understand the events their patients experience. The SPEAC System is an FDA-cleared diagnostic system that continuously records objective, physiological data and event audio over 30 days to aid physicians in characterizing, quantifying, and clarifying patient-reported events.

#110
Cadwell Industries, Inc.

909 N Kellogg Street
Kennewick, WA, 99336, USA
Phone: 509–735–6481
Fax: 509–783–6503
Email: info@cadwell.com
Website: www.cadwell.com

Cadwell celebrates 40 years of delivering neurophysiology solutions. In 1979, John Cadwell, BSEE, MD partnered with his brother Carl Cadwell, DDS, to form Cadwell Laboratories in Washington State. Cadwell combines customer input, employee expertise and USA-made components to develop Arc EEG for at-home ambulatory and clinical use, EMU, and LTM; the innovative Sierra Summit EMG/EP/NCS with optional integrated ultrasound; Cascade Surgical Studio IONM and CadX simulator; Easy III in-lab PSG and integrated ApneaTrak HSAT; CadLink Data Management; and neuro consumables. Our sales managers, support teams, and distributors serve physicians and medical centers worldwide. Cadwell: Helping you help others.

#305
Ceribell

2483 Old Middlefield Way, Suite 120
Mountain View, CA 94043, USA
Technical support: 1–800–763–0183
General inquiries: 1–800–436–0826
Email: EEG@ceribell.com
Website: https://ceribell.com/index.html

Ceribell is focused on making EEG more accessible, efficient, and cost-effective to improve the diagnosis and treatment of patients at risk for seizures. Now with Clarity, Ceribell offers 24/7 continuous bedside EEG monitoring and alert.

#203
Compumedics Neuroscan

5015 West WT Harris Blvd, Suite E
Charlotte, NC 28269, USA
Phone: 800–814–8890
Website: https://compumedicsneuroscan.com/

The Orion LifeSpan magnetoencephalography system from Compumedics Neuroscan is the culmination of a decades-long development, including innovative sensors, sophisticated electronics and the powerful CURRY analysis platform. The company provides proven, trusted technology.

A new generation of MEG detectors gives more precise measurement and localization of brain function than ever before. Advanced high-density EEG is collected simultaneously. It is the only MEG optimized for both pediatric and adult patients, with maximum sensitivity at any age. New technology allows 100% recovery of liquid helium with absolutely no downtime, dramatically reducing operating costs.

Please visit our booth to learn more.

EXHIBITORS

#307
Corticare
5950 La Place Court, Suite #160
Carlsbad, CA, 92008, USA
Phone: 888–482–2334
Email: info@corticare.com
Website: www.corticare.com

CortiCare is a provider of tele-health technology and EEG monitoring solutions to neurology and neuro-critical care areas within the hospital. CortiCare's employees have years of experience providing EEG monitoring services. CortiCare works diligently with its clients to establish protocols, practices, and processes which have become an industry standard for continuous EEG monitoring. CortiCare offers immediate monitoring services with registered EEG technologists who are on-call and available for real-time EEG monitoring. We are ready to provide support part-time, full-time or anytime that real-time EEG information is needed to help manage your critical care patients. For more information, please visit www.corticare.com.

#112
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New York, NY, 10036, USA
Email: rfamanila@springerpub.com

Demos Medical, an imprint of Springer Publishing, publishes award-winning medical titles in our core areas of neurology, physical medicine and rehabilitation, and oncology. Please visit our booth to browse our comprehensive product line in clinical neurophysiology.

#205
DIXI Medical USA Corp.
11910 Fox Ridge Drive
Plymouth, MI, 48170, USA
Phone: 888-664-3494
Email: sales@diximedus.com
Website: www.diximedus.com

Designer and manufacturer of medical devices for functional and stereotactic neurosurgery for the treatment of epilepsy. Since 1975 DIXI Medical has been developing & producing intracranial electrodes. DIXI possesses the skills and resources necessary to design and manufacture invasive and non-invasive medical instruments for neurosurgery.

#303
Eisai, Inc.
100 Tice Blvd
Woodcliff Lake, NJ, 07677, USA
Email: Cindy_Tilley@eisai.com
Website: www.eisai.com/us

#304
g.tec Neurotechnology GmbH
Sierningstasse 14
Schiedlberg, 4521, Austria
Email: cao@gtec.at
Website: www.gtec.at

g.tec developed the first commercially available Brain Computer Interface system in 1999, and in 2018 customers from more than 60 countries are using g.tec devices. There are five g.tec offices worldwide, Graz, Schiedlberg, and Barcelona in Europe; Albany, NY in North America; and Hong Kong in Asia.

g.tec works with all major BCI approaches, such as motor imagery, P300, SSVEP, slow cortical potentials, etc. The company is also an active member in hundreds of national and international research projects and scientific publications.

