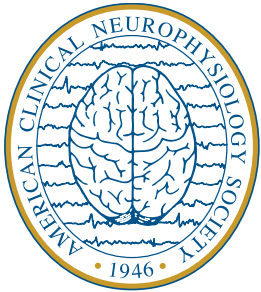


# AUSTIN ★TEXAS★



## AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY 2023 ANNUAL MEETING & COURSES

— March 25-29, 2023 • Hilton Austin —

# *FINAL PROGRAM*



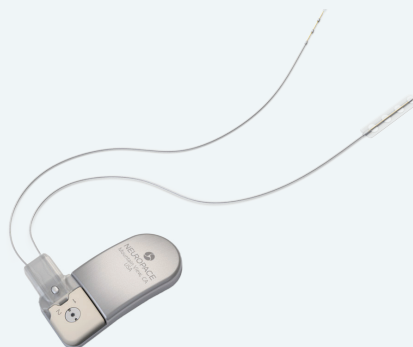


# ADVANCE with NeuroPace

The future of  
epilepsy care is here.  
Don't get left behind.

## The RNS® System

There's a smarter way to  
treat epilepsy



Nearly  
**11 YEARS**  
of Battery  
Life\*

\*The median battery longevity is 10.8 years for the RNS Neurostimulator (model RNS-320). Estimates for longevity were derived from medium stimulation and detection utilization (mAh/ day).

Rx Only. The RNS® System is an adjunctive therapy for adults with refractory, partial onset seizures with no more than 2 epileptogenic foci. See important safety information at <http://www.neuropace.com/safety/>. ©2023 NeuroPace, Inc. All rights reserved. NeuroPace and RNS are registered trademarks of NeuroPace, Inc., Mountain View, CA 94043. NP 230006 Rev 1 / Rev date: 2023-02

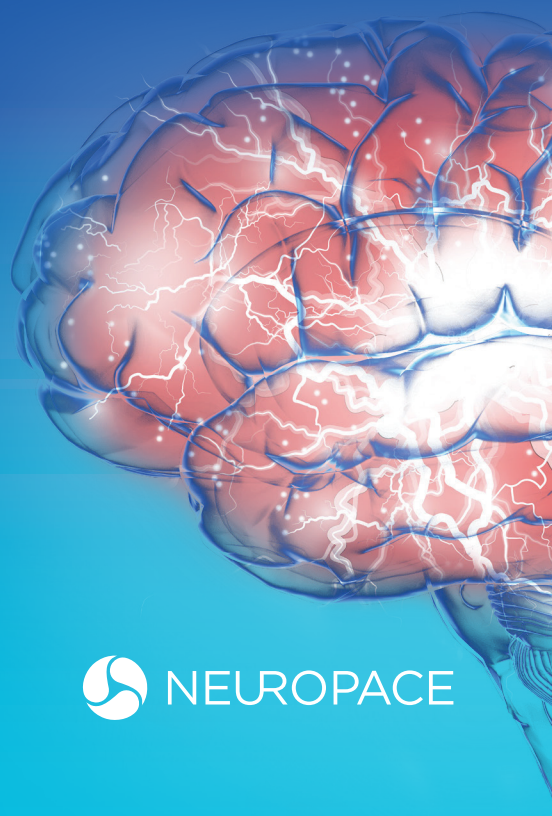
## Groundbreaking Generalized Epilepsy Clinical Trial

Now enrolling in the NAUTILUS Study!



[neuropace.com/nautilus](http://neuropace.com/nautilus)

If you want to be a part of advancing epilepsy care, learn more about a clinical study investigating the use of thalamic stimulation for treatment of primary generalized seizures. See if your patients could be eligible for the NAUTILUS study.



CAUTION—Investigational device. Limited by United States law to investigational use for the following Indications for Use: The RNS® System is intended for thalamic stimulation as an adjunctive therapy for the treatment of primary generalized seizures in individuals 12 years of age or older who have drug-resistant idiopathic generalized epilepsy.

 NEUROPACE

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# WELCOME TO THE ACNS ANNUAL MEETING & COURSES

Dear Colleagues,

On behalf of the American Clinical Neurophysiology Society (ACNS) Council, Course and Program Committees, we are thrilled to welcome you to the 2023 Annual Meeting & Courses in Austin, Texas.

In 2022, we had to pivot to a fully virtual meeting, delaying our much anticipated reunion. We are so happy to be together again!

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. The Program and Course Committees have made a conscious effort in the integration of the programs and incorporation of quality, hands-on opportunities.

The Program Committee has built in new and exciting networking opportunities including Speed Networking, Continue the Conversation Roundtables, SIGs Kick-off Meetings and The Neurology of Wine Tasting. We invite you to add these events to your schedule and interact with leading experts in the field.

We wish everyone an enjoyable experience in Austin!

Sincerely,



Meriem Bensalem-Owen, MD, FACNS & Hiba A. Haider, MD, FACNS, FAES  
Course Committee Co-Chairs



Ruple S. Laughlin, MD, FACNS & Courtney J. Wusthoff, MD, MS, FACNS  
Program Committee Co-Chairs





# ABOUT THE AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY (ACNS)

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.

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.

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info@acns.org www.acns.org



# ABOUT THE AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY (ACNS)

## ANNUAL MEETING & COURSES PLANNING COMMITTEES

### Course Committee

#### Co-Chairs

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#### Ex-Officio

Meriem Bensalem-Owen, MD, FACNS  
Hiba A. Haider, MD, FACNS, FAES  
Jong Woo Lee, MD, PhD, FACNS  
Sarah E. Schmitt, MD, FACNS

# ABOUT THE AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY (ACNS)

## STRATEGIC FUND DONORS

ACNS gratefully acknowledges the following donors to the Strategic Fund. The Society thanks these donors for their commitment to ACNS and its mission “to serve patients and society by empowering members to advance the science, practice and profession of clinical neurophysiology.”

### LIFETIME PLATINUM DONORS

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## GENERAL MEETING INFORMATION

### ABOUT THE ANNUAL MEETING & COURSES

This year, ACNS has integrated the Annual Meeting and Course agenda, allowing delegates to access any of the sessions for a single, simplified registration rate. ACNS has thoughtfully planned the agenda with each specialty in mind.

This year's program will feature both the basics and latest scientific advances in "central" and "peripheral" clinical neurophysiology presented by leading national and international experts in the field. This dynamic program has more choices than ever, including the Joint ACNS and International Society symposia, interactive hands-on workshops, and several opportunities for networking.

ACNS is excited to offer new opportunities for connecting with industry peers such as Speed Networking, "Continue the Conversation" Roundtables and The Neurology of Wine Tasting.

### REGISTRATION DESK HOURS AND LOCATION

*Location: Governor's Ballroom Foyer, 4th Floor*

Hours:

Saturday, March 25	6:30am - 4:15pm
Sunday, March 26	7:00am - 6:15pm
Monday, March 27	7:00am - 4:00pm
Tuesday, March 28	7:00am - 4:30pm
Wednesday, March 29	7:00am - 9:30am

### HEALTH & SAFETY

ACNS strongly encourages full vaccination of all meeting attendees, including booster doses, when appropriate and applicable. Masking is also strongly encouraged but will be optional during the Annual Meeting & Course sessions and social functions.

Those who test positive for COVID or exhibit symptoms are encouraged to remain at home and follow CDC guidelines for testing, isolation, and masking.

### 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: Hilton Meeting**

**Password: ACNS2023**

### DOWNLOAD THE #ACNS2023 MOBILE APP

Make the most of your conference experience by downloading the mobile app.

1. Download the "eventscribe" App  
Search "eventscribe" in the Apple App Store or Google Play. Find the ACNS event in the Upcoming Events (bottom row). Tap the event icon to launch the app.
2. Create an Account  
Create an account by entering an email address and creating a password.
3. Use **Event Code ACNS2023** to enter the App.

### SPEAKER READY ROOM

Location: Room 408

Speakers must upload or revise/edit their PowerPoint presentations in the Speaker Ready Room. Final slides must be uploaded at least two (2) hours prior to the presentation. Presentations may not be uploaded or revised/edited in individual session rooms. Speakers are not permitted to use personal laptops during presentations.

Hours:

Saturday, March 25	7:00am - 5:00pm
Sunday, March 26	7:00am - 7:00pm
Monday, March 27	7:00am - 5:30pm
Tuesday, March 28	7:00am - 6:30pm
Wednesday, March 29	7:00am - 9:30am

### ON-DEMAND RECORDING ACCESS

Access to the on-demand recordings will be available to all registered delegates from April 10 - April 25, 2023. Those who have purchased extended access to the on-demand recordings will have access from April 10 - May 25, 2023.

Registered delegates will receive an email on April 10, 2023 from info@acns.org with access to the Virtual Platform. In this email you will be provided with a "Launch OnDemand" button which will automatically log you into the platform. Please do not share this email/access link with anyone as it is unique to you. If you have any issues with the automatic log in, then you can always authenticate your email address on the platform instead. Attendees may only be logged in via one device at a time, per individual registration. Please add info@acns.org to your "safe senders" list to ensure you don't miss the email. Be sure to check your junk/spam folder if you have not received the message by April 10 at 12pm EST.

The ACNS 2023 Annual Meeting & Courses virtual platform is compatible with Google Chrome, Firefox and Safari web browsers. The platform does not support Internet Explorer.

### BUSINESS MEETING

The ACNS Annual Business Meeting will be held during the General Session on Monday, March 27 from 2:00 - 3:30pm in Salon FG, 6th floor.

### POSTER ABSTRACTS

Posters will be on display in the Exhibit & Poster Hall starting Sunday evening, March 26. Authors will be present on Tuesday, March 28 from 11:30am - 1:00pm.

Poster abstracts will be published as an on-line only publication of the *Journal of Clinical Neurophysiology*.

# GENERAL MEETING INFORMATION

## POLICIES

### Photography and Recording Policy

Photography, video or audio recording (including screen capture) of these courses, materials, speaker likenesses or ACNS graphics without written permission from ACNS is strictly prohibited. Please note that photographs and video taken by or on behalf of ACNS shall be property of ACNS.

### 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.

## MEETING CONDUCT POLICY

### Meeting Conduct, Safety, and Responsibility Policy

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, online and inperson, 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](mailto: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 reserved the right to prohibit attendance at any future meeting.

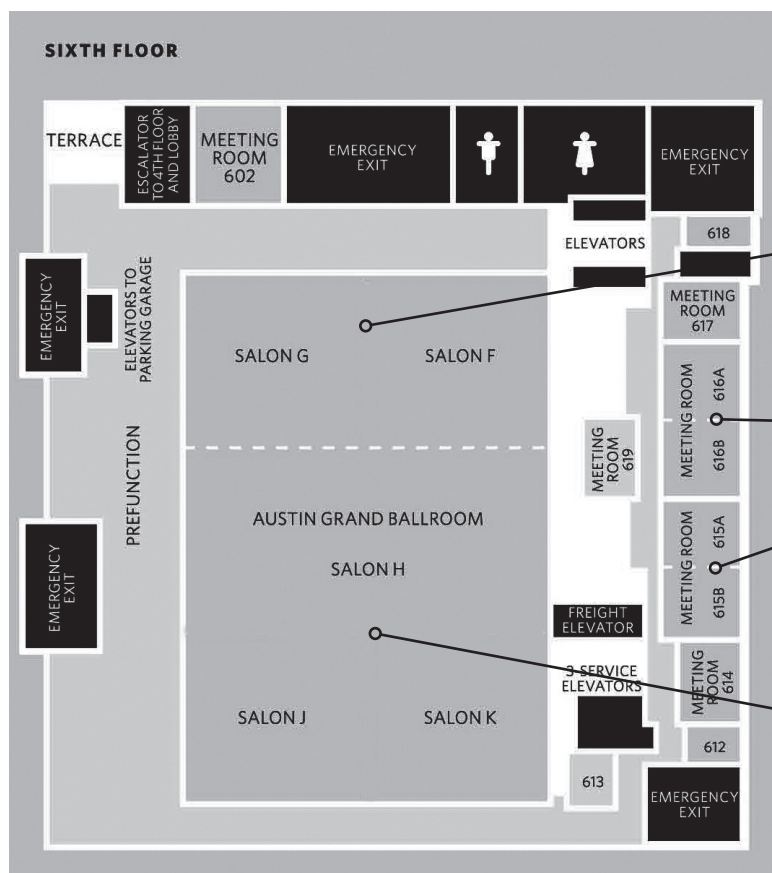
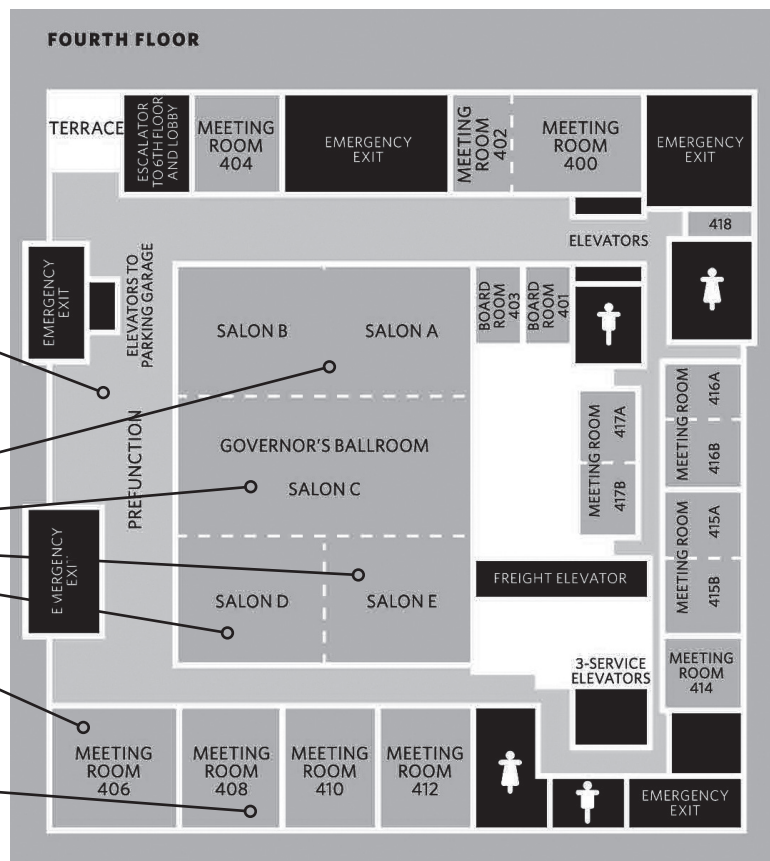
# GENERAL MEETING INFORMATION

## FOURTH FLOOR CONFERENCE AND EVENT ROOMS

Registration

Session Rooms

Speaker Ready Room



## SIXTH FLOOR CONFERENCE AND EVENT ROOMS

General Session and Session Room

Session Rooms

Exhibit & Poster Hall



## GENERAL MEETING INFORMATION

### AUSTIN DOWNTOWN RESTAURANTS – 1.0 MILES OR LESS TO HILTON AUSTIN

#### **Iron Cactus Restaurant & Margarita Bar**

*(Lunch, Dinner)*

Address: 606 Trinity St., Austin, TX 78701

Telephone: (512) 472-9240

<https://ironcactus.com/>

#### **Truluck's Downtown** *(Dinner)*

Address: 400 Colorado St., Austin, TX 78701

Telephone: (512) 482-9000

<https://trulucks.com/>

#### **Red Ash Italia** *(Dinner)*

Address: 303 Colorado St., Ste. 200, Austin, TX 78701

78701

Telephone: (512) 379-2906

<http://www.redashgrill.com/>

#### **Lonesome Dove Western Bistro** *(Dinner)*

Address: 419 Colorado St, Austin, TX 78701

Telephone: (512) 271-2474

<https://lonesomedovebistro.com/>

#### **Banger's Sausage House and Beer Garden**

*(Lunch, Dinner)*

Address: 79 Rainey St, Austin, TX 78701

Telephone: (512) 386-1656

<https://www.bangersaustin.com/>

#### **Parkside** *(Dinner)*

Address: 301 E. Sixth St., Austin, TX 78701

Telephone: (512) 474-9898

<https://parkside-austin.com/>

#### **Wu Chow** *(Lunch, Dinner)*

Address: 500 W. 5th, Austin, TX 78701

Telephone: (512) 476-2469

<https://wuchowaustin.com/>

#### **Fixe Southern House** *(Dinner)*

Address: 500 W. Fifth St., Austin, TX 78701

Telephone: (512) 888-9133

<https://fixesouthernhouse.com/>

#### **Emmer & Rye** *(Dinner)*

Address: 51 Rainey St., Suite 110, Austin, TX 78701

Telephone: (512) 366-5530

<https://emmerandrye.com/>

#### **Vince Young Steakhouse** *(Dinner)*

Address: 301 San Jacinto Blvd., Austin, TX 78701

Telephone: (512) 457-8325

<https://vinceyoungsteakhouse.com/>

#### **Stubb's Bar-B-Q** *(Lunch, Dinner)*

Address: 801 Red River St, Austin, TX 78701

Telephone: (512) 480-8341

<https://www.stubbasaustin.com/>

#### **Iron Works BBQ** *(Lunch, Dinner)*

Address: 100 Red River St., Austin, TX 78701

Telephone: (512) 478-4855

<https://ironworksbbq.com/>

#### **Cafe Blue** *(Lunch, Dinner)*

Address: 340 E. Second St., Austin, TX 78701

Telephone: (512) 428-5796

<https://www.cafebluetx.com/>

#### **Gus's World Famous Fried Chicken** *(Lunch, Dinner)*

Address: 117 San Jacinto Boulevard, Austin, TX 78701

Telephone: (512) 474-4877

<https://gusfriedchicken.com/>

#### **Eddie V's – Downtown** *(Dinner)*

Address: 301 E. 5th Street, Austin, TX 78701

Telephone: (512) 472-1860

<https://www.eddiev.com/home>

#### **Fleming's Prime Steakhouse & Wine Bar** *(Dinner)*

Address: 320 E. 2nd Street, Austin, TX 78701

Telephone: (512) 457-1500

<https://www.flemingssteakhouse.com/locations/tx/austin-downtown>

#### **The Capital Grille** *(Lunch, Dinner)*

Address: 117 W. Fourth St., Ste. 200, Austin, TX 78701

Telephone: (512) 322-2005

<https://www.thecapitalgrille.com/home>

#### **Manuel's Downtown** *(Lunch, Dinner)*

Address: 310 Congress Avenue, Austin, TX 78701

Telephone: (512) 472-7555

<https://www.manuels.com/>

#### **Michelada's Cafe y Cantana** *(Lunch, Dinner)*

Address: 333 East 2nd Street, Austin, TX 78701

Telephone: (512) 320-0300

<https://micheladasaustin.com/>

#### **Moonshine Patio Bar & Grill L (F/SA only)** *(Dinner)*

Address: 303 Red River St., Austin, TX 78701

Telephone: (512) 236-9599

<https://moonshinegrill.com/>

#### **PF Changs** *(Lunch, Dinner)*

Address: 201 San Jacinto Blvd, Austin, TX 78701

Telephone: (512) 457-8300

<https://www.pfchangs.com/>

#### **RA Sushi** *(Lunch, Dinner)*

Address: 117 W. 4th Street, #300, Austin, TX 78701

Telephone: (512) 726-2130

<https://rasushi.com/locations/austin-tx/>

#### **Cooper's Old Time Pit Bar-B-Que Austin**

*(Lunch, Dinner)*

Address: 217 Congress Avenue, Austin, TX 78701

<https://www.coopersbbq.com/>

# AUSTIN SCAVENGER HUNT

*Participate for the  
chance to win one-year  
ACNS membership or  
registration for the 2024  
ACNS Annual Meeting &  
Courses in Orlando, FL!*

Post at least 5 photos to social media  
using **#ACNS2023** to be entered  
into the raffle.

Photos must be taken and posted  
between March 25-29, 2023. Three  
winners will be selected and  
announced via social media  
after the meeting.

## Murals:

- ☐ By a "Keep Austin Weird" logo
- ☐ The 6th street Mural (582 N IH 35 Frontage Rd)
- ☐ Mexic-Arte Museum Mural (419 Congress Ave)
- ☐ The Beauty and Liberty of Equity (111 E Cesar Chavez St)
- ☐ Tau Ceti (Brazos and Second Streets)
- ☐ Willie Nelson and Janis Joplin Mural (407 E Seventh St)
- ☐ Spaceman with Floating Pizza (1209 Red River St)
- ☐ You're My Butter Half (2000 E Martin Luther King Jr Blvd)
- ☐ Love from Austin (1912 S Congress Ave)
- ☐ Greetings from Austin (1720 S First St)
- ☐ Peace, Love, Austin mural (201 Colorado St)
- ☐ I love you so much (1300 S Congress)
- ☐ Eye Joy (5209 N Lamar Blvd)
- ☐ Austin TX (3700 Guadalupe St)

## At a Restaurant or Café:

- ☐ Eating/visiting Amy's Ice Cream
- ☐ Eating pizza at Home Slice Pizza
- ☐ In front of Victory Grill (1104 E 11th St)
- ☐ Having a doughnut at Voodoo Doughnut (212 E 6th St)

## Action Shots:

- ☐ Eating breakfast tacos
- ☐ Eating BBQ
- ☐ Enjoying live music
- ☐ Eating at a food truck

## Famous Places:

- ☐ Congress Avenue Bridge / Bat Bridge (Congress Ave)
- ☐ Texas State Capitol building (1100 Congress Ave)
- ☐ Lady Bird Lake
- ☐ LBJ Presidential library (2313 Red River St, Austin)
- ☐ Austin Public Library (710 W Cesar Chavez St)
- ☐ Rainey Street
- ☐ On 6th Street
- ☐ Barton Springs Pool (Barton Springs Rd)
- ☐ Zilker park (2207 Lou Neff Rd)
- ☐ Walking along Barton Creek Greenbelt (3755 S Capital of Texas Hwy B)
- ☐ Blanton Museum of Art (200 E Martin Luther King Jr Blvd)
- ☐ Lady Bird Johnson Wildflower Center (4801 La Crosse Ave)
- ☐ 360 Bridge
- ☐ Allen Boots (1522 S Congress Ave)
- ☐ Flamingo Automotive (3512 Guadalupe St)
- ☐ Whole Foods ATX Sculpture (525 N Lamar Blvd)



# 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 and courses 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.

