Welcome
The American Clinical Neurophysiology Society (ACNS) and the Canadian Society of Clinical Neurophysiologists (CSCN) are pleased to announce the 31st International Congress of Clinical Neurophysiology (ICCN) of the International Federation of Clinical Neurophysiology (IFCN) will be held May 1-6, 2018 in Washington, DC, USA.

The ICCN 2018 program will include several of ACNS’s signature courses, as well as courses and workshops planned by IFCN Member Societies and other prominent societies in clinical neurophysiology from the US and around the world.

Pre-Congress courses and workshops are designed to provide a solid review of the fundamentals and the latest scientific advances in both central and peripheral clinical neurophysiology.

Three days of general and concurrent Congress sessions will follow including honorary lectures, symposia, platform presentations, controversies sessions, and industry-supported satellite symposia. ACNS and CSCN are honored to co-host ICCN 2018 and to welcome colleagues to Washington, DC!

Co-Hosting Societies
American Clinical Neurophysiology Society (ACNS)
Canadian Society of Clinical Neurophysiologists (CSCN)

Partner Societies – will hold their meeting in conjunction with ICCN
American Clinical Magnetoencephalography Society (ACMEGS)

Supporting Societies and Organizations – have supported ICCN through organization of a satellite course and representation on the Scientific Advisory Board and Program Planning Committees
American Society for Neurophysiological Monitoring (ASNM)
BrainStem Society
Critical Care EEG Monitoring Research Consortium (CCEMRC)
International League Against Epilepsy (ILAE)
International Society of Intraoperative Neurophysiology (ISIN)
International Society of Peripheral Neurophysiological Imaging (ISPNI)

Contributing Societies – have contributed to ICCN via representation on the Scientific Advisory Board and Program Planning Committees
American Autonomic Society (AAS)
American Epilepsy Society (AES)
ASET – The Neurodiagnostic Society
Organisation of Societies for Electrophysiological Technology (OSET)

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Important Dates

<table>
<thead>
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<td>January 31, 2018</td>
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<tr>
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<td>Registration Cancellation Deadline</td>
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Washington, DC Visitor Information

Washington, DC, at a population of 633,000, is the 24th most populous city and the capitol of the United States. Washington is home to the US federal government, many national monuments and museums and 176 foreign embassies, as well as the headquarters of many international organizations, trade unions, non-profit organizations, and professional associations. Behind its public face of luminous marble memorials and government, Washington, DC, leads a wondrously varied life. Musicians trumpet the blues, rock, and jazz at venues throughout Duke Ellington’s hometown. DC’s local flavor varies from crave-worthy dishes served by celebrity chefs to chili-smothered half-smokes served at a diner. Shopping stores, boutiques, gift shops and malls are around every corner. With no shortage of things to do, Washington, DC remains a top destination.

Time Zone

Washington, DC is in the US EDT – United States Eastern Daylight Time. The time is UTC/GMT -4 hours.

Electricity

The United States operates on 120 volts, compared to the standard 220 volts in Europe.

Climate

In the first week of May, Washington, DC will be transitioning from late spring to early summer with warm daytime temperatures leading into cooler evenings. The average high temperature in May is 75° F or 24° C. The average low temperature in May is 57° F or 14° C.

Currency & Tipping Etiquette

The unit of currency is the United States Dollar, or USD. Visit www.xe.com for the latest exchange rates. The general consumer sales tax in the District of Columbia is 5.75%. It is customary to tip between 15-20%, depending on the quality of the service.

Travel

Airports

The Marriott Wardman Park situated just seven miles (11.25km) from Reagan International Airport (DCA) and 28 miles (45km) from Dulles International Airport (IAD), Baltimore/Washington International Thurgood Marshall Airport (BWI) is also 35 miles from the meeting venue.

The ICCN Secretariat recommends checking with your airline regarding policies and details on carry-on and checked baggage items.

Passports & Visas

Most international travelers are required to obtain a visa from the U.S. Department of State. For more information, visit http://travel.state.gov/

Invitation Letters

Delegates requiring official invitation letters to complete their visa applications may contact the ICCN Secretariat at ICCN2018@acns.org.

Accessibility & Special Needs

Delegates requesting accessibility arrangements or with special dietary or other needs are encouraged to contact the ICCN Secretariat at ICCN2018@acns.org at least 30 days prior to the Congress. Special requests may also be made at the time of registration. Special arrangements in order to fully participate in the meeting should provide a written description of such needs to the Registration Desk upon arrival.

Attire

Business (suits) or business casual attire (polo or dress shirt, sport coats) are appropriate for ICCN 2018 courses and sessions; ties are not required. Business casual attire is recommended for the Welcome Reception. Cocktail attire is appropriate for the Gala Reception.

Language

The official language of ICCN 2018 is English. All presentations will be given and all materials will be provided in English. ICCN will not provide simultaneous translation.

Insurance Liabilities & Disclaimer

Delegates and guests will be fully responsible for any claims, liabilities, losses, damages, or expenses, including attorney’s fees, relating to or arising out of any loss of injury to, or damage to any person or property of the delegate or guest or any other property where such injury, loss or damage is incident to, arises out of or is in any way connected with the delegate or guest’s participation in ICCN 2018, including participation in tours and social events. Delegates and guests shall protect, indemnify, hold harmless, and defend ACNS, IFCN and/or the Marriott Wardman Park, their officers, directors, agents or servants, and employees from and against any and all such claims, liabilities, losses, damages, and expenses, including attorneys’ fees, provided that the foregoing shall not apply to injury, loss, or damage caused by or resulting from the negligence or willful misconduct of ACNS, IFCN and/or the Marriott Wardman Park, their officers, directors, agents, or employees.
Headquarters Hotel

Washington Marriott Wardman Park
2660 Woodley Road NW
Washington, District Of Columbia 20008
USA

Rate: $259 USD per night, plus taxes

Reservation Methods
Online: http://iccn2018.acns.org/housing-travel
Phone: (202) 328-200

The surrounding Embassy Row area of Washington, DC is largely an up-scale residential neighborhood, with more than 25 restaurants and shops of all varieties within walking distance. The Metro system runs nearly to the door of the Marriott Wardman Park, with a stop on the Red Line approximately a tenth of a mile (150m) from the hotel. Only three to four Metro stops separate attendees staying at the Marriott Wardman Park from all the major attractions Washington, DC has to offer. The hotel less than two miles (3.2km) from classic Washington attractions, including the National Zoo, Smithsonian Institution, Capitol Hill, White House, and the National Mall monuments and memorials.

Registration

Important Dates
Registration Open: October 4, 2017
Advance Registration Deadline: April 10, 2018

The ICCN 2018 Secretariat encourages online registration for the meeting & course at http://iccn2018.acns.org/registration.

Delegates and guests may also register by completing and mailing or faxing the registration form on page 27. All registrations will be confirmed via e-mail. If you do not receive an email confirmation within two weeks of submission, please contact the ICCN Secretariat at +1-414-918-9803 or ICCN2018@acns.org.

Reduced Rate Country Registration
Visit http://iccn2018.acns.org/registration for a list of countries that qualify for reduced rate registration. Delegates that qualify may register online or by submitting the registration form on page 27.

Guest Registration
Guests of ICCN 2018 delegates age 18 and older may register to attend the social components of the ICCN program, including the Welcome Reception on Thursday, May 3 and the Gala Reception on Friday, May 4, 2018. Guests of ICCN 2018 delegates under age 18 may register to attend the Gala Reception only on Friday, May 4, 2018.

Entrance to the scientific sessions and exhibit hall (except during the Welcome Reception) is not included in guest registration fees. Sorry, no exceptions will be made.

For more information regarding the ICCN 2018 social events and available Washington DC tours, please visit http://iccn2018.acns.org/social-events.

Wire Transfers
Delegates may pay ICCN 2018 registration fees via wire transfer. Please contact the ICCN Secretariat at ICCN2018@acns.org for wire transfer information.

Please note that some financial institutions charge a processing fee, which is deducted from the amount of the transfer. Partial payment may result in an incomplete registration.

Cancellations & Refunds
All cancellations must be received in writing. Delegates may fax their cancellation requests to +1-414-276-3349 or email it to ICCN2018@acns.org. Delegates will receive a confirmation and refund within 14 days of receipt of their cancellation notice. ICCN will grant a full refund, less a 10% processing fee, for cancellations received in writing on or before April 20, 2018. No refunds will be granted after April 20, 2018.

Exhibitors & Supporters
Please visit http://iccn2018.acns.org/exhibits-support for more details on supporting or exhibiting at ICCN 2018.
ICCN 2018 will be planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the sponsorship of ACNS. ACNS is accredited by the ACCME to provide continuing medical education for physicians.

Educational Mission Statement

Purpose

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

Content

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

Target Audience

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

Expected Result

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

Gaps and Needs

In compliance with the Updated Accreditation Criteria of the Accreditation Council for Continuing Medical Education (ACCME), the Continuing Medical Education Committee of the ACNS has identified “professional practice gaps.” Definition: A “professional practice gap” is the difference between what a health professional is doing or accomplishing compared to what is achievable on the basis of current professional knowledge. The following professional practice gaps and educational needs were identified by a combined effort of the Program, Course and CME Committees.

Gap 1. Emerging Areas of Practice

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

Gap 2. General Practice of Clinical Neurophysiology

Clinical neurophysiology procedures are performed by a large proportion of practicing US neurologists, many of whom have little or no formal training in clinical neurophysiology. Many clinical neurophysiology procedures (e.g. evoked potentials, invasive EEG) 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.

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.
Meeting Description

The 31st International Congress of Clinical Neurophysiology (ICCN 2018) is designed to provide a review of the fundamentals and the latest scientific advances in all aspects of clinical neurophysiology. Presentations at ICCN 2018 are given by leading experts in the field and have value for health care professionals who utilize clinical neurophysiology. Sessions include courses, symposia, workshops, and Special Interest Groups, featuring didactic lectures, expert panels, debates and interactive formats. Poster presentations will highlight the latest work conducted at clinical neurophysiology centers around the world.

Target Audience

The ICCN’s educational activities are directed to the following individuals:

- Neurologists, including specialists in epilepsy, neuromuscular disorders, sleep medicine, movement disorders, autonomic disorders, neuro ICU, neurophysiology, neuroimaging, cognitive neurology and general neurologists;
- Neurophysiologists with special interests in EEG, EMG, evoked potentials, sleep medicine, autonemics, MEG, brain stimulation, brain-computer interface, neuroimaging, brain connectivity, cognition and intraoperative monitoring;
- Neurology and clinical neurophysiology trainees; residents, fellows and students;
- Neuroscientists, including researchers of various neurologic disorders, neurophysiology, neuromodulation, neurostimulation, brain connectivity and cognitive neurosciences;
- Technologists involved in a wide array of neurophysiologic tests, including EEG, EMG and nerve conduction studies, evoked potentials, intraoperative monitoring, autonemics, MEG, noninvasive brain stimulation;
- Affiliated personnel, such as nurses, patient care coordinators and business managers involved with the care of patients with neurologic illnesses.

