

American Clinical Neurophysiology Society ANNUAL MEETING & COURSES



PHERION GRAND PHOENIX



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# Message from Course and Program Committee Co-Chairs

Dear Colleagues,

On behalf of the American Clinical Neurophysiology Society (ACNS) Council, we are thrilled to invite you to attend the 2017 Annual Meeting & Courses, taking place February 8-12, 2017 at the Sheraton Grand Phoenix in Phoenix, Arizona.

The ACNS Annual Meeting & Courses are designed to provide a review of the fundamentals as well as the latest scientific advances in central and peripheral neurophysiology. Experts in the field will give presentations of significant value for all healthcare professionals who utilize clinical neurophysiology.

This year, the Annual Courses include expanded offerings in peripheral neurophysiology. Also, the courses are organized along tracks that should minimize conflicts for most attendees. As was done in 2016, and due to the continued success and interest in Neurophysiologic Intraoperative Monitoring (NIOM), the course will remain in the two full-day format to accommodate the degree of interest and growth within this rapidly expanding field of clinical neurophysiology. The course directors are working hard to provide attendees with an informative and educational series of presentations.

The Program Committee is pleased to present an impressive selection of sessions for delegates to attend throughout the weekend. There was an outstanding set of session proposals submitted for consideration this year and we are confident that the program content will provide an exciting educational opportunity for all in attendance.

Following the recent success of the Joint International Symposia, we are pleased to announce the inclusion of three sessions co-organized by our colleagues outside the US. We are honored to welcome representatives from the Brazilian Society of Clinical Neurophysiology, the Mexican Society of Clinical Neurophysiology, the Latin American Chapter of IFCN, and the German Society of Clinical Neurophysiology. This year will also feature two sessions with speakers from the IFCN Executive Committee. We hope you will take advantage of this opportunity to learn from and collaborate with our international colleagues.

In addition to the scientific sessions, there will be opportunities for educational entertainment and networking. The annual Neurophys Bowl provides a great night of "edu-tainment" for participants and attendees to test their knowledge in various fields of Clinical Neurophysiology. Additionally, attendees can socialize and network with exhibitors, colleagues and friends during the Welcome Reception on Friday, February 10 in the Exhibit Hall. Saturday evening will feature a keynote lecture from Phillip Pearl, MD, FACNS entitled "Neurology of Musical Masters".

The 2017 Annual Meeting & Courses will provide an opportunity for education, networking and interaction with the latest technology for attendees in various fields of clinical neurophysiology. We hope to see you in Phoenix!

Sincerely,

Tobias Loddenkemper, MD, FACNS Course Committee Co-Chair

Saurabh R. Sinha, MD, PhD, FACNS Course Committee Co-Chair

Frank. Dislan

Meriem Bensalem-Owen, MD, FACNS Program Committee Co-Chair



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



## **ACNS Information**

#### Council

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Gloria Galloway, MD, MBA, FACNS Ohio State University Medical Center

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#### JOURNAL EDITOR

Aatif M. Husain, MD, FACNS

Duke University Medical Center

#### **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.

#### **Course Committee**

#### **CO-CHAIRS:**

Tobias Loddenkemper, MD, FACNS Children's Hospital Boston

Saurabh R. Sinha, MD, PhD, FACNS Duke University Medical Center

#### **MEMBERS:**

Selim Benbadis, MD, FACNS University of South Florida

Charles M. Epstein, MD, FACNS Emory University

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Cecil D. Hahn, MD, MPH, FACNS Hospital for Sick Children

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Lawrence J. Hirsch, MD, FACNS Yale University

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Jeffrey Liou, MD Harvard Medical School

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Rainbow Babies and Children's Hospital

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Asim Shahid, MD

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Mirela V. Simon, MD, FACNS

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William O. Tatum, IV, DO, FACNS Mayo College of Medicine

Tammy Tsuchida, MD, PhD, FACNS Children's National Health System

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Courtney J. Wusthoff, MD Stanford University

#### **EX-OFFICIO:**

Meriem Bensalem-Owen, MD, FACNS University of Kentucky

Jeffrey Britton, MD, FACNS Mayo Clinic

Frank W. Drislane, MD, FACNS Beth Israel Deaconess Medical Center

## **ACNS Information**

#### **Program Committee**

**CO-CHAIRS:** 

Meriem Bensalem-Owen, MD, FACNS University of Kentucky

Frank W. Drislane, MD, FACNS Beth Isreal Deaconess Medical Center

**MEMBERS**:

Nicholas S. Abend, MD Children's Hospital of Philadelphia

Imran I. Ali, MD, FACNS University of Toledo

Salah A. Almubarak, MD, FRCPC, FACNS Royal University Hospital

Anto Bagic, MD, PhD, FACNS University of Pittsburgh

Richard C. Burgess, MD, FACNS Cleveland Clinic Epilepsy Center

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Rafael de Castro, MD Neurolife Natal

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Ronald Emerson, MD, FACNS Hospital for Special Surgery

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Ioannis Karakis, MD, MSc Emory University

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Heidi Munger Clary, MD, MPH Wake Forest University

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Devon I. Rubin, MD, FACNS Mayo Clinic

Stephan U. Schuele, MD, MPH, FACNS Northwestern University

Raj D. Sheth, MD, FACNS

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Amit Verma, MBBS The Methodist Hospital

Courtney J. Wusthoff, MD Stanford University

**EX-OFFICIO:** 

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Ohio State University

Tobias Loddenkemper, MD, FACNS Children's Hospital Boston

Saurabh R. Sinha, MD, PhD, FACNS Duke University Medical Center

#### **CME Committee**

CHAIR:

Gloria Galloway, MD, MBA, FACNS

**MEMBERS:** 

Nicholas S. Abend, MD, FACNS Children's Hospital of Philadelphia

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Susan T. Herman, MD, FACNS Beth Israel Deaconess Medical Center

Pongkiat Kankirawatana, MD, FACNS Children's of Alabama – UAB

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Tobias Loddenkemper, MD, FACNS Children's Hospital Boston

Dipakkumar Pandya, MD Hunterdon Neurology

Mirela V. Simon, MD, FACNS Massachusetts General Hospital

Saurabh R. Sinha, MD, PhD, FACNS Duke University Medical Center

Christa Swisher, MD

Duke University Medical Center

# **General Meeting Information**

#### **About the Annual Meeting & Courses**

This year's scientific program will feature the latest scientific advances in clinical neurophysiology presented by leading national and international experts in the field. This dynamic program has more choices than ever including the return of the Joint ACNS and International Society symposia, presentations from IFCN Executive Committee members, and speakers who are experts in their field. The parallel sessions will provide simultaneous sessions for interests in EEG, electrodiagnosis and neurophysiologic intraoperative monitoring.

The meeting also features a number of opportunities for networking, including a Professional Development Mentorship Program in which residents and fellow applicants are paired with senior ACNS members and provided an opportunity to connect. The annual Neurophys Bowl is a mainstay of the Annual Meeting program, allowing members and delegates a chance to challenge their knowledge of clinical neurophysiology in a competitive and entertaining format.

#### **Phoenix Visitor Information**

Nearest Airport: Phoenix Sky Harbor International Airport

Phoenix Sky Harbor International Airport (PHX) offers about 1,200 daily flights and services more than 40 million passengers annually. PHX is located 3 miles from downtown Phoenix.

Phoenix's Metro Light Rail system is accessible by shuttle bus at the airport; bus services also run from Phoenix Sky Harbor Airport to locations in the city and the wider Arizona area.

Average February Temperatures: High 71° F, Low 49° F

Phoenix is the sixth-largest city in the United States with a population of over 1.6 million and by land area, it is larger than New York and Los Angeles combined. Phoenix is also known as the "Valley of the Sun" and is the most populated state capitol in the U.S.

The city offers numerous activities for varying interests. Take a hike up Camelback Mountain or down into the Grand Canyon. Play a round on one of Phoenix's more than 200 golf courses. Catch a game – Phoenix is one of only a few cities that is home to all 4 professional ports teams including the Phoenix Suns (National Basketball Association), Arizona Diamondbacks (Major League Baseball), Arizona Cardinals (National Football League), and Arizona Coyotes (National Hockey Association). Enjoy an afternoon at one of the many museums or the Desert Botanical Garden. Get out and explore the city!