#410
IntraNerve Neuroscience
24 S. Weber Street, Suite 200
Colorado Springs, CO, 80903, USA
Phone: 866–226–8576
Fax: 866–286–0255
Email: info@intranerve.com
Website: www.intranerve.com

IntraNerve Neuroscience (INN) is Joint Commission accredited in Ambulatory Care – Telehealth. We offer intraoperative neuromonitoring, neurotelemetry/cEEG, and remote physician interpretation. Our Neurologists/Epileptologists, Technologists, and IT support are dedicated to providing care and assistance around the clock, 24/7/365. We partner with facilities like yours across the country to provide high quality, reliable neuroscience services.

#411
Lifelines Neuro
900 E Main, Suite 300
Louisville, KY, 40206, USA
Phone: 866–889–6505
Email: sales@lifelinesneuro.com
Website: lifelinesneuro.com

Inspired by our users, Lifelines Neuro creates EEG products and solutions that help our customers perform at their best every day, to provide the highest quality patient care. Our platform anticipates users' needs and emerging industry trends to create intuitive products that enable our customers to imagine EEG anywhere.

Our Rendr Platform cloud software connects patients to physicians in real-time, all the time, on any device. Lifelines Neuro Trackit EEG amplifiers and systems are known globally for their exceptional engineering and durability. Our headquarters is in Louisville, KY, with corporate offices in metro St. Louis, MO, London UK and Dublin, IRL.

#406
MDocHaus
485 Mass Avenue
Cambridge, MA, 02135, USA
Phone: 866-985-8217
Email: pr@mdochaus.com
Website: www.MDocHaus.com

#408
Medpro
1550 Katy Gap Road
Katy, TX, 77494, USA
Website: medproequipment.co

#105
Megin Oy
Siltasaarenkatu 18–20
Helsinki, 00530, Finland
Phone: +358–9-756–2400
Fax: +358–9-756–24011
Email: info@megin.fi
Website: www.megin.fi

Megin is the global leader for Magnetoencephalography (MEG) technology, a non-invasive, functional brain mapping solution for the diagnostic workup, treatment strategy and intervention of neurological conditions, including epilepsy. Through innovation and passionate exploration of the endless possibilities with MEG, specialists from close to one hundred sites from around the world have used our MEG technology to study pathological and eloquent areas of the brain in patients diagnosed with neurological disorders.

#405
MVAP Medical Supplies
2001 Corporate Center Dr.
Thousand Oaks, CA, 91320, USA
Fax: 877-735-7213
Email: brenda@mvapmed.com
Website: www.mvapmed.com

MVAP Welcomes all ACNS attendees to visit our booth and pick up some sample giveaways.

We pride ourselves in being a One-Stop-Shop Supplier of all EEG, EMG, IOM, Sleep, Cardiology, and Respiratory Supplies.

Our primary focus is for customer satisfaction and we are eager to help our end users find the right products needed for any of their needs!

#111
Neuroelectrics
210 Broadway, Suite 201
Cambridge, MA, 02139, USA
Phone: 617–682–0770
Email: info@neuroelectrics.com
Website: http://www.neuroelectrics.com

Neuroelectrics is a creative, high-tech company offering the best in class non-invasive and high definition electrical brain stimulation technology for personalized neuromodulation. By measuring and modifying brain function, we aim to restore brain health, minimize disabilities and create a better life for patients. Our first device (Enobio) is an FDA-approved, completely wireless EEG device for labs, clinics, and more. Our second device (Starstim) is a wireless, hybrid EEG and transcranial electric stimulation (tES) system for research, medical, or home use. With an assortment of wet, dry, and semi-dry electrodes, Enobio and Starstim can be used in nearly any environment for endless investigational, diagnostic, and medical applications.