Learning Objectives

At the conclusion of ICCN 2018, the participant will be able to:

1. Describe the indications for use of clinical neurophysiology techniques in diagnosis and management of disorders of the nervous system;
2. Incorporate new neurophysiology procedures and technological advances into his/her own clinical practice;
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 clinical neurophysiology techniques and related disorders; and
5. Apply advances in clinical neurophysiology techniques to improve the diagnosis of neurologic disorders.

Accreditation Statement

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

Credit Designation

ACNS designates the ICCN 2018 Congress for a maximum 22.75 AMA PRA Category 1 Credit(s)™. Physicians should claim only credit commensurate with the extent of their participation in the activity.

ACNS designates the ICCN 2018 Courses for the following maximum number of AMA PRA Category 1 Credit(s)™:

- Intensive Care Unit Electroencephalography
  7.25 AMA PRA Category 1 Credit(s)™
- BrainStem Society Meeting
  10.0 AMA PRA Category 1 Credit(s)™
- Magnetoencephalography
  7.0 AMA PRA Category 1 Credit(s)™
- Advanced Electromyography
  3.75 AMA PRA Category 1 Credit(s)™
- Single Fiber Electromyography
  3.5 AMA PRA Category 1 Credit(s)™
- Neuromuscular Imaging
  11.25 AMA PRA Category 1 Credit(s)™
- Neurophysiological Intraoperative Monitoring
  10.50 AMA PRA Category 1 Credit(s)™
- Invasive Electroencephalography
  7.0 AMA PRA Category 1 Credit(s)™
- Transcranial Magnetic Stimulation
  10.0 AMA PRA Category 1 Credit(s)™

Please note: Final credit amounts may change as the program develops.
### Tuesday, May 1, 2018 - Satellite Courses

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<td>Advanced Electromyography Course</td>
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### Wednesday, May 2, 2018 - Satellite Courses

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## Program at a Glance

**Thursday, May 3, 2018 - Satellite Courses & Congress Scientific & Educational Program**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>7:00am</td>
<td>Neurophysiological Intraoperative Monitoring Course</td>
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<tr>
<td>7:30am</td>
<td>Neuromuscular Imaging Course</td>
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<tr>
<td>8:00am</td>
<td>BrainStem Society Meeting</td>
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<tr>
<td>8:30am</td>
<td>Transcranial Magnetic Stimulation Course</td>
</tr>
<tr>
<td>9:00am</td>
<td>Break</td>
</tr>
<tr>
<td>9:30am</td>
<td>General Session: Opening Ceremonies &amp; ACNS Jasper Lecture</td>
</tr>
<tr>
<td>10:00am</td>
<td>Lunch – Visit Exhibits and Posters</td>
</tr>
<tr>
<td>10:30am</td>
<td>Intraoperative Motor Evoked Potentials Optimization Techniques</td>
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<tr>
<td>11:00am</td>
<td>Neonatal EEG: From Basic Concepts to Advanced Techniques</td>
</tr>
<tr>
<td>11:30am</td>
<td>Autonomic Testing and Small Fiber Neuropathies Evaluations</td>
</tr>
<tr>
<td>12:00pm</td>
<td>TMS-Evoked EEG Potentials – a Novel Technique to Study Brain Excitability and Connectivity</td>
</tr>
<tr>
<td>12:30pm</td>
<td>Ten Years of the IFCN Electrodiagnostic (Awaji) Criteria for Early Diagnosis of ALS Health and Disease</td>
</tr>
<tr>
<td>1:00pm</td>
<td>Break</td>
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<tr>
<td>1:30pm</td>
<td>Standard Formats for Neurophysiology Data Exchange</td>
</tr>
<tr>
<td>2:00pm</td>
<td>Applied Cases in Central Neurophysiology and Video EEG</td>
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<tr>
<td>2:30pm</td>
<td>Platform Sessions</td>
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<tr>
<td>3:00pm</td>
<td>Break</td>
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<tr>
<td>3:30pm</td>
<td>Platform Sessions</td>
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<tr>
<td>4:00pm</td>
<td>Guideline and Evidence-Based Medicine in Electrodiagnostic (EDX) Testing</td>
</tr>
<tr>
<td>4:30pm</td>
<td>Break</td>
</tr>
<tr>
<td>5:00pm</td>
<td>EEG Based Biomarkers in Neuropsychiatric Disorders: Pitfalls and Opportunities</td>
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<tr>
<td>5:30pm</td>
<td>Large Scale Networks in Focal Epilepsy Revealed by High-Density EED and fMRI Studies</td>
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<tr>
<td>6:00pm</td>
<td>Neurophysiology of Tremor</td>
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<tr>
<td>6:30pm</td>
<td>Novel Methodologies in Transcranial Magnetic Stimulation</td>
</tr>
<tr>
<td>7:00pm</td>
<td>Update and Advances in the Neurophysiologic Assessment of Neuromuscular Junction Disorders</td>
</tr>
<tr>
<td>7:30pm</td>
<td>Welcome Reception</td>
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</tbody>
</table>
## Program at a Glance

### Friday, May 4, 2018 - Congress Scientific & Educational Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30am</td>
<td>Coffee Break – Visit Exhibits and Posters</td>
</tr>
<tr>
<td>9:00am</td>
<td>General Session: Berger Lecture &amp; Schwab Lecture</td>
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<tr>
<td>9:30am</td>
<td>Structures Activated by TMS and Stimulating Current Direction</td>
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<tr>
<td>10:00am</td>
<td>Controversy: Nonconvulsive Seizures and Status Should be Aggressively Treated</td>
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<tr>
<td>10:30am</td>
<td>Advances in the Neurophysiology of Language: Structure, Time, and Plasticity</td>
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<tr>
<td>11:00am</td>
<td>Electrophysiology and Immune Mechanisms in Post-Infectious Neuropathies</td>
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<tr>
<td>11:30am</td>
<td>CNP Program Directors Symposium: Subspecialty Clinical Neurophysiology Training</td>
</tr>
<tr>
<td>12:00pm</td>
<td>Lunch – Visit Exhibits and Posters</td>
</tr>
<tr>
<td>12:30pm</td>
<td>Special Interest Groups: Noninvasive Brain Stimulation</td>
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<tr>
<td>1:00pm</td>
<td>Sleep Biomarkers in Cognitive Disorders</td>
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<tr>
<td>1:30pm</td>
<td>Quantitative EEG in Epilepsy and Critical Care: Interactive Workshop</td>
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<tr>
<td>2:00pm</td>
<td>How Well Do You See Inside the Brain with Scalp EEG, MEG, EEG-IMI and Intracerebral EEG?</td>
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<tr>
<td>2:30pm</td>
<td>Peripheral Clinical Neurophysiology in Intensive Care</td>
</tr>
<tr>
<td>3:00pm</td>
<td>Platform Sessions</td>
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<td>3:30pm</td>
<td>Continuous EEG in Targeted Temperature Management: the I-CARE (International Cardiac Arrest EEG Consortium)-CCEMRC Study</td>
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<tr>
<td>4:00pm</td>
<td>Platform Sessions</td>
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<tr>
<td>4:30pm</td>
<td>Pediatric Neuromuscular Disorders</td>
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<tr>
<td>5:00pm</td>
<td>General Session: ACNS Presidential Lecture &amp; Adrian Lecture</td>
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<tr>
<td>5:30pm</td>
<td>Break</td>
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<tr>
<td>6:00pm</td>
<td>Gala Reception</td>
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<tr>
<td>6:30pm</td>
<td>Break</td>
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### Key
- **= Education in CNP track**
### Saturday, May 5, 2018 - Congress Scientific & Educational Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30am</td>
<td>Neurophysiological Effects of Deep Brain Stimulation</td>
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<td>9:00am</td>
<td>Neurophysiologic and Imaging Signatures of Pain and Itch</td>
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<td>9:30am</td>
<td>Neurophysiology of Multisensory Integration</td>
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<td>10:00am</td>
<td>Human Brain Connectome from Physiology to Disease</td>
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<td>Clinical Neurophysiology of Insular Epilepsy</td>
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<td>10:30am</td>
<td>Break</td>
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<tr>
<td>11:00am</td>
<td>General Session: Gloor Lecture &amp; Kugleberg Lecture</td>
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<tr>
<td>11:30am</td>
<td>Lunch – Visit Exhibits and Posters</td>
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<tr>
<td>12:00pm</td>
<td>IFCN General Assembly</td>
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<tr>
<td>12:30pm</td>
<td>Controversy: Ultrasound Is Sufficient For Diagnosis of ALS, CTS Demyelinating Neuropathy</td>
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<td>Controversy: Stereo EEG vs. Grids and Strips – Which Is Better, How Do We Chose?</td>
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<td>2:00pm</td>
<td>Pediatric Noninvasive Brain Stimulation</td>
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<td>2:30pm</td>
<td>Contemporary Update on Pedicle Screw Stimulation</td>
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<td>3:00pm</td>
<td>Break</td>
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<tr>
<td>3:30pm</td>
<td>Neuropsychology of Cannabinoids</td>
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<tr>
<td>4:00pm</td>
<td>Update on Evoked Potential Warning Criteria during Surgery</td>
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<td>4:30pm</td>
<td>Advances in Neuromuscular Imaging: A Focus on Nerve Ultrasound</td>
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<td>5:00pm</td>
<td>Botulinum Toxin Treatment of Neurologic Disorders: Mechanisms of Action and Ultrasound vs EMG Guidance</td>
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<td>5:30pm</td>
<td>Break</td>
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<tr>
<td>6:00pm</td>
<td>Neurophys Bowl</td>
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### Sunday, May 6, 2018 - Congress Scientific & Educational Program

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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30am</td>
<td>Contribution of Corticomuscular, Intermuscular and Corticokinematic Coherence in Research on Sensorimotor Interactions</td>
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<tr>
<td>9:00am</td>
<td>Beyond Sleep Studies and EEG's: Advances in Ambulatory Neurophysiologic Monitoring of Sleep and Epilepsy</td>
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<td>9:30am</td>
<td>New Proposals for Tc-MEP Interpretation in Spinal Deformities and Intramedullary Spinal Cord Tumor (IMSCT) surgeries</td>
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<td>Quo Vadis Clinical MEG Worldwide?</td>
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<td>Brain Connectivity: What Invasive Electrophysiology Can Do For Mapping Brain Networks</td>
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<tr>
<td>10:00am</td>
<td>Break</td>
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<tr>
<td>10:30am</td>
<td>Sensorimotor Organization in Writer’s Cramp</td>
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<td>11:00am</td>
<td>How Sports Affects Neurophysiology: The Good, the Bad, and the Ugly</td>
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<td>11:30am</td>
<td>Optimizing Transcranial Direct Current Stimulation</td>
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<td>Quantitative Methods to Follow Neuromuscular Disease</td>
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<td>Wide-Band EEG by Neuron and Glia: From Basic and Clinical Application in Epilepsy</td>
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<tr>
<td>12:00pm</td>
<td>Break</td>
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<tr>
<td>12:30pm</td>
<td>General Session: Closing Ceremonies</td>
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**Award Lectures**

**IFCN Berger Lecture**

The IFCN Berger Award is presented every four years by the IFCN for outstanding current contributions to central clinical neurophysiology research.