#### **Headquarters Hotel**

Sheraton Grand Phoenix 340 N 3rd Street Phoenix, AZ 85004 (602) 262-2500

#### Mobile App

New in 2017, ACNS will offer a free mobile app for meeting attendees. More information to follow. Be sure to document your meeting experience on social media using **#ACNS2017**!

#### **Important Dates**

Advance Registration Open	September 12, 2016
Poster Abstract Submission Open	October 1, 2016
Poster Abstract Submission Deadline	November 15, 2016
Poster Abstract Decision Notification	December 15, 2016
Housing Deadline	January 15, 2017
Advance Registration Deadline	January 15, 2017
Registration Cancellation Deadline	January 20, 2017
Courses Handout Website Open	January 31, 2017
CME Certificate Program Opens (pre-registered delegates)	February 8, 2017
CME Certificate Program Opens (delegates registering onsite)	March 8, 2017
CME Certificate Claim Deadline	April 3, 2017
Courses Handout Website Closes	April 28, 2017

#### **Housing Reservations**

A block of rooms has been reserved for ACNS Annual Meeting & Courses delegates at the Sheraton Grand Phoenix. Reservations will be accepted on a space-available basis, at the standard hotel rate after the housing deadline of January 15, 2017. Please reserve your rooms before the deadline to take advantage of the group rate.

ACNS Group Rate: \$239/night single/double occupancy

Group rate will be offered three days prior and three days following the dates of the Room Block, based on availability.

Housing Open: Now Open! Housing Deadline: January 15, 2017

To make reservations online, visit the ACNS website: http://www.acns.org/meetings/annual-meeting-and-courses/2017-annual-meeting-and-courses/housing-travel.

To make reservations by phone, call (602) 262-2500. If making reservations by phone, don't forget to mention the ACNS Annual Meeting to receive the group rate!

#### **Registration Procedure**

Save on registration fees and avoid long lines onsite when you register before the advance deadline of January 15! Online registration is a fast an easy way to register in advance, however, delegates may also register by completing and mailing or faxing the PDF registration form available online or on page 19.

To register online, go to the ACNS website: http://www.acns.org/meetings/annual-meeting-and-courses/2017-annual-meeting-and-courses/registration.

All registrations will be confirmed by email. If you do not receive a confirmation within two weeks of submission, please contact the ACNS Executive Office at (414) 918-9803 or info@acns.org.

## **Continuing Medical Education (CME) Information**

#### **Educational Mission Statement**

#### **PURPOSE**

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

#### CONTENT

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

#### TARGET AUDIENCE

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

#### **EXPECTED RESULT**

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

#### **GAPS AND NEEDS**

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

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

#### Gap 1. Emerging Areas of Practice

Neurophysiologic intraoperative monitoring (NIOM) and intensive care unit EEG monitoring (ICU EEG) are new and rapidly evolving areas of clinical neurophysiology. Few practicing neurologists have adequate training in these techniques, and physicians with competence in these areas are in great demand. Educational activities should cover both basic methodologies for those practitioners new to ICU EEG and NIOM, and innovative techniques.

**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) are performed at low volume at most centers, and a forum for review and hands-on interpretation are essential to maintain competence in these areas. Several specific topics with significant gaps between current practice and ideal practice have been identified via review of the literature, review of clinical neurophysiology fellowship curricula, and surveys of ACNS members and Annual Meeting attendees.

#### These include:

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

#### CHANGES IN BEHAVIOR/PRACTICE

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

#### **EVALUATION**

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

#### **POLICY ON FINANCIAL DISCLOSURES**

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

# **Continuing Medical Education (CME) Information**

#### **Meeting Description**

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

#### **Annual Courses Learning Objectives**

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

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

#### **Annual Meeting Learning Objectives**

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

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

#### **Accreditation Statement**

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

#### **Credit Designation**

ACNS designates the Annual Meeting for a maximum 18.75 *AMA PRA Category I Credit(s)*<sup>TM</sup>. Physicians should claim only credit commensurate with the extent of their participation in the activity.

ACNS designates the Annual Courses for the maximum number of AMA PRA Category 1 Credit(s)<sup>TM</sup>.

#### **Applied Cases in Central Neurophysiology & Video-EEG**

1.5 AMA PRA Category I Credit(s)™

#### **EEG/EMG/NIOM Technology**

1.5 AMA PRA Category I Credit(s)TM

Neurophysiologic Intraoperative Monitoring (NIOM) Part I 6.5 AMA PRA Category I Credit(s)<sup>TM</sup>

#### Intensive Care Unit EEG Monitoring (ICU EEG)

6.25 AMA PRA Category I Credit(s)™

#### **Introduction Stereo-EEG**

1.5 AMA PRA Category I Credit(s)™

#### **Non-Invasive Brain Stimulation Technology**

1.5 AMA PRA Category I Credit(s)™

#### **Autonomic Neurophysiology**

1.5 AMA PRA Category I Credit(s)™

#### **EMG**

4.25 AMA PRA Category I Credit(s)™

# Neurophysiologic Intraoperative Monitoring (NIOM) Part II 6.5 AMA PRA Category | Credit(s)<sup>TM</sup>

**Electrocorticography** (ECoG)/Invasive EEG 6.5 *AMA PRA Category I Credit(s)*™

#### 4th Annual CNP Program Director's Symposium

2 AMA PRA Category I Credit(s)™

#### **Applied Cases in Peripheral Neurophysiology**

2 AMA PRA Category I Credit(s)™

#### Video-EEG

3 AMA PRA Category I Credit(s)™

#### **Evoked Potentials**

2.75 AMA PRA Category I Credit(s)™

#### **Neonatal & Pediatric EEG**

3 AMA PRA Category I Credit(s)™



### **Call for Poster Abstracts**

#### **Submission Dates**

Poster abstract submission will open on October 1, 2016. All abstracts must be submitted online by Sunday, November 15, 2016 at 11:59pm ET. No exceptions will be made.

#### **Online Abstract Submission**

Poster abstracts must be submitted through the ACNS website. Complete instructions for submission are available online. Abstracts that have been mailed, emailed or faxed will not be accepted. Anyone may submit a poster abstract to ACNS. Membership in ACNS is not required for poster abstract submission.

#### **Abstract Review**

All abstracts submitted will be reviewed, evaluated for scholarly and relevant content, and graded in blinded fashion by the ACNS Program Committee. The review process takes approximately four weeks, and acceptance notification will be made by email no later than December 15, 2016.

#### **Abstract Categories**

Abstracts submitted to the 2017 ACNS Annual Meeting must fit into one of the following categories to be considered for presentation:

Autonomic Function and its Disorders

Basic Neurophysiology

Critical Care Monitoring

Deep Brain and Cortical Stimulation

Digital/Quantitative EEG and Topography

**EEG** 

**EMG/NCV Testing** 

Epilepsy: Clinical

Epilepsy: Pathophysiology

**Evoked Potentials** 

Functional Imaging

Intraoperative Monitoring

Magnetoencephalography

Peripheral Neuropathy/Neuromuscular

Sensory/Motor Physiology

Sleep

Video-EEG Monitoring for Epilepsy

#### **Abstract Types**

Two types of poster abstracts submissions will be accepted: Poster Abstract Regular Submission or Poster Abstract Case Report Submission. Both types of submissions will follow the same review process. Abstract tiles are limited to 60 characters and 200 words for the additional required fields listed below for each submission type:

#### POSTER ABSTRACT REGULAR SUBMISSION

Introduction

Methods

Results

Conclusion

#### POSTER ABSTRACT CASE REPORT SUBMISSION

Introduction

Case Report/Case History

Conclusion

#### **Previous Publication or Presentation**

Abstracts which have been published in journals, meeting proceedings, or other publication, as well as those presented at meetings prior to the ACNS meeting are eligible and welcome for submission. All poster abstracts presented at the Annual Meeting will be published in the Journal of Clinical Neurophysiology.