## LEARNING OBJECTIVES

At the end of the Annual Meeting & 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;
4. Discuss recent advances in electroencephalography, evoked potentials, ALS, magnetoencephalography, practice technologies, nerve conduction studies and other clinical neurophysiology techniques; and
5. Apply advances in clinical neurophysiology techniques to improve the diagnosis of neurologic disorders.

## ACCREDITATION STATEMENT

ACNS is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

## CREDIT DESIGNATION

ACNS designates the Annual Meeting & Courses for a maximum 43.50 *AMA PRA Category I Credit(s)*<sup>™</sup> in-person, and a maximum of 80.75 *AMA PRA Category I Credit(s)*<sup>™</sup> on-demand. Physicians should claim only credit commensurate with the extent of their participation in the activity.

## EDUCATION 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.





## CONTINUING MEDICAL EDUCATION (CME) INFORMATION

### 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](http://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.

# 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 financial relationships with any ineligible company. 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.

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](mailto:info@acns.org).

Name	Organization	Role	Financial Relationships
Ann Aly AbdelKader, MD	Faculty of Medicine Cairo University	Planner, Speaker	No Relationships
Aisha Abdulrazaq, MD	Mayo Clinic	Speaker	No Relationships
Nicholas S. Abend, MD, MSCE, FACNS	CHOP / UPenn	Planner, Speaker	No Relationships
Jayant N. Acharya, MD, DM, FACNS, FAES, FAAN	Southern Illinois University School of Medicine	Planner	SK Life Science (e)
Yoshiaki Adachi, PhD	Kanazawa Institute of Technology	Speaker	Ricoh Company Ltd. (a)
Pegah Afra, MD, FACNS	Weill Cornell Medicine	Planner, Speaker, Reviewer	LivaNova (a); UCB (a)
Shruti Agashe, MD	Mayo Clinic Rochester	Speaker	No Relationships
Dara VF Albert, DO, MEd	Ohio University	Speaker	No Relationships
Halley B. Alexander, MD	Wake Forest University	Planner	No Relationships
Sasha Alick-Lindstrom, MD, FACNS	University of Texas Southwestern	Planner, Speaker, Reviewer	No Relationships
Abdulrahman Alwaki, MD	Emory University	Speaker	No Relationships
Edilberto Amorim, MD	University of California, San Francisco	Planner, Speaker	No Relationships
Brian Appavu, MD	Phoenix Children's Hospital	Speaker	Natus Neuroscience (d)
Kapil Arya, MD, FACNS	Arkansas Children's Hospital	Planner, Reviewer	No Relationships
Ravindra Arya, MD, DM, FACNS	Cincinnati Children's Hospital Medical Center	Speaker	No Relationships
Eishi Asano, MD	Wayne State University, Children's Hospital of Michigan	Speaker	No Relationships
Gewalin Aungaroon, MD	Cincinnati Children's Hospital, University of Cincinnati	Planner, Speaker	No Relationships
Natalie Bell, B.S. Engineering	The University of Texas Southwestern Medical Center	Speaker	No Relationships
Giulia Benedetti, MD	Seattle Children's Hospital and University of Washington	Planner, Speaker	No Relationships
Sandor Beniczky, MD, PhD, FEAN	Aarhus University Hospital	Speaker	Eisai Inc. (d)
Meriem Bensalem-Owen, MD, FACNS	University of Kentucky	Planner	Neuropace (a); UCB (a)

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

## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Simone Beretta, MD, PhD	Fondazione IRCCS San Gerardo Monza	Speaker	No Relationships
Sarah Berini, MD	Mayo Clinic Rochester	Planner, Speaker	No Relationships
Adriana Bermeo-Ovalle, MD, FACNS	Rush University Medical Center	Planner, Speaker	Bioserenity/Digitrace (b); Eisai Pharmaceuticals (d); Monteris Medical (b); Neurelis Pharmaceuticals (d); SK Life Science (d); Sunovion Pharmaceuticals, Inc. (d)
Sonal Bhatia, MBBS, MD	Medical University of South Carolina	Planner, Speaker	No Relationships
Tom Bleck, MD, FACNS	Northwestern University Feinberg School of Medicine	Speaker	Ceribell Corporation (b, c); Marinus Pharmaceuticals (g)
William Bosl, PhD, FACNS, FAMIA	Boston Children's Hospital, Harvard Medical School	Planner	Praxis Pharmaceuticals (b)
Jeffrey Britton, MD, FACNS	Mayo Clinic	Planner	SEER Medical (g)
Maria Bruzzone Giraldez, MD, MSCR	University of Florida	Speaker	No Relationships
Ellen Bubrick, MD	Brigham and Women's Hospital	Speaker	uniQure (e); uniQure (b)
Katie Bullinger, MD, PhD	Emory University	Planner, Speaker	Neuropace (a); UCB (a)
Tyson Burghardt, MD	Michigan State University	Reviewer	No Relationships
Jorge Burneo, MD, MSPH, FAAN	University of Western Ontario	Speaker	Eisai Canada (a); Sunovion Canada (a)
Lidia Cabañes-Martínez, MD, FACNS	Department of Clinical Neurophysiology, Hospital Ramón y Cajal (Madrid)	Speaker	No Relationships
Brian Cabaniss, MD	Emory University	Speaker	Medtronic (a); Takeda Pharmaceuticals (a)
Clifford Calley, MD	UT Health Austin Pediatric Neurosciences at Dell Children's	Speaker	No Relationships
Maureen P. Carroll, REEG, EPT, RPSGT, CNIM	ASET - The Neurodiagnostic Society	Planner	No Relationships
Lauren Cazares	ACNS	Staff	No Relationships
Felix Chang, MD	Stanford University	Speaker	No Relationships
Patrick Chauvel, MD	University of Pittsburgh	Speaker	No Relationships
Heidi Munger Clary, MD, MPH, FACNS	Wake Forest University	Planner	Eysz (a)
Stephen Coates, MBBS	Epilepsy and Me - TeleEEG	Speaker	No Relationships
Elizabeth Coon, MD	Mayo Clinic Rochester	Speaker	No Relationships
Kate Davis, MD	Hospital of University of Pennsylvania	Speaker	Eton Pharmaceuticals (b); Jazz Pharmaceuticals (b); SK Life Science (e); Spark Therapeutics (b)
Masoom Desai, MD	University of New Mexico	Speaker	No Relationships
Monica Dhakar, MD, MS, FACNS	Brown University	Planner	Marinus Pharmaceuticals (a); Parexel Inc (a)
Elliot Dimberg, MD, FAAN, FACNS	Mayo Clinic Arizona	Planner	No Relationships
Frank W. Drislane, MD, FACNS	Beth Israel Deaconess, Boston	Planner, Speaker	No Relationships
Peter J. Dyck, MD	Mayo Clinic	Keynote Speaker	No Relationships
John S. Ebersole, MD	Overlook MEG Center, Atlantic Health Neuroscience Institute	Speaker	Compumedics LLC (e)
Laura Edgar, EdD, CAE	ACGME	Speaker	No Relationships

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



## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Ronald Emerson, MD, FACNS	Hospital for Special Surgery, Weil Cornell Medical Center	Speaker	Amgen (c); Bristol Meyers Squibb (c); Eli Lilly (c); General Electric (c); Ice Neurosystems (c); Johnson & Johnson (c); Neuropace (c); Pfizer (c); Quality Care Products (c); Thermo Fisher (c)
Krista Eschbach, MD	Children's Hospital Colorado	Speaker	No Relationships
Rebecca Fasano, MD	Emory	Speaker	No Relationships
Paolo Federico, MD, PhD	University of Calgary	Speaker	No Relationships
Olga Fedirchuk, MD	Hospital Universitario Ramón y Cajal	Speaker	No Relationships
Dominic Fee, MD, FACNS	Medical College of Wisconsin	Planner, Speaker	No Relationships
Victor Ferastraoaru, MD	Montefiore Medical Center / Albert Einstein College of Medicine	Planner	No Relationships
Victoria Fernández, MD, PhD	Hospital Regional Universitario de Málaga, Spain	Planner, Speaker	No Relationships
Guadalupe Fernandez-baca, MD, MS	Case Western Reserve University	Speaker	No Relationships
Robert Fisher, MD, PhD	Stanford	Speaker	Avails Medical (c); Cerebral Therapeutics (c); Eysz (c); Insightec (a); Irody (c); Smart-Monitor (c); Zeto (c)
Nancy Foldvary-Schaefer, DO, FACNS	Cleveland Clinic Neurologic Institute	Planner, Speaker	harmony biosciences (a); Jazz Pharmaceuticals (a, e); Suven (a); Takeda (a); Vanda pharm (a)
Brandon Foreman, MD, MS, FACNS, FNCS	University of Cincinnati	Speaker	Marinus Pharmaceuticals (a, e); Sage Therapeutics, Inc (e); UCB Pharma (d, e)
Birgit Frauscher, MD, PhD	Montreal Neurological Institute and Hospital, McGill University	Planner, Speaker	Eisai Canada (a, d, e); Paladin Canada (e); UCB Canada (d)
France W. Fung, MD MSc	CHOP / UPenn	Planner, Speaker	No Relationships
William Gallentine, DO, FACNS	Stanford University	Planner, Speaker	No Relationships
Gloria M. Galloway, MD, MBA, FACNS	Ohio State Wexner Medical Center	Planner, Speaker	No Relationships
Paul García, MD, PhD	Columbia University	Planner, Speaker	Conscious Mind Labs (e); Lantern Laboratories (g)
Naiara Garcia Losarcos, MD	University Hospitals Cleveland Medical Center	Planner	No Relationships
Nicolas Gaspard, MD, PhD	Free University of Brussels	Speaker	UCB Pharma (d)
Jay Gavvala, MD, MSCI, FACNS	UTHealth Houston McGovern Medical School	Speaker	No Relationships
Deana Gazzola, MD, FACNS	NYU Grossman School of Medicine	Speaker	No Relationships
Elizabeth E. Gerard, MD, FACNS	Northwestern University	Planner, Speaker, Reviewer	Eisai Company, (a); Xenon Pharmaceuticals (a)
Emily Gilmore, MD, MS, FACNS, FNCS	Yale University	Speaker	No Relationships
Ezequiel Gleichgerricht, MD, PhD	Medical University of South Carolina	Planner	No Relationships
David Gloss, MD, FACNS	Retired	Speaker	No Relationships
Teneille E. Gofton, MD, MSc, FRCPC, FACNS	Western University	Planner, Speaker	No Relationships
Daniel Goldenholz, MD, PhD, FAES	Beth Israel Deaconess Medical Center	Speaker	No Relationships

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

## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Ruxue Gong, PhD	Emory University	Speaker	No Relationships
Jorge A. Gonzalez-Martinez, MD	UPMC	Speaker	No Relationships
Jean Gotman, PhD, FACNS	Montreal Neurological Institute	Planner, Speaker	No Relationships
Nick Gregg, MD	Mayo Clinic	Speaker	No Relationships
Madeleine M. Grigg-Damberger, MD, FACNS	University of New Mexico	Planner, Speaker	No Relationships
Rejean Guerriero, DO	Washington University School of Medicine	Speaker, Reviewer	No Relationships
James Gugger Jr., MD, PharmD	University of Pennsylvania	Planner, Speaker, Reviewer	No Relationships
Laura M. Guilhoto, PhD, MD	Federal University of São Paulo (UNIFESP)	Speaker	No Relationships
Cecil D. Hahn, MD, MPH, FACNS	The Hospital for Sick Children	Planner, Speaker	Holberg EEG (b); Takeda (a, b); UCB Biopharma SPRL (a, b)
Hiba A. Haider, MD, FACNS, FAES	Emory University School of Medicine	Planner, Speaker, Reviewer	No Relationships
Abeer J. Hani, MD, FACNS	Lebanese American University	Reviewer	No Relationships
Dana Harrar, MD, PhD	Children's National Hospital	Speaker	No Relationships
Aline Herlopian, MD	Yale University	Planner	No Relationships
Susan T. Herman, MD, FACNS	Barrow Neurological Institute	Planner, Speaker	Bioserenity (b); Cerebral Therapeutics (a); CRE Medical (a); Equilibre (a); Marinus Pharmaceuticals (a); Neuroelectrics (a)
Chloe Hill, MD	University of Pennsylvania	Speaker	No Relationships
Lawrence J. Hirsch, MD, FACNS	Yale University	Planner, Speaker	Accure (b); Aquestive (b); Ceribell, Inc. (b); Eisai Inc. (b); Marinus (b); Medtronic (b); Natus (d); Neurelis (b); Neuropace (b, d, e); UCB (b, d)
Matthew Hoffman, DO, PhD, FACNS	Mayo Clinic	Planner, Speaker	No Relationships
Holli Horak, MD	University of Arizona College of Medicine	Speaker	No Relationships
Inna Hughes, MD	University of Rochester School of Medicine	Speaker	No Relationships
Christine Hung, MD	Montefiore Medical Center/Albert Einstein College of Medicine	Planner, Speaker	No Relationships
Aatif M. Husain, MD, FACNS	Duke University	Planner, Speaker	Eisai Pharmaceuticals (b); Jazz Pharmaceuticals (b, e); Marinus Pharmaceuticals (a, b, e); Merck (b); Neurelis Pharmaceuticals (a, b); Pipeline Pharma (b); UCB Pharmaceuticals (b)
Ayatallah Hussein, MD	Cairo University	Planner, Speaker	No Relationships
Ann Hyslop, MD, FACNS	Stanford University School of Medicine	Speaker, Reviewer	Aquestive Therapeutics (d); Eisai Pharmaceuticals (e); Jazz Pharmaceuticals (d, e); Supernus (e)
Akio Ikeda, MD, PhD, FACNS	Department of Epilepsy, Movement Disorders and Physiology, Kyoto University Graduate School of Medicine	Reviewer	Eisai Pharmaceuticals (a); NIHON KOHDEN CORPORATION (a); Otsuka Pharmaceutical Co (a); UCB Japan Co (a)
Mohammed Ilyas, MD, FACNS	University of Missouri-Kansas City	Reviewer	Greenwich Biosciences (e); Zogenix (e)
Monica P. Islam, MD, FACNS	Nationwide Children's Hospital/ The Ohio State University	Reviewer	Abbott Inc. (c); Abbvie Inc (c); Eli Lilly (c); Pfizer (c)

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f. Contractual Services; g. Other Financial or Material Support

## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Julia Jacobs, MD, MSc	University of Calgary	Planner, Speaker	Eisai Canada (b); Epilog (b); Pendopharm Canada (b)
Barbara Jobst, MD, FACNS	Dartmouth Hitchcock Medical Center	Speaker	No Relationships
Giridhar Kalamangalam, MD, DPhil, FACNS	University of Florida Department of Neurology	Planner, Speaker	No Relationships
Gregory Kapinos, MD, MS	Icahn School of Medicine at Mount Sinai	Planner, Speaker	No Relationships
Ioannis Karakis, MD, PhD, MSc, FACNS	Emory University	Planner, Speaker	Glaxo SmithKline (e)
Shigenori Kawabata, MD, PhD	Graduate School of Tokyo Medical and Dental University	Planner, Speaker	Ricoh Company Ltd. (a)
Linda Kelly	ASET- The Neurodiagnostic Society	Planner	No Relationships
Fawad Khan, MD, FACNS	The International Center for Epilepsy at Ochsner, Ochsner Health System	Reviewer	Eisai (b); Marinus (a); SK Life Science (d); UCB (a, d); Zimmer Biomet (b)
Kami Kjolsing, R.EEG T.	Minnesota Epilepsy Group	Speaker	No Relationships
Kerstin Alexandra Klotz, MD	Univeristy Medical Center Freiburg	Speaker	No Relationships
Eliane Kobayashi, MD, PhD	Epilepsy service and EEG Department, Montreal Neurological Hospital	Reviewer	UCB Canada (a, f)
Erik Kobylarz, MD, PhD	Dartmouth Hitchcock Medical Center	Planner, Speaker	No Relationships
Vasileios Kokkinos, PhD	Massachusetts General Hospital	Planner	No Relationships
Sanjeev V. Kothare, MD	Cohen Children's Medical Center, Northwell Health, Zucker School of Medicine	Speaker	No Relationships
Christopher J. Lamb, MD	Mayo Clinic	Speaker	No Relationships
Suzette Laroche, MD, FACNS	University of North Carolina	Planner, Speaker	No Relationships
Ruple Laughlin, MD, FACNS	Mayo Clinic	Planner, Speaker	No Relationships
Scheherazade Le, MD	Stanford University	Speaker	No Relationships
Jong Woo Lee, MD, PhD, FACNS	Brigham Health	Planner, Reviewer	Bioserenity (f); Soterya, Inc (c, e); Teladoc (f)
Leslie Lee, MD, FACNS	Stanford University	Planner	No Relationships
Alan D. Legatt, MD, PhD, FACNS	Albert Einstein College of Medicine, Bronx, New York	Speaker	Glaxo SmithKline (c); Johnson & Johnson (c); Merck (c); Pfizer (c); TEVA ©; Viatris (c)
Alain Lekoubou Looti, MD, MS	Penn State Neuroscience Institute	Speaker	No Relationships
Dalila Lewis, MD	Medical University of South Carolina	Speaker	Zogenix (e)
Xiangping Li, MD	The University of Texas Medical Branch	Reviewer	No Relationships
Lynn Liu, MD, FACNS	University of Rochester	Planner, Speaker	Moderna (c); Pfizer (c)
Jaime R. Lopez, MD, FACNS	Stanford University School of Medicine	Planner, Speaker	No Relationships
Matthew Luedke, MD, FACNS	Duke University Hospital	Planner	BrightHealth (e); Eisai Pharmaceuticals (b); Neurona (a)
Brian Lundstrom, MD, PhD, FACNS	Mayo Clinic	Planner, Speaker	Cadence Neuroscience (g); Epiminder (b); Medtronic (a, b) Neuroelectrics (a); Neuropace (a, b); Philips, Inc. (b)
Zabeen Mahulwala, MD	University of Kentucky	Planner, Speaker	No Relationships
Janette Mailo, MD, PhD	University of Alberta, Stollery Children's Hospital	Speaker	No Relationships

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

## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Eric Mariuma, MD	Montefiore Medical Center	Speaker	No Relationships
Guillermo Martín Palomeque, MD, FACNS	Department of Clinical Neurophysiology, Hospital Ramón y Cajal (Madrid)	Planner, Speaker	No Relationships
Laurence Martineau, MD	CHU de Québec	Speaker	Pendopharm Canada (f); UCB (f)
Catherine Marx, PhD	Federal University of São Paulo (UNIFESP)	Planner, Speaker	No Relationships
Shavonne L. Massey, MD, MSCE, FACNS	CHOP / UPenn	Planner, Speaker	No Relationships
Luis Carlos Mayor-Romero, MD, FACNS, FAES	Hospital Universitario Fundacion Santa Fe de Bogota	Planner, Speaker	No Relationships
Michael McGarvey, MD, FACNS	University of Pennsylvania	Planner, Speaker	Apple (c)
Jennifer L. McKinney, MD, FACNS	Nationwide Children's Hospital/ The Ohio State University	Reviewer	Sarepta Therapeutics (a)
James B. Meiling, D.O.	Mayo Clinic	Speaker	No Relationships
Daniel L. Menkes, MD, FACNS	OUWB School of Medicine	Planner	CMTE (c)
Ramshekhar A. Menon, MD	Sree Chitra Tirunal Institute for Medical Sciences and Technology	Speaker	No Relationships
Edward Merricks, PhD	Columbia University	Speaker	No Relationships
Kara B. Miecznikowski, BS	University of Cincinnati College of Medicine	Speaker	No Relationships
Yara Mikhaeil-Demo, MD, FACNS	University of Illinois, Chicago	Reviewer	No Relationships
Yafa Minazad, DO, FACNS, MMM	Vituity	Planner, Speaker	No Relationships
Moshe Mizrahi, MD	University of Cincinnati Academic Health Center	Reviewer	No Relationships
Ismail Mohamed, MD, FACNS	University of Alabama Birmingham	Planner, Speaker, Reviewer	Marinus Pharmaceuticals (a)
Iryna Muzyka, MD, FACNS	Mayo Clinic AZ	Reviewer	No Relationships
John Mytinger, MD	Nationwide Children's Hospital	Speaker	No Relationships
Dileep Nair, MD	Cleveland Clinic	Speaker	Neuropace (b, d)
Dinesh Nair, MD, PhD	Brigham and Women Hospital, Harvard Medical School	Speaker	No Relationships
Jessie Nance, MD	Johns Hopkins	Speaker	
Marcus C. Ng, MD, FRCPC, CSCN (EEG), FACNS	University of Manitoba	Planner, Speaker	Eisai Canada (a, d, e); UCB Canada (d)
Dang Nguyen, MD, PhD, FRCPC	University of Montreal	Planner, Speaker	No Relationships
Shelley Noland, MD	Mayo Clinic Arizona	Speaker	MicroAire (b)
Jonathan Norton, PhD, FACNS	University of Saskatchewan	Planner	No Relationships
Adam L. Numis, MD	UCSF Benioff Children's Hospital	Speaker	No Relationships
Magda L. Nunes, PhD	School of Medicine of the Catholic Pontifical University of Rio Grande do Sul (PUCRS)	Speaker	No Relationships
Marc R. Nuwer, MD, PhD	UCLA Health	Planner, Speaker	Corticare (c)
Juan Ochoa, MD, FACNS	University of South Alabama	Reviewer	Compumedics Neuroscan (b)
Tatsuya Oishi, MD	Mayo Clinic	Planner, Speaker	No Relationships
Joel Oster, MD, FACNS	Tufts University	Reviewer	No Relationships