*Margitta Seeck, MD, PhD*
Professor
University of Geneva

Prof. Seeck will deliver the Berger Award Lecture on Friday, May 4, 2018.

**IFCN Kugelberg Lecture**

The IFCN Kugelberg Award is presented every four years by the IFCN for outstanding current contributions to peripheral clinical neurophysiology research.

*Mandaville Gourie-Devi, MBBS, MD, DM, DSc*
Emeritus Professor of Neurology
Department of Neurology
Institute of Human Behaviour and Allied Sciences

Prof. Gourie-Devi will present the Kugelberg Award Lecture on Saturday, May 5, 2018.

**IFCN Adrian Lecture**

The IFCN Adrian Award is presented every four years by the IFCN for outstanding current contributions to Clinical Neurophysiology research in basic science.

*Clifford Saper, MD, PhD*
Professor, Beth Israel Deaconess Medical Center

Prof. Saper will present the Adrian Award Lecture on Friday, May 4, 2018.

**ACNS Jasper Award Lecture**

The Herbert H. Jasper Award is presented annually to an individual for a lifetime of outstanding contributions to the field of clinical neurophysiology including research, teaching and mentoring.

*Mark Hallett, MD, FACNS*
Chief, Human Motor Control Section
National Institute of Neurological Disorders and Stroke, National Institutes of Health

Prof. Hallet’s Jasper Award Lecture will be part of the ICCN 2018 Opening Ceremonies on Thursday, May 3, 2018.

**ACNS Gloor Award Lecture**

The Pierre Gloor Award is presented annually for an individual’s outstanding contributions to central clinical neurophysiology research.

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

Prof. Nuwer will present the Gloor Award Lecture on Saturday, May 5, 2018.

**ACNS Schwab Award Lecture**

This Robert S. Schwab Award is presented annually for an individual’s outstanding contributions to peripheral clinical neurophysiology research.

*Donald Sanders, MD*
Professor of Neurology
Duke University Medical Center

Prof. Sanders will present the Schwab Award Lecture on Friday, May 4, 2018.

**Networking Events**

**Welcome Reception**

ICCN Exhibit Hall
Washington Marriott Wardman Park

Join us at the official Welcome Reception of ICCN 2018. You will have the chance to connect with colleagues, meet other attendees, view posters, and visit exhibit booths on the opening day of Congress sessions.

**Gala Reception**

Smithsonian National Air & Space Museum

Connect with colleagues in one of the nation’s most prominent museums. The Smithsonian National Air & Space Museum holds the largest collection of historic aircraft and spacecraft in the world, providing a unique backdrop for networking, collaboration, and exploring. Attendees will be able to experience featured exhibits and have access to the IMAX movie theater.

For a list of additional tours and activities offered in Washington, DC that attendees may independently sign up for, visit [http://iccn2018.acns.org/networking-events](http://iccn2018.acns.org/networking-events)
**Satellite & Courses Program**

**TUESDAY, MAY 1, 2018**

**8:00am – 5:00pm**  CONCURRENT COURSES

**Intensive Care Unit Electroencephalography (ICU EEG)**
Jointly developed by the Critical Care EEG Monitoring Research Consortium (CCEMRC)
Co-Directors: Lawrence Hirsch, MD, FACNS (USA) and Eugen Trinka, MD (Austria)

**Agenda:**

8:00am  Introduction  
Eugen Trinka, MD (Austria)

8:10am  ICU EEG Terminology (ACNS Guidelines)  
Sandor Beniczky, MD, PhD (Denmark)

8:40am  Defining Nonconvulsive Seizures/NCSE, Clin and EEG  
Eugen Trinka, MD (Austria)

9:10am  ICU EEG Monitoring in Neonates, Including ACNS Guidelines  
Courtney J. Wusthoff, MD, MS, FACNS (USA)

9:40am  When and How To Treat Neonatal Seizures  
Ronit M. Pressler, MD, PhD, MRCPCH (United Kingdom)

10:10am  Break

10:30am  ICU EEG Monitoring in Children and Adults (ACNS Guidelines)  
Nicholas S. Abend, MD, MSCE (USA)

11:00am  Postanoxic Coma  
Michel J. Van Putten, MD, MSc, PhD (Netherlands) and Luis Otavio Caboclo, MD, MSc, PhD (Brazil)

12:00pm  NORSE/FIRES: New Consensus Definitions  
Lawrence Hirsch, MD, FACNS (USA)

12:15pm  Lunch

1:15pm  EEG in Encephalopathy  
Peter W. Kaplan, MD, FRCP, FACNS (USA)

1:45pm  Controversial Patterns and the Ictal-Interictal Continuum  
Suzette M. LaRoche, MD, FACNS (USA) and Nicolas Gaspard, MD, PhD (Belgium)

2:35pm  Quantitative EEG: Methodology  
Susan T. Herman, MD, FACNS (USA)

2:55pm  Break

3:15pm  Quantitative EEG: Application: Detecting Ischemia and Seizures  
M. Brandon Westover, MD, PhD, FACNS (USA)

3:45pm  Use of EEG to Manage Super Refractory SE  
Andrew Cole, MD (USA)

4:15pm  Multimodality Monitoring and Integrating EEG into Neurocritical Care  
Jan Claassen, MD, PhD, FNCS (USA)

4:45pm  Summary and Future  
Lawrence Hirsch, MD, FACNS (USA)

**BrainStem Society Meeting**
Jointly developed by the BrainStem Society  
Co-Directors: Mark Hallett, MD, FACNS (USA) and Josep Valls-Sole, MD (Spain)

**Agenda:**

8:00am  Opening  
Mark Hallett, MD, FACNS (USA)

8:15am  Spontaneous, Voluntary and Reflex Blinking in Clinical Practice  
Josep Valls-Sole, MD (Spain)

8:45am  Basics of Ocular Motor Control by the Brainstem  
David Zee (USA)

9:15am  Eye Movement Disorders due to Brainstem Dysfunctions  
Daniel Gold, DO (USA)

9:45am  Break

10:00am  Functional Anatomy, Mechanisms of Respiration  
Jeff Smith, PhD (USA)

10:30am  Disorders of Respiration during Sleep  
Nancy Foldvary-Schaefer, DO (USA)

11:00am  Facial Pain Syndromes. Differential Diagnoses  
Satu Jaaskelainen, MD, PhD (Finland)

11:30am  Brainstem and The Control Of Pain. Periaqueductal Grey Matter  
Andrea Truini, MD (Italy)

12:00pm  Lunch

1:30pm  Brainstem and Cerebellum Control Of Balance and Equilibrium  
John Rothwell, PhD (United Kingdom)

2:00pm  How to Study Vestibular Nuclei. cvEMP and ovEMP  
James G. Colebatch, DSc, FRACP (Australia)

2:30pm  Break

3:00pm  Startle and the StartReact Effect. Physiological Mechanisms  
Anthony Carlsen, PhD (Canada)

3:30pm  Autonomic Dysfunction. Vagal Nerve Disorders  
Lucy Norcliffe-Kaufmann, PhD (USA)

4:00pm  State of The Art in Vagus Nerve Stimulation  
Jens Ellrich, MD, PhD (Georgia)

4:30pm  State of The Art in Trigeminal Nerve Stimulation  
Ian Cook, MD, DFAPA (USA)
### Magnetoencephalography

Jointly developed by the American Clinical Magnetoencephalography Society (ACMEGS)  
Co-Directors: Tony Wilson, PhD (USA), Angel Hernandez, MD (USA), and Stefan Rampp, MD (Germany)

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda</th>
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</table>
| 8:00am | Introduction  
Richard C. Burgess, MD, PhD, FACNS (USA)                                                |
| 8:10am | Welcome  
Tony Wilson, PhD (USA)                                                                    |
| 8:30am | Neurophysiological Basis and Recording Fundamentals of MEG and EEG  
Richard C. Burgess, MD, PhD, FACNS (USA)                                                   |
| 9:00am | The Logistics of MEG Operation and Practicing According to the ACMEGS Clinical Practice Guidelines  
Anto Bagic, MD, PhD, FACNS (USA)                                                             |
| 10:00am | Break                                                                                       |
| 10:15am | Dipole Modeling of Epileptiform Activity  
John Ebersole, MD (USA)                                                                     |
| 11:00am | Normal Variants in MEG  
Stefan Rampp, MD (Germany)                                                                  |
| 11:45am | Lunch                                                                                       |
| 12:45pm | Source Modeling of Evoked Activity  
Tony Wilson, PhD (USA)                                                                       |
| 1:00pm | Cases (How MEG Contributed to Patient Management) - Adult Cases  
Anto Bagic, MD, PhD, FACNS (USA) and Andrew Zillgitt, DO (USA)                              |
| 3:00pm | Break                                                                                       |
| 3:15pm | Cases (How MEG Contributed to Patient Management) - Pediatric Cases  
Angel Hernandez, MD (USA) and Dave Clarke, DO (USA)                                        |

### Advanced Electromyography

Co-Directors: Devon Rubin, MD, FACNS (USA), Renato Verdugo, MD (Chile)

<table>
<thead>
<tr>
<th>Time</th>
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| 8:00am | EDX in Demyelinating Neuropathies (Action Potential and Impulse Conduction)  
David Burke, MD, DSc (Australia)                                                        |
| 8:40am | Advances in Cranial Nerve Electrodiagnostic Testing  
Jun Kimura, MD (USA)                                                                       |
| 9:20am | EDX Advances in Myopathy  
Christian Kranup, MD DMSc FRCP FEAN (Denmark)                                               |
| 10:00am | Break                                                                                       |
| 10:10am | EDX Advances in Motor Neuron Diseases/ALS  
Reinhard Dengler, MD (Germany)                                                              |
| 10:50am | EDX Advances in Sensory Neuropathy  
Renato Verdugo, MD (Chile)                                                                   |
| 11:20am | EDX Features in Peripheral Nerve Hyperexcitability Disorders  
Devon Rubin, MD, FACNS (USA)                                                               |