#### **Author Attendance Requirement**

By submitting an abstract to 2017 ACNS Annual Meeting, abstract authors are agreeing that at least one author will attend the meeting and will be available to present on the date and time assigned by the Program Committee. Authors will be notified of presentation dates and times at the time of notification of acceptance and are expected to make appropriate travel arrangements to ensure that at least one of the abstract's authors will be in attendance. In addition, presenting authors are expected to register to attend the meeting by the deadline set forth in their acceptance notification. Abstracts for which an author is not pre-registered by the dates set forth will automatically be withdrawn from the program. Poster setup is tentatively scheduled for Thursday, February 9 and displayed Friday, February 10 – Saturday, February 11, 2017.

#### **Poster Cancellation Policy**

At least one author or co-author on all posters is expected to register to attend the meeting for which they are accepted by the deadlines set forth in their acceptance notification. If this author cancels their registration prior to the meeting, the poster may be withdrawn from the program.

#### **Important Dates to Remember**

October 1, 2016	Poster Abstract Submission Open
November 15, 2016	Poster Abstract Submission Closes
December 1, 2016	Young Investigator Travel Awards Announced (See page 8 for more information)
December 15, 2016	Poster Abstract Acceptance Notifications Sent

Submit online at www.acns.org!

# **Young Investigator Travel Award**

Several young physician investigators will be awarded travel fellowships of \$1,000 each. These fellowships are determined based upon the ranking of the applicant's abstract by the Program Committee.

#### **Eligibility Criteria**

Applicant must be: (1) a current ACNS member or apply for membership concurrent with application for Travel Award; (2) a resident, fellow, or junior faculty within two years of completion of fellowship training; and (3) be the first author of an abstract submitted to the Annual Meeting. Applicant must meet the entire aforementioned criteria in order to be considered for the Young Investigator Travel Award. Prior recipients of Travel Fellowships are not eligible for additional Travel Fellowship awards.

#### Selection

Awardees will be chosen based on the quality of submitted abstracts, as ranked by the ACNS Program Committee. A total of six travel fellowships will be awarded for the ACNS 2017 Annual Meeting. Additional travel awards may be awarded if funding is available.

#### **Award**

Awardees will receive complimentary registration for the meeting and reimbursement of travel funds up to \$1,000, upon provision of an expense voucher, and original receipts. Awardees will be recognized at an award ceremony during the Annual Meeting. Awards are one-time only.

#### **Procedures**

Upon close of abstract submission, the ACNS Program Committee will review, evaluate, and rank abstracts, including all candidates for consideration to receive a travel award. The Program Committee Co-Chairs will select the final six awardees based on the collective rankings from the Program Committee. ACNS will notify awardees of decision no later than December 1, 2016. Awardees will then be expected to accept invitation by the deadlines set forth in their acceptance notifications, as well as register for the Annual Meeting, and secure travel arrangements. Upon provision of an expense voucher, including original receipts, reimbursement will be provided to award recipients, no later than 30 days after the Annual Meeting.

#### **Cancellation Policy**

Award recipients are expected to register to attend the Annual Meeting by the deadlines set forth in their acceptance notification. If an award recipient cancels their registration prior to the meeting, the Travel Award may be withdrawn from the individual and designated to another candidate.





# **Award Recipients & Lectures**

### Friday, February 10, 2017

#### 2017 PIERRE GLOOR AWARD PRESENTATION & LECTURE



Charles M. Epstein, MD, FACNS

The Gloor Award is presented annually for outstanding current contributions to clinical neurophysiology research. Dr. Epstein will be recognized and will deliver the 2017 Gloor Address on Friday, February 10, 2017 at the ACNS Annual Meeting. Dr. Epstein is Professor of Neurology at Emory University School of Medicine in Atlanta, Georgia and a former president of ACNS.

#### Saturday, February 11, 2017

#### 2017 HERBERT H. JASPER AWARD PRESENTATION & LECTURE



"The Epileptogenic Zone" Hans Lüders, MD, PhD, 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. Lüders will be recognized during a general session on Saturday, February 11, 2017. Dr. Lüders is a Professor in the Department of Medicine at Cleveland Clinic Lerner College of Medicine of Case Western Reserve in Cleveland.

#### 2017 ROBERT S. SCHWAB AWARD



"Modern Clinical Neurophysiology in ALS-Tracing Lower & Upper Motor Neuron Involvement" Reinhard Dengler, MD

The Schwab Award is presented annually to an individual who has made significant contributions in the area of clinical neurophysiology. Dr. Dengler will be recognized and will deliver the 2017 Schwab Lecture on Saturday, February 11, 2017. Dr. Dengler is the Chairman and a Professor of Neurology at Hannover Medical School.



# **Annual Courses Program**

## Wednesday, February 8, 2017

6:30-9:30A	AM al Breakfast		sive Care Unit EEG Monitoring (ICU EEG)
7:00-8:30	AM	Co-Directors: Jong Woo Lee, MD, PhD, FACNS & Courtney J. Wus MD, FACNS	
	<b>MG/NIOM Technology</b> Susan T. Herman, MD, FACNS & Seward Rutkove, MD	9:00am	Overview of ICU EEG Monitoring in Neonates, Children & Adults
7:00am	EMG Technology Seward Rutkove, MD	9:40am	Nicholas Abend, MD, FACNS Guidelines & Logistics of ICU EEG Monitoring
7:45am	EEG Technology Susan T. Herman, MD, FACNS	10:10am	Susan T. Herman, MD, FACNS  cEEG Interpretation: Background, Reactivity,
7:00-8:30			Artifacts, & ACNS Terminology  Lawrence J. Hirsch, MD, FACNS
802: Applie	ed Cases in Central Neurophysiology & Video	10:40am	Morning Break
	Selim R. Benbadis, MD, FACNS & William O. Tatum, IV,	11:00am	cEEG Interpretation: The Ictal-Interictal Continuum Suzette M. LaRoche, MD, FACNS
audience par	will be a fast paced, interactive "show & tell" where rticipation is encouraged. Several challenging EEGs and e presented & lively discussion between the course	11:30am	Treatment of Nonconvulsive Seizures & Status Epilepticus Aatif M. Husain, MD, FACNS
directors & th	ne audience.	12:00pm	Lunch
9:00AM-5:	00PM physiologic Intraoperative Monitoring (NIOM)	1:00pm	ICU EEG Reading Session: Adult Cases Elizabeth Gerard, MD, FACNS
Part I	Aatif M. Husain, MD, FACNS & Mirela V. Simon, MD, MSc,	1:15pm	cEEG Interpretation: Neonates Tammy Tsuchida, MD, PhD, FACNS
FACNS		1:45pm	ICU EEG Reading Session: Neonatal & Pediatric
9:00am	Welcome & Introductions		Cases William B. Gallentine, DO, FACNS
9:05am	SEP Monitoring Viet Nguyen, MD, FACNS	2:00pm	Finances, Billing & Coding Marc R. Nuwer, MD, PhD, FACNS
9:45am	MEP Monitoring Leslie H. Lee, MD FACNS	2:30pm	Quantitative EEG for Seizure Detection Cecil D. Hahn, MD, MPH, FACNS
10:25am	Morning Break	3:00pm	Afternoon Break
10:40am	BAEP Monitoring  Alan D. Legatt, MD, PhD, FACNS	3:20pm	Quantitative EEG for Ischemia Detection M. Brandon Westover, MD, PhD
11:20am	EEG Monitoring Michael McGarvey, MD, FACNS	3:50pm	Multimodal Monitoring in Acute Brain Injury Jan Claassen, MD, PhD
12:00pm	Discussion	4:30pm	cEEG of Anoxic Brain Injury & Targeted Temperature
12:15pm	Lunch		Management
1:15pm	EMG & Peripheral Nerve Monitoring Gloria M. Galloway, MD, MBA, FACNS		Jeffrey Britton, MD, FACNS
1:55pm	Cranial Nerve Monitoring  Jaime R. Lopez, MD, FACNS		
2:35pm	Anesthesia Patrick Bolton, MD		
3:15pm	Afternoon Break		
3:30pm	Troubleshooting Jay L. Shils, PhD, DABNM, FACNS		
4:10pm	Billing Issues Marc R. Nuwer, MD, PhD, FACNS		
4:50pm	Discussion		

