2022
BIENNIAL MEETING
JUNE 4–7, 2022 • LOEWS ATLANTA HOTEL • ATLANTA, GEORGIA
PRELIMINARY PROGRAM

REGISTER AT CNS.ORG/ASSFN BY MAY 4TH TO SAVE!

Jointly provided by the Congress of Neurological Surgeons and the American Society for Stereotactic and Functional Neurosurgery
The American Society for Stereotactic and Functional Neurosurgery is excited to invite you to the ASSFN 2022 Biennial Meeting, held June 4-7, 2022 in Atlanta, Georgia.

Join us as Mahlon Delong, Professor Emeritus at Emory, and Julie Pilitsis, Dean of the Charles E. Schmidt College of Medicine at Florida Atlantic University honor legend Roy A. E. Bakay.

Daily Plenary Sessions explore thought-provoking topics with speakers working on the leading edge of technology. This year’s Plenary Session topics are: DEI in Functional Neurosurgery; Ethics in Neuromodulation; Molecular Neuromodulation; Motor and Sensory Neuromodulation; Neurosurgical Insights into Fundamental Neuroscience; and Clinical Trials and Tribulations.

In addition to the Daily Plenary Sessions, you’ll want to attend the Parallel Sessions, which allow you to tailor your meeting experience to meet your specific needs. This year’s Parallel Session topics are: Pediatric Neuromodulation, Functional Neuro-oncology; Advances in Movement Disorders; Advances in Epilepsy; Controversies in Neuromodulation; Advancements in Pain; Cognitive and Affective Neuromodulation; and Valley of Death.

The ASSFN 2022 Biennial Meeting is an unparalleled opportunity to stay on the leading edge of stereotactic and functional neurosurgery, and collaborate with colleagues and acclaimed faculty from across the globe, all while enjoying the beauty of Atlanta!

We plan to provide a safe environment for us to meet together in-person in Atlanta; please check the website for detailed information.

MAKE YOUR ARRANGEMENTS AND REGISTER TODAY AT CNS.ORG/ASSFN.
Roy A. E. Bakay, was a towering figure in Stereotactic and Functional Neurosurgery in the 1990s and 2000s. Born in Chicago in 1949, Roy attended Beloit College (where he was valedictorian of Bachelor of Science graduates) and Northwestern University Medical School. He completed his neurosurgery residency (alongside co-resident and former Honored Guest Kim Burchiel, MD) in 1981 at University of Washington under renowned Arthur Ward, Jr. A hotbed of research, particularly seminal studies on epilepsy in non-human primates, Roy’s research in this model would lay the foundation for his remarkable research career using NHPs for studies of neural transplantation for Parkinson’s disease. After a fellowship at NIH, Dr. Bakay began his career at Emory in 1982 where he remained for 18 years. At Emory, he worked very closely with world-renowned movement disorder neurologist/neuroscientists including Mahlon R. Delong, MD, winner of the Lasker Prize for his characterization of the role of the STN in Parkinson’s disease, and Jerrold L. Vitek, MD, PhD, now chair of neurology at Univ. of Minnesota. Together they pioneered microelectrode-guided pallidotomy and then DBS. In 2000, Dr. Bakay moved to Rush University Medical Center and his native Chicago, where he remained until he was taken from us far too soon when he succumbed to gastric cancer in 2013, famously still taking call until the very untimely end.

I first came to know of Roy in 1992 when he and Drs. Delong and Vitek published their seminal paper “Posteroventral pallidotomy for Parkinson’s disease” in J. Neurosurgery, the same year that the classic paper “Leksell’s posteroventral pallidotomy in the treatment of Parkinson’s disease” was published by Lauri Laitinen, Tommy Bergenheim and Marwan Hariz, in the same journal. These papers changed the lives of many patients and doctors, including myself; they were the lynchpin of the renaissance in functional neurosurgery. In fact, after seeing them I applied to do an intra-residency CNS fellowship with Dr. Bakay in 1994 but the application was, unfortunately, not selected. I nevertheless met Roy for the first time in 1995 at the annual meeting of the American Society for Neural Transplantation and Repair, of which he was a founding member; at these annual meetings Roy was perennially larger than life, and the life of the party. Although I never worked directly with him, our professional lives intersected very frequently over the next 18 years around pallidotomy (I inherited his patients at Emory, none of whom required repeat surgery), neural transplantation (I had the great honor to work closely with him on one such trial), and epilepsy, too. Roy was one of the most important role models for my early career, exemplifying that – despite what many people say to the contrary - you can in fact be an outstanding neurosurgeon AND an outstanding neuroscientist. By honoring Dr. Bakay at this meeting it is my intention to share that message - through the memory of his life and career – with the incredible cadre of young neurosurgeon/neuroscientists in our vibrant and growing field.

Roy's were literally impossibly large shoes to fill at Emory, where I had the great honor to work with his longtime neurology partners, most notably Dr. Delong until his retirement two years ago. Roy was a man who chose his words carefully and economically, but what he said had outsize impact, such as, in regard to DBS: “Why would you ever want to reverse a pallidotomy?” But with few words, his impact on our field was huge, and his legacy lives on in those he trained - leaders in Stereotactic and Functional Neurosurgery beginning with Phil Starr at Emory and including, at Rush, Julie Pilitsis.