### Single Fiber Electromyography

Co-Directors: Erik Stålberg, MD, PhD (Sweden) and Donald Sanders, MD (USA)

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<tr>
<th>Time</th>
<th>Agenda</th>
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| 1:00pm | Welcome  
Erik Stålberg, MD, PhD (Sweden)                                                            |
| 1:15pm | SFEMG Recording Principles  
Erik Stålberg, MD, PhD (Sweden)                                                               |
| 1:45pm | SFEMG Parameters: Jitter, FD (Ways to Measure)  
Donald Sanders, MD (USA)                                                                     |
| 2:15pm | Demo – Vol SFEMG: FD & Jitter; Normal + Patient  
Donald Sanders, MD (USA)                                                                    |
| 2:45pm | Break                                                                                       |
| 3:15pm | Stimulations SFEMG, Method, Pitfalls  
Erik Stålberg, MD, PhD (Sweden)                                                                |
| 3:35pm | CNE Jitter - Method, Definition, Pitfalls  
Erik Stålberg, MD, PhD (USA)                                                                   |
| 3:55pm | DEMO CNE Jitter – Vol and Stim  
João Aris Koyounčdjan, MD, PhD (Brazil)                                                         |
| 4:25pm | Jitter in MG and LEMS  
Donald Sanders, MD (USA)                                                                      |
WEDNESDAY, MAY 2, 2018

8:00am – 5:00pm CONCURRENT COURSES
Neuromuscular Imaging
Jointly developed by the International Society of Peripheral Neurophysiological Imaging (ISPNI)
Co-Directors: Lisa D. Hobson-Webb, MD (USA), Luca Padua, MD, PhD (Italy), and Michael Cartwright, MD (USA)

Agenda:
8:00am Welcome
Lisa D. Hobson-Webb, MD (USA) and Luca Padua, MD, PhD (Italy)
8:10am Intro to Neuromuscular Imaging
Francis O. Walker, MD, FACNS (USA)
8:45am NMUS in UE Focal Neuropathies (Including Demo)
Simon Podnar, MD (Slovenia)
9:30am NMUS in LE Focal Neuropathies (Including Demo)
Jeff Strakowski, MD (USA)
10:15am Break
10:30am NMUS in Immune-Mediated Polyneuropathy
Alexander Grimm, MD (Germany)
11:15am NMUS in Motor Neuron Disease
Stefanie Schreiber, MD (Germany)
12:00pm Lunch
1:00pm MRI of Spinal Nerve Roots
Darryl B. Sneag, MD (USA)
1:45pm MR Neurography
Roberto Gasparotti, MD (Italy)
2:30pm Advanced Neuromuscular Imaging
Einar P. Wilder-Smith, MD (USA)
3:15pm PNS and CNS Trauma: Damage, Regeneration, and Neuroplasticity. US to Monitor Brain, Vessels, Nerves, and Muscles
Luca Padua, MD, PhD (Italy)
4:00pm Disease-Specific Scoring Systems in NMUS
Alexander Grimm, MD (Germany) and Antonios Kerasnoudis, MD, PhD (Greece)
4:30pm Interesting Cases in NMUS
David Preston, MD (USA)

Demonstration Stations:
30-minute demonstration stations will be offered with a break from 3:00 – 3:30pm
Demonstration Stations to be included are:
- Median Nerve
- Radial Nerve
- Fibular Nerve
- Tibial Nerve
- Muscle
- Brachial Plexus
- Free Scan Station

Instructors will be:
- Lisa D. Peter Inkpen, MD (USA)
- Einar P. Wilder-Smith, MD (USA)
- David Mayans, MD (USA)
- Jeremy D. Bland, MB ChB (USA)
- Sarada Sakamuri, MD (USA)
- Craig Zaidman, MD (USA)
- John Norbury, MD (USA)
- Jeff Strakowski, MD (USA)
- Joon-Shik Yoon (Korea (the Republic of))
- Eman Tawfik, MD (USA)
- Jaime Lopez, MD, FACNS (USA)
- Jay Shils, PhD, D.ABNM, FACNS (USA)
- Andrea Szelenyi, MD, PhD (Germany)
- Jaime Lopez, MD, FACNS (USA)
- Marc R. Nuwer, MD, PhD, FACNS (USA)
- David MacDonald, MD, FRCP(C), ABCN (Saudi Arabia)
- Alan D. Legatt, MD, PhD, FACNS (USA)
- Antoun Koht, MD (USA)
- Lawrence R. Wierzbowski, AuD, D.ABNM, BCS-IOM (USA)
- Andrea Szelenyi, MD, PhD (Germany)
- Jorge E. Gutierrez, MD, MSc (Colombia)
- Leslie H. Lee, MD, FACNS (USA)
- Francesco Sala, MD (Italy)
- Leslie H. Lee, MD, FACNS (USA)
Satellite & Courses Program

### Invasive Electroencephalography
Jointly developed by the International League Against Epilepsy (ILAE)
Co-Directors: Stephan Schuele, MD, MPH, FACNS (USA), and Jean Gotman, PhD, FACNS (Canada)

**Agenda:**

8:00am  Where Does iEEG Fit in the Pre-Operative Investigation?
        Stephan Schuele, MD, MPH, FACNS (USA)

8:30am  Why Do We Need iEEG When We Have High Density EEG, MEG and EEG-fMRI?
        Jean Gotman, PhD, FACNS (Canada)

9:00am  Diagnostic Utility of EEG for Epilepsy Surgery: Indications, Modalities, and Techniques (Report of ILAE Task Force)
        Prasanna Jayakar, MD (USA)

9:30am  The Physics of Intracranial EEG
        Ronald Lesser, MD (USA)

10:00am Break

10:30am Surgical Techniques and Complications
        Giorgio Lo Russo, MD (Italy)

11:00am The Normal Intracerebral EEG
        Birgit Frauscher, MD (Canada)

11:30am Functional Mapping
        Nathan E. Crone, MD (USA)

12:00pm Lunch

1:00pm  iEEG in Temporal and Temporal plus Epilepsies
        Cigdem Ozcara, MD (Turkey)

1:30pm  iEEG in Focal Cortical Dysplasia (including children)
        Laura Tassi, MD (Italy)

2:00pm  iEEG in Nodular Heterotopias
        Francois Dubaue, MD (Canada)

2:30pm  Break

3:00pm  iEEG in Non-Lesional Epilepsy
        Philippe Kahane, MD, PhD (France)

3:30pm  Seizure Onset Patterns and Their Significance
        Lara Jehi, MD (USA)

4:00pm  Does Removing the Seizure Onset Provide the Best Outcome?
        Maelke Zijlmans, MD, PhD (Netherlands)

### Transcranial Magnetic Stimulation
Co-Directors: Walter Paulus, MD (Germany), and Mark George, MD (USA)

**Agenda:**

8:00am  Introduction
        Mark George, MD (USA)

8:05am  Physics of Intracranial Current Flow Induced By TMS and TES and of Membrane Excitation
        Alexander Opitz, PhD (Germany)

8:45am  Essentials of Transcranial Magnetic Stimulation
        John Rothwell, PhD (United Kingdom)

9:30am  Physiology of Transcranial Magnetic Stimulation
        Vincenzo Di Lazzaro, MD (Italy)

10:15am Break

10:30am Essentials of Transcranial Electric Stimulation
        Walter Paulus, MD (Germany)

11:15am Transcranial Stimulation and Imaging
        Hartwig R. Siebner, MD (Germany)

12:00pm Lunch

1:00pm  Transcranial Stimulation and Memory
        Agnes Floel, MD (Germany)

1:45pm  Recent Advances with TMS for Treating Depression
        Mark George, MD (USA)

2:30pm  Using TMS or tSCS to Treat Addiction
        Elliot Stein, PhD (USA)

3:15pm  Break

3:30pm  NIH Initiatives Using NIBS in Health and Disease
        Sarah H. Lisanby, MD (USA)

4:15pm  NIBS Approaches to Treating Bipolar Disorder
        Robert M. Post, MD (USA)
THURSDAY, MAY 3, 2018

**Neurophysiological Intraoperative Monitoring (continued)**

**Co-Directors:** Jaime López, MD, FACNS (USA), Jay Shils, PhD, D.ABNM, FASNM, FACNS (USA), and Andrea Szelenyi, MD, PhD (Germany)

**Agenda:**

- **7:00am** Welcome & Introduction
- **7:05am** NIOM of Functional Neurosurgery (DBS, SCS, MCS)
  - Jay L. Shils, PhD, D.ABNM, FASNM, FACNS (USA)
- **7:40am** NIOM Using Reflex and Other Modalities
  - Vedran Deletis, MD, PhD (Croatia)
- **8:15am** Evidence Based Data in NIOM
  - Robert N. Holdefer, PhD (USA)
- **8:50am** NIOM of Vascular Surgery (Cardiac and Aortic)
  - Mark Stecker, MD, PhD, D.ABNM, FASNM (USA)
- **9:25am** Alert Criteria in NIOM
  - Lilia de La Maza, MD (Mexico)
- **10:00am** Discussion

**Neuromuscular Imaging (continued)**

**Co-Directors:** Lisa D. Hobson-Webb, MD (USA), Luca Padua, MD, PhD (Italy), and Michael Cartwright, MD (USA)

**Agenda:**

- **7:00am** MRI vs US in Clinical Practice
  - Craig Zaidman, MD (USA)
- **7:45am** Imaging of the Brachial Plexus (Including Demo)
  - Michael Cartwright, MD (USA)
- **8:15am** Imaging of the Diaphragm (Including Demo)
  - Andrea Boon, MD (USA)
- **8:45am** New Imaging Technologies
  - Lisa D. Hobson-Webb, MD (USA)
- **9:30am** Keynote Address – Opportunities in Muscle US
  - Nens van Alfen, MD, PhD (Netherlands)
- **10:00am** Conclusion, Intro to Next Meeting
  - Lisa D. Hobson-Webb, MD (USA) and Luca Padua, MD, PhD (Italy)

**Demonstration Stations:**

- Brachial Plexus US
  - Leo Visser, MD (Netherlands)
- Diaphragm US
  - Andrea Boon, MD (USA)
- US-Guided CTS Injection
  - John Norbury, MD (USA)
- US-Guided Other Nerve Injection
  - Jeff Strakowski, MD (USA)
- Small Nerves UE
  - Monika Krzesniak-Swinarska, MD (USA)
- Small Nerves LE
  - Luca Padua, MD, PhD (USA)