# **Annual Courses Program**

## Thursday, February 9, 2017

mursua	y, i ebidary 9, 2017					
6:30-9:30	АМ	12:15pm	Lunch			
Continental Breakfast		1:15pm	EMG Waveform Identification Devon I. Rubin, MD, FACNS			
7:00-8:30		0.00484 /	00 <b>DM</b>			
901: Stereo-EEG Co-Directors: Stephan U. Schuele, MD, MPH, FACNS & Nitin Tandon, MD		9:00AM -5:00PM 921: Neurophysiologic Intraoperative Monitoring (NION				
7:00am	Patient & Electrode Selection Stephan U. Schuele, MD, MPH, FACNS	Part II	: Aatif M. Husain, MD, FACNS & Mirela V. Simon, MD, MSc,			
7:30am	Image Processing & Surgical Planning Giridhar Kalamangalam, MD, DPhil, FACNS	FACNS 9:00am	Welcome & Introductions			
8:00am	Nuts & Bolts of SEEG Implantation Nitin Tandon, MD	9:05am	Motor Mapping & Monitoring Charles Yingling, PhD, FACNS			
7:00-8:30		9:45am	Medicolegal & Business Issues George R. Lee, MD			
	nvasive Brain Stimulation Technology	10:25am	Morning Break			
	: Charles Epstein, MD, FACNS & Alexander Rotenberg, MD,	10:40am	Value of NIOM			
<i>PhD</i> 7:00am	The Basics of TMS & TDCS: Circuits, Physics, &	10:40am	John Ney, MD, MPH			
	Specific Neuronal Elements Charles M. Epstein, MD, FACNS	11:20am	Pedicle Screw Evaluation Bernard Allen Cohen, PhD, FACNS FASNM			
7:45am	Putting the Pieces Together: Ion-Channels,	12:00pm	Q & A Discussion			
	Transmitters, Classic & Contemporary Studies in Non-Invasive Brain Stimulation	12:15pm	Lunch			
	Alexander Rotenberg, MD, PhD	1:15pm	Language Mapping David Gloss, MD, FACNS			
7:00-8:30 <b>903: Auto</b> r	AM nomic Neurophysiology	1:55pm	Electrocorticography Mirela V. Simon, MD, FACNS			
Co-Directors	: Jeffrey Liou, DO & Claus Reinsberger, MD, PhD, FACNS	2:35pm	Pelvic Floor Monitoring			
7:00am	Introduction		Stanley Skinner, MD, FACNS			
7:05am	Anatomy & Physiology of the Autonomic Nervous System	3:15pm	Afternoon Break			
	Jeffrey Liou, DO	3:30pm	D Wave Monitoring with Case Discussions Eva K. Ritzl, MD, FACNS			
7:40am	Neurological Disorders with Central Autonomic Failure	4:10pm	Sensory & Motor Spinal Cord Mapping Andres Gonzalez, MD, MMM, FACNS			
8:05am	Alexandra Hovaguimian, MD  Peripheral Autonomic Failure	4:50pm	Discussion			
	Brent Goodman, MD	9:00AM-5	:00PM			
9:00AM-2	:30PM		rocorticography (ECoG) & Intracranial EEG			
911: EMG		Co-Directors MPH, FACNS	: Lawrence J. Hirsch, MD, FACNS & Stephan U. Schuele, MD,			
9:00am	Daniel Menkes, MD, FACNS & Devon Rubin, MD, FACNS  Pitfalls of NCS	9:00am	Introduction & Overview			
9.00aiii	Devon I. Rubin, MD, FACNS	9:15am	Temporal Lobe Epilepsy: When to do Invasive			
9:45am	Electrodiagnostic Evaluation of Peripheral Neuropathy		Monitoring & How to Choose Electrode Type Giridhar Kalamangalam, MD, DPhil, FACNS			
	Daniel Menkes, MD, FACNS	9:45am	Extratemproal Epilepsy: When to do Invasive Monitoring & How to Choose Electrode Type			
10:30am	Morning Break		Stephan U. Schuele, MD, MPH, FACNS			
10:45am	Electrodiagnostic Approach to Neuromuscular Junction Disorders Brent Goodman, MD	10:15am	Surgical Techniques Including Risks of Invasive Implantations  Daniel J. Curry, MD			
11:30am	Electrodiagnostic Features of Hyperexcitable Nerve Syndromes Ruple Laughlin, MD	10:45am	Morning Break			

# **Annual Courses Program**

## Thursday, February 9, 2017

11:00am	Patterns of Seizure Onsets & Spread, Underlying Pathological Substrate & Outcomes Lawrence J. Hirsch, MD, FACNS	11:30AM-2:00PM 931: 4th Annual CNP Program Director's Symposiun Director: Jeffrey Britton, MD, FACNS		
11:30am	Intracranial EEG in Children Juan Bulacio, MD	11:30am	Lunch	
12:00pm	Lunch	12:00pm	Fellowship Match - Pros & Cons Jeffrey Britton, MD, FACNS	
1:00pm	Concept of "Epileptogenic Zones/Networks" & Identifying them with Invasive EEG TBD	12:30pm	Education Innovations you can Initiate Tomorrow Jeffrey Britton, MD, FACNS Lily Wong-Kisiel, MD	
1:45pm	Case Discussion I: Nonlesional Neocortical Epilepsy Jay Gavvala, MD		Jay S. Pathmanathan, MD, PhD	
2:05pm	Case Discussion II: FCD: ECoG vs. Invasive	1:30pm	Words to the Wise from ACGME Imran I. Ali, MD, FACNS	
	Implantation Lawrence J. Hirsch, MD, FACNS	3:00-5:00	PM	
2:25pm	Case Discussion III: FCD: Bitemporal Lobe Epilepsy Christopher Skidmore, MD	<b>941: Applied Cases in Peripheral Neurophysiology</b> Co-Directors: Ruple Laughlin, MD & Jaime R. López, MD, FACNS		
2:45pm	Discussion	3:00pm	Introduction	
3:00pm	Afternoon Break	3:05pm	Applied Cases in Neuropathy	
			Ruple Lauahlin. MD	
3:15pm	Functional Mapping with Intracranial EEG & Cortical Stimulation Anthony Ritaccio, MD	3:55pm	Ruple Laughlin, MD  Applied Cases in Neuromuscular Junction Disorders Julie Khoury, MD	
3:15pm 4:00pm	Stimulation	3:55pm 4:25pm	Applied Cases in Neuromuscular Junction Disorders	
	Stimulation Anthony Ritaccio, MD Wideband Intracranial EEG & Localization of Seizure		Applied Cases in Neuromuscular Junction Disorders Julie Khoury, MD  Applied Cases in Myopathies & Myotonic Disorders	
	Stimulation Anthony Ritaccio, MD Wideband Intracranial EEG & Localization of Seizure Foci	4:25pm	Applied Cases in Neuromuscular Junction Disorders Julie Khoury, MD  Applied Cases in Myopathies & Myotonic Disorders Amy Visser, MD	

## Friday, February 10, 2017

Steven Karceski, MD

7:00-10:0		8:00am	Brainstem Auditory Evoked Potentials (BAEPs)  Alan D. Legatt, MD, PhD, FACNS
Co-Directors	: Phillip Pearl, MD, FACNS & Michael R. Sperling, MD, FACNS	8:30am	Discussion
7:00am	How to Build & Structure a Video-EEG Monitoring Unit William O. Tatum, IV, DO, FACNS	8:35am	Break
7:30am	Video Analysis of Ictal Behaviors Nancy Foldvary-Schaefer, DO	8:45am	EP Examples & Case Discussions Viet Nguyen, MD, FACNS (Moderator) Aatif M. Husain, MD, FACNS
8:00am	Scalp EEG in Epilepsy Phillip Pearl, MD, FACNS		Steven Karceski, MD Alan D. Legatt, MD, PhD, FACNS Elayna Rubens, MD, FACNS
8:30am	Intracranial EEG Michael R. Sperling, MD, FACNS		Reza Zarnegar, DO, FACNS
9:00am	Case Studies	7:00-10:0	00AM
	Christopher Skidmore, MD	1303: Ned	onatal & Pediatric EEG
7:00-10:0	10 A M	Co-Director:	s: Mark Scher, MD & Asim Shahid, MD
1302: Evo	ked Potentials	7:00am	Practice & Pitfalls of Neonatal EEG  Mark Scher, MD
	:: Viet Nguyen, MD, FACNS & Elayna Rubens, MD, FACNS	8:00am	Challenges in Pediatric EEG Interpretation
7:00am	Introduction & Visual Evoked Potentials (VEPs)		Jun Park, MD
7:30am	Elayna Rubens, MD, FACNS  Somatosensory Evoked Potentials (SEPs)  Staven Karreski, MD	9:00am	Use of Signal Processing in Pediatric & Neonatal EEG Kenneth Loparo, PhD