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



## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Ria Pal, MD	Stanford University	Speaker	No Relationships
Kimberly Pargeon, MD, FACNS	Harbor-UCLA Medical Center	Reviewer	No Relationships
Prachi Parikh, MD	Duke University	Planner	No Relationships
Jun T. Park, MD, FAES, FACNS	UH Cleveland Medical Center/UH Rainbow Babies & Children's	Planner, Speaker, Reviewer	No Relationships
Milena Pavlova, MD	Brigham and Women's Hospital	Planner, Speaker	Biomobie Corp (a); Jazz Pharmaceuticals (a); Massmedial (b); Sanofi-Genzyme (f); Somryst (b); Vanda Pharm (a)
Phillip Pearl, MD, FACNS	Boston Children's Hospital	Planner	Boston Health Care/PTC Therapeutics (b); Boston Health Care/PTC Therapeutics (a); Neurelis Pharmaceuticals (e)
Ke Peng, PhD	University of Montreal	Speaker	No Relationships
Pedro Perez Lorensu, MD, PhD	Hospitalario Universitario de Canarias (HUC), Spain	Speaker	No Relationships
Elia M. Pestana Knight, MD, FACNS, FAES	Cleveland Clinic Epilepsy Center, CCLCM	Planner, Speaker	Marinus Pharmaceuticals (e)
Ognen Petroff, MD, FACNS, FAES, FAAN	Yale New Haven Hospital	Reviewer	No Relationships
Elana Pinchfsky, MD	CHU Sainte-Justine	Planner	No Relationships
Francesca Pizzo, PhD	CHU Marseille	Speaker	No Relationships
Prasad Policherla, MD, FAHA, FAAN	Mercy Defiance Clinic and Hospital	Reviewer	No Relationships
Craig Press, MD, PhD	Children's Hospital of Philadelphia	Planner, Speaker	Marinus Pharmaceuticals (b, f)
Ronit Pressler, MD, PhD, MRCPCH	Great Ormond Street Hospital for Children and UCL Institute for Child Health	Speaker	GW (e); Kephala (f); Mediservices Healthcare (f); Natus (d); UCB Biopharma (b)
Vineet Punia, MD	Cleveland Clinic Foundation	Speaker	Eisai (e);
Mark S. Quigg, MD, MS, FAES, FANA	UVA Charlottesville	Speaker	No Relationships
Imran Quraishi, MD, PhD	Yale Unversity	Speaker	No Relationships
Ramya Raghupathi, MD	Hospital of University of Pennsylvania	Planner, Speaker	No Relationships
Vikram Rao, MD, PhD	University of California San Francisco	Speaker	Livanova (e); Medtronic (a); Neuropace (b)
Chrystal Reed, MD, PhD	Cedars Sinai Medical Center	Reviewer	No Relationships
R. Mark Richardson, MD, PhD	Massachusetts General Hospital	Speaker	Neuropace (b, e)
Loreto-Pohl Rios, MD	Clínica Integral de Epilepsia Infanto-Juvenil, Chile	Speaker	No Relationships
Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS	Johns Hopkins	Planner, Speaker	Various lawfirms (b)
James J. Riviello, MD, FACNS	Texas Childrens ´s Hospital, Baylor College of Medicine	Speaker	No Relationships
Ricardo Rodríguez-Ferreira, MD	Instituto de Ortopedia e Traumatología, University of São Paulo	Speaker	No Relationships
Kathryn Rosenblatt, MD, MHS	Johns Hopkins University	Speaker	No Relationships
Eric Rosenthal, MD	Harvard University	Speaker	UCB Pharma (b)

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



## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Alexander Rotenberg, MD, PhD	Director, Neuromodulation Program, Boston Children's Hospital	Planner	PrevEp (e)
Elayna Rubens, MD, FACNS	Montefiore Medical Center/Albert Einstein College of Medicine	Planner	No Relationships
Devon Rubin, MD, FACNS	Mayo Clinic	Planner, Speaker	No Relationships
Clio Rubinos, MD, MSCR	University of North Carolina	Planner, Speaker	No Relationships
Maria Sam, MD, FACNS	Wake Forest School of Medicine	Planner, Reviewer	No Relationships
Daniel San Juan Orta, MD, FACNS	HMG Hospital Coyoacan	Planner, Speaker	No Relationships
Amanda Sandoval, MD	University of Utah	Speaker	No Relationships
Ryota Sasaki, MD	Department of Neurosurgery, Nara Medical University	Speaker	No Relationships
Sarah E. Schmitt, MD, FACNS	Department of Neurology, MUSC	Planner, Speaker, Reviewer	No Relationships
Stephan Schuele, MD, MPH, FACNS, FAAN	Northwestern University Feinberg School of Medicine	Planner, Speaker	Bioserenity/Digitrace (b, e); Eisai Pharmaceuticals (e); Epilog (b); Jazz Pharmaceuticals (d); Monteris Medical (b); Neurelis (d); SK Life Science (d); Sunovion (d)
Vishal Shah, MBBS	University of Kansas Medical Center (KUMC)	Planner	No Relationships
Asim Shahid, MD	University Hospitals Cleveland Medical Center, Rainbow Babies & Children's Hospital	Planner	No Relationships
Raj Sheth, MD, FAAN, FACNS	Mayo Clinic / Nemours Clinic-Florida	Planner	Supernus (b); Zogenix (b)
Jay Shils, PhD, FACNS	Rush University Medical Center	Speaker	No Relationships
David Shirilla, DO	Medical College of Wisconsin Affiliated Hospitals Program	Speaker	No Relationships
Kamal Shouman, MD	Mayo Clinic Rochester	Speaker	No Relationships
Mirela V. Simon, MD, MSc, FACNS	Massachusetts General Hospital	Planner, Speaker	No Relationships
Jaysingh Singh, MD	The Ohio State University Wexner Medical Center	Planner, Speaker	No Relationships
Saurabh R. Sinha, MD, PhD, FACNS	Department of Neurology, Duke University Medical Center	Planner	Acquestive Therapeutics (e); Basilea Inc. (b); Blackthorn Therapeutics (b); Eisai Inc. (a); Monteris Medical (a, b); SK Life Science (e); UCB (b, e)
Adithya Sivaraju, MD	Yale New Haven Hospital	Speaker	No Relationships
Sharon Lewis, MD	University of Pennsylvania	Speaker	No Relationships
Aaron Struck, MD	University of Wisconsin	Speaker	Ceribell, Inc. (a)
Fahd Sultan, MD, FACNS	University of Oklahoma Health Sciences Center	Planner, Reviewer	No Relationships
James Tao, MD, PhD, FACNS	University of Chicago Medical Center	Planner	No Relationships
Olga Taraschenko, MD, PhD, FACNS	University of Nebraska Medical Center	Planner	No Relationships
William O. Tatum, IV, DO, FACNS	Mayo Clinic Jacksonville	Planner, Speaker	Bioserenity/Digitrace (f); Cerevel (a); Eisai (a); Livanova (a); Neurelis Pharmaceuticals (b); UCB Pharma (a); Xenon Pharmaceuticals (a)
Connie N. Taylor, MD	Avera Health	Speaker	No Relationships

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

## CONFLICT OF INTEREST DISCLOSURES

Name	Organization	Role	Financial Relationships
Armando Tello, MD, PhD	Head of the Clinical Neurophysiology Department. Hospital Español (Ciudad de México)	Planner, Speaker	No Relationships
Jeffrey Tenney, MD, PhD, FACNS	Cincinnati Children's Hospital Medical Center	Planner, Speaker	CTF MEG Neuro Innovations, Inc. (b); Persyst (b)
Elizabeth Thiele, MD, PhD	Massachusetts General Hospital	Speaker	Aditum (b); Azurity (b); Bridgebio (b); GW Pharmaceuticals (a, b); Livanova (b); Marinus Pharmaceuticals (e); Nobelpharma (b); Radius hHealth (b); Stoke (b); Takeda (b); Zogenix (b); Zogenix (a)
Ajay X. Thomas, MD, PhD	Division of Neurology and Developmental Neuroscience, Department of Pediatrics, Baylor College of Medicine and Texas Children's Hospital	Speaker	No Relationships
Sheela Toprani, MD, PhD	UC Davis Health Neurology Clinic	Speaker	No Relationships
Spyridoula Tsetsou, MD	Icahn School of Medicine	Speaker	No Relationships
Melissa Tsuboyama, MD	Boston Children's Hospital	Speaker	No Relationships
Tammy Tsuchida, MD, PhD, FACNS	Children's National Hospital	Speaker	
Michel Van Putten, MD, PhD	University of Twente	Speaker	Clinical Science Systems (b)
Rocio Vasquez Do Campo, MD	University of Alabama	Speaker	No Relationships
Jorge Vidaurre, MD, FACNS, FAES	Nationwide Children's Hospital	Planner, Speaker	No Relationships
Nicolas Von Ellenrieder, PhD	Montreal Neurological Institute	Speaker	No Relationships
Daniel Weber, DO, FAES, FACNS	St. Louis University School of Medicine	Planner, Speaker	SK Life Science (d)
Brandon Westover, MD, PhD	Massachusetts General Hospital	Speaker	No Relationships
Daniel Winkel, MD	Emory University	Speaker	No Relationships
Gregory Worrell, MD, PhD	Mayo Clinic	Planner, Speaker	Cadence Neuroscience (b, e, g); NeuroOne Inc (b, c, e)
Courtney J. Wusthoff, MD, MS, FACNS	Stanford University	Planner, Speaker, Reviewer	No Relationships
Elissa Yozawitz, MD, FAES	"Montefiore Medical Center Albert Einstein College of Medicine"	Speaker	No Relationships
Sahar Zafar, MD	Mass General Hospital	Speaker	Corticare (b)
Alejandro Zavala, MD, FACNS	Head of the Clinical Neurophysiology Department. Hospital Médica Sur. Ciudad de México	Speaker	Novartis Pharmaceuticals (e)
Ifrah Zawar, MD	University of Virginia	Speaker	No Relationships
Andrew Zillgitt, DO, FACNS, FAES	Beaumont Health System	Reviewer	Eisai (d); Neuropace (b); Nile (b); SK Life Science (d); UCB (d)

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

## SUPPORT ACKNOWLEDGMENT

ACNS gratefully acknowledges the following companies for their support of the 2023 Annual Meeting & Courses:

### **ABBVIE**

(in-kind support of the “Botulinum Toxin Treatment under EMG Guidance” workshop)

### **CADWELL INDUSTRIES**

(in-kind support of the “Botulinum Toxin Treatment under EMG Guidance,” “Uncommon Sensory Nerve Conduction Studies,” and “Nerve Conduction” workshops)

### **NATUS NEUROLOGY**

(in-kind support of the “Nerve Conduction” workshop)

### **SK LIFESCIENCES**

(grant support of the Monday morning coffee break)

### **SPES MEDICA**

(in-kind support of the “Intraoperative Neurophysiology of Oculomotor, Trochlear, and Abducens Nerves” workshop)

### **VITUITY**

(grant support of the ICU EEG SIG Kick-Off Social)

## SOCIAL & NETWORKING EVENTS

### CONTINUE THE CONVERSATION ROUNDTABLE DISCUSSIONS

**Sunday, March 26, 2023, 11:30am – 1:00pm**

**Tuesday, March 28, 2023, 11:30am – 1:00pm**

*Location: 4th Floor Ballroom Foyer*

During lunch, gather with leading experts in your field to continue the conversations started in the session rooms. Take advantage of this networking opportunity!

### SPECIAL INTEREST GROUP (SIG) KICK-OFF SOCIAL

**Monday, March 27, 2023, 12:30 – 1:30pm**

*Locations: ICU EEG - Salon C*

*NIOM - Salon D*

*Stereo EEG - Salon E*

ACNS is excited to launch a Special Interest Group (SIG) program, open to members only! The SIGs will be organized around several main areas of CNP practice and SIG members will be connected throughout the year via discussion board chats and quarterly virtual meet-ups.

The SIG program will officially kick-off over lunch on Monday, March 27 when each SIG will meet in-person in Austin to discuss their goals for the year. Come learn what they have planned in the coming months as they offer key educational content and networking opportunities throughout the year.

### SPEED NETWORKING

**Monday, March 27, 2023, 11:30am - 12:15pm**

*Location: 4th Floor Ballroom Foyer*

Annual Meeting delegates aim to meet and greet as many colleagues as possible in this fast-paced networking event, held Monday, March 27, 11:30am - 12:15pm. Delegates are paired for 2-minute connections before rotating to the next colleague. This networking opportunity is available to all delegates. Take advantage of an opportunity to chat with potential employers, collaborators, and peers.

Don't forget to bring business cards!

### WELCOME RECEPTION

**Sunday, March 26, 2023, 6:30 – 7:30pm**

*Location: Exhibit & Poster Hall, Salon HJK, 6th Floor*

ACNS invites all delegates to attend the Welcome Reception in the Exhibit Hall on Sunday, March 26.

### THE NEUROLOGY OF WINE TASTING

**Sunday, March 26, 2023, 7:00 – 9:00pm**

*Salon FG, 6th Floor*

Join ACNS President Dr. Jaime R. López and a guest sommelier for an interactive and educational wine tasting experience on Sunday, March 26. Included in this event is four hand-selected wine samples, appetizers, and a deeper understanding of wine tasting.

Tickets are limited and may be purchased at the registration desk for \$50 for physicians and \$25 per trainee.

### PROFESSIONAL DEVELOPMENT MENTORSHIP PROGRAM

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





## AWARD RECIPIENTS & KEYNOTE LECTURES

The ACNS Awards Committee, chaired by Suzette M. LaRoche, MD, FACNS, is pleased to announce the following recipients of ACNS's 2023 awards who will be recognized at the 2023 Annual Meeting in Austin, Texas.

### PIERRE GLOOR AWARD PRESENTATION & LECTURE

**"Hans Berger Meets ECMO: A Clinical Neurophysiologist in the Intensive Care Unit"**

Tuesday, March 28, 2023, 1:00pm



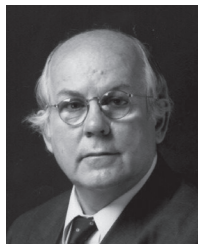
**Thomas P. Bleck, MD, FACNS**

The Gloor Award is presented annually for outstanding current contributions to central clinical neurophysiology research. Dr. Bleck will be recognized and will deliver the 2023 Gloor Lecture titled "Hans Berger Meets ECMO: A Clinical Neurophysiologist in the Intensive Care Unit" on Tuesday, March 28, 2023.

### ROBERT S. SCHWAB AWARD PRESENTATION & LECTURE

**"Improved Assessment of Signs and Nerve Conductions for Diagnosis and Quantitation of Sensorimotor Polyneuropathies"**

Monday, March 27, 2:00pm

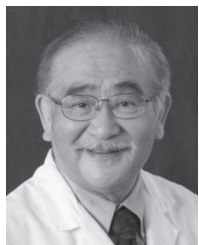


**Peter J. Dyck, MD**

The Schwab Award is presented annually to an individual who has made significant contributions in the area of peripheral clinical neurophysiology. Dr. Dyck will be recognized and will deliver the 2023 Schwab Lecture titled "Improved Assessment of Signs and Nerve Conductions for Diagnosis and Quantitation of Sensorimotor Polyneuropathies" on Monday, March 27, 2023.

### HERBERT H. JASPER AWARD PRESENTATION

Tuesday, March 28, 1:00pm



**Thoru M. Yamada, 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. Yamada will be recognized during a general session on Tuesday, March 28, 2023.

### PRESIDENT'S ADDRESS

**"Safety in Clinical Neurophysiology: The Good, the Bad, and the Ugly"**

Sunday, March 26, 1:50pm



**Jaime R. Lopez, MD, FACNS**

ACNS President Jaime R. Lopez, MD, FACNS will deliver the 2023 President's Address titled "Safety in Clinical Neurophysiology: The Good, the Bad, and the Ugly" on Sunday, March 26, 2023.

### MARC R. NUWER SERVICE AWARD PRESENTATION

Monday, March 27, 2:00pm



**Aatif M. Husain, MD, FACNS**

The Marc R. Nuwer Service Award is presented to an individual in recognition of outstanding service to ACNS and its members, including non-scientific contributions. Dr. Husain will be recognized during the Annual Business Meeting on Monday, March 27, 2023.

### ACNS DISTINCTION IN TEACHING AWARD

Monday, March 27, 2:00pm



**Ioannis Karakis, MD, PhD, MSc, FACNS**

This award was created to recognize a mid-career ACNS member for outstanding accomplishments in teaching clinical neurophysiology to fellows, residents, medical students or EEG technologists. Dr. Karakis will be recognized during the Annual Business Meeting on Monday, March 27, 2023.

### ACNS DISTINCTION IN SERVICE AWARD

Monday, March 27, 2:00pm



**Hiba A. Haider, MD, FACNS, FAES**

This award was created to recognize a mid-career ACNS member who has demonstrated outstanding service to the field of clinical neurophysiology at the institutional or national level. Dr. Haider will be recognized during the Annual Business Meeting on Monday, March 27, 2023.

## SCHEDULE AT A GLANCE

SATURDAY, MARCH 25, 2023		Location
8:00 - 11:15am	<b>Course: Neurophysiology Technology: NCS/EMG, Sleep, EEG, EMG, NIOM</b> 	Salon D, 4th Floor
	Course Directors: Susan T. Herman, MD, FACNS and Dominic Fee, MD, FACNS	
	<b>Course: NIOM Part I</b> 	Salon E, 4th Floor
	Course Directors: Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS and Christine Hung, MD	
1:00 - 4:15pm	<b>Course: ICU EEG Part I</b> 	Salon FG, 6th Floor
	Course Directors: Elizabeth E. Gerard, MD, FACNS and France Fung, MD	
	<b>Course: NIOM Part II</b> 	Salon E, 4th Floor
	Course Directors: Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS and Christine Hung, MD	
2:30 - 2:45pm	<b>Break</b>	4th Floor Ballroom Foyer
3:00 - 4:30pm	<b>2023 ACNS CNP Program Directors' Symposium: Implementing ACGME Milestones 2.0 and Incorporating Virtual Platforms to Clinical Neurophysiology</b> 	Salon C, 4th Floor
	Session Directors: Ioannis Karakis, MD, PhD, MSc, FACNS and Lynn Liu, MD, MS (HPE), FACNS	
SUNDAY, MARCH 26, 2023		Location
7:00 - 8:30am	<b>Breakfast</b>	4th Floor Ballroom Foyer
8:00 - 11:15am	<b>Course: Basic EEG</b> 	Salon C, 4th Floor
	Course Directors: Ioannis Karakis, MD, PhD, MSc, FACNS and Daniel J. Weber, DO, FACNS	
	<b>Course: ICU EEG Part II</b> 	Salon D, 4th Floor
	Course Directors: Elizabeth E. Gerard, MD, FACNS and France W. Fung, MD, MSc	
	<b>Course: Nerve Conduction Workshop</b> 	Salon FG, 6th Floor
	Course Directors: Ruple Laughlin, MD, FACNS and Zabeen Mahulwala, MD	
	<b>Course: NIOM Part III</b> 	Salon E, 4th Floor
8:00 - 9:30am	Course Directors: Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS and Christine Hung, MD	
	<b>SEEG Implantation Strategy in Epileptic Patients: Illustrative Case Discussions</b>	Salon AB, 4th Floor
	Session Director: Jun T. Park, MD, FAES, FACNS	
	<b>The Art and Craft of Video-Polysomnography to Identify Parasomnias, Seizures, Artifacts and Movements During Sleep</b>	Room 406
	Session Directors: Madeleine M. Grigg-Damberger, MD, FACNS and Nancy Foldvary-Schaefer, DO, FACNS	
9:30 - 9:45am	<b>Coffee Break</b>	4th Floor Ballroom Foyer
9:45 - 11:15am	<b>Electrophysiology of Vision Updates and Clinical Applications in Neurology (Joint ACNS/ Egyptian Clinical Neurophysiology Society Symposium)</b>	Room 406
	Session Directors: Ayat Allah Hussein, MD and Ann Aly AbdelKader, MD	
	<b>Neuromodulation in Treating Epilepsy</b>	Salon AB, 4th Floor
	Session Director: Aline Herlopian, MD	
11:30 AM - 1:00pm	<b>Lunch   Continue the Conversation Roundtable Discussion</b>	4th Floor Ballroom Foyer
1:15 - 2:45pm	<b>General Session: 2022 Cosimo-Ajmone Marsan Award Presentation   Young Investigator Travel Awards Presentation   Presidential Address</b> 	Salon FG, 6th Floor

 = On-demand  = This session will be presented in Spanish.

All courses and select scientific program sessions will be available on-demand Monday, April 10 through Thursday, May 25, 2023.