**BrainStem Society Meeting (continued)**

**Co-Directors:** Mark Hallett, MD, FACNS (USA) and Josep Valls-Sole, MD (Spain)

**Agenda:**

- **7:00am** Welcome
  - John Rothwell, PhD (USA)
- **7:05am** Anatomy of the Reticular Formation and the PPN
  - Clifford Saper, MD, PhD (USA)
- **7:30am** Functions of the PPN
  - Edgar Garcia-Rill, PhD (USA)
- **8:00am** Prepulse Inhibition
  - Markus Kofler, MD (Austria)
- **8:30am** Break
- **8:45am** The PPN and Freezing of Gait
  - Jorik Nonnekes, MD, PhD (Netherlands)
- **9:15am** PPN DBS. Indications and Potential Secondary Effects
  - Andres Lozano, MD, PhD, FRCSC, FRSC, FCAHS (Canada)
- **9:45am** Discussion
  - Josep Valls-Sole, MD (Spain)
- **10:15am** Final Remarks
  - Mark Hallett, MD, FACNS (USA)

**Transcranial Magnetic Stimulation, continued**

**Co-Directors:** Walter Paulus, MD (Germany) and Mark George, MD (USA)

**Agenda:**

- **7:00am** Towards EEG Biomarkers of Response to TMS in Depression and Other Neuropsychiatric Diseases
  - Zafiris Daskalakis, MD, PhD, FRCP (Canada)
- **7:00am** Essentials of Repetitive Transcranial Magnetic Stimulation
  - Yoshikazu Ugawa, MD, PhD (Japan)
- **7:45am** Break
- **8:00am** Transcranial Stimulation and Pharmacology
  - Ulf Ziemann, MD (Germany)
- **8:45am** Transcranial Stimulation and EEG
  - Paolo Maria Rossini, MD, PhD (Italy)
- **9:30am** Summary and General Q&A
  - Mark George, MD (USA)

**10:30 – 11:00am**

**Coffee Break**

**Visit Exhibits and Posters**

**11:00am – 12:30am**

**Opening Ceremonies & General Session**

- **ACNS Jasper Award Lecture**
  - Mark Hallett, MD, FACNS

**12:30 – 1:30pm**

**Lunch**

**Visit Exhibits & Posters**

**Coffee Break**

**Visit Exhibits and Posters**
1:30 – 3:00pm  CONCURRENT SESSIONS
10 Years of IFCN Electrodiagnostic (Awaji) Criteria for Early Diagnosis of ALS
Chair: Ryuji Kaji, MD, PhD (Japan)

Agenda:
- Meta-Analysis of the Sensitivity and the Specificity of IFCN Awaji Criteria
  David Burke, MD, DSc (Australia)
- Expanded Use of IFCN Awaji Criteria with Ultrasound
  Reinhard Dengler, MD (Germany)
- How to Implement Awaji IFCN Criteria in EMG practice
  Ryuji Kaji, MD, PhD (Japan)

Autonomic Testing and Small Fiber Neuropathies Evaluations
Chair: Peter Novak, MD, PhD (USA)

Agenda:
- Autonomic Testing
  Thomas Chelimsky, MD (USA)
- Central Dysautonomia
  Max Hilz, MD (Germany)
- Quantitative Grading of Autonomic Failure, Severity of Small Fiber Neuropathy, Autonomic Overactivity and Orthostatic Intolerance
  Peter Novak, MD, PhD (USA)

Intraoperative Motor Evoked Potentials Optimization Techniques
Chair: Bernard Allan Cohen, PhD, FACNS (USA)

Agenda:
- Double Train Stimulation
  Henricus L. Journee, MD, PhD (Netherlands)
- Quadripolar MEP Stimulation
  Bernard A. Cohen, PhD, FACNS (USA)
- Peripheral Nerve Stimulation and Other Techniques
  Ronald Emerson, MD, FACNS (USA)

Neonatal EEG: From Basic Concepts to Advanced Techniques
Chair: Cecil Hahn, MD, MPH, FACNS (Canada)

Agenda:
- Neonatal EEG: Pearls and Pitfalls
  Fabrice Wallois, MD, PhD (France)
- Diagnosing Neonatal Seizures with Amplitude-Integrated EEG and Conventional EEG
  Ronit M. Pressler, MD, PhD, MRCPCH (United Kingdom)
- Logistics of EEG Monitoring in the Neonatal Intensive Care Unit
  Cecil D. Hahn, MD, MPH, FACNS (Canada)

TMS-Evoked EEG Potentials – A Novel Technique to Study Brain Excitability and Connectivity in Health and Disease
Chair: Ulf Ziemann, MD (Germany)

Agenda:
- Pharmacological Characterization of TMS-Evoked EEG Potentials
  Ulf Ziemann, MD (Germany)
- Utility of TMS-Evoked EEG Potentials in Epilepsy
  Vasilios K. Kimiskidis, MD, PhD (Greece)
- Utility of TMS-Evoked EEG Potentials in Disorders of Consciousness
  Mario Rosanova, MD (Italy)

3:00 – 3:15pm
Break

3:15 – 4:45pm  CONCURRENT SESSIONS
Applied Cases in Central Neurophysiology and Video EEG
Chair: William O. Tatum, IV, DO, FACNS (USA)

Agenda:
- Clinical Neurophysiology: Pearls and Pitfalls
  William O. Tatum, IV, DO, FACNS (USA)
- Challenges in Video-EEG Monitoring
  Selim R. Benbadis, MD, FACNS (USA)
- Mystery Pediatric Cases
  Phillip Pearl, MD, FACNS (USA)

Guidelines and Evidence-Based Medicine in Electrodiagnostic Testing
Chair: Anders Fuglsang-Frederiksen, DMSc (Denmark)

Agenda:
- Guidelines and Standards in Electrodiagnostic Medicine
  Kirsten Pugdahl, MS, PhD (Denmark)
- Utility of EDX in Polyneuropathy
  Hatice Tankisi, MD, PhD (Denmark)
- Utility of EDX in Amyotrophic Lateral Sclerosis
  Mamede de Carvalho, MD, PhD (Portugal)

Standard Formats for Neurophysiology Data Exchange
Chair: Jonathan J. Halford, MD (USA)

Agenda:
- The Need for Standard Neurophysiology Formats
  Jonathan J. Halford, MD (USA)
- Brain Imaging Data Structure (BIDS)
  Cyril Pernet, PhD (United Kingdom)
- Design of the Multiscale Electrophysiology Format, Version 3 (MEF3)
  Squire M. Stead, MD, PhD (USA)

4:45 – 5:00pm
Break
5:00 – 6:30pm  CONCURRENT SESSIONS
EEG Based Biomarkers in Neuropsychiatric Disorders: Pitfalls and Opportunities
Chair: Joshua Ewen, MD, FACNS (USA)
Agenda:
- EEG Based Biomarkers in Neuropsychiatric Disorders: Pitfalls and Opportunities
  Sandra Loo, PhD (USA)
- EEG Based Biomarkers in Neuropsychiatric Disorders: Pitfalls and Opportunities
  Sandor Beniczky, MD, PhD (Denmark)
- EEG Based Biomarkers in Neuropsychiatric Disorders: Pitfalls and Opportunities
  Joshua Ewen, MD, FACNS (USA)

Large Scale Networks in Focal Epilepsy Revealed by High-density EEG and fMRI Studies
Chair: Margitta Seeck, MD, PhD (Switzerland)
Agenda:
- Cognitive Impairment in Focal Epilepsy - Large Scale Network Disturbance
  Pierre Mégevand, MD, PhD (Switzerland)
- Large-Scale Epileptic Networks in Temporal Lobe Epilepsy: Evidence from HD-EEG in Patients and Animal Models
  Christoph M. Michel, PhD (Switzerland)
- Noninvasive Source Imaging of Seizure from High Density Scalp EEG
  Bin He, PhD (USA)

Novel Methodologies in Transcranial Magnetic Stimulation
Chair: Ricci Hannah, PhD (United Kingdom)
Agenda:
- Selective Neuronal Stimulation with Controllable Pulse Parameter TMS: Physiological and Behavioural Evidence
  Ricci Hannah, PhD (United Kingdom)
- Behavioural Consequences of Quadrupulse Stimulation (QPS): Interactions with Response Inhibition in Healthy Individuals and Parkinson’s Disease Patients
  Masashi Hamada, MD, PhD (Japan)
- Brain-State Dependent TMS: Live Methodological Demonstration and Evidence for Enhanced Neuromodulation Effectiveness
  Christoph Zrenner, MD (Germany)

Neurophysiology of Tremor
Chair: Dietrich Haubenberger, MHSc, MD (Austria)
Agenda:
- Parkinson’s Tremor
  Rick C. Helmich, MD, PhD (Netherlands)
- Essential Tremor
  Dietrich Haubenberger, MHSc, MD (Austria)
- Dystonic Tremor
  Pattamon Panyakaew, MD (Thailand)

Update and Advances in the Neurophysiologic Assessment of Neuromuscular Junction Disorders
Chair: Devon Rubin, MD, FACNS (USA)
Agenda:
- Repetitive Nerve Stimulation: Advances, Techniques, and Limitations
  Devon Rubin, MD, FACNS (USA)
- Update in Single Fiber EMG and Concentric Needle EMG in the Diagnosis of Neuromuscular Junction Disorders
  Daniel Menkes, MD, FACNS (USA)
- Advancing Neurophysiologic Techniques in the Evaluation of Neuromuscular Junction Disorders
  Hans D. Katzberg, MD, MSc, FRCPC (Canada)

6:30 – 8:00pm
Welcome Reception
Exhibit Hall
(see p. 13 for more information)

FRIDAY, MAY 4, 2018
7:00 – 8:30am
Breakfast Product Theaters
8:30 – 9:00am
Coffee Break
9:00 – 10:30am
General Session
IFCN Berger Award Presentation & Lecture
Margitta Seeck, MD, PhD
ACNS Schwab Award Presentation & Lecture
Donald Sanders, MD

10:00 – 10:15am
Break

10:15 – 11:45am  CONCURRENT SESSIONS
CNP Program Directors Symposium: Subspecialty Clinical Neurophysiology Training
Chair: Jeffrey Britton, MD, FACNS (USA)
Agenda:
- American Perspectives
  Jeffrey Britton, MD, FACNS (USA)
- European Perspectives
  Jonathan Cole, MA, MSc, DM (Oxon), FRCP (United Kingdom)
- Asian Perspectives
  Ryusuke Kakigi, MD, PhD (Japan)
Congress Scientific & Educational Program

Advances in the Neurophysiology of Language: Structure, Time, and Plasticity
Chair: Ellen Lau, PhD (USA)

Agenda:
- Neural Representations of Speech in Auditory Cortex
  Jonathan Z. Simon, PhD (USA)
- Neural Encoding of Linguistic Structure Across Time
  Ellen Lau, PhD (USA)
- Plasticity in the Neural Implementation of Language: Insights from Studies with Blind Individuals
  Marina Bedny, PhD (USA)