#204
NeuroPace, Inc.
455 N. Bernardo Avenue
Mountain View, CA 94043
Website: https://www.neuropace.com
Phone: 650–237–2700
Fax: 650–237–2701
Email: info@neuropace.com

About the NeuroPace RNS® System
The RNS System is the world's first and only closed-loop brain-responsive neurostimulation system designed to prevent epileptic seizures at their source. The RNS System treats seizures by continuously monitoring brain waves, detecting unusual activity, and automatically responding with imperceptible electrical pulses before seizures occur. Physicians can program the detection and stimulation parameters of the implanted RNS neurostimulator to personalize therapy for each individual. The RNS® System is an adjunctive therapy for adults with refractory, partial onset seizures with no more than two epileptogenic foci. See important safety information at http://www.neuropace.com/safety/

#207
Neurotech, LLC
626 W. Moreland Blvd
Waukesha, WI, 53188, USA
Phone: 262–754–0898
Fax: 262–754–0897
Email: vwolfe@neurotecheeg.com
Website: www.neurotecheeg.com

Neurotech, LLC specializes in EEG services including in-home, long-term, and continuous hospital EEG monitoring. Accredited by the Joint Commission and partnered with many academic facilities, our in-home, long-term EEG monitoring services improves our patients' comfort and provides a cost-effective alternative to a hospital stay. Neurotech cEEG Partners, LLC provides hospitals with continuous EEG monitoring in the ICU and EMU to improve patient safety and outcomes.

EXHIBITORS

#306
Nexstim
Elimaenkatu 9B
Helsinki, 05100, Finland
Phone: +1 608–274–4020
Fax: +1 608–274–7083
Email: info@nexstim.com
Website: https://www.nexstim.com

Nexstim has developed SmartFocusTM TMS technology, a non-invasive E-field navigated TMS technology for both therapeutic and diagnostic applications. Nexstim's Navigated Brain Stimulation (NBS) system is FDA-cleared for pre-procedural mapping of speech and motor cortices. Nexstim's Navigated Brain Therapy (NBT) system is FDA-cleared for the treatment of major depressive disorder (MDD).

#413
Next Gen Neuro
3042 S County Road, 475 East
Plainfield, IN, 46168, USA
Phone: 833–334–2334
Email: info@teamngn.com
Website: www.teamngn.com

Next Gen Neuro (NGN) is a women and veteran-owned high quality, affordable EEG/cEEG service provider determined to make a difference in our field. Our passion is to seek opportunities to help all patient populations, with a special commitment to the most vulnerable patients and the most challenged areas of neurodiagnostic service coverage. We offer Real-Time Continuous Monitoring, Retrospective Review, Intermittent Clinical and Technical Review, Reading Physicians, and additional services. We can help you and your team navigate the newly implemented 2020 CPT Coding Changes through our Consultation and Management offerings. We are the Next Generation of Partnership in Neurodiagnostic Care.

#106/108
Nihon Kohden America
15353 Barranca Parkway
Irvine, CA, 92618, USA
Phone: 949-268-7189
Fax: 949-271-5319
Email: info@nihonkohden.com
Website: http://us.nihonkohden.com/

Nihon Kohden's Neurology product portfolio includes instrumentation for Epilepsy Monitoring, Electroencephalography, EEG & PSG Ambulatory Recording, Polysomnography, Wireless EEG & PSG, Home Sleep Testing/ PSG, Electromyography, Evoked Potentials, Intra-operative and cEEG ICU monitoring. Nihon Kohden's instrumentation offers the flexibility and expandability needed to meet the changing demands of today's neurodiagnostic field. In the U.S., 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 more than 10 consecutive years (MD Buyline). For more information, visit http://us.nihonkohden.com/.

#211
Ochsner Health System
1514 Jefferson Highway
New Orleans, LA, 70121, USA
Email: Katythomas@ochsner.org
Website: www.ochsner.org

Ochsner Health System is seeking BC/BE Neurologists for our openings in New Orleans, Baton Rouge, and the North Shore. Both newly trained and experienced physicians are encouraged to apply. The Department of Neurology has a complement of over 40 neurologists system-wide with subspecialty representation in stroke, neurocritical care, interventional neurology, neuromuscular disease, movement disorders, epilepsy, MS, headache, cognitive disorders, sleep, traumatic brain injury and sports medicine. Ochsner is Louisiana's largest non-profit healthcare system. Driven by a mission to Serve, Heal, Lead, Educate and Innovate.

#308/310
Persyst Development Corporation
420 Stevens Avenue Suite 210
Solana Beach, CA 92075
Phone: 928–708–0705
Website: https://www.persyst.com/
Fax: 928–771–1209
Email: tradeshow@persyst.com

Persyst is the worldwide leader in EEG software. Our software is used daily by thousands of neurologists at hundreds of hospitals around the world. We have pioneered the use of digital signal processing and neural networks in order to remove artifacts and interpret EEG data.