## SCHEDULE AT A GLANCE

SUNDAY, MARCH 26, 2023		Location
3:15 - 4:45pm	<b>Autonomic Testing in Peripheral and Central Autonomic Disorders: A Case-Based Approach</b> <sup>OD</sup> Session Director: <i>Sarah Berini, MD</i>	Salon FG, 6th Floor
	<b>Botulinum Toxin Treatment Under EMG Guidance: Hands-On Workshop</b> Session Director: <i>Jaime R. Lopez, MD, FACNS</i>	Room 406
	<b>Functional Mapping and Seizure Stimulation with SEEG: Where are We Now?</b> <sup>OD</sup> Session Director: <i>Gewalin Aungaroon, MD</i>	Salon C, 4th Floor
	<b>Intraoperative Neurophysiology of Oculomotor, Trochlear, and Abducens Nerves</b> Session Directors: <i>Matthew Hoffman, DO, PhD and Tatsuya Oishi, MD</i>	Salon AB, 4th Floor
	<b>The Circannual Neurophysiology of Sleep, Status Epilepticus, and Zeitgebers</b> <sup>OD</sup> Session Directors: <i>Milena Pavlova, MD and Marcus C. Ng, MD, FRCPC, CSCN (EEG), FACNS</i>	Salon E, 4th Floor
4:45 - 5:00pm	<b>Break</b>	4th Floor Ballroom Foyer
3:15 - 6:30pm	<b>Course: ICU EEG Part III</b> <sup>OD</sup> Course Directors: <i>Elizabeth E. Gerard, MD, FACNS and France W. Fung, MD, MSc</i>	Salon D, 4th Floor
5:00 - 6:30pm	<b>Amplitude-Integrated EEG: Friend or Foe?</b> Session Director: <i>Cecil D. Hahn, MD, MPH, FACNS</i>	Room 615AB
	<b>Clinical Utility of EEG Source Imaging in Localizing the Epileptogenic Zone.</b> <sup>OD</sup> Session Directors: <i>Stephan U. Schuele, MD, MPH, FACNS and Jaysingh Singh, MD</i>	Salon C, 4th Floor
	<b>Complex EMG Waveforms</b> Session Director: <i>Devon I. Rubin, MD, FACNS</i>	Room 406
	<b>Electro-Clinical Criteria of Developmental Epileptic Encephalopathies. Accurate or Ill Defined? (Joint ACNS/IFCN Latin American Chapter Symposium)</b> <sup>OD</sup> Session Directors: <i>Jorge Vidaurre, MD, FACNS, FAES and Daniel San Juan Orta, MD, FACNS</i>	Salon E, 4th Floor
	<b>NIOM in Children</b> Session Director: <i>Mirela V. Simon, MD, MSc, FACNS</i>	Salon AB, 4th Floor
6:30 - 7:30pm	<b>Welcome Reception</b>	Exhibit & Poster Hall Salon HJK, 6th Floor
7:00 - 9:00pm	<b>The Neurology of Wine Tasting</b>	Salon FG, 6th Floor
MONDAY, MARCH 27, 2023		Location
7:00 - 8:30am	<b>Breakfast</b>	Exhibit & Poster Hall Salon HJK, 6th Floor
8:00 - 9:30am	<b>2023 ACNS Career Development Panel: How to Carve a Niche and Balance Work-Life Responsibilities</b> Session Directors: <i>Lynn Liu, MD, MS (HPE), FACNS and Ioannis Karakis, MD, PhD, MSc, FACNS</i>	Salon D, 4th Floor
	<b>Multimodal Monitoring with Emphasis on Depth Recordings as Well as MMM Correlates on Scalp EEG and Utility in informing Seizure Treatment</b> <sup>OD</sup> Session Director: <i>Ramya Raghupathi, MD</i>	Salon FG, 6th Floor
8:00 - 11:15am	<b>Course: Stereo EEG Part I</b> <sup>OD</sup> Course Directors: <i>Giridhar P. Kalamangalam, MD, DPhil, FACNS and Birgit Frauscher, MD, PhD</i>	Salon C, 4th Floor
	<b>Course: Video EEG</b> <sup>OD</sup> Course Directors: <i>Katie Bullinger, MD, PhD and Sarah E. Schmitt, MD, FACNS</i>	Salon E, 4th Floor

<sup>OD</sup> = On-demand <sup>ES</sup> = This session will be presented in Spanish.

All courses and select scientific program sessions will be available on-demand Monday, April 10 through Thursday, May 25, 2023.

## SCHEDULE AT A GLANCE

MONDAY, MARCH 27, 2023		Location
8:00 - 9:30am	<b>What Is The EEG?</b> Session Directors: <i>Jean Gotman, PhD, FACNS and Giridhar Kalamangalam, MD, DPhil, FACNS</i>	Salon AB, 4th Floor
9:30 - 9:45am	<b>Break</b>	Exhibit & Poster Hall Salon HJK, 6th Floor
9:45 - 11:15am	<b>Indications for MEG in Epilepsy and Tumor Surgery</b> Session Director: <i>Jeffrey Tenney, MD, PhD, FACNS</i>	Salon AB, 4th Floor
	<b>Management of Status Epilepticus and the Ictal-Interictal Continuum in Hypoxic-Ischemic Brain Injury</b>  Session Directors: <i>Jong Woo Lee, MD, PhD, FACNS and Edilberto Amorim, MD</i>	Salon FG, 6th Floor
	<b>Overall Advances Implications of Continuous Brain Monitoring in Neonatal Intensive Care Unit (Joint ACNS/Brazilian Clinical Neurophysiology Society Symposium)</b> Session Directors: <i>Catherine Marx, PHD and Cecil D. Hahn, MD, MPH, FACNS</i>	Room 406
	<b>Uncommon Sensory Nerve Conduction Studies Workshop</b> Session Director: <i>Devon I. Rubin, MD, FACNS</i>	Salon D, 4th Floor
11:30am - 12:15pm	<b>Speed Networking</b>	6th Floor Ballroom Foyer
12:15 - 1:45pm	<b>Lunch</b>	Exhibit & Poster Hall Salon HJK, 6th Floor
12:30 - 1:30pm	<b>SIG Kick-Off Social</b>	
	<b>ICU EEG</b>	Salon C, 4th Floor
	<b>NIOM</b>	Salon D, 4th Floor
	<b>Stereo EEG</b>	Salon E, 4th Floor
2:00 - 3:30pm	<b>General Session: Schwab Award Presentation &amp; Lecture   Business Meeting</b> 	Salon FG, 6th Floor
3:45 - 5:15pm	<b>Beyond Stereo-EEG: Are Multi-Modal Recordings Clinically Relevant?</b>  Session Director: <i>Julia Jacobs, MD, MSc</i>	Salon FG, 6th Floor
	<b>The Business of Clinical Neurophysiology: Market Value and Negotiation</b>  Session Directors: <i>Pegah Afra, MD, FACNS and Matthew Luedke, MD, FACNS</i>	Salon D, 4th Floor
	<b>Cranial Nerves and Brainstem Mapping and Monitoring in the OR: Challenges and Troubleshooting Strategies</b> Session Director: <i>Mirela V. Simon, MD, MSc, FACNS</i>	Salon AB, 4th Floor
	<b>Hot Topics in AI and Seizures</b>  Session Director: <i>Brian Lundstrom, MD, PhD, FACNS</i>	Salon E, 4th Floor
	<b>Quantitative EEG in Pediatric Critical Care</b> Session Directors: <i>Giulia Benedetti, MD and Craig A. Press, MD, PhD</i>	Salon C, 4th Floor
	<b>Research Highlights</b> Session Directors: <i>Olga Taraschenko, MD, PhD and Mirela V. Simon, MD, MSc</i>	Room 406

 = On-demand  = This session will be presented in Spanish.

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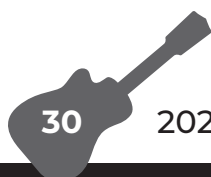


## SCHEDULE AT A GLANCE

TUESDAY, MARCH 28, 2023		Location
7:00 - 8:30am	<b>Breakfast</b>	Exhibit & Poster Hall Salon HJK, 6th Floor
8:00 - 9:30am	<b>Challenging NM and EDX Cases: Solving the Puzzle</b> Session Director: <i>Ruple Laughlin, MD, FACNS</i>	Salon D, 4th Floor
	<b>Clinical Neurophysiology Resident &amp; Fellow Symposium</b> Session Directors: <i>Pegah Afra, MD, FACNS and Jeffrey Britton, MD, FACNS</i>	Room 406
	<b>Intraoperative Neurophysiological Monitoring in Aortic Surgeries (Joint ACNS/Spanish Society for Clinical Neurophysiology (SENEC) Symposium)</b> Session Directors: <i>Jaime R. Lopez, MD, FACNS and Victoria Fernández, MD, PhD</i>	Salon C, 4th Floor
	<b>Managing Acute Symptomatic Seizures and Epileptiform Abnormalities: A Common Clinical Challenge in an Evidence Free World</b> Session Directors: <i>Adithya Sivaraju, MD and Clio Rubinos, MD, MSCR</i>	Salon AB, 4th Floor
8:00 - 9:30am	<b>Course: Evoked Potentials</b>  Course Directors: <i>Erik J. Kobylarz, MD, PhD and Elayna Rubens, MD, FACNS</i>	Salon E, 4th Floor
8:00 - 11:15am	<b>Course: Stereo EEG Part II</b>  Course Directors: <i>Giridhar P. Kalamangalam, MD, DPhil, FACNS and Birgit Frauscher, MD, PhD</i>	Salon FG, 6th Floor
9:30 - 9:45am	<b>Break</b>	Exhibit & Poster Hall Salon HJK, 6th Floor
9:45 - 11:15am	<b>Course: Business Management Course: The Business of a Clinical Neurophysiologist: The Underpinnings of Earnings</b>  Course Directors: <i>Yafa Minazad, DO, FACNS, MMM and Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS</i>	Salon C, 4th Floor
9:45 - 11:15am	<b>Disparities in Neurophysiology: Where are We and How can We Improve?</b>  Session Directors: <i>Suzette Laroche, MD, FACNS and Sonal Bhatia, MBBS, MD</i>	Salon E, 4th Floor
	<b>Electroencephalographic Measurements of Delirium: Use Of EEG for Delirium Prediction and Diagnosis</b> Session Directors: <i>Paul García, MD, PhD and Madeleine M. Grigg-Damberger, MD, FACNS</i>	Room 406
	<b>Genetic Generalized Epilepsies: Bringing Rare Electroclinical Phenotypes to the Diagnostic Forefront</b>  Session Director: <i>Elia M. Pestana Knight, MD, FACNS, FAES</i>	Salon D, 4th Floor
	<b>Hot Topics in EMG and IOM</b> Session Director: <i>Brian Lundstrom, MD, PhD, FACNS</i>	Salon AB, 4th Floor
11:30 AM - 1:00pm	<b>Continue the Conversation Roundtable Discussions   Lunch</b> 	6th Floor Ballroom Foyer
1:00 - 2:30pm	<b>General Session: Jasper Award Presentation   Gloor Award Presentation &amp; Lecture</b>	Salon FG, 6th Floor
2:45 - 4:15pm	<b>Ancillary Test Reporting in Determination of Death by Neurologic Criteria: Proposed ACNS Training Modules for Additional Credentialing and Competency Certifications in EEG and Evoked Potentials</b> Session Director: <i>Gregory Kapinos, MD, MS</i>	Room 406
	<b>To Treat or Not to Treat Periodic Discharges in Critically Ill Patients: Evidence from Neuroimaging</b> Session Director: <i>Dang Nguyen, MD, PhD, FRCPC</i>	Salon AB, 4th Floor
4:15 - 4:30pm	<b>Break</b>	Exhibit & Poster Hall Salon HJK, 6th Floor

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## SCHEDULE AT A GLANCE

TUESDAY, MARCH 28, 2023		Location
2:45 - 6:00pm	<b>Course: ACNS Guidelines: Updates and Reviews</b> <sup>OD</sup> Course Directors: <i>Aatif M. Husain, MD, FACNS and William O. Tatum IV, DO, FACNS</i>	Salon E, 4th Floor
	<b>Course: Neonatal EEG</b> <sup>OD</sup> Course Directors: <i>Shavonne L. Massey, MD, MSCE, FACNS and William Gallentine, DO, FACNS</i>	Salon C, 4th Floor
	<b>Course: Sleep: At the Heart of Clinical Neurophysiology</b> <sup>OD</sup> Course Directors: <i>Marcus C. Ng, MD, FRCPC, CSCN (EEG), FACNS and Lynn Liu, MD, MS (HPE), FACNS</i>	Salon D, 4th Floor
	<b>Course: Stereo EEG Part III</b> <sup>OD</sup> Course Directors: <i>Giridhar P. Kalamangalam, MD, DPhil, FACNS and Birgit Frauscher, MD, PhD</i>	Salon FG, 6th Floor
4:30 - 6:00pm	<b>Emerging Concepts in the Diagnosis and Management of Super-Refractory Status Epilepticus, NORSE and FIRES</b> Session Directors: <i>Teneille E. Gofton, MD, MSc, FRCPC, FACNS and Cecil D. Hahn, MD, MPH, FACNS</i>	Salon AB, 4th Floor
	<b>Treatment of Peripheral Nerve Injuries: From Clinic to OR</b> Session Director: <i>Jaime R. Lopez, MD, FACNS</i>	Room 406
WEDNESDAY, MARCH 29, 2023		Location
7:00 - 8:30am	<b>Breakfast</b>	4th Floor Ballroom Foyer
8:00 - 9:30am	<b>Diversity in Leadership</b> <sup>OD</sup> Session Directors: <i>Sarah E. Schmitt, MD, FACNS and Sasha Alick-Lindstrom, MD, FACNS</i>	Salon FG, 6th Floor
	<b>Intraoperative Neurophysiologic Monitoring In Minimally Invasive Spinal Surgeries</b> <sup>ES</sup> Session Directors: <i>Guillermo Martín Palomeque, MD, FACNS and Armando Tello, MD, PhD</i>	Salon AB, 4th Floor
8:00 - 11:15am	<b>Course: Neuromodulation/Stimulation</b> <sup>OD</sup> Course Directors: <i>Gregory Worrell, MD, PhD and Alexander Rotenberg, MD, PhD</i>	Salon C, 4th Floor
9:30 - 9:45am	<b>Break</b>	4th Floor Ballroom Foyer
9:45 - 11:15am	<b>Magnetospinography &amp; Magnetoneurography: The Emerging Field of Spinal Cord &amp; Peripheral Nervous System Magnetic Neurophysiology (Joint ACNS/Japan Neuroscience Society Symposium)</b> Session Directors: <i>Pegah Afra, MD, FACNS and Shigenori Kawabata, MD, PhD</i>	Salon AB, 4th Floor
	<b>Epilepsy Clinical Cases</b> <sup>OD ES</sup> Session Director: <i>Luis Carlos Mayor-Romero, FACNS, FAES</i>	Salon FG, 6th Floor

<sup>OD</sup> = On-demand <sup>ES</sup> = This session will be presented in Spanish.

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# ANNUAL MEETING & COURSES AGENDA

**SATURDAY, MARCH 25, 2023**

**8:00 – 11:15am**

**Course: Neurophysiology Technology: NCS/EMG, Sleep, EEG and NIOM <sup>OD</sup>**

*Location: Salon D, 4th Floor*

Course Co-Directors: Susan T. Herman, MD, FACNS and Dominic Fee, MD, FACNS

**Learning Objectives:**

At the conclusion of this activity, the learner will be able to:

1. Appropriately select and use developing technologies for peripheral nerve and muscle assessments;
2. Apply efficient techniques for polysomnographic assessment of patients with neurological conditions;
3. Describe the fundamental operation of EEG equipment, including filters and the use of montages;
4. Identify the benefits and pitfalls of ambulatory and continuous EEG recordings for patients with epilepsy; and
5. Troubleshoot common technical problems in neurologic intraoperative monitoring.

8:00am Technical Aspects of Nerve Conduction Studies  
*Dominic Fee, MD, FACNS*

8:30am Instrumentation and Pitfalls of EMG  
*David Shirilla, DO*

9:00am Video-EEG-PSG and other Techniques for Sleep Disorders in Neurologic Patients  
*Marcus Ng, MD, FRCPC, CSCN, FACNS*

9:30am Break

9:45am Digital EEG: Instrumentation, Recording, and Review  
*Saurabh R. Sinha, MD, PhD, FACNS*

10:15am Technology Aspects of Video-EEG: Ambulatory and EMU  
*Aline Herlopian, MD*

10:45am Inpatient Continuous EEG: EMU and ICU  
*Susan T. Herman, MD, FACNS*

**Course: NIOM Part I <sup>OD</sup>**

*Location: Salon E, 4th Floor*

Course Co-Directors: Eva K. Ritzl, MD, MBA, FACNS and Christine Hung, MD

**Learning Objectives:**

At the conclusion of this activity, the learner will be able to:

1. Explain the concepts underpinning different NIOM modalities;
2. Use NIOM modalities in basic and advanced applications; and
3. Discuss billing rules and medico-legal concepts as they pertain to NIOM.

8:00am Introduction  
*Eva K. Ritzl, MD, MBA, FACNS and Christine Hung, MD*

8:05am SEP  
*Atif M. Husain, MD, FACNS*

8:40am MEP/D-Wave  
*Ronald Emerson, MD, FACNS*

9:15am Spinal Cord /Column & Cases  
*Jay L. Shils, PhD, DABNM, FACNS*

9:50am Break

10:05am BAER  
*Alan D. Legatt, MD, PhD, FACNS*

10:40am Brainstem and Skull Base Surgery & Cases  
*Jaime R. Lopez, MD, FACNS*

**9:30 – 9:45am**

**Coffee Break**

*4th Floor Ballroom Foyer*

**11:30am – 1:00pm**

**Lunch**

*4th Floor Ballroom Foyer*

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# ANNUAL MEETING & COURSES AGENDA

## SATURDAY, MARCH 25, 2023

1:00 – 4:15pm

### Course: ICU EEG Part I

Location: Salon FG 6th Floor

Course Co-Directors: Elizabeth E. Gerard, MD, FACNS and France W. Fung, MD MSc

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Review guidelines and consensus statements on CEEG monitoring in adult and pediatric ICUs;
2. Discuss indications for CEEG monitoring in critically ill adults and children;
3. Outline basic ACNS critical care EEG terminology; and
4. Describe ictal-interictal continuum patterns and explore cases of IIC in critically ill adult patients.

1:00pm Introduction

1:05pm Consensus, Guidelines and Current Practice  
*Nicholas S. Abend, MD, MSCE, FACNS*

1:30pm ACNS Terminology (The Basics)  
*Lawrence J. Hirsch, MD, FACNS*

1:55pm Status Epilepticus - Identification  
*Cecil D. Hahn, MD, MPH, FACNS*

2:20pm Break

2:45pm Ictal-Interictal Continuum (IIC) & 2HELPS2B  
*Aaron F. Struck, MD*

3:10pm Overview of Pediatric ICU EEG  
*France W. Fung, MD*

3:35pm CASES - Ictal-Interictal Continuum  
*Masoom Desai, MD*

### Course: NIOM Part II

Location: Salon E, 4th Floor

Course Co-Directors: Eva K. Ritzl, MD, MBA, FACNS and Christine Hung, MD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Explain the concepts underpinning different NIOM modalities;
2. Use NIOM modalities in basic and advanced applications; and
3. Discuss billing rules and medico-legal concepts as they pertain to NIOM.

1:00pm EEG  
*Eva K. Ritzl, MD, MBA, FACNS*

1:35pm EMG  
*Eric Mariuma, MD*

2:10pm Peripheral Nervous System Monitoring and Mapping  
*Jessica Nance, MD, MS*

2:45pm Break

3:00pm Billing  
*Marc R. Nuwer, MD, PhD, FACNS*

3:35pm Anesthesia  
*Ronald Emerson, MD, FACNS*

2:30 – 2:45pm

### Coffee Break

4th Floor Ballroom Foyer

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# ANNUAL MEETING & COURSES AGENDA

**SATURDAY, MARCH 25, 2023**

**3:00 – 4:30pm**

## **CNP Program Directors' Symposium: Implementing ACGME Milestones 2.0 and incorporating Virtual Platforms to Clinical Neurophysiology <sup>OD</sup>**

*Location: Salon C, 4th Floor*

Session Co-Directors: Ioannis Karakis, MD, PhD, MSc, FACNS and Lynn Liu, MD, MS (HPE), FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe the rationale used to create the Clinical Neurophysiology Milestones 2.0 and apply the new milestones to individual Clinical Neurophysiology Fellowship Programs;
2. Discuss how virtual platforms can be incorporated into Clinical Neurophysiology Fellowship Programs Education; and
3. Utilize virtual solutions to conduct interviews and facilitate networking connections in Clinical Neurophysiology.

3:00pm Introduction

*Ioannis Karakis, MD, PhD, MSc, FACNS and Lynn Liu, MD, MS (HPE), FACNS*

3:10pm Creating CNP Milestones 2.0

*Laura Edgar, EdD, CAE, Vice President for Milestones Development, ACGME*

3:30pm Applying CNP Milestones 2.0

*Dara Albert, DO*

3:50pm Virtual Education in CNP

*Daniel J. Weber, DO, FACNS*

4:10pm Virtual Interviews and Networking with the CNP Community

*Rebecca Fasano, MD*

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# ANNUAL MEETING & COURSES AGENDA

## SUNDAY, MARCH 26, 2023

7:00 – 8:30am

### Breakfast

4th Floor Ballroom Foyer

8:00 – 11:15am

### Course: Basic EEG <sup>OD</sup>

Location: Salon C, 4th Floor

Course Co-Directors: Ioannis Karakis, MD, PhD, MSc, FACNS and Daniel J. Weber, DO, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss fundamental tenets of signal generation, technical considerations of signal acquisition, and type of recordings and reporting standards;
2. Identify normal and artifact EEG examples and their variants across various age groups; and
3. Discuss non epileptiform and epileptiform abnormalities and their relationship with underlying neurologic disorders.

8:00am Normal Adult EEG  
*Daniel Winkel, MD*

8:25pm Normal Neonatal and Pediatric EEG  
*Dara Albert, DO*

8:50am Normal EEG Variants  
*Ioannis Karakis, MD, PhD, MSc, FACNS*

9:10am Artifacts  
*Daniel Weber, DO, FACNS*

9:30am Break

9:45am Abnormal Adult EEG: Epileptiform Abnormalities  
*Adriana Bermeo-Ovalle, MD, FACNS, FAES*

10:10am Abnormal Adult EEG: Non Epileptiform Abnormalities  
*Elizabeth Gerard, MD, FACNS*

10:35am Abnormal Pediatric and Neonatal EEG  
*Dana Harrar, MD, PhD*

### Course: ICU EEG Part II <sup>OD</sup>

Location: Salon D, 4th Floor

Course Co-Directors: Elizabeth E. Gerard, MD, FACNS and France W. Fung, MD MSc

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Explain logistics of CEEG monitoring including billing and coding and building an ICU EEG program;
2. Outline advanced ACNS critical care EEG terminology;
3. Describe use of quantitative EEG in adult and neonatal ICUs; and
4. Discuss ICU monitoring in resource-limited settings.