CONTROVERSY: Nonconvulsive Seizures and Status Should be Aggressively Treated
Moderator: Frank Drislane, MD, FACNS (USA)

Agenda:
- Pro
  Andrea Rossetti, MD, PhD (Switzerland)
- Con
  Lawrence Hirsch, MD, FACNS (USA)

Electrophysiology and Immune Mechanisms in Post Infectious Neuropathies
Chair: YL Lo, MD (Singapore)

Agenda:
- Axonal Guillain-Barre Syndrome: New Concepts
  Satoshi Kuwabara, MD (Japan)
- Electrophysiologic Features of Postinfectious Neuropathies
  YL Lo, MD (Singapore)
- Nodopathies of the Peripheral Nervous System
  Marcondes C. Franca, MD, PhD (Brazil)

Structures Activated by TMS and Stimulating Current Direction
Co-Chairs: Yoshikazu Ugawa, MD, PhD (Japan) and John Rothwell, PhD (United Kingdom)

Agenda:
- Based on Own Human Experimental Data
  Yoshikazu Ugawa, MD, PhD (Japan)
- Based on Epidural Recording Data
  John Rothwell, PhD (United Kingdom)
- Based on Modelling Data
  Vincenzo Di Lazzaro, MD (Italy)

11:45am – 1:00pm
Lunch
Visit Exhibits and Posters

Special Interest Groups (SIGs)

Noninvasive Brain Stimulation
Director: Walter Paulus, MD
Education
Director: Jonathan Cole, MA, MSc, DM (Oxon), FRCP
Neuromuscular Ultrasound
Director: Francis Walker, MD, FACNS
Continuous EEG
Director: Sarah Schmitt, MD, FACNS
Neurophysiologic Interoperative Monitoring
Director: Lilia de La Maza, MD

1:00 – 2:30pm  CONCURRENT SESSIONS
How Well Do You See Inside the Brain with Scalp EEG, MEG, EEG-fMRI and Intracerebral EEG?
Chair: Jean Gotman, PhD, FACNS (Canada)

Agenda:
- Strengths and Limitations of Scalp EEG and MEG in Identifying Deep Neuronal Sources
  Andreas Alexopoulos, MD (USA)
- Combining EEG and fMRI to See the Source of Deep Epileptic Discharges
  Jean Gotman, PhD, FACNS (Canada)
- Intracerebral EEG Can See Deep in the Brain, but with Tunnel Vision
  Laura Tassi, MD (Italy)

Peripheral Clinical Neurophysiology in Intensive Care
Co-Chairs: Mamede de Carvalho, MD, PhD (Portugal) and Hatice Tankisi, MD, PhD (Denmark)

Agenda:
- Intensive Care Unit Myopathy
  Hatice Tankisi, MD, PhD (Denmark)
- Intensive Care Unit Neuropathy
  Birger Johnsen, MD, PhD (Denmark)
- Respiratory Evaluation
  Mamede de Carvalho, MD, PhD (Portugal)

Quantitative EEG in Epilepsy and Critical Care: Interactive Workshop
Chair: Susan T. Herman, MD, FACNS (USA)

Agenda:
- Quantitative EEG for Assessment of Background Abnormalities
  Michel J. Van Putten, MD, MSc, PhD (Netherlands)
- Quantitative EEG for Identification of Seizures and Periodic Patterns
  Susan T. Herman, MD, FACNS (USA)
- Quantitative EEG for Identification of Ischemia
  M. Brandon Westover, MD, PhD, FACNS (USA)
### Sleep Biomarkers in Cognitive Disorders
**Chair:** Madeleine M. Grigg-Damberger, MD, FACNS (USA)

**Agenda:**
- Sleep Biomarkers in Alzheimer’s Disease and Minimal Cognitive Impairment
- Madeleine M. Grigg-Damberger, MD, FACNS (USA)
- Prognostic Significance of Sleep Disorders in Mild Traumatic Brain Injury
- Sanjeev Kothare, MD (USA)
- Sleep Biomarkers in Parkinson’s Disease
- Birgit Högl, MD (Austria)

### Teaching Clinical Neurophysiology: Adapting Models to Local Demands
**Chair:** Paulo Andre Kimaid, MD, PhD (Brazil)

**Agenda:**
- Clinical Neurophysiology in Brazil – A New Paradigm
- Learning Distance and Intensive Practical Sessions
- Paulo Andre A. Kimaid, MD, PhD (Brazil)
- Web Based EEG Teaching Techniques
- Sandor Beniczky, MD, PhD (Denmark)
- The Role of IFCN and Other World Organizations in Teaching CNP
- Hiroshi Shibasaki, MD, PhD (Japan)

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**2:30 – 2:45pm**  
**Break**

**2:45 – 4:15pm**  
**CONCURRENT SESSIONS**

### Continuous EEG in Targeted Temperature Management: the I-CARE (International Cardiac Arrest EEG Consortium)-CCEMRC Study
**Chair:** Jong Woo Lee, MD, PhD, FACNS (USA)

**Agenda:**
- Approaches to Continuous EEG in Cardiac Arrest
  - Michel J. Van Putten, MD, MSc, PhD (Netherlands)
- Advances in Assessing EEG Reactivity in Targeted Temperature Management
  - M. Brandon Westover, MD, PhD, FACNS (USA)
- Dynamic Nature of Brain Injury in Targeted Temperature Management
  - Jong Woo Lee, MD, PhD, FACNS (USA)

### Growing the Optimal Neurodiagnostic Team: Presented by ASET-The Neurodiagnostic Society
**Chair:** Maureen Carroll, R.EEG/EP T, CNIM, RPSGT (USA)

**Agenda:**
- Education Without Boundaries: Self-directed Distance Learning in Neurodiagnostics
  - Maureen Carroll, R.EEG/EP T, RPSGT, CNIM (USA)
- The Road from Didactics to Clinical Competence in Neurodiagnostics
  - Cheryl Plummer, R.EEG T, CLTM, FASET (USA)
- Global Neurodiagnostic Educational Resources through OSET
  - Maggie Marsh-Nation, R.EEG T, CNIM, MSIDT (USA)

### Pediatric Neuromuscular Disorders
**Chair:** Nancy Kuntz, MD (USA)

**Agenda:**
- Congenital Myasthenic Syndromes: Update on EDX and Treatment
  - Liying Cui, MD (China)
- Hereditary Neuropathies: Navigating EDX and Genetic Testing
  - Nancy Kuntz, MD (USA)
- Diagnostic Features and Treatment Update
  - Kathryn Selby, BSc, MBChB, MRCP, FRCP (Canada)

**4:15 – 4:30pm**  
**Break**

**4:30 – 6:00pm**  
**General Session**

- ACNS Presidential Lecture
- Stephan U. Schuele, MD, MPH, FACNS
- IFCN Adrian Award Presentation & Lecture
- Clifford Saper, MD, PhD

**7:00 – 9:00pm**  
**Gala Reception**

Smithsonian National Air & Space Museum
(see p. 13 for more information)

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**SATURDAY, MAY 5, 2018**

**8:30 – 10:00am**  
**CONCURRENT SESSIONS**

### Clinical Neurophysiology of Insular Epilepsy
**Chair:** Dang K. Nguyen, MD, PhD, FRCP (Canada)

**Agenda:**
- Video-scalp EEG Investigation of Insular Epilepsy
  - Dang K. Nguyen, MD, PhD, FRCP (Canada)
- Magnetoencephalographic Investigation of Insular Epilepsy
  - Ismail Mohamed, MD (USA)
- Invasive EEG Investigation of Insular Epilepsy
  - Philippe Kahane, MD, PhD (France)

### Human Brain Connectome from Physiology to Disease
**Chair:** Fabrizio Vecchio, PhD (Italy)

**Agenda:**
- Anatomical and Functional Connectivity: From Cell to Whole Brain
  - Hartwig R. Siebner, MD (Denmark)
- Functional Connectivity in Physiological and Pathological Aging from EEG Network Analysis During Rest and Task
  - Fabrizio Vecchio, PhD (Italy)
- Connectivity and Neurodegeneration
  - Paolo Maria Rossini, MD, PhD (Italy)
Congress Scientific & Educational Program

Neurophysiologic and Imaging Signatures of Pain and Itch
Chair: Sung-Tsang Hsieh, MD, PhD (Taiwan)
Agenda:
- Neurophysiological Signatures of Pain and Their Clinical Use
  Praveen Anand, MD (United Kingdom)
- Imaging Signatures of Nerve Degeneration-Induced Neuropathic Pain
  Sung-Tsang Hsieh, MD, PhD (Taiwan)
- Itch Perception in Humans
  Ryusuke Kakigi, MD, PhD (Japan)

Neurophysiological Effects of Deep Brain Stimulation
Chair: Josep Valls-Sole, MD (Spain)
Agenda:
- Stimulated Area and Local Field Potentials. Near Effects of DBS
  Jerrold Vitek, MD, PhD (USA)
- Beyond Basal Ganglia. Effects of DBS on Cortical Activity
  Robert Chen, MD (Canada)
- Lateral Effects on Sensory and Motor Pathways
  Josep Valls-Sole, MD (Spain)

Neurophysiology of Multisensory Integration
Chair: John Foxe, PhD (USA)
Agenda:
- Shifting Among Multiple Sense
  John Foxe, PhD (USA)
- Timing in the Brain: Multi-Modal Investigations
  Mark Wallace, MD (USA)
- Title coming soon
  Sophie Molholm, PhD (USA)

10:00 – 10:15am
Break

10:15 – 11:45am
General Session
ACNS Gloor Award Presentation & Lecture
Marc R. Nuwer, MD, PhD, FACNS
IFCN Kugleberg Award Presentation & Lecture
Mandaville Gourie-Devi, MBBS, MD, DM, DSc

11:45am – 1:00pm
Lunch
Visit Posters and Exhibits

12:00 – 2:30pm
IFCN General Assembly

2:00 – 3:30pm
CONCURRENT SESSIONS
Contemporary Update on Pedicle Screw Stimulation
Chair: Gloria Galloway, MD, MBA, FACNS (USA)
Agenda:
- Alert Criteria in PS Placement and Chronically Compressed Nerve Roots
  Gloria Galloway, MD, MBA, FACNS (USA)
- Value of NIOM in PS Placement Review of the Data
  Armando Tello, MD, PhD (Mexico)
- Complications of PS Placement with Review of Case Studies
  Jaime Ramos-Peek, MD (Mexico)

CONTROVERSY: Stereo VS Grids and Strips – Which is Better, How Do We Choose?
Chair: Saurabh Sinha, MD, PhD, FACNS (USA)
Agenda:
- Saurabh R. Sinha, MD, PhD, FACNS (USA)
  Francois Dubreau, MD (Canada)
  Gregory Bergey, MD (USA)