#210
PMT Corporation
1500 Park Rd
Chanhassen, MN, 55317, USA
Phone: 952–470–0866
Fax: 952–470–0865
Email: info@pmtcorp.com
Website: www.pmtcorp.com

PMT Corporation is the premier supplier of an extensive line of neurosurgical products, offering Cortac, cortical surface electrodes, Depthalon, depth electrodes and sEEG depth electrodes for epilepsy monitoring. PMT also offers high-end neck braces, including halo systems and orthotic vests for cervical, thoracic and lumbar spinal immobilization and microsurgical instruments.

#104
Rhthmlink International, LLC
1140 First Street South
Columbia, SC, 29209, USA
Phone: 866-633-3754
Fax: 803-227-1015
Email: sales@rhthmlink.com
Website: www.rhythmlink.com

#400
Ricoh Medical Imaging
1100 Valencia Avenue
Tustin, CA, 92780, USA
Phone: 714–316–4661
Email: scott.abelson@ricoh-usa.com

Ricoh, a 19-billion-dollar global company. We acquired Yokogawa MEG in 2016, and the RICOH MEG received FDA clearance in 2017. For more than 80 years, Ricoh has been driving innovation and continues to invest in R&D to provide innovative tools -- like the RICOH MEG -- to help healthcare professionals and researchers advance research and treatment for neurological disorders.

Ricoh Medical Imaging is dedicated to the advancement of MEG within the neuroscience community. Our strength is the sustainability, reliability, and a collaborative culture with all our customers.

#301
Rosman Search, Inc
30799 Pinetree Road, Suite #250
Pepper Pike, OH, 44124, USA
Phone: 216–906–8188
Website: http://www.rosmansearch.com
Email: bdery@rosmansearch.com
Fax: 216–803–6672

RosmanSearch is a Neurosurgery, Neurology and APP recruitment firm. We place quality providers with quality practices nationwide. We are the only search firm with dedicated teams specializing in neuroscience. Our mission is to be the best, the most expert, and the one that is known for quality—every time!

#107
Safe Harbor Billing and Management, LLC
P.O. Box 134
McKinney, TX, 75070, USA
Phone: 972-808-7917
Fax: 972-808-7917
Email: doreen@safeharborbilling.com
Website: safeharborbilling.com

Safe Harbor Billing and Management is more than just a billing company. We are a full-service billing and management company for specialized services such as out of network billing, intra-operative neuromonitoring (IONM), as well as specialists in billing for PAs, NPs, and on-call physicians. Additional specialized services including Accounts Receivable Recovery and Re-billing services are also available.

#109
Signal Gear LLC
27 Sweetwater Drive
Prosperity, SC, 29127, USA
Phone: 855-439-4327
Fax: 800-828-9804
Email: team@signalgear.com
Website: www.signalgear.com

SIGNAL GEAR is a medical device company focused on designing and developing 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. Our goal is to provide the optimal patient product for each specialty, from the clinical office setting to the operating room, by tirelessly testing products in our electrical, mechanical, and clinical test labs. Stop by our booth and introduce yourself. We'd love to meet you and hear about your work!

#404
SK Life Science, Inc.
461 From Road, 5th Floor
Paramus, NJ, 07652, USA
Phone: 913-901-6845
Email: phazel@sklsi.com

Website: www.sklifescienceinc.com SK Life Science, Inc., a subsidiary of SK Biopharmaceuticals, Co., Ltd., is focused on developing and commercializing treatments for disorders of the central nervous system (CNS). Both are a part of the global conglomerate SK Group, the second largest company in Korea. SK life science is located in Paramus, New Jersey.

We have a pipeline of eight compounds in development for the treatment of CNS disorders including epilepsy, Lennox-Gastaux syndrome and attention deficit hyperactivity disorder, among others. The first product the company is planning to commercialize independently is cenobamate (YKP3089), an investigational compound for the potential treatment of partial-onset seizures in adult patients.

For more information, visit SK life science's website at www.SKLifeScienceInc.com and SK Biopharmaceuticals' website at www.skbp.com/eng.