– Written by Robert Gross
### Saturday, June 4
- 9:00 am-5:00 pm Registration
- 10:00 am-12:30 pm Special Course 1
  - Grant Writing Workshop
- 1:00-5:00 pm Special Course 2
  - Beyond Standard Temporal Lobectomy — Novel Techniques for Medically Intractable Epilepsy: A Video and Hands-On Session
- 1:00-5:00 pm Special Course 3
  - Incorporating New Technology into your Movement Disorders Practice
- 5:00-6:00 pm Non-CME Sponsored Dinners

### Sunday, June 5
- 6:30 am-6:30 pm Registration
- 7:00-8:00 am Breakfast Session
- 8:00-10:00 am Plenary Session 1
  - DEI in Functional Neurosurgery
- 9:30 am-4:00 pm Exhibit Hall open
- 10:00-10:20 am Beverage Break with Exhibitors
- 10:20 am-12:00 pm Parallel Session 1
  - Pediatric Neuromodulation
- 10:20 am-12:00 pm Parallel Session 2
  - Functional Neuro-oncology
- 10:00 am-12:00 pm Non-CME Sponsored Breakfasts
- 12:00-1:00 pm Honored Guest Lunch
- 1:00-3:00 pm Parallel Session 2
  - Ethics in Neuromodulation
- 3:00-3:40 pm Beverage Break with Exhibitors
- 3:40-6:00 pm Parallel Session 3
  - Advances in Movement Disorders
- 3:40-6:00 pm Parallel Session 4
  - Advances in Epilepsy
- 6:00-8:00 pm Opening Reception

### Monday, June 6
- 6:30 am-5:30 pm Registration
- 7:00-8:00 am Non-CME Sponsored Breakfasts
- 7:30 am-5:00 pm Exhibit Hall open
- 8:00-9:20 am Plenary Session 3
  - Molecular Neuromodulation
- 9:20-10:00 am Beverage Break with Exhibitors
- 10:00 am-12:00 pm Plenary Session 4
  - Motor and Sensory Neuromodulation
- 12:00-1:00 pm Honored Guest Lunch
- 1:00-3:00 pm Parallel Session 3
  - Controversies in Neuromodulation
- 3:00-3:30 pm Beverage Break with Exhibitors
- 3:30-5:00 pm Poster Session with Wine and Cheese
- 5:00-5:30 pm ASSFN Business Meeting (Non-CME)
- 5:30-6:30 pm Non-CME Sponsored Dinners

### Tuesday, June 7
- 6:30 am-11:00 am Registration
- 7:00-8:00 am ASSFN Research Grant Program
- 7:00-8:00 am Non-CME Sponsored Breakfasts
- 8:00-10:30 am Exhibit Hall open
- 8:00-9:30 am Plenary Session 5
  - Neurosurgical Insights into Fundamental Neuroscience
- 9:30-10:00 am Beverage Break with Exhibitors
- 10:00 am-12:00 pm Parallel Session 4
  - Cognitive and Affective Neuromodulation
- 10:00 am-12:00 pm Parallel Session 8
  - Valley of Death
- 12:00-1:00 pm Non-CME Sponsored Lunches
- 1:00-3:00 pm Parallel Session 5
  - Controversies in Neuromodulation
- 1:00-3:00 pm Parallel Session 6
  - Advancements in Pain
- 3:00-3:30 pm Beverage Break with Exhibitors
- 3:30-5:00 pm Plenary Session 6
  - Clinical Trials and Tribulations
- 3:00-3:30 pm Awards Ceremony
## MEETING AGENDA