CONTROVERSY: Ultrasound is Sufficient for Diagnosis of ALS, CTS, Demyelinating Neuropathy
Moderator: Francis O. Walker, MD, FACNS (USA)
Agenda:
- Pro
  David Preston, MD (USA)
- Con
  Leo Visser, MD (Netherlands)

Pediatric Noninvasive Brain Stimulation
Chair: Alex Rotenberg, MD, PhD (USA)
Agenda:
- Moving Targets: Developmental Neurobiology Considerations in NBS
  Alexander Rotenberg, MD, PhD (USA)
- Therapeutic Targets in ADHD
  Michael Siniatchkin, MD (Germany)
- Therapeutic Prospects for NBS in Pediatric Stroke
  Adam Kirton, MD, MSc (Canada)

3:30 – 3:45pm
Break

3:45 – 5:15pm
CONCURRENT SESSIONS
Advances in Neuromuscular Imaging: A Focus on Nerve Ultrasound
Chair: Lisa D. Hobson-Webb, MD (USA)
Agenda:
- Emerging Technologies in Neuromuscular Imaging: An Overview
  Lisa D. Hobson-Webb, MD (USA)
- Integrating Imaging with Electrodiagnostic Testing
  Michael Cartwright, MD (USA)
- Elastography Techniques in Neuromuscular Imaging
  Daniele Coraci, MD, PhD (Italy)
Botulinum Toxin Treatment of Neurologic Disorders: Mechanism of Action and Ultrasound vs EMG Guidance  
Chair: Jaime Lopez, MD, FACNS (USA)  
Agenda:  
The Clinical Neuropharmacology and Neurophysiology of Botulinum Toxins  
Janice Massey, MD (USA)  
Ultrasound Guidance of Botulinum Toxin Therapy  
Katharine Alter, MD (USA)  
EMG and Electrical Stimulation Guidance for Botulinum Toxin  
Jaime Lopez, MD, FACNS (USA)  

Neurophysiology of Cannabinoids  
Chair: Jose Tellez-Zenteno, MD, PhD, FRCP(C), CSCN (EEG) (Canada)  
Agenda:  
Neurophysiology of CBD in Epilepsy  
Jose Tellez-Zenteno, MD, PhD, FRCP(C), CSCN (EEG) (Canada)  
Neurophysiology of CBD in Pain  
Sung-Tsang Hsieh, MD, PhD (Taiwan)  
Neurophysiology of CBD in Sleep  
Charlene Gamaldo, MD (USA)  

The Evolving Role of Neurostimulation in the Management of Medically Refractory Epilepsy  
Chair: Dawn Eliashiv, MD, FACNS, FAAN (USA)  
Agenda:  
Cranial Nerve Stimulation in Epilepsy: Update and Future Trends  
Christopher De Giorgio, MD (USA)  
Responsive Neurostimulation: Patient Selection and Advanced Programming Strategies  
Lawrence Hirsch, MD, FACNS (USA)  
Neurostimulation 2020 and Beyond  
Dawn Eliashiv, MD, FACNS (USA)  

Update on Evoked Potential Warning Criteria during Surgery  
Chair: Aatif Husain, MD, FACNS (USA)  
Agenda:  
Somatosensory Evoked Potentials  
David MacDonald, MD, FRCP(C), ABCN (Saudi Arabia)  
Motor Evoked Potentials  
Andrea Szelenyi, MD, PhD (Germany)  
Brainstem Auditory Evoked Potentials  
Aatif M. Husain, MD, FACNS (USA)  

5:15 – 5:45pm  
Break  

5:45 – 6:45pm  
General Session  
Neurophys Bowl  

SUNDAY, MAY 6, 2018  

8:30 – 10:00am CONCURRENT SESSIONS  
Brain Connectivity – What Invasive Electrophysiology Can Do for Mapping Brain Networks  
Chair: Riki Matsumoto, MD, PhD (Japan)  
Agenda:  
Mapping Brain Networks with ECoG Spectral Analysis  
Nathan E. Crone, MD (USA)  
Probing Brain Effective Connectivity Using Cortico-Cortical Evoked Potential  
Riki Matsumoto, MD, PhD (Japan)  
Exploring Brain Functional Connectivity Using Direct White Matter Stimulation  
Hugues Duffau, MD, PhD (France)  

Beyond Sleep Studies and EEGs: Advances in Ambulatory Neurophysiologic Monitoring of Sleep and Epilepsy  
Chair: Tobias Loddenkemper, MD, FACNS (USA)  
Agenda:  
Monitoring of Neurophysiological Biomarkers during Wakefulness and Sleep  
Milena Pavlova, MD (USA)  
Seizures, Sleep and SUDEP  
Elson So, MD (USA)  
Circadian Seizure Patterns and Ambulatory Detection Devices  
Tobias Loddenkemper, MD, FACNS (USA)  

Contribution of Corticomuscular, Intermuscular and Corticokinematic Coherence in Research on Sensorimotor Interactions  
Chair: Sylvain Crémoix, PhD (France)  
Agenda:  
Potential of Corticomuscular and Intermuscular Interactions to Evaluate and Detect Alteration of Motor Control in Healthy People and People with Cervical Spinal Cord Injury  
Sylvain Crémoix, PhD (France)  
Corticocinematic Coherence During Walking: Investigating The Cortical Control Of Human Gait in Young and Older Adults and People With Parkinson’s Disease  
Tjeerd Boonstra, PhD (Australia)  
Corticokinematic Coherence: A Biomarker of the Proprioceptive Feedbacks to the Sensorimotor Cortex  
Mathieu Bourguignon, PhD (Spain)
New Proposals for Tc-MEP Interpretation in Spinal Deformities and Intramedullary Spinal Cord Tumor (IMSCT) Surgeries
Chair: Martin J. Segura, MD, PhD (Argentina)

Agenda:
- A New Alarm Criterion for MEP-NIOM and an Alternative Gold Standard to Better Identify True “False Positive” Findings
- Martin J. Segura, MD, PhD (Argentina)
- A Proposed New Algorithm for Decision Making in the Face of Neurophysiological Alarms During Spinal Deformity Surgeries
- Ricardo Ferreira, MD (Brazil)
- A Tailored Neurophysiological Approach to Warning MEP Criteria in Intramedullary Spinal Cord Tumors
- Francisco J. Soto, MD (Chile)

Quo Vadis Clinical MEG Worldwide?
Chair: Anto Bagic, MD, PhD, FACNS (USA)

Agenda:
- Japanese Perspective on the Current State and Future Direction of Clinical MEG
  Kazutaka Jin, MD, PhD (Japan)
- European Perspective on the Current State and Future Direction of Clinical MEG
  Stefan Rampp, MD (Germany)
- USA Perspective on the Current State and Future Direction of Clinical MEG
  Anto Bagic, MD, PhD, FACNS (USA)

10:00 – 10:15am
Break

10:15 – 11:45am
CONCURRENT SESSIONS

Optimizing Transcranial Direct Current Stimulation
Chair: Michael A. Nitsche, MD (Germany)

Agenda:
- More Is Not Better, Just Different
  Michael A. Nitsche, MD (Germany)
- Targeting Networks
  Giulio Ruffini, PhD (Spain)
- tDCS and Drugs
  Alexander Rotenberg, MD, PhD (USA)

Quantitative Methods to Follow Neuromuscular Disease
Chair: Seward Rutkove, MD (USA)

Agenda:
- Quantitative Needle EMG Methods
  Mark Bromberg, MD, PhD (USA)
- Electrical Impedance Myography
  Seward Rutkove, MD (USA)
- Motor Unit Estimates
  Jeremy Shefner, MD, PhD (USA)

Sensorimotor Organization in Writer’s Cramp
Chair: Mathew Alexander, MD, DM (India)

Agenda:
- Pathopsysiology of Dystonia
  Pattamon Panyakaew, MD (Thailand)
- Noninvasive Brain Stimulation as a Therapeutic Tool in FHD
  Angelo Quartone, MD (Italy)
- Sensori-Motor Processing Abnormalities in Writer’s Cramp
  Mathew Alexander, MD, DM (India)

How Sports Affects Neurophysiology: The Good, the Bad, and the Ugly
Chair: Claus Reinsberger, MD, PhD, FACNS (Germany)

Agenda:
- Better Performance by Better Sleep: The Role of Sleep in Elite Sports (The Good)
  Hugh Fullagar, PhD (Australia)
- Neurophysiology of Acute Concussion (The Bad)
  Claus Reinsberger, MD, PhD, FACNS (Germany)
- Task-Specific Dystonia in Sports: ‘Waggles’, ‘Staggers’ and ‘Yips’ (The Ugly)
  Sarah Pirio Richardson, MD (USA)

Wide-Band EEG by Neuron and Glia: from Basic and Clinical Application in Epilepsy
Chair: Akio Ikeda, MD, PhD, FACNS (Japan)

Agenda:
- Basic Generator Mechanism of Wide-Band EEG in Epilepsy
  Christophe Bernard, PhD (France)
- Clinical Observation of HFO in Epilepsy
  Jean Gotman, PhD, FACNS (Canada)
- Clinical Observation of DC Shifts in Epilepsy
  Akio Ikeda, MD, PhD, FACNS (Japan)

11:45am – 12:00pm
Break

12:00 - 12:45pm
Closing Ceremonies
To register for the meeting online, please visit: [http://iccn2018.acns.org/](http://iccn2018.acns.org/)

Advance Registration Deadline: April 10, 2018

Onsite prices will increase.

*(Please type or print clearly.)*

First (Given) Name_______________________________ Middle Initial________ Last (Family) Name__________________________

Designation (MD, PhD, DO, etc.)_____________________Institution____________________________________________________

Mailing Address______________________________________________________________________________________________

City_________________________________________________________ State/Province___________________________________

Zip/Postal Code________________________________________ Country _______________________________________________________

Phone_______________________________ Fax______________________________ Email________________________________

□ I do not wish to be included on the delegate list provided to supporters. □ I do not wish to be included on any published delegate list including programs, mobile apps, etc.

**SATELLITE COURSES** – Tuesday, May 1 – Thursday, May 3, 2018

Please note that the scheduled times of some courses listed below may conflict. Please refer to the Preliminary Program for complete course scheduling information to make your selections. Delegates registering for the Congress below qualify for discounted course registration rates.