#209
SpecialtyCare
3 Maryland Farms Suite 200
Brentwood, TN, 37027, USA
Phone: 615-346-8801
Email: brittni.dugnaski@specialtycare.net
Website: www.specialtycareus.com

#208
Spes Medica USA
25 Storey Avenue, #118
Newburyport, MA, 01950, USA
Phone: 855-773-7872
Email: usa@spesmedica.com
Website: www.spesmedica.com

#402
Stratus
4545 Fuller Drive, Suite 100
Irving, TX, 75038, USA
Phone: 888-982-8492
Email: contact@stratusneuro.com
Website: www.stratusneuro.com

#206
UCSF Health
3360 Geary Blvd, Suite 301
San Francisco, 94118, CA
Phone: 415–353–7703
Email: cheryl.hardin@ucsf.edu
Website: jobs.ucsfmedicalcenter.org

At UCSF Health, our mission of innovative patient care, advanced technology and pioneering research is redefining what's possible for the patients we serve – a promise we share with the professionals who make up our team.

Ranked by U.S. News & World Report as seventh in the country – UCSF Health is committed to providing the most rewarding work experience while delivering the best care available anywhere. In an environment that allows for continuous learning and opportunities for professional growth, UCSF Health offers the ideal atmosphere in which to best use your skills and talents.

Table C
University of Florida Health Shands Hospital
1329 SW 16th Avenue, Suite 3120
Gainesville, FL, 32608, USA
Phone: 352–265–8314
Fax: 352–733–0016
Email: ufcep@neurology.ufl.edu
Website: www.neurology.ufl.edu

The multidisciplinary team at the University of Florida Comprehensive Epilepsy Program (UFCEP) is committed to providing advanced care to people with epilepsy, seizures and sleep disorders.UF Health Shands Hospital is home to state-of-the-art medical, surgical and imaging facilities. An epilepsy monitoring unit is available for both adults and children who require long-term monitoring of their seizures.

#302
Wolters Kluwer
P.O. Box 1030
2400 BA, Alphen aan den Rijn, The Netherlands
Email: info@wolterskluwer.com
Website: https://wolterskluwer.com/

Wolters Kluwer is a leading global provider of trusted clinical technology and evidence-based solutions that help healthcare professionals build clinical competency and effective decision-making to improve outcomes. Wolters Kluwer is the proud publisher of the *Journal of Clinical Neurophysiology*, the official journal of the American Clinical Neurophysiology Society.

#407/409
Zeto, Inc.
2336 Park Avenue
Santa Clara, CA, 95050, USA
Phone: 919-669-7674
Email: Johnlynch@zetoinc.com
Website: www.zeto.inc.com

Zeto is transforming the way Routine EEG is performed. Fast, convenient, medical-grade EEG is what we do. Our product is an FDA cleared, zero-prep, easy to wear headset with dry electrodes backed by a cloud platform that offers instant upload, tools for analysis and live viewing from any location. Zeto makes EEG available to facilities that currently do not have access.

PRODUCT THEATERS

These sessions are supported and programmed by a single supporting company and will feature presentations on topics and technologies selected by the company. Lunch will be provided by ACNS, and is not reportable according to the Sunshine Act. CME credits are NOT available for the Product Theaters.

Friday, February 7

11:45am-12:45pm - Lunch will be provided
Location: Conti Room

DECIDE Multicenter Clinical Trial: Does Use of Ceribell Rapid Response EEG Impact Clinical Decision Making?

Presented By: Ceribell

Speakers:

Josef Parvizi MD PHD
Professor of Neurology and Neurological Sciences
Chief Medical Adviser and Co-Founder of Ceribell

Paul M. Vespa MD
Professor of Neurology
Gary L. Brinderson Family Chair in Neurocritical Care
Assistant Dean of Critical Care Medicine Research
David Geffen School of Medicine, UCLA

Description:

Results from the DECIDE prospective observational multicenter clinical trial will be presented.

Conducted at MGH, UTSW, Wake Forest, Rush Medical Center and UCLA, this 181-patient study confirmed that early access to EEG at the bedside enables clinicians to improve patient management in neurocritical care practice by significantly enhancing the accuracy of their decision making and their confidence in their diagnostic and therapeutic decisions. Without access to early EEG, physicians' confidence in their clinical decision making was low and their accuracy in seizure diagnosis was slightly better than chance level. Early EEG also detected cases of non-convulsive status epilepticus (NCSE) in a significant proportion of patients who were already treated empirically for seizures suggesting that empiric treatment may not be sufficient to treat or prevent NCSE.

Learn about how early access to EEG leads to better management of patients at risk for seizures by:

- More timely seizure diagnosis
- More accurate diagnostic and treatment decisions
- Easy to use EEG device that can be set up in minutes by physicians or APPs.