### Friday, February 10, 2017

10:00-10:30AM

Coffee Break – Visit Exhibits & Poster Viewing

10:30AM-12:15PM

**Opening General Session** 

10:30am Welcome

10:40am President's Lecture

Jonathan C. Edwards, MD, FACNS

11:30am Gloor Award Presentation & Lecture

Charles M. Epstein, MD, FACNS

12:15-1:30PM

**Lunch-Visit Exhibits & Poster Tours** 

1:30-3:30PM

**Concurrent Sessions** 

1011: IFCN Symposium: Movement

**Control – The Clinical** 

**Neurophysiologist's Perspective** 

Session Director: Mark Hallett, MD, FACNS

1:30pm Motor Cortex Function Tested by Transcranial

Magnetic Stimulation

Ulf Ziemann, MD

2:00pm Cerebellar Stimulation & Prism Adaptation

Yoshikazu Ugawa, MD

2:30pm Brain Reactions to the Use of Robotic Hand in

**Amputees** 

Paolo Maria Rossini, MD, PhD

3:00pm The Physiology of Will

Mark Hallett, MD, FACNS

1012: Epileptic Encephalopathy with CSWS: An Overview & Practical Approach

Session Director: Kevin Chapman, MD

1:30pm What's in a Name – ESES/CSWS Definition &

Evaluation

Ivan Sanchez Fernandez, MD

2:05pm What is the Influence of Spikes on Cognitive

Impairment?

Jennifer Vannest, PhD

2:40pm The Treatment of ESES/CSWS – Options & Practical

**Approaches** 

Tobias Loddenkemper, MD, FACNS

3:15pm Discussion

1:30-3:00PM

**Tips & Tricks for MEP in Spinal Surgery** 

Session Director: David Gloss, MD, FACNS

1:30pm Evidence for MEPs in Spinal Surgery

David Gloss, MD, FACNS

2:00pm Tips & Tricks for MEPs in Spinal Surgery

Eva K. Ritzl, MD, FACNS

Mirela V. Simon, MD, MSc, FACNS

3:30-4:00PM

**Coffee Break** 

4:00-5:30PM

**Concurrent Sessions** 

1021: Clinical Neurophysiology as a Window to Con-

sciousnes

Session Director: Meriem Bensalem-Owen, MD, FACNS

4:00pm Introduction – Epilepsy as a Model for the Study of

Consciousness

Meriem Bensalem-Owen, MD, FACNS

4:10pm The Role of Clinical Neurophysiology in the

**Evaluation of Coma & Disorders of Consciousness** 

Peter W. Kaplan, MD, FRCP, FACNS

4:35pm Sleep & the Different States of Consciousness

Madeleine M. Grigg-Damberger, MD, FACNS

5:00pm Syncope & the Borderland of Consciousness

Kevin Nelson, MD

5:25pm Discussion

1022: Mapping Epileptogenic & Functional Cortex in Tumor-Related Epilepsy

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

4:00pm Diagnostic Video EEG Monitoring of Brain Tumors

Jessica W. Templer, MD

4:20pm Presurgical Evaluation in Tumor-Related Epilepsy

Stephan U. Schuele, MD, MPH, FACNS

4:45pm Functional Mapping

Jeffrey Politsky, MD, FRCP(c)

5:10pm ECoG vs. Invasive EEG to Identify Seizure Focus in

TRF

Michael R. Sperling, MD, FACNS

1023: Clinical Neurophysiology Around the World

Session Director: Ioannis Karakis, MD, PhD, MSc

4:00pm Clinical Neurophysiology in Africa

Jaffar Khan, MD

4:25pm Clinical Neurophysiology in Asia

Chong Tin Tan, MD, FRCP

4:50pm Clinical Neurophysiology in South America

Jorge G. Burneo, MD

5:15pm Clinical Neurophysiology in the Western World

Ioannis Karakis, MD, PhD, MSc

1024: SIG: Clinical Neurophysiology Resident & Fellows Special Interest Group

Session Director: Andrea Hakimi, DO, FACNS

This session will highlight cases submitted by Residents and Fellows on a variety of Clinical Neurophysiology topics or quality improvement projects.

#### Friday, February 10, 2017

1025: Joint Symposium ACNS/Mexican Society of Clinical Neurophysiology: Beyond Rhythms & Spikes: How the EEG Can Reveal the Dysfunctional Dynamics of Complex Networks in Psychiatric & Neurodevelopmental Disorders

Session Directors: Claudia Paz, MD & Armando Tello, MD, PhD

4:00pm The Crossroads of Anxiety: Distinct

**Neurophysiological Maps for Different** 

Symptomatic Groups Montserrat Gerez, MD, PhD 4:25pm Praxis & Visuo-Motor Network Function in Healthy Subjects & Autism Spectrum Disorders (ASD)

Joshua Ewen, MD, FACNS

4:50pm QEEG in Obsessive Compulsive Disorder

Humberto Nicolini, MD, PhD

5:30-5:45PM Walking Break

5:45-7:00PM Neurophys Bowl

7:00-8:30PM

**Welcome Reception** 

#### Saturday, February 11, 2017

7:00-8:00AM

**Continental Breakfast – Visit Exhibits & Posters** 

8:00-9:30AM

**Concurrent Sessions** 

1111: Interpreting Challenging NCS & Needle EMG Findings - An Interactive Case-Based Approach

Session Director: Devon I. Rubin, MD, FACNS

8:00am Challenging NCS & Needle EMG Findings - 1

Paul E. Barkhaus, MD

8:30am Challenging NCS & Needle EMG Findings - 2

Elliot Dimberg, MD, FACNS

9:00am Challenging NCS & Needle EMG Findings - 3

Devon I. Rubin, MD, FACNS

1112: Aggressiveness of Treatment of Refractory Status Epilepticus: A Clinical Neurophysiology Approach

Session Director: Frank W. Drislane, MD, FACNS

8:00am Patients with Refractory Status Epilepticus should

be Treated Aggressively Lawrence J. Hirsch, MD, FACNS

8:30am Aggressive Treatment of Patients with Refractory

Status Epilepticus can be Dangerous for Their

Health

Peter W. Kaplan, MD, FRCP, FACNS

9:00am Trying to get the Best of Both Positions

Frank W. Drislane, MD, FACNS

1113: Competing Techniques for Refining the Location of the Epileptogenic Zone: Magnetoencephalography & High Density EEG

Session Director: Richard C. Burgess, MD, PhD, FACNS

8:00am Comparison of Intracranial EEG Potentials with

Source Localization from Scalp EEG & MEG: Location

Accuracy & Implantation Guide Eliane Kobayashi, MD, PhD

8:30am Simultaneous High Density Scalp EEG & MEG

Robert C. Knowlton, MD

9:00am Theoretical & Practical Considerations for

Localization of the Epileptogenic Zone from High

**Density EEG & MEG** 

Richard C. Burgess, MD, PhD, FACNS

1114: Cortical Stimulation: Theory & Practice

Session Director: Giridhar Kalamangalam, MD, DPhil, FACNS

8:00am Physiology of Non-Invasive Cortical Stimulation

Mark Hallett, MD, FACNS

8:20am Measuring & Modifying Cortical Excitability with

**AEDs** 

Ulf Ziemann, MD

8:40am Modelling the Effects of Cortical Stimulation:

Afterdischarge

Giridhar Kalamangalam, MD, DPhil, FACNS

9:00am From Science to Bedside: Eloquent Function

Mapping

Anthony L. Ritaccio, MD

9:20am Panel Discussion

#### Saturday, February 11, 2017

#### 1115: Joint ACNS/ASECN (Argentinian Society)

Symposium: Innovations in NIOM Interpretation

Session Director: Martin J. Segura, MD, PhD

8:00am A New Warning Criterion for MEP-NIOM & an

Alternative Gold Standard to Better Identify "False

Positive" Findings Martin J. Segura, MD, PhD

8:25am Proposed Algorithm for Decision Making in the

Face of Neurophysiological Alarms During Spinal

Deformity Surgeries Ricardo J. Ferreira, MD

8:50am New Alarm Criteria for SEP/BAEP Monitoring

Parthasarathay Thirumala, MD, FACNS

9:15am Discussion

9:30-10:00AM

Coffee Break - Visit Exhibits & Poster Viewing

10:00-11:00AM

**General Session** 

10:00am Young Investigator Travel Award Presentation

10:15am Jasper Award Presentation & Lecture: The

Epileptogenic Zone Hans Lüders, MD, PhD, FACNS

11:00-11:15AM Walking Break

11:15AM-12:45PM

**Concurrent Sessions** 

1131: IFCN Symposium: The Clinical Neurophysiology of Neuromuscular

Disease

Session Director: TBD

11:15am Action Potential & Impulse Conduction in Human

Myelinated Axons
David Burke, MD, DSc

11:45am SFEMG in Neuromuscular Disease

Liying Cui, MD

12:15pm Evaluation of Sensory Neuropathies

Renato Verdugo, MD

1132: Consensus for Recording & Analysis of Wide-Band EEG in Clinical Epilepsy

Session Director: Akio Ikeda, MD, PhD

11:15am Interictal Slow Shifts by Macroinvasive Electrodes

Akio Ikeda, MD, PhD

11:35am Ictal Slow Shifts by Macroinvasive Electrodes

Pradeep Modur, MD, FACNS

11:55am High Frequency Oscillation (HFO) by

Microelectrodes Greg Worrell, MD

12:15pm High Frequency Oscillation (HFO) by Macroinvasive

Recording

Jean Gotman, PhD, FACNS

1133: Uso de EEG en Cuidado Intensivo (Use of EEG in the ICU)

Note: This session will be presented in Spanish. Session Director: Adriana Bermeo-Ovalle, MD, FACNS

11:15am Aspector Tecnicos, Limitaciones y Ventajas del uso

de EEG en la UCI (Technical Aspects, Advantages &

Limitations of the Use of EEG in the ICU)

Adriana S. Tanner, MD

11:40am Patrones Confusos de EEG en la UCI: Status

Triphasicus vs. Status Epilepticus (Patterns in the ICU: Status Triphasicus vs. Status Epilepticus)

Andres M. Kanner, MD

12:05pm Principios y uso de EEG Cuantitativo en UCI

(Principles & Use of qEEG in ICU)
Adriana Bermeo-Ovalle, MD, FACNS

12:25pm Uso de EEG para Diagnostico y Manejo de

Status Epilepticus (Use of EEG for Diagnosis &

**Management of Status Epilepticus)** 

Juan G. Ochoa, MD

12:45-1:30PM

**Lunch-Visit Exhibits & Posters** 

1:30-2:00PM

**Annual Business Meeting** 

2:00-3:30PM

**Concurrent Sessions** 

1151: Nerve Conduction Testing in Entrapment Neuropathies

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

2:00pm Common Entrapments of the Upper Extremities

Gloria M. Galloway, MD, MBA, FACNS

2:15pm Common Entrapments of the Lower Extremities

Mark Ross, MD, FACNS

2:30pm Workshop Skills Session

Jaime R. Lopez, MD, FACNS

3:00pm Workshop Skills Session

Gloria M. Galloway, MD, FACNS

Mark Ross, MD, FACNS

Saturday, February 11, 2017

# 1152: Advances in Prognostication & Management of Coma Following Cardiac Arrest

Session Director: M. Brandon Westover, MD, PhD

2:00pm Self-Fulfilling Prophecies, Moral Dilemmas, & the Need for Quantitative Knowledge in Hypoxic

Ischemic Encephalopathy
M. Brandon Westover, MD, PhD

2:10pm Advances in the Qualitative & Quantitative Interpretation of Prognostic EEG Features

Michel J. van Putten, MD, MSc, PhD

2:30pm Quantitative Assessment of EEG Background

Reactivity in Hypoxic Ischemic Encephalopathy

Edilberto Amorim, MD

2:45pm Quantifying Dynamic EEG Features in Prognosis of

Hypoxic Ischemic Encephalopathy Mohammad Ghassemi, DPhil

3:00pm Electrodermal Activity Trends in Hypoxic Ischemic

Encephalopathy

Jong Woo Lee, MD, PhD, FACNS

3:20pm Treatment of Electroencephalographic Status

**Epilepticus after Cardiopulmonary Resuscitation:** 

The TELSTAR Trial Barry Ruijter, MSc

# 1153: Neurostimulation & Networks: Management of Refractory Epilepsy

Session Director: Dawn Eliashiv, MD, FACNS

2:00pm Neurostimulation: Why Does it Work & What are the

Future Directions?

Dawn Eliashiv, MD, FACNS

2:20pm New Insights to Vagus & Trigeminal & Tachycardia

**Based Closed Loop Neurostimulation** 

Chirstopher DeGiorgio, MD

2:40pm Strategies in Patient Selection & Parameter Setting

with Responsive Neurostimulation Lawrence J. Hirsch, MD, FACNS

3:00pm Added Value of Deep Brain Stimulation in Epilepsy

Robert Gross, MD, PhD

3:20pm Discussion

# 1154: Cortico-Cortical Evoked Potentials & High Frequency Oscillations – Brain Mapping Made Easy

Session Director: Daniela Minecan, MD, FACNS

2:00pm The ABCs of High Frequency Oscillations & their

Clinical Relevance Rafeed Alkawadri, MD

2:20pm Cortico-Cortical Evoked Potentials – A Practice

Review TBD

2:40pm Language Mapping – High Gamma Activity &

**Coritco-Cortical Evoked Potentials Recordings** 

Anthony L. Ritaccio, MD, FAAN, FANA

3:00pm Wrap Up & Future Directions

TBD

#### 1155: Joint ACNS/IFCN Latin America Chapter Symposium: Transcranial Motor Evoked Potentials Warning Criteria

Session Director: Paulo Andre Kimaid, MD, PhD

2:00pm The Amplitude Decrease Warning Criteria

Paulo Andre A. Kimaid, MD, PhD

2:30pm The Threshold Level Warning Criteria

Jaime R. Lopez, MD, FACNS

3:00pm The All-or-Nothing Warning Criteria

Francisco Soto, MD

#### 3:30-3:45PM Walking Break

3:45-5:15PM

#### **Concurrent Sessions**

#### 1161: Understanding the Utility of Stereo Electroencephalography (SEEG) in Intractable Focal Epilepsy through Illustrative Cases

Session Director: Jun T. Park, MD

3:45pm Guiding Principles Behind Stereo

Electroencephalography Hans Lüders, MD, PhD, FACNS

4:15pm Implantation Approach: Adults, Children

Jonathan Miller, MD, FACNS

4:35pm Illustrative Cases: Adults

Guadalupe Fernandez Baca Vaca, MD

4:55pm Illustrative Cases: Children

Asim Shahid, MD

# 1162: Wearable Seizure Detection Devices: Are They Ready for Primetime? A Critical Look at Peri-Ictal Physiology & Applicable Technology

Session Director: Barbara Jobst, MD & Elson Lee So, MD, FACNS

3:45pm Introduction

Elson Lee So, MD, FACNS

3:50pm Why the Need for Seizure Detection Wearables

Barbara Jobst, MD

4:00pm Which Peri-Ictal Neurophysiological Changes Can

be Mapped by Current Technology

Daniel Friedman, MD

4:25pm How Accurate are Current Seizure Detection

Wearables?

Tobias Loddenkemper, MD, FACNS

4:50pm Open Forum with Audience Participation

#### Saturday, February 11, 2017

1163: The Frontal Lobe Club

Session Director: Daniela Minecan, MD, FACNS

3:45pm The Functional Anatomy of the Frontal Lobe

Daniela Minecan, MD, FACNS

4:00pm Frontal Lobe Seizure Subtypes with a Focus on

Semiology

Rafeed Alkawadri, MD

4:20pm Frontal Lobe Seizures – Invasive Monitoring

Approaches
Juan Bulacio, MD

4:40pm Frontal Lobe Seizures – What about the Children?