8:00am Introduction

8:05am Billing & Coding  
*Marc Nuwer, MD, PhD, FACNS*

8:30am Setting up an ICU EEG Program  
*William Gallentine, DO, FACNS*

8:55am ACNS Terminology (Advanced)  
*Lawrence J. Hirsch, MD, FACNS*

9:20am Break

9:45am QEEG for Seizures and IIC  
*Hiba A. Haider, MD, FACNS, FAES*

10:10am Overview of aEEG in Neonates  
*Courtney J. Wusthoff, MD, MS, FACNS*

10:35am ICU Monitoring in Resource-Limited Settings  
*Janette A. Mailo, MD, PhD*

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# ANNUAL MEETING & COURSES AGENDA

## SUNDAY, MARCH 26, 2023

### Course: Nerve Conduction Workshop **OD**

Location: Salon FG, 6th Floor

This workshop is supported by an in-kind donation of equipment from Cadwell Industries Inc. and Natus Neurology.

Course Co-Directors: Ruple Laughlin, MD, FACNS and Zabeen Mahuwala, MD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Appropriately perform routine upper and lower limb nerve conduction studies;
2. Explain the technical factors that can affect nerve conduction study responses; and
3. Describe troubleshooting techniques to optimize the performance and reliability of standard nerve conduction studies.

8:00am Welcome

8:10am Review of NCS Basics  
*Ruple S. Laughlin, MD, FACNS*

8:30am Review Protocol for Routine Upper Limb NCS  
*Zabeen K. Mahuwala, MD*

8:45am Review Protocols for Routine Lower Limb NCS  
*Christopher Lamb, MD*

9:20am Perform NCS  
Station 1: Upper Limb NCS  
Station 2: Lower Limb NCS

11:05am Discussion

### Course: NIOM Part III **OD**

Location: Salon E, 4th Floor

Course Co-Directors: Eva K. Ritzl, MD, MBA, FACNS and Christine Hung, MD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Explain the concepts underpinning different NIOM modalities;
2. Use NIOM modalities in basic and advanced applications; and
3. Discuss billing rules and medico-legal concepts as they pertain to NIOM.

8:00am Introduction

8:05am Motor Mapping  
*Alan D. Legatt, MD, PhD, FACNS*

8:40am Pediatric Neuromonitoring  
*Mirela V. Simon, MD, MSc, FACNS*

9:15am Unusual Anatomy Resulting in Unusual Data/Critical Changes  
*Christine Hung, MD*

9:50am Break

10:05am Troubleshooting and Communication for the Remote Neurologist  
*Christine Hung, MD*

10:40am Medicolegal  
*Jaime R. Lopez, MD, FACNS*

## 8:00 – 9:30am

### SEEG Implantation Strategy in Epileptic Patients: Illustrative Case Discussions

Location: Salon AB, 4th Floor

Session Director: Jun T. Park, MD, FAES, FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss the concepts of SEEG patients with drug resistant focal epilepsy;
2. Describe the indications of SEEG in adults and children; and
3. Apply the technique in selected patients with drug resistant focal epilepsy.

8:00am Principles of Stereoelectroencephalography (SEEG) Investigation  
*Jun T. Park, MD, FAES, FACNS*

8:15am Case Discussion 1  
*Laurence Martineau MD, FRCPc, CSCN (EEG)*

8:40am Case Discussion 2  
*Guadalupe Fernandez-Baca, MD, MS*

9:05am Case Discussion 3 & Summary  
*Phillipe Kahane, MD, PhD*

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# ANNUAL MEETING & COURSES AGENDA

## SUNDAY, MARCH 26, 2023

### The Art and Craft of Video-Polysomnography to Identify Parasomnias, Seizures, Artifacts and Movements During Sleep

Location: Room 406

Session Co-Directors: Madeleine M. Grigg-Damberger, MD, FACNS and Nancy Foldvary-Schaefer, DO, MS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Distinguish sleep-related seizures from NREM arousal parasomnias and REM behavior disorder events;
2. Identify salient video-PSG features which distinguish epileptic and non-epileptic arousals, movements and behaviors; and
3. Recognize pathognomonic video-PSG features of particular neurological and neurodegenerative disorders and how best to record these.

8:00am Value of Video-Polysomnography to Diagnose Particular Neurological and Neurodegenerative Disorders  
*Madeleine M. Grigg-Damberger, MD, FACNS*

8:30am Video-Polysomnographic Signatures Distinguishing Sleep-Related Seizures from NREM Arousal Disorders, REM Sleep Behavior Events and other Non-Epileptic Parasomnias  
*Nancy Foldvary-Schaefer, DO, MS*

9:00am Video-Polysomnographic Signatures Distinguishing Epileptic from Non-Epileptic Arousals, Behaviors Movements and Artifacts  
*Marcus C. Ng, MD, FRCPC, CSCN (EEG), FACNS*

## 9:30 – 9:45am

### Coffee Break

4th Floor Ballroom Foyer

## 9:45 – 11:15am

### Electrophysiology of Vision Updates and Clinical Applications in Neurology (Joint ACNS/ Egyptian Clinical Neurophysiology Society Symposium)

Location: Room 406

Session Co-Directors: Ayat Allah Hussein, MD and Ann Aly AbdelKader, MD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. List, describe and define types of visual electrophysiology techniques, indications and when to refer;
2. Demonstrate pattern VEP, flash VEP, pattern ERG, flashERG normal and abnormal patterns; and
3. Conduct pattern VEP, pattern ERG, flashERG flashERG in different neurological disorders.

9:45am VEP Pattern and Flash and Updated Clinical Applications in Neurology  
*Ann Aly AbdelKader, MD*

10:15am ERG (Pattern, Flash, Multifocal Modalities) and their Updated Applications in Neurology  
*Ayat Allah Hussein, MD*

10:45am Intraoperative Monitoring of VEP  
*Atif M. Husain, MD, FACNS*

### Neuromodulation in Treating Epilepsy

Location: Salon AB, 4th Floor

Session Director: Aline Herlopian, MD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Identify candidates for each neurostimulation device and determine foci to be targeted by each device;
2. Interpret chronic electrocorticograms and how to perform programming and adjust settings; and
3. Accurately target the locations intended for neurostimulation (e.g. thalamic nuclei).

9:45am Programming Deep Brain Stimulation  
*Imran Quraishi, MD, PHD*

10:15am Programming Responsive Neurostimulation Device  
*Vikram Rao, MD, PhD*

10:45am Targeting the network  
*R. Mark Richardson, MD, PHD*

## 11:30am – 1:00pm

### Lunch | Continue the Conversation Roundtable Discussions

4th Floor Ballroom Foyer

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# ANNUAL MEETING & COURSES AGENDA

**SUNDAY, MARCH 26, 2023**

**1:15 – 2:45pm**

**General Session: 2022 Cosimo-Ajmone Marsan Award  
Presentation | Young Investigator Travel Awards Presentation |  
Presidential Address <sup>OD</sup>**

*Location: Salon FG, 6th Floor*

Moderators: Courtney J. Wusthoff, MD, MS, FACNS and Ruple S. Laughlin, MD, FACNS

- 1:15pm Welcome  
*Ruple S. Laughlin, MD, FACNS and Courtney J. Wusthoff, MD, MS, FACNS, Program Committee Co-Chairs*
- 1:20pm Presentation of the 2022 Cosimo-Ajmone Marsan Award  
*Stephan U. Schuele, MD, MPH, FACNS, JCN Editor-in-Chief*
- 1:30pm Presentation of the Young Investigator Travel Awards  
*Ruple S. Laughlin, MD, FACNS and Courtney J. Wusthoff, MD, MS, FACNS*
- 1:45pm Introduction of ACNS President
- 1:50pm Presidential Address  
*Jaime R. López, MD, FACNS*

**3:15 – 6:30pm**

**Course: ICU EEG Part III <sup>OD</sup>**

*Salon D, 4th Floor*

Course Co-Directors: Elizabeth E. Gerard, MD, FACNS and France W. Fung, MD MSc

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Review CEEG and multimodal monitoring utilization in other conditions including anoxic brain injury;
2. Discuss CEEG use in specific conditions in the ICU including encephalopathy and NORSE/FIRES;
3. Explore cases of multimodal monitoring in the pediatric ICU; and
4. Explore cases of refractory status epilepticus including NORSE/FIRES.

- 3:15pm Introduction
- 3:20pm Anoxic Brain Injury, Prognostication  
*Simone Beretta, MD, PhD*
- 3:45pm Multimodal Monitoring and Brain Monitoring for Ischemia  
*Brandon Westover, MD, PhD*
- 4:10pm Cases: Multimodal Monitoring/Prognostication in Pediatrics  
*Rejean M. Guerriero, DO*
- 4:35pm Discussion
- 4:45pm Break
- 5:00pm Encephalopathy  
*Emily J. Gilmore, MD, MS, FACNS, FNCS*
- 5:25pm NORSE/FIRES  
*Nicolas Gaspard, MD, PhD*
- 5:50pm Cases: Status Epilepticus Cases Including NORSE/FIRES  
*Sarah E. Schmitt, MD, FACNS*
- 6:15pm Discussion

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# ANNUAL MEETING & COURSES AGENDA

**SUNDAY, MARCH 26, 2023**

**3:15 – 4:45pm**

## **The Circannual Neurophysiology of Sleep, Status Epilepticus, and Zeitgebers**

*Location: Salon E, 4th Floor*

Session Co-Directors: Milena Pavlova, MD and Marcus C. Ng, MD, FRCPC, CSCN (EEG), FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe a modern chronobiological model of circannual relationships between sleep, seizures, and circadian rhythms;
2. Understand and deploy commonly used modern methods of analyzing circular longitudinal data in clinical neurophysiology; and
3. Apply principles of circannual neurophysiology to a real-life practice environment subject to dramatic changes in zeitgebers.

3:15pm A Chronobiological Model of Sleep, Seizures, and Circadian Rhythms  
*Milena Pavlova, MD*

3:45pm Analytical Methods of Circannual Data in Clinical Neurophysiology  
*Mark S. Quigg, MD, MS, FAES, FANA*

4:15pm Application of Real-Life Arctic Circannual Data in an Extreme Zeitgeber Environment  
*Marcus C. Ng, MD, FRCPC, CSCN (EEG), FACNS*

## **Autonomic Testing in Peripheral and Central Autonomic Disorders: A Case-Based Approach**

*Location: Salon FG, 6th Floor*

Session Director: Sarah Berini, MD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Identify patients with appropriate indications for autonomic testing and optimally prepare them for successful autonomic testing;
2. Describe the classic findings seen on autonomic testing in autonomic neuropathies; and
3. Describe the classic findings seen on autonomic testing in synucleinopathies.

3:15pm Autonomic Testing: Techniques and Pitfalls  
*Sarah Berini, MD*

3:40pm Autonomic Testing in Central Autonomic Disorders  
*Elizabeth A. Coon, MD*

4:10pm Autonomic Testing in Autonomic Neuropathy, Reflex Syncope and POTS  
*Kamal Shouman, MD*

## **Functional Mapping and Seizure Stimulation with SEEG: Where are We Now?**

*Location: Salon C, 4th Floor*

Session Director: Gewalin Aungaroon, MD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Recognize the utility of electrical cortical stimulation for functional and seizure onset zone mapping with intracranial EEG;
2. Understand the commonly accepted practices and learn about some less commonly used methods for functional and seizure onset zone mapping and their application to presurgical planning; and
3. Develop an ability to evaluate the strength of evidence relevant to this topic when data are incongruent.

3:15pm Introduction  
*Ravindra Arya, MD, DM, FACNS*

3:30pm Electrical Stimulation to Elicit Brain Function: Electrode Wars!  
*Ravindra Arya, MD, DM, FACNS*

3:45pm What we Learn from ECS-Induced Seizure?  
*Patrick Y. Chauvel, MD*

4:10pm The Road Less Traveled... But Not Less Beautiful: SPES and DWI for Cortical Functional Mapping  
*Eishi Asano, MD, PhD*

4:35pm Discussion

## **Botulinum Toxin Treatment under EMG Guidance: Hands-on Workshop**

*Location: Room 406*

This workshop is supported by an in-kind donation of equipment from Abbvie, Inc., and Cadwell Industries.

Session Director: Jaime R. López, MD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Explain the different botulinum toxin sub-types;
2. Describe the benefit of using EMG when performing Neurotoxins injections; and
3. Accurately localize the commonly injected muscles in dystonia, spasticity, and migraine.

3:15pm Botulinum Toxin Treatment in Neurologic Disorders-A Review  
*Felix Chang, MD*

3:40pm Hands-on Demonstration on How to Perform Neurotoxins Treatment Using Simulated Devices  
*Jaime R. López, MD, FACNS*

 = On-demand  = This session will be presented in Spanish.

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# ANNUAL MEETING & COURSES AGENDA

## SUNDAY, MARCH 26, 2023

### Intraoperative Neurophysiology of Oculomotor, Trochlear, and Abducens Nerves

*Location: Salon AB, 4th Floor*

This workshop is supported by an in-kind donation of equipment from Spes Medica.

Session Co-Directors: Matthew Hoffman, DO, PhD, FACNS and Tatsuya Oishi, MD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe the orbital anatomy relevant to placement of needle electrodes in extraocular muscles;
2. Evaluate techniques for recording EMG activity from cranial nerves 3, 4, and 6; and
3. Employ sensitive, selective, and safe techniques for recording and interpreting intraoperative free-running and triggered EMG responses from cranial nerves 3, 4, and 6.

3:15pm Orbital Anatomy and Techniques for Recording EMG from Extraocular Muscles

*Matthew Hoffman, DO, PhD, FACNS*

3:50pm Deep Intraorbital Electrode EMG Recordings from Extraocular Muscles

*Tatsuya Oishi, MD*

## 4:45 – 5:00pm

### Coffee Break

*4th Floor Ballroom Foyer*

## 5:00 – 6:30pm

### Amplitude-Integrated EEG: Friend or Foe?

*Location: Room 615AB*

Session Director: Cecil D. Hahn, MD, MPH, FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Identify common barriers to collaborative neonatal brain monitoring using aEEG and cEEG;
2. Describe effective strategies for successful collaborative neonatal brain monitoring implemented in several jurisdictions around the world; and
3. Apply lessons learned across a diversity of practices to improving collaborative neonatal neuromonitoring at their own institution.

5:05pm Neonatal Neuromonitoring in Europe: Setting the Trend

*Ronit Pressler, MD, PhD, MRCPCH*

5:30pm Neonatal Neuromonitoring in Brazil: Public-Private Partnership?

*Catherine Marx, PHD*

5:55pm Neonatal Neuromonitoring in the United States: Land of Plenty?

*Shavonne L. Massey, MD, MSCE, FACNS*

6:20pm Discussion

*Cecil D. Hahn, MD, MPH, FACNS, Ronit Pressler, MD, PhD, MRCPCH,*

*Catherine Marx, PHD and Shavonne L. Massey, MD, MSCE, FACNS*

### Complex EMG Waveforms

*Location: Room 406*

Session Director: Devon I. Rubin, MD, FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Learn the skills to identify individual atypical or uncommon EMG waveforms, and firing patterns of waveforms;
2. Identify the significance of atypical or uncommon EMG waveforms; and
3. Improve skills of EMG waveform interpretation in clinical practice

5:00pm Basic Skills of EMG Waveform Recognition and Identifying Complex EMG Waveforms

*Devon I. Rubin, MD, FACNS*

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# ANNUAL MEETING & COURSES AGENDA

## SUNDAY, MARCH 26, 2023

### Clinical Utility of EEG Source Imaging in Localizing the Epileptogenic Zone

Location: Salon C, 4th Floor

Session Co-Directors: Stephan U. Schuele, MD, MPH, FACNS and Jaysingh Singh, MD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss EEG source localization;
2. Review of current evidence on ESI: Clinical value, Diagnostic accuracy, and limitations; and
3. Describe the utility of ESI in the pre-surgical evaluation of drug resistant epilepsy.

5:00pm Science of EEG Source Localization- Understanding the Value of Electrical Dipoles  
*Sandor Beniczky, MD, PhD, FEAN*

5:25pm Automated Source Imaging and Integration in Epilepsy Surgery Planning  
*Stephan Schuele, MD, MPH, FACNS, FAAN*

5:50pm Practical Fundamentals and Pitfalls of ESI: Case-Based Discussion  
*Jaysingh Singh, MD*

### Electro-Clinical Criteria of Developmental Epileptic Encephalopathies. Accurate or Ill Defined? (Joint ACNS/IFCN-Latin American Chapter Symposium)

Location: Salon E, 4th Floor

Session Co-Directors: Jorge Vidaurre, MD, FACNS, FAES and Daniel San Juan Orta, MD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Understand the limitations with current definition of hypsarrhythmia and learn potential solutions to this problem;
2. Describe features of EEG in Lennox-Gastaut syndrome and ways to arrive at an early diagnosis; and
3. Discuss newest proposal on definition and diagnosis of ESES pattern.

5:00pm Introduction  
*Jorge Vidaurre, MD, FACNS*

5:05pm Lennox-Gastaut Syndrome and the Lack of Clarity Regarding Electroclinical Criteria  
*Daniel San Juan Orta, MD, FACNS*

5:35pm West Syndrome and the Shortcomings of Hypsarrhythmia – Time for Change  
*John R. Mytinger, MD*

6:05pm Epileptic Encephalopathy with Continuous Spike and Wave During Sleep and the Assessment of – A Work in Progress  
*Loreto-Pohl Rios, MD*

### NIOM in Children

Location: Salon AB, 4th Floor

Session Director: Mirela V. Simon, MD, MSc, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Accurately estimate age specific latencies, amplitudes and morphologies of the evoked potentials;
2. Understand the effects of different anesthetics, and different doses / infusion rates on EEG, SSEP and MEP; and
3. Conduct successful brain and root mapping.

5:00pm Intraoperative Seizure Focus and Functional Mapping in Epilepsy Surgery  
*Julia Jacobs, MD*

5:30pm NIOM in Spine Column and Tethered Cord Surgery  
*Mirela V. Simon, MD, MSc, FACNS*

6:00pm NIOM in Dorsal Rhizotomy Surgery  
*Gloria M. Galloway, MD, MBA, FACNS*

## 6:30 – 7:30pm

### Welcome Reception

Location: Exhibit & Poster Hall

Salon HJK, 6th Floor

ACNS invites all delegates to attend the Welcome Reception in the Exhibit Hall to enjoy a limited hosted and passed appetizers.

## 7:00 – 9:00pm

### The Neurology of Wine Tasting

Location: Salon FG, 6th Floor

Join ACNS President Dr. Jaime R. López and a guest sommelier for an interactive and educational wine tasting experience on Sunday, March 26. Included in this event is four hand-selected wine samples, appetizers, and a deeper understanding of the wine tasting.

Tickets are required limited and may be purchased at the registration desk for \$50 for physicians and \$25 per trainee. Limited availability.

 = On-demand  = This session will be presented in Spanish.

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# ANNUAL MEETING & COURSES AGENDA

## MONDAY, MARCH 27, 2023

7:00 – 8:30am

### Breakfast

*Exhibit & Poster Hall*

*Salon HJK, 6th Floor*

8:00 – 11:15am

### Course: Stereo EEG Part I <sup>OD</sup>

*Location: Salon C, 4th Floor*

Course Co-Directors: Giridhar P. Kalamangalam, MD, DPhil, FACNS and Birgit Frauscher, MD, PhD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Apply the basic principles of planning and interpreting a SEEG study;
2. Discuss in-depth illustrative cases; and
3. Describe the usefulness of advanced analysis tools for SEEG planning and interpretation.

8:00am SEEG: The Big Picture

*Stephan U. Schuele, MD, MPH, FACNS*

8:30am The Patient First: General Management Principles in SEEG

*Sasha Alick-Lindstrom, MD, FACNS, FAESFAAN*

9:00am Wiggly Lines: Physiology and Interpretation of the SEEG Signal

*Gridhar P. Kalamangalam, MD, DPhil, FACNS*

9:30am Break

9:45am Want some Stimulation! What, Why, How

*Birgit Frauscher, MD, PhD*

10:15am After the SEEG: Resect, Neuromodulate, or Something Else?

*Jorge A. Gonzalez-Martinez, MD*

10:45am Discussion

### Course: Video EEG <sup>OD</sup>

*Location: Salon E, 4th Floor*

Course Co-Directors: Katie Bullinger, MD, PhD and Sarah E. Schmitt, MD, FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe technical requirements and safety concerns for video-EEG monitoring in the inpatient setting;
2. Distinguish between epileptic seizures and nonepileptic events in adults and children using video-EEG monitoring; and
3. Identify localization of epileptic seizures based on phase I and phase II video-EEG findings.

8:00am Introduction

8:05am The EMU: Set up, Technical Considerations and Billing

*Brian T. Cabaniss, MD*

8:30am The EMU: Staffing, Safety and the Ictal Exam

*Chloe Hill, MD*

8:55am Diagnosing Seizures and Spells with Video EEG

*Katie Bullinger, MD, PhD*

9:20am Break

9:40am Scalp Video EEG for Seizure Localization

*Deana Gazzola, MD, FACNS*

10:05am Video EEG in Pediatric and Neonatal Patients

*Inna Hughes, MD, PhD*

10:30am Intracranial Video-EEG

*Birgit Frauscher, MD, PhD*

10:55am Discussion

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# ANNUAL MEETING & COURSES AGENDA

## MONDAY, MARCH 27, 2023

8:00 – 9:30am

### 2023 ACNS Career Development Panel: How to Carve a Niche and Balance Work-Life Responsibilities

Location: Salon D, 4th Floor

Session Co-Director: Lynn Liu, MD, MS (HPE), FACNS and Ioannis Karakis, MD, PhD, MSc, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe ways to develop teaching, research, clinical practice, administrative, service and advocacy niche;
2. Demonstrate ways to maintain balance of work-life responsibilities; and
3. List the pros and cons of various career options in Clinical Neurophysiology.

8:00am Introduction

Lynn Liu, MD, MS (HPE), FACNS and Ioannis Karakis, MD, PhD, MSc, FACNS

8:10am How to Carve Out a Teaching Niche

Sarah E. Schmitt, MD, FACNS

8:30am How to Carve Out a Research Niche

Kate Davis, MD

8:50am How to Carve Out a Clinical Practice and Administrative Niche

Yafa Minazad, DO, FACNS, MMM

9:10am How to Carve Out a Clinical Service and Advocacy Niche

Marc R. Nuwer, MD, PhD, FACNS

### Multimodal Monitoring with Emphasis on Depth Recordings as well as MMM Correlates on Scalp EEG and Utility in Informing Seizure Treatment **OD**

Location: Salon FG, 6th Floor

Session Director: Ramya Raghupathi, MD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. List the practical applications and limitations on the use of depth electrodes in CEEG monitoring;
2. multimodal monitoring with emphasis on depth recordings; and
3. Explore future directions /research opportunities in the area.