<table>
<thead>
<tr>
<th>Tuesday, May 1</th>
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<tbody>
<tr>
<td>8:00 - 17:00</td>
<td>ICU EEG</td>
<td>$200 USD</td>
<td>$150 USD</td>
<td>$125 USD</td>
<td>$95 USD</td>
</tr>
<tr>
<td>8:00 – 17:00</td>
<td>MEG</td>
<td>$200 USD</td>
<td>$150 USD</td>
<td>$125 USD</td>
<td>$95 USD</td>
</tr>
<tr>
<td>8:00 - 12:00</td>
<td>Advanced EMG</td>
<td>$100 USD</td>
<td>$75 USD</td>
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<td>$50 USD</td>
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<tr>
<td>13.00 - 17:00</td>
<td>Single Fiber EMG</td>
<td>$100 USD</td>
<td>$75 USD</td>
<td>$65 USD</td>
<td>$50 USD</td>
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</table>

Tuesday, May 1 (8:00 – 17:00) & Thursday, May 3 (7:00-10:30)

BrainStem Society □ $175 USD □ $100 USD □ $100 USD □ $75 USD □ $100 USD □ $75 USD

**Wednesday, May 2**

<table>
<thead>
<tr>
<th>Wednesday, May 2</th>
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<tbody>
<tr>
<td>8:00 – 17:00</td>
<td>Invasive EEG</td>
<td>$200 USD</td>
<td>$150 USD</td>
<td>$125 USD</td>
<td>$95 USD</td>
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</table>

**Wednesday, May 2 (8:00 – 17:00) – Thursday, May 3 (7:00-10:30)**

<table>
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<tr>
<th>Neuromuscular Imaging</th>
<th>$400 USD</th>
<th>$350 USD</th>
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<td>NIOM</td>
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<td>$200 USD</td>
<td>$175 USD</td>
<td>$135 USD</td>
<td>$175 USD</td>
<td>$135 USD</td>
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<tr>
<td>TMS</td>
<td>$275 USD</td>
<td>$200 USD</td>
<td>$175 USD</td>
<td>$135 USD</td>
<td>$175 USD</td>
<td>$135 USD</td>
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</table>

**Satellite Courses Total (A):**

<table>
<thead>
<tr>
<th>Tuesday, May 1</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>8:00 - 17:00 ICU E</td>
<td>Physician</td>
<td>$200 USD</td>
<td>$150 USD</td>
<td>$125 USD</td>
<td>$95 USD</td>
</tr>
<tr>
<td>8:00 – 17:00 MEG</td>
<td>Physician</td>
<td>$200 USD</td>
<td>$150 USD</td>
<td>$125 USD</td>
<td>$95 USD</td>
</tr>
<tr>
<td>8:00 - 12:00 Adv</td>
<td>Physician</td>
<td>$100 USD</td>
<td>$75 USD</td>
<td>$65 USD</td>
<td>$50 USD</td>
</tr>
<tr>
<td>13:00 - 17:00 S</td>
<td>Physician</td>
<td>$100 USD</td>
<td>$75 USD</td>
<td>$65 USD</td>
<td>$50 USD</td>
</tr>
</tbody>
</table>

**CONGRESS REGISTRATION**

Thursday, May 3 - Sunday, May 6, 2018

<table>
<thead>
<tr>
<th>Physician</th>
<th>Student*/Technologist</th>
<th>Reduced Rate Countries**</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500 USD</td>
<td>$300 USD</td>
<td>$300 USD</td>
</tr>
</tbody>
</table>

**Congress Total (B):**

* To qualify for the student rate, please submit a letter from a supervisor verifying student status with this registration form.

**Please visit [http://iccn2018.acns.org/registration](http://iccn2018.acns.org/registration) for a list of countries that qualify for “reduced rate countries” registration. Delegates that qualify may register online or by submitting the registration form.
SOCIAL EVENTS

☐ Welcome Reception - Thursday, May 3, 2018 Complimentary

☐ Gala Reception - Friday, May 4, 2018 $85

Social Events Total (C):_______________

GUEST REGISTRATION

Guests – Age 18 and over
Welcome and Gala Receptions only

Guest Name:______________________________________________________________

Guest Name:______________________________________________________________

$175 x ___________  

Guests - Under Age 18
Gala Reception only (must be accompanied by a registered delegate)

Guest Name:______________________________________________________________

Guest Name:______________________________________________________________

$60 x ___________  

Guest Total (D):_______________

SPECIAL NEEDS

☐ I have a religious or allergy-related dietary restriction. Please explain:

___________________________________________________________________________________________________________

☐ I have a need for physical assistance. Please explain:

___________________________________________________________________________________________________________

PAYMENT:

Satellite Courses (A):__________ + Congress (B):__________ + Social Events (C):__________ Guests (D):__________

TOTAL DUE: _____________________

☐ Please invoice me (invoice must be paid by April 10, 2018)

☐ Company check - payable to American Clinical Neurophysiology Society (in US Dollars, drawn on a US bank)

☐ Credit Card (check one):  □ VISA □ MasterCard □ Discover □ American Express

Credit Card Number____________________________________________________ Expiration Date___________________

Card Holder Name ____________________________________________________________________________________

Authorized Signature___________________________________________________ Date____________________________

*Registrations will not be processed without payment and signature.*

Signature of Agreement: I am hereby registering to attend the 31st International Congress of Clinical Neurophysiology (ICCN) of the International Federation of Clinical Neurophysiology (IFCN), May 1-6, 2018, at the Marriott Wardman Park in Washington, DC. I understand that the event registration rate listed above will be charged to the credit card I have listed. I understand further that all registration charges must be paid in full upon completion of this form. If registration is not paid for in full at the time of event, I may be asked to provide payment upon arrival at the meeting.

Waiver. Submission of this registration form and payment of associated fee serves as agreement by the delegate to release the American Clinical Neurophysiology Society, the Washington Marriott Wardman Park, their respective agents, servants, employees, representatives, successors, and assigns, from any and against all claims, demands, causes of action, damages, costs, and expenses, including attorneys' fees, for injury to person or damage to property arising out of attendance at the 31st International Congress of Clinical Neurophysiology (ICCN) of the International Federation of Clinical Neurophysiology (IFCN). In addition, the delegate hereby grants permission to use his/her likeness in a photograph or other digital reproduction in any and all of its publications, including website entries, without payment or any other consideration, agreeing that these materials will become the property of ACNS which has the right to edit, alter, copy, exhibit, publish or distribute this photo for purposes of publicizing its programs or for any other lawful purpose. Additionally, the delegate waives any right to royalties or other compensation arising or related to the use of the photograph.

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Please return this registration form with payment to:
ICCN Secretariat • 555 E. Wells Street, Suite 1100 • Milwaukee, WI 53202 • Fax: (414) 276-3349 • E-mail: ICCN2018@acns.org
Please check below the Congress sessions you plan to attend. Pick one from each time segment. These sessions are included in the Congress registration fee at no additional charge. Anticipated attendance information will be used to assign sessions to appropriate meeting space. You are not obligated to attend the sessions you check.

<table>
<thead>
<tr>
<th>Thursday, May 3</th>
<th>Friday, May 4</th>
<th>Saturday, May 5</th>
<th>Sunday, May 6</th>
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<tr>
<td>13:30-15:00</td>
<td>10:15-11:45</td>
<td>8:30-10:00</td>
<td>8:30-10:00</td>
</tr>
<tr>
<td>□ 3005: Intraoperative Motor Evoked Potentials Optimization Techniques</td>
<td>□ 4005: Controversy: Nonconvulsive Seizures and Status Should Be Aggressively Treated</td>
<td>□ 5005: Human Brain Connectome from Physiology to Disease</td>
<td>□ 6005 Contribution of Corticomuscular, Intermuscular and Corticokinematic Coherence in Research on Sensorimotor Interactions</td>
</tr>
<tr>
<td>□ 3020: TMS-evoked EEG Potentials – A Novel Technique to Study Brain Excitability and Connectivity in Health and Disease</td>
<td>□ 4020: Structures Activated By TMS and Stimulating Current Direction</td>
<td>□ 5020: Pediatric Noninvasive Brain Stimulation</td>
<td>□ 6040: Beyond Sleep Studies and EEG’s: Advances in Ambulatory Neurophysiologic Monitoring of Sleep and Epilepsy</td>
</tr>
<tr>
<td>15:15-16:45</td>
<td>11:45-13:00</td>
<td>14:00-15:30</td>
<td>10:15-11:45</td>
</tr>
<tr>
<td>□ 3030: Guidelines and Evidence-Based Medicine in Electrodiagnostic (EDX) Testing</td>
<td>□ 4081: Special Interest Group: Education</td>
<td>□ 5030: Controversy: Ultrasound Is Sufficient For Diagnosis of ALS, CTS Demyelinating Neuropathy</td>
<td>□ 6025: Quantitative Methods to Follow Neuromuscular Disease</td>
</tr>
<tr>
<td>□ 3035: Standard Formats for Neurophysiology Data Exchange</td>
<td>□ 4082: Special Interest Group: Ultrasound</td>
<td>□ 5035: Controversy: Ultrasound vs. How Do We Choose?</td>
<td>□ 6030: Sensorimotor Organization in Writer’s Cramp</td>
</tr>
<tr>
<td>17:00-18:30</td>
<td>13:00-14:30</td>
<td>15:45-17:15</td>
<td>15:00-16:15</td>
</tr>
<tr>
<td>□ 3050: EEG Based Biomarkers in Neuropsychiatric Disorders: Pitfalls and Opportunities</td>
<td>□ 4025: How Well Do You See inside the Brain with Scalp EEG, MEG, EEG-IMRI and Intracerebral EEG?</td>
<td>□ 5040: Pediatric Noninvasive Brain Stimulation</td>
<td>□ 6045: How Sports Affects Neurophysiology: The Good, the Bad, and the Ugly</td>
</tr>
<tr>
<td>□ 3055: Large Scale Networks In Focal Epilepsy Revealed by High-Density EED and IMRI Studies</td>
<td>□ 4030: Peripheral Clinical Neurophysiology in Intensive Care</td>
<td>□ 5045: Advances in Neuromuscular and Clinical Application in Epilepsy</td>
<td></td>
</tr>
</tbody>
</table>
SOCIAL EVENTS

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- Gala Reception - Friday, May 4, 2018  □ $85

Social Events Total (C): ____________

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Welcome and Gala Receptions only

Guest Name: ____________________________

Guest Name: ____________________________

$175 x ____________ = $175 ____________

Guests - Under Age 18

Gala Reception only (must be accompanied by a registered delegate)

Guest Name: ____________________________

Guest Name: ____________________________

$60 x ____________ = $60 ____________

Guest Total (D): ____________

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___________________________________________________________________________________________________________

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**ICCN ★ 2018**

Marriott Wardman Park, Washington, DC

May 1-6, 2018

**IMPORTANT DATES**

- Abstract Decision Notification: January 2018
- Exhibit & Support Application Deadline: March 20, 2018
- Housing Deadline: April 10, 2018
- Registration Deadline: April 10, 2018