**TBD** 

5:00pm Wrap Up & Recommendations for Frontal Lobe

**Epilepsy** 

Stephan U. Schuele, MD, MPH, FACNS

1164: Proponents vs. Opponents: You Really Mean I Need to Order a MEG in 2017?

Session Director: Anto Bagic, MD, PhD, FACNS

3:45pm Informed Skeptic – We Wish, We Profess, but thus

Spoke the NAEG Centers' Directors

Anto Bagic, MD, PhD, FACNS

4:10pm Enlightened Proponent – If you just could See How

it Works in Our Hands...

Richard C. Burgess, MD, PhD, FACNS

4:35pm Enlightened Opponent – Know What you Have &

When to Use It!

Ronald Lesser, MD, FACNS

5:00pm Discussion

1165: SIG: Neurophysiological Intraoperative Monitoring (NIOM)

Session Director: Jaime R. Lopez, MD, FACNS

3:45pm Continuous Neuromonitoring Part 2: Fact or

Fiction?

Leslie H. Lee, MD, FACNS

4:10pm Career Opportunities in NIOM – An Overview

Gowri Lakshminarayan, MD

4:35pm Mexican National Clinical Practice Guidelines in

NIOM

Lilia de la Maza, MD

5:00pm Open Forum Discussion

5:15-5:30PM Walking Break

5:30-7:00PM General Session

5:30pm Research Highlights Program

The Research Highlights Program is designed to present the best of the best in research in various Clinical Neurophysiology fields. There will be three poster abstracts

selected to present in the program.

6:15pm Schwab Award Presentation & Lecture: Modern

Clinical Neurophysiology in ALS-Tracing Lower &

**Upper Motor Neuron Involvement** 

Reinhard Dengler, MD

7:00-8:00PM

**Neurology of Musical Masters** 

Phillip Pearl, MD, FACNS

#### Sunday, February 12, 2017

7:00-8:00AM

**Continental Breakfast** 

8:00-9:30AM

**Concurrent Sessions** 

1201: Joint ACNS/DGKN (German Society)
Symposium: The Role of Neurophysiology

for Acute Sports Injuries

Session Director: Claus Reinsberger, MD, PhD

8:00am Neurophysiological Assessment of Acute Sports

Related Peripheral Nerve Injuries

Reinhard Dengler, MD

8:30am Neurophysiological Assessment of Acute Sports

Related Injuries of the Central Nervous System

Claus Reinsberger, MD, PhD, FACNS

9:00am Sleep & Sports Injuries - Prevention, Sleep Post

**Concussion & Circadian Shifts** 

Madeleine Grigg-Damberger, MD, FACNS

1202: Neurophysiologic Intraoperative Monitoring of Vascular Disorders

Session Director: Jaime R. Lopez, MD, FACNS

8:00am NIOM of Cerebrovascular Surgery & Endovascular

**Procedures** 

Jaime R. Lopez, MD, FACNS

8:25am Neurophysiologic Monitoring of Aortic Aneurysm

Repair

Leslie H. Lee, MD, FACNS

8:50am NIOM of Cardiac Surgery

Michael McGarvey, MD, FACNS

9:15am Case Presentations & Discussion

#### Sunday, February 12, 2017

#### 1203: Advances to Improve Accuracy in EEG Interpretation

Session Director: Suzette M. LaRoche, MD, FACNS

8:00am Automate Detection of Interictal Epileptiform

Activity

Jonathan J. Halford, MD

8:20am Determination of Reactivity in the Comatose

**Population** 

M. Brandon Westover, MD, PhD

8:40am Standardized Critical Care EEG Terminology

Suzette M. LaRoche, MD, FACNS

9:00am Defining & Diagnosing Non-Convulsive Status

**Epilepticus** 

Emily J. Gilmore, MD

# 1204: SIG: Invasive EEG – Interictal Epileptiform Activity & Bevond

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

8:00am EEG/MEG Source Imaging & Intracranial Correlation

John Ebersole, MD

8:15am Non-Epileptiform Interictal Abnormalities on ECoG

Douglas R. Nordli, MD, FACNS

8:30am Activation Methods: Pros & Cons

Andres M. Kanner, MD

8:45am IED & HFO in the Operating Room

Greg Worrell, MD

9:00am IED & HFO: Correlation with Ictal Onset Zone

Jean Gotman, PhD, FACNS

9:15am Discussion

9:30-10:00AM Coffee Break

10:00-11:30AM

Concurrent Sessions 1211: Joint ACNS/Brazilian Society Symposium: The Neurology &

Neurophysiology of Zika Virus

Session Director: Luis Otavio Caboclo, MD, MSc, PhD

10:00am Zika Virus Infection: The Outbreak of Zika-

Associated Microcephaly

Eli M. Mizrahi, MD, FACNS

10:25am Zika Virus Encephalitis

Luis Otavio Caboclo, MD, MSc, PhD

10:50am Guillain-Barré Syndrome Associated with Zika Virus

Marcondes Franca, MD, PhD

11:15am Discussion

#### 1212: Practical Applications of Unconventional Neurophysiologic Intraoperative Monitoring (NIOM) Techniques

Session Director: Leslie H. Lee, MD, FACNS

10:00am Practical Applications of Pudendal/Perianal &

Saphenous Nerve SSEPs Leslie H. Lee, MD, FACNS

10:30am Practical Intraoperative Techniques & Applications:

Bulbocavernosus Reflex, F-Wave, & H-Reflex

Responses

Guillermo Martin Palomeque, MD

11:00am Practical Approach & Techniques of Intraoperative

**Brainstem Mapping** 

Mirela V. Simon, MD, MSc, FACNS

# 1213: Defining Research Priorities in Refractory Status Epilepticus Management

Session Director: Cecil D. Hahn, MD, MPH, FACNS & Jong Woo Lee, MD, PhD, FACNS

10:00am RSE in Children: Current Management, Gaps in

Knowledge, Research Priorities Tobias Loddenkemper, MD, FACNS

10:20am RSE in Adults: Current Management, Gaps in

Knowledge, Research Priorities Jong Woo Lee, MD, PhD, FACNS

10:40am Clinical Trial Design & Individualized Therapy for

RSE

Nicolas Gaspard, MD, PhD

11:00am Autonomous Drug Delivery Systems for RSE

Management

M. Brandon Westover, MD, PhD

11:15am Planning Collaborative Clinical Trials for RSE

Management

Cecil D. Hahn, MD, MPH, FACNS

# 1214: Infantile Spasms: A Look at One Old Epilepsy in the Modern Era

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

10:00am Animal Models of Epileptic Spasms & the

**Development of Novel Treatment Options** 

Morris H. Scantlebury, MD

10:25am Clinical Spectrum of Epileptic Spasms: From Classic

to Subtle Forms & Across All Age Groups

Elia M. Pestana Knight, MD, FACNS

10:50am Variations of Hypsarrhythmia Pattern &

Implications of its Identification in the Medical

Management of Epileptic Spasms Elia M. Pestana Knight, MD, FACNS

11:10am Electroclinical Features of Children with Epileptic

Spasms who are Candidate to Epilepsy Surgery

Ahsan Moosa Naduvil Valappil, MD



# AMERICAN CLINICAL NEUROPHYSIOLOGY SOCIETY 2017 ANNUAL MEETING & COURSES ADVANCE REGISTRATION FORM

February 8-12, 2017 | Sheraton Grand Phoenix | Phoenix, Arizona

To register for the meeting online, please visit: www.ACNS.org

\*Please type or print legibly\*

ACNS Member ID (	Optional)	-			
First Name	Middle	_Last Name			
Designation(s) (Exar	nple: MD, PhD, DO, etc.)	_ Institution			
Maining Address					
City	State/Provice		Zip/Postal Code		
Country	Email				
Telephone	Fax				
ANNUAL COUR	SES – Wednesday, February 8 – Friday, February 10, 2017 icheduled times of some Courses listed below may conflict. Please refer t	o the Preliminary Pro	gram for complete (	Course scheduling in	formation to make
		ACNS Members	Non-Members	ACNS Junior & Technologist Members & International Attendees (Outside US & Canada)	Non-Member Residents, Fellows, Technologists& International Attendees (Outside US & Canada)
Wednesday, Febru	ary 8				
7:00-8:30am	801: Short Course: EEG/EMG/NIOM Technology	□ \$75	□ \$95	□ \$35	□ \$65
7:00-8:30am	802: Short Course: Applied Cases in Clinical Neurophysiology & Video EEG	□ \$75	□ \$95	□ \$35	□ \$65
9:00am-5:00pm	811: Full Day Course: Neurophysiologic Intraoperative Monitoring (NIOM) Part I	□ \$175	□ \$230	□ \$95	□ \$140
9:00am-5:00pm	812: Full Day Course: Intensive Care Unit EEG Monitoring (ICU EEG)	□\$175	□ \$230	□ \$95	□ \$140
Thursday, Februar	y 9				
7:00-8:30am	901: Short Course: Stereo-EEG	□\$75	□ \$95	□ \$35	□ \$65
7:00-8:30am	902: Short Course: Non-Invasive Brain Stimulation Techniques	□\$75	□ \$95	□ \$35	□ \$65
7:00-8:30am	903: Short Course: Autonomic Neurophysiology	□\$75	□ \$95	□ \$35	□ \$65
9:00am-2:30pm	911: Half Day Course: EMG	□\$85	□ \$100	□ \$45	□ \$75
9:00am-5:00pm	921: Full Day Course: Neurophysiologic Intraoperative Monitoring (NIOM) Part II	□\$175	□ \$230	□\$95	□ \$140
9:00am-5:00pm	922: Full Day Course: Electrocorticography(ECoG) & Intracranial EEG	□\$175	□ \$230	□ \$95	□ \$140
11:30am-2:00pm	931: 4th Annual CNP Program Director's Symposium	□\$30	□ \$30	□ \$30	□ \$30
3:00-4:30pm	941: Short Course: Applied Cases in Peripheral Neurophysiology	□\$75	□ \$95	□ \$35	□ \$65
Friday, February 1	0			1	
7:00-10:00am	1301: Half Day Course: Video-EEG	□\$85	□ \$100	□ \$45	□ \$75
7:00-10:00am	1302: Half Day Course: Evoked Potentials	□\$85	□ \$100	□ \$45	□ \$75
7:00-10:00am	1303: Half Day Course: Neonatal & Pediatric EEG	□\$85	□ \$100	□ \$45	□ \$75
Annual Courses	Total (A):				

ANNUAL MEETING/SCIENTIFIC	PROGRAM - I	Friday, February	10 through Sunday	February 12	2. 2017
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		ACNS Members	Non-l	Members	ACNS Junior & Technolo- gist Members& International Attendees (Outside US & Canada)	Non-Member Residents, Fellows, Technologists& International Attendees (Outside US & Canada)
Friday, February 10 - Sunday, February 12						
Annual Meeting Scientific Program		□ \$350		\$500	□ \$235	□ \$330
Annual Meeting Scientific Program One-Day Regi	stration	□ \$210	Ш	\$300		
Annual Meeting Total (B):						
Please check below the sessions you plan to attend. pated attendance. You are not obligated to attend		s information will be	used to a	ssign session	ns to available rooms	based on antici-
Friday, February 10	Saturday, February 11			Sunday, F	ebruary 12	
1:30-3:30pm  □ 1011: IFCN Symposium: Movement Control  — The Clinical Neurophysiologist's Perspective  □ 1012: Epileptic Encephaolpathy with CSWS:  An Overview and Practical Approach  □ 1013: Tips and Tricks for MEP in Spinal Surgery  4:00-5:30pm  □ 1021: Clinical Neurophysiology as a Window to Consciousness  □ 1022: Mapping Epileptogenic & Functional Cortex in Tumor-Related Epilepsy  □ 1023: Clinical Neurophysiology Around the World  □ 1024: SIG — Clinical Neurophysiology Resident & Fellow Special Interest Group  □ 1025: Beyond Rhythms & Spikes: How the EEG Can Reveal the Dysfunctional Dynamics of Complex Networks in Psychiatric & Neurodevelopmental Disorders	8:00-9:30am  □ 1111: Interpreting Challenging NC: - An Interactive Case-Based Approace □ 1112: Aggressiveness of Treatment of cus: A Clinical Neurophysiology Ap □ 1113: Competing Techniques for Refepileptogenic Zone: MagnetoencepteEEG □ 1114: Cortical Stimulation: Theory □ 1115: Joint ACNS/ASECN (Argentition in NIOM Interpretation  11:15am-12:45pm □ 1131: IFCN Symposium: The Clinineuromuscular Disease □ 1132: Consensus for Recording & Ain Clinical Epilepsy □ 1133: Uso de EEG en Cuidado Intericular in Succession & George Competition & Network (Argenticular in Prognostication & George Competition & Network (Argenticular in Prognostication & George Competition) □ 1152: Advances in Prognostication & George Following Cardiac Arrest (1153: Neurostimulation & Network (Argenticular in Prognostication & George Following Cardiac Arrest (1153: Neurostimulation & Network (Argenticular in Prognostication & George Following Cardiac Arrest (1153: Neurostimulation & Network (Argenticular in Prognostication & George Following Cardiac Arrest (1153: Neurostimulation & Network (Argenticular in Prognostication & George Following Cardiac Arrest (1153: Neurostimulation & Network (Argenticular in Prognostication & George Following Cardiac Arrest (1153: Neurostimulation & Network (Argenticular in Prognostication & George Following Cardiac Arrest (1152: Understanding the Utility of (SEEG) in Intractable Focal Epileps (SEEG) in Intractable Focal Epileps (1162: Wearable Seizure Detection Derimetime? A Critical Look at Periplicable Technology (1163: The Frontal Lobe Club (1164: Proponents vs. Opponents: Yorder a MEG in 2017? (NIOM)	ch of Refractory Status Eproach effining the Location of halography & High I & Practice inian) Symposium: In a superior of the	pilepti- of the Density  nnova- of die EEG  a the  athies efrac- ency osium:	sium: T Sports I Sports I 1202: N toring of 1203: A Interpres Sympos 1204: S form Ad 10:00-11: J cal Neur ogy and I Neur (NIOM 1213: I tory Sta 1214: I	oint ACNS/DGKN he Role of Neurophy injuries Neurophysiologic Into f Vascular Disorders dvances to Improve etation in Epilepsy Pl sium) IG – Invasive EEG: ctivity and Beyond	raoperative Moni- Accuracy in EEG lanning (Spanish Interictal Epilepti- Society of Clinisium: The Neurol- Zika Virus of Unconvention- erative Monitoring forities in Refracagement ook at One Old
SOCIAL & NETWORKING EVENTS  No additional charge						
I am interested in attending the Welcome Recepti	on on Friday, February 10 from 7:00-8:3	30pm.				
☐ I am interested in attending the Neurophys Bowl ☐ I am interested in participating on a team in th	e Neurophys Bowl. Please contact me wi	th details!				
☐ I am interested in attending the Keynote Lecture: ☐ I am interested in taking part in the ACNS Menton		lay, February 11 from	7:00-8:0	00pm.		

\*Registration will not be processed without payment and signature\*

Card Number

Card Holder Name \_

Authorized Signature \_\_\_

#### PLEASE RETURN THIS REGISTRATION FORM WITH REQUIRED PAYMENT TO

Expiration Date \_\_\_\_\_

Date

American Clinical Neurophysiology Society, Attn: Meetings Department 555 E. Wells Street, Suite 1100 • Milwaukee, WI 53202 • Fax: (414) 276-3349 • E-mail: info@acns.org





# **IMPORTANT DATES**

September 12, 2016
October 1, 2016
November 15, 2016
December 15, 2016
January 15, 2017
January 15, 2017
January 20, 2017

Courses Handout Website Open	January 31, 2017
CME Certificate Program Opens (pre-registered delegates)	February 8, 2017
CME Certificate Program Opens (delegates registering onsite)	March 8, 2017
CME Certificate Claim Deadline	April 3, 2017
Courses Handout Website Closes	April 28, 2017