8:00am Invasive Monitoring in Critically Ill – TBI

James Gugger Jr., MD, PharmD

8:25am MMM Correlates on Interictal-ictal Continuum/Seizures

Brandon Foreman, MD, MS, FACNS, FNCS

8:50am Pediatric Perspective on Multimodality Monitoring with

Intracortical Electroencephalography

Brian L. Appavu, MD

9:15am Practical Applications and Impact of MMM in Clinical Decision Making

Emily Gilmore, MD, MS, FACNS, FNCS

9:10am Discussion

### What is the EEG?

Location: Salon AB, 4th Floor

Session Co-Directors: Jean Gotman, PhD, FACNS and Giridhar P. Kalamangalam, MD, DPhil, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Recognize the variety of neurophysiological phenomena subsumed under the term 'EEG';
2. Evaluate the variety of approaches to EEG, and the spatiotemporal span of their relevance; and
3. Critically appraise emerging neuroscientific and clinical literature in this interdisciplinary area.

8:00am Introduction

Jean Gotman, PhD, FACNS

8:10am Micro And Macro EEG

Edward Merricks, PhD

8:35am Cortical Activity and the Clinical EEG

Nicolas Von Ellenrieder, PhD

9:00am Phenomenological Models For EEG

Giridhar P. Kalamangalam, MD, DPhil, FACNS

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# ANNUAL MEETING & COURSES AGENDA

## MONDAY, MARCH 27, 2023

9:30 – 9:45am

### Coffee Break

Exhibit & Poster Hall

Salon HJK, 6th Floor

*This break is supported, in part, by a grant from SK Lifesciences.*

9:45 – 11:15am

### Indications for MEG in Epilepsy and Tumor Surgery

Location: Salon AB, 4th Floor

Session Director: Jeffrey Tenney, MD, PhD, FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Identify the common, evidence based indications for MEG in epilepsy surgery;
2. List the eloquent cortical functions which can be localized by MEG and assist in the planning of tumor surgery; and
3. Describe how MEG can contribute to improved outcomes in epilepsy surgery.

9:45am Ten Common, Evidence Supported Indications for MEG in Epilepsy Surgery

*Jeffrey Tenney, MD, PhD, FACNS*

10:15am MEG Evoked Field Mapping for Tumor and Epilepsy Surgery

*Clifford Calley, MD*

10:45am How to use MEG in Epilepsy Surgery: Case Examples

*Ismail S. Mohamed, MD, FACNS*

### Overall Advances Implications of Continuous Brain Monitoring in Neonatal Intensive Care Unit (Joint ACNS/Brazilian Clinical Neurophysiology Society Symposium)

Location: Room 406

Session Co-Directors: Catherine Marx, PHD and Cecil D. Hahn, MD, MPH, FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Adapt the neonatal seizure classification system according to clinical aspects provided when continuous EEG monitoring is not available to contribute to the classification;
2. Describe the program of neonatal screening of rare diseases in Brazil and the early diagnosis of epilepsies with onset in the neonatal period; and
3. Discuss about the emerging new concepts of neonatal seizures and status epilepticus in the neonatal period and new treatment options.

9:45am How to Adapt the New Neonatal Seizure Classification System in Countries Without Continuous EEG

*Magda L. Nunes, PHD*

10:15am Program of Rare Diseases Identification in Brazil: The Impact of Early Identification of Epilepsies with Onset in the Neonatal Period

*Laura M. Guilhoto, PHD*

10:45am Neonatal Seizures and Neonatal Status Epilepticus: New Concepts and New Treatments

*James J. Riviello, MD, FACNS*

### Management of Status Epilepticus and the Ictal-Interictal Continuum in Hypoxic-Ischemic Brain Injury

Location: Salon FG, 6th Floor

Session Co-Directors: Jong Woo Lee, MD, PhD, FACNS and Edilberto Amorim, MD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss the primary results of the TELSTAR trial as well as the main secondary findings;
2. List approaches to identifying patients for aggressive status epilepticus treatment after cardiac arrest utilizing visual and quantitative EEG methods; and
3. Develop strategies for treatment of post-anoxic status epilepticus.

9:45am Patient Selection for Aggressive Status Epilepticus Treatment Post-Cardiac Arrest

*Edilberto Amorim, MD*

10:45am The TELSTAR Trial

*Michel van Putten, MD, PhD*

10:15am Management of Status Epilepticus in Hypoxic-Ischemic Brain Injury

*Simone Beretta, MD, PhD*

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# ANNUAL MEETING & COURSES AGENDA

## MONDAY, MARCH 27, 2023

### Uncommon Sensory Nerve Conduction Studies Workshop

Location: Salon D, 4th Floor

This workshop is supported by an in-kind donation of equipment from Cadwell Industries.

Session Director: Devon I. Rubin, MD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Understand the role of uncommon upper and lower extremity sensory NCS;
2. Perform uncommon upper and lower extremity sensory NCS; and
3. Know how to troubleshoot or address technical issues encountered during uncommon sensory NCS.

9:45am Uncommon Sensory NCS

Devon I. Rubin, MD, FACNS

10:05am Uncommon Lower Extremity Sensory NCS

Ruple S. Laughlin, MD, FACNS

### 11:30am – 12:15pm

#### Speed Networking

Location: 6th Floor Ballroom Foyer

Meet and greet as many colleagues as possible in this fast-paced networking event. Delegates are paired for 2-minute connections before rotating to the next colleague.

Don't forget to bring business cards!

### 12:15 – 1:45pm

#### Lunch

Exhibit & Poster Hall

Salon HJK, 6th Floor

### 12:30 – 1:30pm

#### SIG Kick-Off Social

ICU EEG, Salon C, 4th Floor

NIOM, Salon D, 4th Floor

Stereo EEG, Salon E, 4th Floor

### 2:00 – 3:30pm

#### General Session: Schwab Award Presentation & Lecture | Business Meeting <sup>OD</sup>

Location: Salon FG, 6th Floor

Moderator: Ruple S. Laughlin, MD, FACNS

2:00pm Robert S. Schwab Award Presentation

Jaime R. Lopez, MD, FACNS

2:05pm Robert S. Schwab Award Lecture: "Improved Assessment of Signs and Nerve Conductions for Diagnosis and Quantitation of Sensorimotor Polyneuropathies"

Peter J. Dyck, MD

2:40pm ACNS Member Business Meeting

Recognition of New Fellows

Nicholas S. Abend, MD, MSCE, FACNS

Recognition of Outgoing Officers & Council Members

Nicholas S. Abend, MD, MSCE, FACNS

Distinction in Teaching & Distinction in Service Award Presentations

Jaime R. Lopez, MD, FACNS

Marc R. Nuwer Service Award Presentation

Jaime R. Lopez, MD, FACNS

Inauguration of ACNS President

Jaime R. Lopez, MD, FACNS and Saurabh R. Sinha, MD, PhD, FACNS

### 3:45 – 5:15pm

#### Beyond Stereo-EEG: Are Multi-Modal Recordings Clinically Relevant? <sup>OD</sup>

Location: Salon FG, 6th Floor

Session Director: Julia Jacobs, MD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. List the advances and pitfalls of simultaneous recordings with SEEG;
2. Identify networks discovered by simultaneous EEG-SEEG, MEG-SEEG, fMRI-SEEG; and
3. Describe whether and when multi-modal recordings have clinical relevance during a stereo-EEG investigation.

3:45pm Combining SEEG with Other Recordings: Is this Clinically Relevant?

Julia Jacobs, MD

4:00pm Simultaneous Scalp and Intracranial EEG: Lessons Learned!

Kerstin Alexandra Klotz, MD

4:25pm Combining SEEG and MEG: Fancy to Have or Clinically Relevant?

Francesca Pizzo, PhD

4:50pm Combining Simultaneous SEEG and fMRI: Is it Worth the Effort?

Paolo Federico, MD, PhD, FRCPC

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# ANNUAL MEETING & COURSES AGENDA

## MONDAY, MARCH 27, 2023

### The Business of Clinical Neurophysiology: Market Value and Negotiation <sup>OD</sup>

Location: Salon D, 4th Floor

Session Co-Directors: Pegah Afra, MD, FACNS and Matthew Luedke, MD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Explain the difference salary structures and their respective components, and which components best render themselves to negotiation or salary restructuring;
2. Understand basic negotiation principles, formulate effective strategies and feel more confident about negotiation; and
3. Understand various databases that suggest market value for clinical neurophysiologist and how to emerge using pre-pandemic data to advance the post-pandemic business of CNP.

3:45pm Clinical Neurophysiologist Salary: Structure, Components, & Market value, What Can We Modify & How?  
*Pegah Afra, MD, FACNS*

4:15pm Contract Negotiations For The Clinical Neurophysiologist  
*Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS*

4:45pm Emerging From The Pandemic: Successfully Leading Your Institution In Restructuring The Finances of Clinical Neurophysiologist  
*Marc R. Nuwer, MD, PhD, FACNS*

### Cranial Nerves and Brainstem Mapping and Monitoring in the OR: Challenges and Troubleshooting Strategies

Location: Room 406

Session Director: Mirela V. Simon, MD, MSc, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Perform technical troubleshooting and optimizing the stimulation techniques;
2. Perform technical troubleshooting and optimizing the recording techniques; and
3. Apply alarm criteria and identify real (surgery maneuvers related) neurophysiologic changes.

3:45pm How to Successfully Perform and Reliably Interpret Brainstem Reflexes and Corticobulbar Motor Evoked Potentials Monitoring  
*Mirela V. Simon, MD, MSc, FACNS*

4:15pm Novel and Improved Techniques for Brainstem and Cranial Nerves Mapping  
*Scheherazade T. Le, MD*

4:45pm Monitoring of Visual Pathways  
*Dinesh G. Nair, MD, PhD*

### Hot Topics in AI and Seizures <sup>OD</sup>

Location: Salon E, 4th Floor

Session Director: Brian Lundstrom, MD, PhD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe recent developments in AI/ML as it relates to the evaluation of seizures;
2. Identify how recent developments may affect clinical practice; and
3. Understand how scientific and clinical progress interact.

3:45pm Introduction  
*Brian Lundstrom, MD, PhD, FACNS*

3:50pm Hot Topics in AI and Epilepsy  
*Daniel M. Goldenholz, MD, PhD*

4:15pm Hot Topics in AI and Long-term At-home Recordings  
*Nick Gregg, MD*

4:40pm Hot Topics in AI and ICU EEG  
*Brandon Westover, MD, PhD*

### Quantitative EEG in Pediatric Critical Care

Location: Salon C, 4th Floor

Session Co-Directors: Giulia Benedetti, MD and Craig A. Press, MD, PhD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss how qEEG enhances neuromonitoring in neonates, differs from older children, unique challenges of qEEG in this population, and innovations in qEEG analysis for neonates;
2. Recognize patterns of neurologic emergencies using qEEG, including status epilepticus, focal ischemia, intracranial hemorrhage, and increased intracranial pressure; and
3. Discuss traditional and emerging techniques using quantitative electroencephalography in evaluating the encephalopathic pediatric patient.

3:45pm Introduction  
*Giulia Benedetti, MD*

3:50pm Monitoring Neonates with qEEG: Advantages, Pitfalls, and Innovations  
*Shavonne L. Massey, MD, MSCE, FACNS*

4:15pm Quantitative EEG in the Diagnosis and Management of Acute Neurologic Emergencies in the Pediatric Intensive Care Unit  
*Dana Harrar, MD, PhD*

4:40pm Quantitative Electroencephalography in Evaluation of Pediatric Encephalopathy and Coma  
*Brian L. Appavu, MD*

5:05pm Discussion  
*Craig A. Press, MD, PhD*

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# ANNUAL MEETING & COURSES AGENDA

## MONDAY, MARCH 27, 2023

### Research Highlights

*Location: Salon AB, 4th Floor*

Session Co-Directors: Olga Taraschenko, MD, PhD and Mirela V. Simon, MD, MSc

- 3:45pm Impact of Seizure Onset Zone and Intracranial EEG Ictal Characteristics on Epilepsy Surgery Outcomes in Tuberous Sclerosis Complex  
*Kara B. Miecznikowski, BS*
- 4:00pm Neuronal Oscillations and Repetitive Head Impacts in Youth Football Players  
*Natalie Bell, B.S. Engineering*
- 4:15pm Combined Cortical and Thalamic Open-Loop Stimulation in Epilepsy  
*Shruti Agashe, MD, MS*
- 4:30pm Effects of Intraoperative Motor Evoked Potential Amplification Following Tetanic Stimulation of the Pudendal Nerve in Pediatric Craniotomy  
*Ryota Sasaki, MD*
- 4:45pm A Case Series of Ischemic Monomelic Neuropathy Following Peripheral Arterial Ischemia  
*Olga Fedirchuk, MD*

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# ANNUAL MEETING & COURSES AGENDA

**TUESDAY, MARCH 28, 2023**

**7:00 – 8:30am**

## Breakfast

*Exhibit & Poster Hall  
Salon HJK, 6th Floor*

**8:00 – 11:15am**

## Course: Stereo EEG Part II <sup>OD</sup>

*Location: Salon FG, 6th Floor*

Course Co-Directors: Giridhar P. Kalamangalam, MD, DPhil, FACNS and Birgit Frauscher, MD, PhD

### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Apply the basic principles of planning and interpreting a SEEG study;
2. Discuss in-depth illustrative cases; and
3. Describe the usefulness of advanced analysis tools for SEEG planning and interpretation.

8:00am Case Presentation I  
*Ramya Raghupathi, MD*

8:30am Case Presentation II  
*Jay Gavvala, MD, MSCI, FACNS*

9:00am Case Presentation III  
*Sheela Toprani, MD, PhD*

9:30am Break

9:45am Case Presentation IV  
*Jaysingh Singh, MD*

10:15am Case Presentation V  
*Ann Hyslop, MD, FACNS*

10:45am Discussion

**8:00 – 9:30am**

## Course: Evoked Potentials <sup>OD</sup>

*Location: Salon E, 4th Floor*

Course Co-Directors: Erik J. Kobylarz, MD, PhD and Elayna Rubens, MD, FACNS

### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Explain the basics of evoked potential testing including the technical aspects of stimulation, recording, and signal generation;
2. Identify the components of brainstem auditory, visual, and somatosensory evoked potentials; and
3. Classify EP findings as normal or abnormal and provide an accurate interpretation of the findings when the study is abnormal.

8:00am Somatosensory Evoked Potentials (SEPs)  
*Matthew Hoffman, DO, PhD, FACNS*

8:30am Brainstem Auditory Evoked Potentials (BAEPs)  
*Alan D. Legatt, MD, PhD, FACNS*

9:00am Visual Evoked  
*Erik J. Kobylarz, MD, PhD*

## Challenging NM and EDX Cases: Solving the Puzzle

*Location: Salon D, 4th Floor*

Session Director: Ruple S. Laughlin, MD, FACNS

### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Identify logical next steps in evaluation of a NM patients with EDX;
2. Demonstrate sound rationale for pursuing given EDX studies in the care of NM patients presenting with complex symptoms; and
3. Express EDX findings soundly to referring providers based on the clinical question asked and EDX findings.

8:00am Challenging NM Cases: Using EDX to Solve the Puzzle  
*Devon I. Rubin, MD, FACNS*

8:30am Challenges in EDX: The Reasons Why  
*Sarah Berini, MD*

9:30am Challenging EDX Cases: The Rationale Behind the Decisions  
*Holli Horak, MD*

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# ANNUAL MEETING & COURSES AGENDA

## TUESDAY, MARCH 28, 2023

### Clinical Neurophysiology Resident & Fellow Symposium

Location: 406

Session Co-Directors: Pegah Afra, MD, FACNS and Jeffrey Britton, MD, FACNS

- 8:00am Temporal Encephalocele: An Epileptogenic Focus Confirmed by Direct Intracranial Electroencephalography  
*Shruti Agashe, MD, MS*
- 8:15am Optimizing Surgical Planning for Epilepsy Patients with Multimodal Neuroimaging Integration: A Case Study  
*Ruxue Gong, PhD*
- 8:30am Absence Seizures Provoked by Pregabalin  
*Aisha Abdulrazaq, MD*
- 8:45am Electrographic Cyclic Alternating Pattern of Encephalopathy in Two Children with NMDAR Encephalitis and FIRES.  
*Ajay X. Thomas, MD, PhD*
- 9:00am The Use of Nerve Conduction Studies, Needle Electromyography, and Neuromuscular Ultrasound in Diagnosing Two Cases of Tarsal Tunnel Syndrome  
*James B. Meiling, DO*
- 9:15am Pediatric Neurofascin-155 Antibody-Associated CIDP: An Illustration of Diagnostic and Therapeutic Challenges  
*Ria Pal, MD*

### Intraoperative Neurophysiological Monitoring in Aortic Surgeries (Joint Spanish Society for Clinical Neurophysiology (SENEC) Symposium)

Location: Salon C, 4th Floor

Session Co-Directors: Jaime R. López, MD, FACNS and Victoria Fernández, MD, PhD

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Define the various types of NIOM procedures used for aortic surgeries;
2. Discuss common NIOM events and strategies to rule out technical problems during aortic surgeries; and
3. Discuss about controversies in NIOM during aortic surgeries.

- 8:00am Introduction  
*Jaime R. López, MD, FACNS and Victoria Fernández, MD, PhD*
- 8:05am Intraoperative Neurophysiological Monitoring of Thoraco-Abdominal Aortic Surgeries  
*Guillermo Martín Palomeque, MD, FACNS*
- 8:30am Intraoperative Neurophysiological Monitoring in Ascending and Aortic Arch Surgery  
*Pedro Perez Lorensu, MD, PhD*
- 8:55am Controversies and Utility of Intraoperative Monitoring During Aortic Repairs  
*Michael McGarvey, MD, FACNS*
- 9:20am Discussion  
*Jaime R. López, MD, FACNS and Victoria Fernández, MD, PhD*

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# ANNUAL MEETING & COURSES AGENDA

**TUESDAY, MARCH 28, 2023**

## **Managing Acute Symptomatic Seizures and Epileptiform Abnormalities: A Common Clinical Challenge in an Evidence Free World**

*Location: Salon AB, 4th Floor*

Session Co-Directors: Adithya Sivaraju, MD and Clio Rubinos, MD, MSCR

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Determine the prevalence and prognostic significance of acute symptomatic seizures and epileptiform abnormalities in acute brain injury patients along with the long term evolution of EEG findings;
2. Analyze the risk: benefit ratio of acute and long-term anti-seizure treatment in acute brain injury patients with symptomatic seizures and epileptiform abnormalities; and
3. Demonstrate the utility of the post-acute symptomatic seizure (PASS) clinic model in providing standardized and longitudinal care.

8:00am Introduction

*Adithya Sivaraju, MD*

8:05am Post Acute Symptomatic Seizure Clinic – A Systematic Approach to Post-Discharge Care

*Vineet Punia, MD, MS*

8:30am Prognostic Significance Acute Symptomatic Seizures and Epileptiform Abnormalities in Acute Brain Injury

*Sahar F. Zafar, MD*

8:55am Balancing the Risk-Benefit Ratio Anti-Seizure Treatment in Acute Brain Injury

*Clio Rubinos, MD, MSCR*

9:20am Discussion

**9:30 - 9:45am**

## **Coffee Break**

*Exhibit & Poster Hall*

*Salon HJK, 6th Floor*

**9:45 – 11:15am**

## **Course: Business Management Course: The Business of a Clinical Neurophysiologist: The Underpinnings of Earnings <sup>OD</sup>**

*Location: Salon C, 4th Floor*

Course Co-Directors: Yafa Minazad, DO, FACNS, MMM and Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss the impact the new TeleNeurology work models have on neuro-physiology;
2. Describe the CPT / RUC process and it's importance for valuing providers' work; and
3. Engage in effective salary negotiations.

9:45am Tele-Neurology and the Impact on Neurophysiology; Current Status and Future Opportunities

*Yafa Minazad, DO, FACNS, MMM*

10:15am Where Does the Money Come From? - From CPT Codes to Dollars

*Eva K. Ritzl, MD, MBA, FRCP (Glasgow), FACNS*

10:45am You're worth it: The Fair Market Value of a Neurophysiologist

*Christine Hung, MD*

## **Disparities in Neurophysiology: Where are We and How Can We Improve? <sup>OD</sup>**

*Location: Salon E, 4th Floor*

Session Co-Directors: Suzette M. LaRoche, MD, FACNS and Sonal Bhatia, MBBS, MD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss the ubiquity of health disparities in adult, pediatric EEG and the wide range of populations affected even globally;
2. List the underlying factors that lead to these disparities; and
3. Explore and design more effective, targeted interventions to combat these disparities.

9:45am Introduction to Disparities and Inequities in the Field of EEG: What Do We Know?

*Suzette M. LaRoche, MD, FACNS*

9:50am Healthcare Disparities in Pediatric EEG

*Sonal Bhatia, MBBS, MD*

10:15am Splitting Hairs: A Technologist's Perspective

*Kami Kjolsing, R.EEG T.*

10:40am Globe-Trotting EEG Disparities: Changing What is Possible

*Stephen Coates, MD*

11:05am Discussion

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# ANNUAL MEETING & COURSES AGENDA

## TUESDAY, MARCH 28, 2023

### Electroencephalographic Measurements of Delirium: Use of EEG for Delirium Prediction and Diagnosis

Location: Room 406

Session Co-Directors: Paul García, MD, PhD and Madeleine M. Grigg-Damberger, MD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. List the strengths and limitations of EEG use for delirium prediction and diagnosis;
2. List the different intraoperative EEG patterns associated with post-operative delirium; and
3. Define the EEG patterns associated with the presence/absence of delirium in the critically ill patient.