Saturday, February 8

12:45-1:45pm-Lunch will be provided
Location: Conti Room

Clinical Utility of Ultra-Long sEMG Monitoring

Presented By: Brain Sentinel, Inc.

Speakers:

Selim R. Benbadis, MD, FAAN, FACNS, FAES
Professor of Neurology and Director,
Comprehensive Epilepsy Program
University of South Florida

Ro Elgavish, MD, PhD, FAES, FANA
ABPN Diplomate in Neurology and Epilepsy

Description:

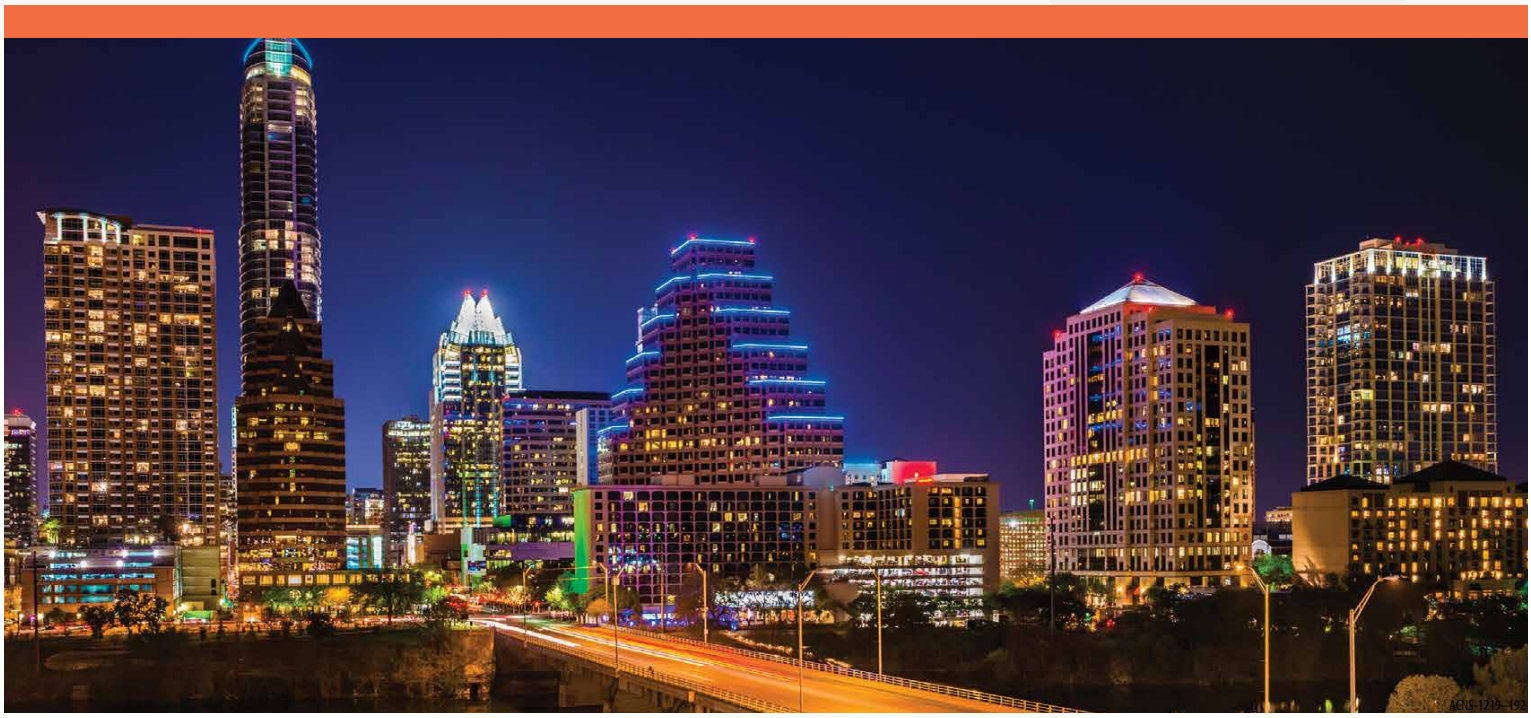
During this program, attendees will learn about:

- Basic introduction of sEMG signatures of GTC seizures
- Differentiating between sEMG recorded during GTC seizures and other motor events
- Identifying patients that may benefit from ultra-long sEMG monitoring
- Real-world examples of the clinical utility of ultra-long sEMG monitoring

Questions will be taken at the end of the presentation.

AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY

2021 ANNUAL MEETING & COURSES

SAVE THE DATE

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