9:45am Preoperative and Postoperative EEG Changes and Their Relation with Postoperative Delirium  
*Maria Bruzzone Giraldez, MD, MSCR*

10:05am Intraoperative EEG and Postoperative Delirium and its Relation with Intravenous Anesthetics  
*Paul García, MD, PhD*

10:20am EEG Findings in ICU Patients at High Risk for Delirium  
*Kathryn Rosenblatt, MD, MHS*

10:40am Discussion  
*Madeleine M. Grigg-Damberger, MD, FACNS*

### Genetic Generalized Epilepsies: Bringing Rare Electroclinical Phenotypes to the Diagnostic Forefront <sup>OD</sup>

Location: Salon D, 4th Floor

Session Director: Elia M. Pestana Knight, MD, FACNS, FAES

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Expand the knowledge about less recognized Genetic Generalized Epilepsy;
2. Discuss the clinical and EEG features that distinguish the Epilepsy with Eyelid Myoclonic, Sunflower Syndrome, and Perioral myoclonia with absence seizures from other common Genetic Generalized Epilepsies; and
3. Discuss treatment options for the Epilepsy with Eyelid Myoclonic, Sunflower Syndrome, and Perioral myoclonias with absence seizures.

9:45am Introduction to Generalized Genetic Epilepsy: From Lumping to Splitting Diagnosis  
*Elia M. Pestana Knight, MD, FACNS, FAES*

10:05am Eyelid Myoclonia (EMA) with and without Absence Seizures or Jeavons Syndrome  
*Ifrah Zawar, MD*

10:25am Sunflower Syndrome: Electroclinical Features and Treatment Options  
*Elizabeth Thiele, MD, PhD*

10:45am Perioral Myoclonias with Absence Seizures: Electroclinical Features, Differential Diagnosis, and Treatment.  
*Ifrah Zawar, MD presenting Ramshekhar A. Menon's, MD, PhD Slides*

### Hot Topics in EMG and IOM

Location: Salon AB, 4th Floor

Session Director: Brian Lundstrom, MD, PhD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe recent developments in clinical neurophysiology;
2. Identify how recent developments affect clinical practice; and
3. Understand how scientific and clinical progress interact.

9:45pm Introductions  
*Brian Lundstrom, MD, PhD, FACNS*

9:50pm Hot Topics in EMG  
*Rocio Vasquez Do Campo, MD*

10:15am Hot Topics in IOM: Cranial Nerve Monitoring and Mapping  
*Matthew Hoffman, D.O., PhD, FACNS*

10:40am Hot Topics in IOM: Cerebral Function Monitoring and Mapping  
*Abdulrahman Alwaki, MD*

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# ANNUAL MEETING & COURSES AGENDA

## TUESDAY, MARCH 28, 2023

11:30am – 1:00pm

### Lunch

Exhibit & Poster Hall  
Salon HJK, 6th Floor

11:30am – 1:00pm

### Continue the Conversation Round Table Discussions

6th Floor Ballroom Foyer

12:00 – 12:45pm

### Poster Tours

Exhibit & Poster Hall  
Salon HJK, 6th Floor

1:00 – 2:00pm

### General Session: Jasper Award Presentation | Gloor Presentation & Lecture <sup>OD</sup>

Location: Salon FG, 6th Floor

Moderator: Courtney J. Wusthoff, MD, MS, FACNS

1:00pm Herbert H. Jasper Award Presentation  
Thor M. Yamada, MD, FACNS

1:10pm Pierre Gloor Award Presentation  
Courtney J. Wusthoff, MD, MS, FACNS

1:15pm Pierre Gloor Award Lecture: "Hans Berger Meets ECMO: A Clinical  
Neurophysiologist in the Intensive Care Unit"  
Thomas P. Bleck, MD, FACNS

2:45 – 6:00pm

### Course: ACNS Guidelines: Updates and Reviews <sup>OD</sup>

Location: Salon E, 4th Floor

Course Co-Directors: Aatif M. Husain, MD, FACNS and William O. Tatum IV, DO, FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe the method to develop clinical practice guidelines;
2. Discuss the process necessary to for devising a guideline from initiation to completion; and
3. Interpret organization-specific, evidence-based recommendations from the available literature.

2:45pm The Value of Guidelines  
Frank W. Drislane, MD, FACNS

3:15pm How to Develop and Use a CPG  
Aatif M. Husain, MD, FACNS

3:45pm Systematic Review  
William O. Tatum IV, DO, FACNS

4:15pm Break

4:30pm Levels of Evidence & GRADE  
David Gloss, MD, FACNS

5:00pm Quality of Evidence/Bias  
Barbara C. Jobst, MD, FACNS

5:30pm The Future of ACNS CPGs  
Courtney J. Wusthoff, MD, MS, FACNS

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# ANNUAL MEETING & COURSES AGENDA

## TUESDAY, MARCH 28, 2023

### Course: Neonatal EEG

Location: Salon C, 4th Floor

Course Co-Directors: Shavonne L. Massey, MD, MSCE, FACNS and William Gallentine, DO, FACNS

#### Learning Objectives:

At the end of this activity, the learner will be able to:

1. Identify normal and abnormal neonatal EEG background patterns and understand their prognostic significance;
2. Recognize key features of neonatal seizures, including the importance of EEG monitoring in diagnosis, the role of clinical semiology and EEG patterns in diagnosing epilepsy syndromes, and considerations in treatment; and
3. Describe how extracerebral artifacts can influence neonatal EEG interpretation.

2:45pm Normal Neonatal EEG Background  
*Giulia Benedetti, MD*

3:15pm Neonatal Seizures: Diagnosis and Classification  
*Ronit M. Pressler, PhD, MD*

3:45pm Abnormal Neonatal EEG Patterns and Prognostic Value  
*Amanda G. Sandoval Karamian, MD*

4:15pm Break

4:30pm Neonatal EEG Pitfalls: Artifacts and Seizure Mimics  
*Tammy Tsuchida, MD, PhD, FACNS*

5:00pm Spectrum of Neonatal Epilepsy Syndromes  
*Adam L. Numis, MD*

5:30pm Neonatal Seizure Treatment  
*Elissa Yozawitz, MD*

### Course: Sleep: At the Heart of Clinical Neurophysiology

Location: Salon D, 4th Floor

Course Co-Directors: Marcus C. Ng, MD, FRCPC, CSCN (EEG), FACNS and Lynn Liu, MD, MS (HPE), FACNS

#### Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Demonstrate the use of EEG criteria to score sleep stages and PSG criteria to score sleep events;
2. Describe the features of sEEG during sleep;
3. Explain the features of Circadian Rhythm Disorders; and
4. Compare and contrast the differences between parasomnias and nocturnal seizures.

2:45pm Sleep Scoring: EEG  
*Ioannis Karakis, MD, PhD, MSc, FACNS*

3:15pm Sleep Scoring: PSG  
*Milena Pavlova, MD*

3:45pm Sleep Scoring: SEEG  
*Birgit Frauscher, MD, PhD*

4:15pm Break

4:30pm Sleep Clinic: Circadian Rhythm Disorders  
*Sanjeev V. Kothare, MBBS*

5:00pm Sleep Clinic: Seizures  
*Nancy Foldvary-Schaefer, DO, MS*

5:30pm Sleep Clinic: Parasomnias  
*Madeleine M. Grigg-Damberger, MD, FACNS*

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# ANNUAL MEETING & COURSES AGENDA

**TUESDAY, MARCH 28, 2023**

## **Course: Stereo EEG Part III**

*Location: Salon FG, 6th Floor*

Course Co-Directors: Giridhar P. Kalamangalam, MD, DPhil, FACNS and Birgit Frauscher, MD, PhD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Apply the basic principles of planning and interpreting a SEEG study;
2. Discuss in-depth illustrative cases; and
3. Describe the usefulness of advanced analysis tools for SEEG planning and interpretation.

2:45pm Electro-Magnetic Source Localization for SEEG  
*John S. Ebersole, MD*

3:25pm Wide-Band Recording and Advanced Analytics  
*Gregory Worrell, MD, PhD*

4:05pm Discussion

4:15pm Break

4:30pm Advanced Functional Mapping in SEEG  
*Eishi Asano, MD, PhD*

5:05pm Advanced MR Imaging for SEEG  
*Kathryn Davis, MD*

5:40pm Discussion

5:50pm Course Summary

**2:45 – 4:15pm**

## **Ancillary Test Reporting in Determination of Death by Neurologic Criteria: Proposed ACNS Training Modules for Additional Credentialing and Competency Certifications in EEG and Evoked Potentials**

*Location: Room 406*

Session Director: Gregory Kapinos, MD, MS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Describe the process of clinical determination, confounders and incomplete clinical exams, which is essential to guide and gauge which electrodiagnostic neurophysiologic testing is best suited to the particular scenario;
2. Conduct in simulation the proper acquisition technique, protocol and analysis of findings for electrocerebral inactivity (on EEG), absence of N20 (cortical SSEP), P14 (medullary EP) and wave III-V (BAERs); and
3. Reliably interpret (with knowledge of caveats and limitations, addressing pitfalls, artifacts) and use specific formulations or phrasings for rendering an official report for electroneurodiagnostic ancillary testing in brain death.

2:45pm The Impetus for an ACNS Competency Module with Certificate of Training in Report Rendering for Electroneurophysiologic Testing in Brain Death  
*Gregory Kapinos, MD, MS*

3:15pm Electrocerebral Inactivity on EEG: Appropriate Selection, Adequate Acquisition, Protocol Adherence, Artifact Reduction, and Proper Reporting  
*Masoom Desai, MD*

3:45pm Update on Use and Reporting of EPs in Brain Death: Brainstem and Somatosensory Evoked Potentials Competency Submodule  
*Spyridoula Tsetsou, MD*

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# ANNUAL MEETING & COURSES AGENDA

## TUESDAY, MARCH 28, 2023

### To Treat or Not to Treat Periodic Discharges in Critically ill Patients: Evidence from Neuroimaging

Location: Salon AB, 4th Floor

Session Director: Dang Nguyen, MD, PhD, FRCPC

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss periodic discharges in the context of the morphological characteristics, prevalence, classification and potential relationship with other epileptiform discharges (e.g. seizures) in critically ill patients;
2. Design studies using neuroimaging techniques to observe the electrical and oxygenation/metabolic changes associated with PDs in animal or human models; and
3. Identify the potential risk factors of PDs (morphological characteristics, frequency, etc.) and the types of PDs that may need further treatment.

2:45pm Introduction

*Dang Nguyen, MD, PhD, FRCPC*

3:10pm Cerebral and Systemic Hemodynamic Effects of Periodic Discharges: Insights from Animal Models

*Nicolas Gaspard, MD, PhD*

3:30pm Frequency of Lateralized Periodic Discharges Correlates with Glucose Metabolism

*Aaron F. Struck, MD*

4:00pm Combined EEG-Functional Near Infrared Spectroscopy for Long-Term Monitoring of Cortical Hemodynamic Response to PDs in Critically Ill Patients

*Ke Peng, PhD*

## 4:15 – 4:30pm

### Coffee Break

4th Floor Ballroom Foyer

## 4:30 – 6:00pm

### Emerging Concepts in the Diagnosis and Management of Super-Refractory Status Epilepticus, NORSE and FIRES

Location: Salon AB, 4th Floor

Session Co-Directors: Teneille E. Gofton, MD, MSc, FRCPC, FACNS and Cecil D. Hahn, MD, MPH, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Review emerging evidence regarding etiologies, EEG signatures and treatments in NORSE and FIRES;
2. Illustrate how advanced EEG techniques can be harnessed to help guide anesthetic therapy for SRSE; and
3. Discuss the range of clinical outcomes associated with SRSE and their EEG correlates.

4:30pm Introduction

*Teneille E. Gofton, MD, MSc, FRCPC, FACNS*

4:35pm Application of Advanced EEG Techniques to Guide Anesthetic Management of SRSE

*Eric S. Rosenthal, MD*

5:00pm Recent Advances in Etiologies, EEG Findings and Treatments for NORSE and FIRES

*Lawrence J. Hirsch, MD, FACNS*

5:25pm Prognosis and Outcomes in SRSE

*Krista Eschbach, MD*

5:50pm Discussion

### Treatment of Peripheral Nerve Injuries: From Clinic to OR

Location: Room 406

Session Director: Jaime R. López, MD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Discuss the which EMG and NCS to use in the preoperative assessment of peripheral nerve injuries;
2. Formulate an IOM protocol for assessing and monitoring peripheral nerve surgical procedures, including the use of nerve action potentials and nerve fascicle identification; and
3. Describe the information that the surgeon expects to obtain from the IOM team, which will guide surgical management.

4:30pm Preoperative Neurodiagnostic Testing of Peripheral Nerve Injuries

*Ruple S. Laughlin, MD, FACNS*

4:55pm Intraoperative Assessment and Monitoring of Peripheral Nerve Surgeries

*Jaime R. López, MD, FACNS*

5:20pm Surgical Treatment of Peripheral Nerve Injuries and Surgeon's Perspective

*Shelley S. Noland, MD*

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# ANNUAL MEETING & COURSES AGENDA

## WEDNESDAY, MARCH 29, 2023

7:00 – 8:30am

### Breakfast

4th Floor Ballroom Foyer

8:00 – 11:15am

### Course: Neuromodulation/Stimulation <sup>OD</sup>

Location: Salon C, 4th Floor

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

Learning Objective:

At the conclusion of this activity, the learner will be able to:

1. Discuss the physics of electrical and magnetic brain stimulation;
2. Identify some of the currently available brain stimulation devices; and
3. Describe the clinical evidence for brain stimulation for epilepsy.

8:00am Non-Invasive Neuromodulation: Transcranial Magnetic Stimulation (TMS)

*Melissa Tsuboyama, MD*

8:30am Non-Invasive Neuromodulation: Transcranial direct current stimulation (tDCS)

*Robert S. Fisher, MD, PhD*

9:00am Non-Invasive Neuromodulation: Transcranial focused ultrasound (FUS)

*Ellen J. Bubrick, MD*

9:30am Break

9:45am Invasive Neuromodulation: Vagus Nerve Stimulation

*Brian Lundstrom, MD, PhD, FACNS*

10:15am Invasive Neuromodulation: Deep Brain Stimulation

*Nicholas Gregg, MD*

10:45am Invasive Neuromodulation: Responsive Neurostimulation (RNS)

*Dileep Nair, MD*

8:00 – 9:30am

### Diversity in Leadership <sup>OD</sup>

Location: Salon FG, 6th Floor

Session Co-Directors: Sarah E. Schmitt, MD, FACNS and Sasha Alick-Lindstrom, MD, FACNS

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Identify the unique challenges faced by international medical graduates, and describe strategies to address these challenges;
2. Describe measures to overcome challenges encountered by international medical graduates, minorities and women in career advancement, including strategies for improving work-life balance and managing expectations for family / career; and
3. Describe measures that can be utilized to improve diversity and inclusivity in "leadership pipelines" at all stages of career development.

8:00am Introductions

*Sarah E. Schmitt, MD, FACNS and Sasha Alick-Lindstrom, MD, FACNS*

8:05am International Medical Graduates: Unique Challenges, Unique Perspectives

*Alain Lekoubou Looi, MD, MS*

8:30am Balancing Roles in your Career and your Life

*Dalila W. Lewis, MD*

8:55am Diversity Pipelines: Promoting Diversity at all Career Stages

*Sharon Lewis, MD*

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# ANNUAL MEETING & COURSES AGENDA

## WEDNESDAY, MARCH 29, 2023

### Intraoperative Neurophysiologic Monitoring In Minimally Invasive Spinal Surgeries <sup>ES</sup>

Location: Salon AB, 4th Floor

Session Co-Directors: Guillermo Martín Palomeque, MD, FACNS and Armando Tello, MD, PhD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Review the standard techniques for intraoperative monitoring of spinal surgeries;
2. Describe the anatomical peculiarities of minimally invasive procedures and their influence on the intraoperative monitoring strategies; and
3. Identify the moments of higher risk during these surgeries and to recognize the most adequate neurophysiological techniques to apply in those critical moments.

8:00am Intraoperative Neurophysiological Monitoring in Lumbosacral Spine and its Limitations in Minimally Invasive Spine Surgeries  
*Lidia Cabañes-Martínez, MD, FACNS*

8:25am Intraoperative Neurophysiological Monitoring in Lateral Interbody Fusion Procedures  
*Ricardo Rodríguez-Ferreira, MD*

9:05am Intraoperative Neurophysiological Monitoring in Lumbosacral Percutaneous Procedures  
*Alejandro Zavala, MD, FACNS*

### 9:30 – 9:45am

#### Coffee Break

4th Floor Ballroom Foyer

### 9:45 – 11:15am

### Epilepsy Clinical Cases <sup>ES</sup> <sup>OD</sup>

Location: Salon FG, 6th Floor

Session Director: Luis Carlos Mayor-Romero, FACNS, FAES

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Interpret phase I information from Video-EEG evaluation in patients with intractable epilepsy;
2. Design a phase II invasive Video-EEG evaluation considering current available methodologies (SEEG, Subdural electrodes); and
3. Utilize information acquired through an invasive VEEG evaluation in making surgical recommendations.

9:45am Epilepsy Clinical Case 1  
*Jorge G. Burneo, MD, MSPH, FAAN*

10:15am Epilepsy Clinical Case 2  
*Loreto-Pohl Rios, MD*

10:45am Epilepsy Clinical Case 3  
*Luis Carlos Mayor-Romero, MD, FACNS, FAES*

### Magnetospinography & Magnetoneurography: The Emerging Field of Spinal Cord & Peripheral Nervous System Magnetic Neurophysiology (Joint ACNS/Japan Neuroscience Society)

Location: Salon AB, 4th Floor

Session Co-Directors: Pegah Afra, MD, FACNS and Shigenori Kawabata, MD, PhD

Learning Objectives:

At the conclusion of this activity, the learner will be able to:

1. Explain the localization gaps in EP/NCS in PNS/spinal cord & understand the role of MSG/MNG to fill this gap noninvasively, with improved localization;
2. Explain how a Magnetospinography/Magnetoneurography (MSG/MNG) machine is designed and the outline of MSG/MNGs current state and methodological improvement for clinical use; and
3. Explain the technique of Magnetospinography and Magnetoneurography and compare its clinical application to gold standard of NCS and outline potential clinical use.

9:45am Why Do We Need Peripheral Magnetic Neurophysiology? Better Localization, Non-Invasiveness or Else?  
*Pegah Afra, MD, FACNS*

10:05am Development of the Biomagnetometer System for Magnetospinography/Magnetoneurography (MSG/MNG)  
*Yoshiaki Adachi, PhD*

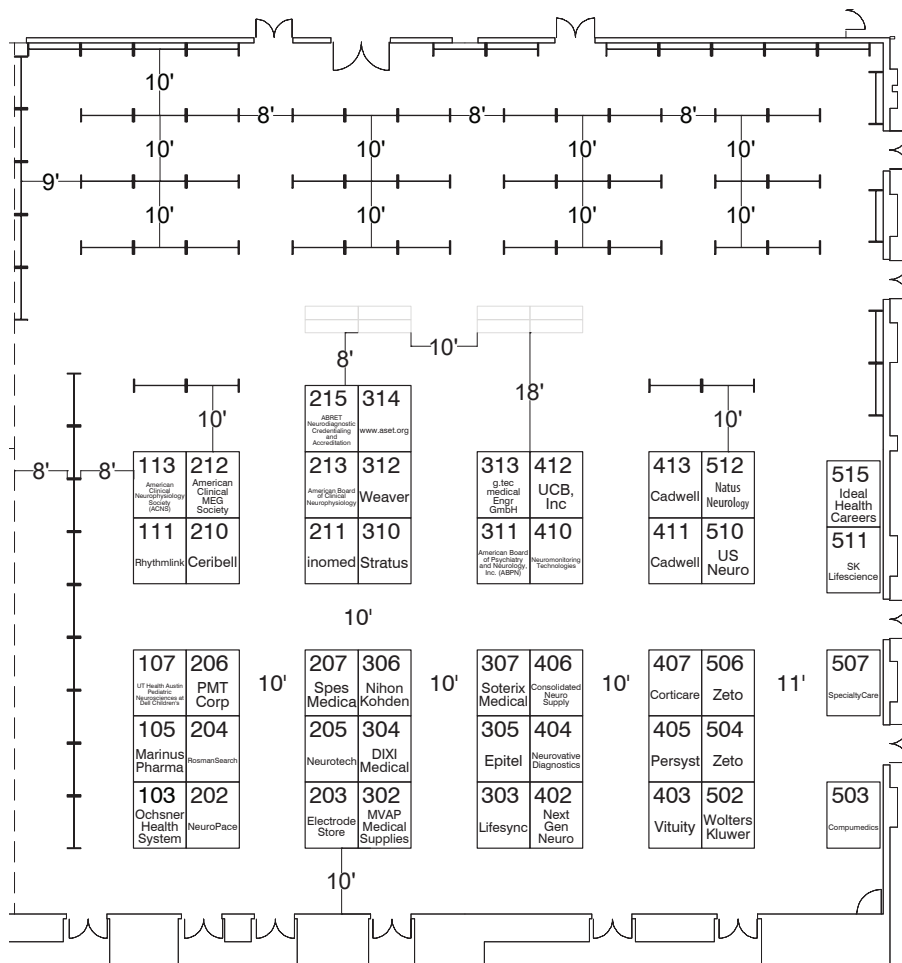
10:40am Magnetoneurography of Peripheral Nerves, Brachial Plexus and Magnetospinography (MSG)  
*Shigenori Kawabata, MD, PhD*

<sup>OD</sup> = On-demand <sup>ES</sup> = This session will be presented in Spanish.

All courses and select scientific program sessions will be available on-demand Monday, April 10 through Thursday, May 25, 2023.



## EXHIBIT HALL MAP



Booth #	Company Name
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105	Marinus Pharma
107	UT Health Austin Pediatric Neurosciences at Dell Children's
111	RhythmLink
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203	Electrode Store
204	RosmanSearch
205	Neurotech, LLC
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207	Spes Medica USA
210	Ceribell
211	inomed, Inc.
212	American Clinical MEG Society (ACMEGS)
213	American Board of Clinical Neurophysiology (ABCN)
214	American Clinical Neurophysiology Society (ACNS)
215	ABRET Neurodiagnostic Credentialing and Accreditation
302	MVAP Medical Supplies
303	Lifesync
304	DIXI Medical USA Corp.
305	Epitel
306	Nihon Kohden America
307	Soterix Medical
310	Stratus

Booth #	Company Name
311	American Board of Psychiatry and Neurology, Inc. (ABPN)
312	Weaver and Company
314	ASET - The Neurodiagnostic Society
315	g.tec medical engineering GmbH
402	Next Gen Neuro
403	Vituity
404	Neurovative Diagnostics
405	Persyst Development Corporation
406	Consolidated Neuro Supply
407	Corticare
410	Neuromonitoring Technologies
411	Cadwell Industries, Inc.
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413	Cadwell Industries, Inc.
502	Wolters Kluwer
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507	SpecialtyCare
510	US Neuro
511	SK Lifescience
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## EXHIBITOR INFORMATION

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### **ABRET Neurodiagnostic Credentialing and Accreditation**

<http://www.abret.org>

ABRET Neurodiagnostic Credentialing & Accreditation offers five credentials for technologists and neuroprofessionals (R. EEG T.®, R. EP T.®, CNIM®, CLTM®, NA-CLTM, CAP®) and a Certificate Program, CMEG®. For labs wanting to demonstrate a commitment to standards and quality, laboratory accreditation programs are available, LAB-EEG, LAB-NIOM, and LAB-LTM. International testing available. Live remote proctoring is available for the EEG and EP examinations. Coming soon, a CNIM microcredential on complex spine.

213

### **American Board of Clinical Neurophysiology**

<http://www.abcn.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. Coming soon – Pediatric EEG Track. Exams offered during six-week sessions each spring and fall. International testing and on-line proctoring available. Fellowship training is required.

311

### **American Board of Psychiatry and Neurology, Inc. (ABPN)**

<http://www.abpn.com>

The American Board of Psychiatry and Neurology serves the public interest and the professions of psychiatry and neurology by promoting and assessing the competence of psychiatrists and neurologists and by establishing standards for initial and continuing certification programs.

212

### **American Clinical MEG Society (ACMEGS)**

555 E. Wells Street, Suite 1100

Milwaukee, WI 53202

(414) 918-9804

<http://www.acmegs.org>

ACMEGS supports MEG centers in delivering quality comprehensive care to people with neurological disorders, by setting standards of care, advocating for access to high quality MEG center services, and providing education, knowledge, and other resources to its member centers.

214

### **American Clinical Neurophysiology Society (ACNS)**

555 E. Wells Street

Suite 1100

Milwaukee, Wisconsin 53202

(414) 918-9803

<http://www.acns.org>

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.

314

### **ASET – The Neurodiagnostic Society**

<http://www.aset.org>

ASET – The Neurodiagnostic Society is the premier international professional association for over 7,000 Neurodiagnostic professionals. Organized in 1959, ASET's purpose is to provide leadership, advocacy, and professional excellence for our members while creating greater awareness of the profession and establishing standards and best practices to ensure quality patient care. ASET offers a wide range of membership benefits to help Neurodiagnostics technologists take the next step in their careers by helping them earn continuing education units (CEUs). These include special access educational seminars, webinars, Annual Conference, The Neurodiagnostic Journal, a director of Neurodiagnostic professionals, virtual networking platform, and more.

411-413

### **Cadwell Industries, Inc.**

909 N Kellogg Street

Kennewick, Washington 99336

<http://www.cadwell.com>

[info@cadwell.com](mailto:info@cadwell.com)

Established in 1979 by John Cadwell, BSEE, MD and brother Carl Cadwell, DDS, 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.

## EXHIBITOR INFORMATION

210

### **Ceribell**

2483 Old Middlefield Way  
Suite 120  
Mountain View, California 94043  
<http://ceribell.com/index.html>  
[EEG@ceribell.com](mailto:EEG@ceribell.com)

Ceribell Point-of-Care EEG empowers neurologists to efficiently expand EEG coverage across the hospital without over-extending their team. Continuous 24/7 seizure burden monitoring, real-time alerts, and remote access for EEG reads, anytime on any device, reduce the burden of STAT and afterhours EEG coverage on neurology and neurodiagnostic departments. Improve and streamline patient care in your hospital with Ceribell.

503

### **Compumedics**

5015 West WT Harris Blvd  
Suite E  
Charlotte, North Carolina 28269  
<http://www.compumedics.com>

Compumedics offers innovative solutions for neuro-diagnostics ranging from Routine EEG studies to Long-Term-Monitoring. The "Curry" neuroimaging software suite, paired with Compumedics' high density recording systems, helps optimize patient outcomes in Level 3/4 Epilepsy centers. The neXus 360 data management system provides web-based and remote physician access from any device with internet access. By defining life's signals, our technology turns vast amounts of data into valuable information that leads to a more accurate diagnosis and consequently more effective therapy for some of the most serious health conditions.

406

### **Consolidated Neuro Supply**

<http://www.neurosupply.com>

Located in the heart of the technology district in Milford, OH, Consolidated Neuro Supply Inc. is a leading provider of healthcare products used to diagnose neurological disorders and monitor critical neurological structures during high-risk surgical procedures. With 20+ years of experience, we continue to provide our customers with quality health care products while maintaining our focus on service and value. Product offerings include EMG needle electrodes, EEG electrodes, subdermal needle electrodes, pedicle screw and direct nerve stimulators. Please visit us at [www.neurosupply.com](http://www.neurosupply.com).

407

### **Corticare**

5950 La Place Court  
Suite #160  
Carlsbad, California 92008  
<http://www.corticare.com>  
[info@corticare.com](mailto:info@corticare.com)

CortiCare provides continuous remote EEG Services for the ICU, NICU or EMU using a robust infrastructure of registered EEG technologists and reading neurophysiologists. Our clinical team provides immediate notification of patient events so physicians can interpret neurocritical care data in real-time. We are ready to provide support when and as needed. The new CortiCap single-use, premeasured electrode set can be used by any healthcare staff to set up a 10-20 EEG and initiate CEEG monitoring quickly. For more info, visit us at Booth #407 or visit [www.corticare.com](http://www.corticare.com).

304

### **DIXI Medical USA Corp.**

11910 Fox Ridge Drive  
Plymouth, Michigan 48170  
<http://www.diximedus.com>  
[sales@diximedus.com](mailto:sales@diximedus.com)

DIXI Medical - a world-leader in SEEG since 1975 is a designer and manufacturer of medical devices for functional and stereotactic neurosurgery for the treatment of epilepsy. Microdeep® - the original SEEG depth electrode is available with 5 - 18 platinum contacts and is used in leading epilepsy programs world-wide. Stop by and learn more about DIXI Medical USA's SEEG advantages or email [info@diximedus.com](mailto:info@diximedus.com)

203

### **Electrode Store**

<https://electrodestore.com>

The Electrode Store is a US-based manufacturer and distributor of medical electrodes and related supplies used in the diagnosis or monitoring of neurological and neuromuscular disorders. Products include disposable and re-usable EEG cups, surface electrodes, hydrogel electrodes, EEG caps, a variety of needle electrodes (for EMG, EEG and IONM), gels, pastes and more. The Electrode Store holds ISO 13485, EC and MDSAP certifications. Ordering is fast and easy by website, phone, FAX, or email.

## EXHIBITOR INFORMATION

305

### Epitel

<http://www.epitel.com>

Epitel is a digital health company dedicated to improving seizure monitoring and detection. The company's first commercial product, the REMI Remote EEG Monitoring System, is FDA cleared for near real-time and/or remote EEG monitoring for up to 48 hours in a professional healthcare facility. Leveraging its proprietary cloud-based wearable sensor system, Epitel is enabling informed treatment decisions by making EEGs readily deployable and accessible at point-of-care. For more information, visit [epitel.com](http://www.epitel.com).

315

### g.tec medical engineering GmbH

<http://www.gtec.at>

g.tec developed the first commercially available Brain Computer Interface system in 1999, and in 2022, users from more than 60 countries are using g.tec devices. Currently, 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. Some of the recent developments include stroke rehabilitation system, recoveriX; functional brain mapping system, cortiQ; wireless EEG & fNIRS, g.Nautilus PRO flexible, etc.

515

### Ideal Health Careers

<http://www.idealhealthcareers.com>

Ideal Health Careers is a professional search firm focusing solely on the clinical neurophysiology market, enabling us to become a key strategic asset for our clients. We have been recruiting in this space since 2005 and have successfully placed dozens of interpreting physicians (reading neurologists) and 300+ IOM/EEG clinical, sales, and marketing professionals across the country. We have a profound understanding of the neurodiagnostic market! Feel free to ask about full-time opportunities for experienced clinical neurophysiologists (IOM) as well as those completing fellowships in 2023-24. Discussions are always 100% confidential.

211

### inomed, Inc.

<http://us.inomed.com>

Since 1991, inomed has developed and manufactured state-of-the-art products and treatments for customers working in the fields of intraoperative neuromonitoring (IONM), functional neurosurgery, pain therapy, and neurological diagnostics. We help our customers provide safe, successful surgeries for their patients. In order to ensure the highest quality of service, we offer our customers a comprehensive package consisting of development and manufacturing to German quality standards, worldwide distribution, on-site services and educational classes. .

303

### Lifesync

<https://rochestersuperstore.com>

LifeSync Neuro (formerly Rochester Electro-Medical) is a trusted partner with various products and services in neurodiagnostic and neuromonitoring technology. All LifeSync products are known for excellent signal quality and patient comfort. Our competitively priced, in-stock products can be shipped quickly, giving you what you need when you need them.

105

### Marinus Pharma

<https://marinuspharma.com/>

Marinus is committed to improving the lives of patients with seizure disorders through the development of innovative treatment options and by closely collaborating with patients, caregivers and healthcare professionals.

302

### MVAP Medical Supplies

2001 Corporate Center Drive  
Thousand Oaks, California 91320  
<http://www.mvapmed.com>  
[brenda@mvapmed.com](mailto:brenda@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!



## EXHIBITOR INFORMATION

512

### Natus Neurology

3150 Pleasant View Road  
Middleton, Wisconsin 53562

Natus delivers advanced technology and market-leading solutions across the full spectrum of neuro care. Since 1935 we have been committed to advancing the quality of patient care in the fields of EEG, EMG, EP, ICU, Neurocritical Care, IOM, LTM, Sleep, research and application products.

Natus is recognized by healthcare providers as the solution source to screen, diagnose, and treat disorders affecting the brain, neural pathways and eight sensory nervous systems. For more information, please visit [natus.com](http://natus.com).

410

### Neuromonitoring Technologies

<https://neuromonitoringtechnology.com>

Don't Leave the Brain Behind: Telemetry for the Brain Not Just the Heart  
24/7/365 Continuous Video EEG Services Immediate Care of ICU/EMU patients for improved outcomes Neuromonitoring Technologies provides continuous "eyes-on" video EEG using telemedicine technology with the required 4/1 patient to ABRET® R.EEG T. & CLTM technologist ratio. Critical conditions (seizures, ischemia) require rapid recognition for immediate treatment that directly affects the course of an illness and the length of a hospital stay. NMT's highly experienced, technologists, have proven success in correlating EEG, cardiovascular and hemodynamic parameters with clinical findings for immediate intervention by the in-house neurologist.

202

### NeuroPace, Inc.

455 N. Bernardo Avenue  
Mountain View, California 94043  
<http://www.neuropace.com>  
[info@neuropace.com](mailto:info@neuropace.com)

Based in Mountain View, Calif., NeuroPace is a commercial-stage medical device company focused on transforming the lives of people suffering from epilepsy by reducing or eliminating the occurrence of debilitating seizures. Its novel and differentiated RNS® System is the first and only commercially available, brain-responsive platform that delivers personalized, real-time treatment at the seizure source. This platform can drive a better standard of care for patients suffering from drug-resistant epilepsy and has the potential to offer a more personalized solution and improved outcomes to the large population of patients suffering from other brain disorders.

205

### Neurotech, LLC

626 W. Moreland Blvd  
Waukesha, Wisconsin 53188  
<http://www.neurotech EEG.com>  
[vwolfe@neurotech EEG.com](mailto:vwolfe@neurotech EEG.com)

Neurotech, LLC specializes in EEG services including in-home ambulatory EEG, and continuous EEG monitoring in the hospital setting. 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.

404

### Neurovative Diagnostics

<http://neurovativediagnosics.com>

Neurovative Diagnostics is a Joint Commissioned Accredited company, who was founded by individuals with direct clinical EEG expertise and business professionals, with over 50 combined years of experienced in the Neurodiagnostic field. Neurovative Diagnostics delivers the latest in innovation using a cloud-based EEG platform accessible on any device. Neurovative goes above and beyond to cater to physician and patient preferences, which is extremely vital when working with patients of all pages.

402

### Next Gen Neuro

3042 S County Road  
475 East  
Plainfield, Indiana 46168  
<http://www.teamngn.com>  
[info@teamngn.com](mailto:info@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 are committed to building a tailored service that best meets your needs! We are the Next Generation of Partnership in Neurodiagnostic Care.



## EXHIBITOR INFORMATION

306

### Nihon Kohden America

15353 Barranca Parkway  
Irvine, California 92618  
<http://us.nihonkohden.com/>  
[info@nihonkohden.com](mailto:info@nihonkohden.com)

Nihon Kohden's extensive Neurology portfolio includes instrumentation across all modalities, providing coverage through the entirety of a patient's stay. Nihon Kohden's offerings include a breadth of products in Electroencephalography, Intraoperative Neuromonitoring, Electromyography, Polysomnography, and disposable supplies, tailored to meet EMU, ED/ICU, ambulatory, outpatient, clinic, and OR needs. Nihon Kohden offers the flexibility and expandability needed to meet the changing demands of today's neurodiagnostic field. In the U.S., Nihon Kohden 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/>.

103

### Ochsner Health System

1514 Jefferson Highway  
New Orleans, Louisiana 70121  
<http://www.ochsner.org>  
[Katythomas@ochsner.org](mailto:Katythomas@ochsner.org)

405

### Persyst Development Corporation

420 Stevens Avenue  
Suite 210  
Solana Beach, California 92075  
<http://www.persyst.com/>  
[tradeshows@persyst.com](mailto:tradeshows@persyst.com)

Persyst is the worldwide leader in EEG software. As standard of care, 211 of 233 members of the National Association of Epilepsy Centers use Persyst EEG monitoring & review. Similarly, 97 of 100 top U.S. Neurology hospitals use Persyst for EEG monitoring and review. Persyst is the only EEG trending and detection software integrated, sold & supported by every major EEG manufacturer. Persyst 14 Review and Analysis Software is a complete solution for accurate, efficient and rapid analysis of EEG data. Persyst enables the highest level of comprehensive patient care for EEG monitoring and analysis.

206

### PMT Corporation

1500 Park Road  
Chanhassen, Minnesota 55317  
<http://www.pmtcorp.com>  
[info@pmtcorp.com](mailto:info@pmtcorp.com)

PMT Corporation is the premier supplier of an extensive line of neurosurgical products, offering Cortac, cortical surface electrodes, Depthalyn, 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.

111

### RhythmLink

PO Box 2045  
Columbia, SC 29202  
<http://www.RhythmLink.com>

RhythmLink® International, LLC designs, manufactures and distributes medical devices in the EEG, IONM and EMG markets as well as provides custom packaging, private labeling, custom products and contract manufacturing to its customers. RhythmLink is recognized as a leader within its field at providing the important physical connection between patients and the diagnostic equipment to record or elicit neurophysiologic biopotentials. Originally founded by neurodiagnostic technicians and engineers in 2002, RhythmLink strives to provide continuous innovation and superior quality in all of its products. Based in Columbia, SC, RhythmLink's advancements and improvements in technology, business development and corporate branding have brought national and international recognition.

304

### RosmanSearch

30799 Pinetree Road  
Suite 250  
Pepper Pike, Ohio 44124  
<http://www.rosmansearch.com>  
[bdery@rosmansearch.com](mailto:bdery@rosmansearch.com)

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!

## EXHIBITOR INFORMATION

511

### SK Lifescience

<http://www.xcopri.com>

SK Lifescience is a CNS-focused pharmaceutical company. We believe there is more to life when you connect health with happiness.

307

### Soterix Medical

<https://soterixmedical.com/>

Soterix Medical is a global leader in Noninvasive Neuromodulation and Neuromonitoring technologies. Founded in 2008, Soterix Medical is committed to bringing the most advanced medical technology into the hands of people who need it. Soterix Medical is launching its first intraoperative monitoring solution this year called MEGA-IOM leveraging its expertise in developing highly reliable, usable, and flexible systems. MEGA-IOM provides unmatched higher amplitude, longer stimulus duration, and incorporates the best-in-class amplifier specifications. It is a one stop comprehensive solution for the operating room.

507

### SpecialtyCare

3 Maryland Farms

Suite 200

Brentwood, Tennessee 37027

<http://www.specialtycareus.com>

[brittni.dugnaski@specialtycare.net](mailto:brittni.dugnaski@specialtycare.net)

With over 1,500 clinicians supporting over 400,000 procedures annually, SpecialtyCare provides the highest quality people, services, and technology to the operating room. More than 1,000 hospitals and 13,500 physicians trust SpecialtyCare to achieve exceptional outcomes, regulatory compliance, and financial results. By maintaining the SpecialtyCare Operative Procedural Registry (SCOPE™), the largest procedural database of its kind, we identify standards, determine benchmarks, disseminate best practices, and foster innovations and efficiencies that improve patient outcomes. Accredited and certified by The Joint Commission, SpecialtyCare develops expertise beyond industry requirements. Customers trust our highly trained clinicians delivering excellence in neuro, cardiac, and surgical services.

207

### Spes Medica USA

25 Storey Avenue

#118

Newburyport, Massachusetts 01950

<http://www.spesmedicausa.com>

[usa@spesmedica.com](mailto:usa@spesmedica.com)

310

### Stratus

4545 Fuller Drive

Suite 100

Irving, Texas 75038

<http://www.stratusneuro.com>

[contact@stratusneuro.com](mailto:contact@stratusneuro.com)

Stratus is the nation's leading supplier of EEG solutions to hospitals and private practices. We strive to make EEG testing more efficient and effective for providers. Stratus offers a wide array of services, technology, and proprietary web-based EEG software to meet your needs. Our large pool of registered EEG techs provide EMU and ICU EEG monitoring 24/7/365, ambulatory and routine EEG, EEG pruning and annotation, and other solutions. We also support centralized and decentralized clinical trials.

412

### UCB, Inc.

510

### US Neuro

107

### UT Health Austin Pediatric Neurosciences at Dell Children's

<http://partnersincare.health/ut-health-austin-pediatric-neurosciences-at-dell-childrens>

UT Health Austin Pediatric Neurosciences at Dell Children's is a clinical partnership between Dell Children's Medical Center and UT Health Austin, the clinical practice of the Dell Medical School at The University of Texas at Austin. UT Health Austin Pediatric Neurosciences at Dell Children's diagnoses, treats, and manages the care of children and adolescents with medical conditions of the central nervous system, including epilepsy, cerebral palsy, neuromuscular diseases, congenital abnormalities, movement disorders, headaches, genetic conditions, neurodevelopmental disorders, brain tumors, acquired brain injuries, such as head injuries, neurological infections, and strokes. We prioritize family-centered treatment, collaboration among specialists, and inter-institutional partnerships.

## EXHIBITOR INFORMATION

403

### Vituity

<http://www.vituity.com/careers>

For nearly 50 years, Vituity has driven positive change in the business and practice of healthcare. All of our 5,000+ clinicians across 450 practices are essential in our mission to transform care delivery and improve lives. Learn more about rewarding neurology careers at [vituity.com/careers](http://vituity.com/careers).

312

### Weaver and Company

<http://weaverandcompany.com>

Weaver and Company's Nuprep® Skin Prep Gel lowers impedance to improve electrode tracings. Its mild abrasive formula improves conductivity and helps achieve maximum efficiency with equipment. Ten20® Conductive Paste contains the right balance of adhesiveness and conductivity enabling the electrodes to remain in place while allowing the transmittance of electrical signals.

502

### Wolters Kluwer

P.O. Box 1030

2400 BA

Alphen aan den Rijn

<http://shop.lww.com>

[info@wolterskluwer.com](mailto:info@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.

504-506

### Zeto

<https://zeto-inc.com/>

Zeto, Inc. is an award-winning, privately held innovative EEG brain monitoring company located in Santa Clara, California, that is focused on transforming the way electroencephalography (EEG) is performed at hospitals and clinics. Zeto's revolutionary FDA-cleared EEG headset and cloud platform bring the traditional EEG procedure to the 21st century. Zeto offers remote EEG reading service and remote cEEG and routine EEG monitoring to its customers. Zeto also offers near real-time notification of ongoing seizures by using reliable FDA cleared seizure detection software.

[illegible]



# UT Health Austin Pediatric Neurosciences at Dell Children's



**UT Health Austin Pediatric Neurosciences at Dell Children's is a clinical partnership between Dell Children's Medical Center and UT Health Austin, the clinical practice of the Dell Medical School at The University of Texas at Austin.** Our care team diagnoses, treats, and manages the care of children and adolescents with medical conditions of the central nervous system, including epilepsy, cerebral palsy, neuromuscular diseases, congenital abnormalities, movement disorders, headaches, genetic conditions, neurodevelopmental disorders, brain tumors, and acquired brain injuries, such as head injuries, neurological infections, and strokes. As a leading neurosciences program in Central Texas, our comprehensive care approach prioritizes family-centered treatment, collaboration among a variety of specialists, and inter-institutional partnerships.



Scan here to learn more about our specialty programs and services.



The University of Texas at Austin  
**UT Health Austin**





AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY  
555 East Wells Street, Suite 1100  
Milwaukee, WI 53202

ACNS-0123-585

# 2024 ACNS Annual Meeting & Courses

*Orlando* FLORIDA

FEBRUARY 28 - MARCH 3, 2024



*Save the Date*