### Saturday, June 4

<table>
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<tr>
<th>Time</th>
<th>Event Description</th>
<th>Directors/Instructors</th>
<th>Registration Costs</th>
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<tbody>
<tr>
<td>10:30 am-12:30 pm</td>
<td><strong>SPECIAL COURSE 1</strong> Grant Writing Workshop</td>
<td>Nader Pouratian, Jennifer A. Sweet</td>
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<td>Learning Objectives:</td>
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<td>- Describe fundamentals of successful grants</td>
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<td>- List sources of research funding</td>
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<td>- Identify institutional grant requirements</td>
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<td><strong>Sources of Funding</strong></td>
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<td></td>
<td>- Julie G. Pilitsis, Nader Pouratian</td>
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<td><strong>Untapped Resources</strong></td>
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<td>- Edward F. Chang, Sameer A. Sheth</td>
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<td><strong>Navigating Your Institution Policies</strong></td>
<td>R. Mark Richardson</td>
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<td><strong>Writing Tips</strong></td>
<td>Robert E. Gross, Jennifer A. Sweet</td>
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<td><strong>Panel Discussion</strong></td>
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<td>1:00-5:00 pm</td>
<td><strong>SPECIAL COURSE 2</strong> Beyond Standard Temporal Lobectomy. Novel Techniques for Medically Intractable Epilepsy: A Video and Hands-on Session</td>
<td>Dario J. Englot, Shenandoah Robinson</td>
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<td>Learning Objectives:</td>
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<td></td>
<td>- Describe indications for LITT in epilepsy</td>
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<td>- Review endoscopic approach to mesial temporal lobe epilepsy</td>
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<td>- Discuss approaches for treatment of multi-focal epilepsy</td>
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<td><strong>Part 1: Video Sessions</strong></td>
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<td>- LITT Therapy for Hypothalamic Hamartomas</td>
<td>Daniel Curry, Jon T. Willie</td>
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<td>- Endoscopic Approaches for Mesial Temporal Epilepsy</td>
<td>Jorge A. Gonzalez-Martinez</td>
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<td>- Surgical Approaches for Multifocal Epilepsy</td>
<td>Sharona Ben-Haim, Jamie Joseph Van Gompel</td>
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<td><strong>Part 2: Hands-on Session</strong></td>
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<td>- Hands-on LITT and Endoscopic Devices</td>
<td>Daniel Drane, Saadi Ghatan, Robert E. Gross</td>
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<td>- Hands-on: Robotic Devices</td>
<td>Stan Anderson, Robert A. McGovern, Joseph S. Neimat, Chengyuan Wu</td>
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| 1:00-5:00 pm  | **SPECIAL COURSE 3** Incorporating New Technology into Your Movement Disorders Practice | Shabbar F. Danish, Richard Rammo                            | $150 | $250 |
|               | Learning Objectives:                                                               |                                                            |                   |
|               | - Apply image analysis techniques to optimize DBS treatment                         |                                                            |                   |
|               | - Discuss the differences between MRI, CT, and robotic approaches to DBS placement |                                                            |                   |
|               | - Identify and mitigate common risks in DBS management                              |                                                            |                   |
|               | **Planning Software Overview**                                                     | Joshua P. Aronson, Cameron C. McIntyre                      |                   |
|               | **Hands-on: Planning Software**                                                    |                                                            |                   |
|               | - iMRI vs. iCT vs. Robotic Overview Review                                           | Ellen L. Air, Steven Gill, Sepehr Sani                      |                   |
|               | **Hands-on: iMRI vs. iCT vs. Robotic Technology to Assess Your Results**            |                                                            |                   |
|               | **Complication Avoidance and Management**                                          | Kathyrn L. Holloway, Sunil Kumar Kalia                      |                   |
|               | **Difficult Cases**                                                                | Richard Rammo                                              |                   |
### Sunday, June 5

#### 7:00-8:00 am

**BREAKFAST SESSION 1**  **$55**  
**Mentorship Workshop**  
*Moderator: Sharona Ben-Haim*

Learning Objectives:
- Describe key characteristics of good mentees
- Describe key characteristics of good mentors
- Describe approaches to giving feedback

**Being a Good Mentee**  
*Ellen L. Air*

**Leveraging Mentorship to Sponsorship**  
*Phillip A. Starr*

**Giving and Receiving Feedback**  
*Peter Konrad*

**Panel Discussion**  
*Ellen L. Air, Sharona Ben-Haim, Peter Konrad*

#### 7:00-8:00 am

**BREAKFAST SESSION 2**  **$55**  
**Establishing Centers for Neuromodulation and Technology**  
*Moderator: Robert E. Gross, Eric C. Leuthardt*

Learning Objectives:
- Describe models of integrated Neuromodulation centers
- Identify approaches to establish a Neuromodulation center
- Discuss pathways to transition technology into clinical application

**Getting Set-up**  
*Sameer A. Sheth*

**Which Model to Use**  
*Ali R. Rezai*

**Democratizing Technology**  
*Suneil K. Kalia*

**Panel Discussion**  

#### 8:00-10:00 am

**PLENARY SESSION 1**  
**DEI in Functional Neurosurgery**  
*Moderators: Robert E. Gross, Nathan C. Rowland*

Learning Objectives:
- Evaluate key sources of disparity in healthcare
- Describe approaches to reduce impact of disparities in healthcare
- Discuss approaches to increase diversity in technology and medicine

**Welcome and Introduction to Special Lectures**  
*Robert E. Gross*

**Special Lecture: Diversity in Medicine**  
*Carol Anderson*


**Intersection: Race, Class and Gender X Neurotechnology, Robotics and AI**  
*Ayanna Howard*

**Increasing DEI in Neurosurgery**  
*Edjah K. Nduom*

**Introduction of ASSFN President**  
*Robert E. Gross*

**Presidential Address**  
*Joseph S. Neimat*
Sunday, June 5, Continued

10:20 am-12:00 pm
PARALLEL SESSION 1
Pediatric Neuromodulation

Moderators: Daniel Curry, Ann-Christine Duhaime

Learning Objectives:
▶ Recognize indications for LITT in pediatric epilepsy
▶ Discuss indications for DBS in pediatric dystonia
▶ Describe disparities in application of new technology in pediatric epilepsy

LITT in Pediatric Epilepsy
Francesco T. Mangano

Ethics in Pediatric Neuromodulation
Saadi Ghatan

DBS in Pediatric Dystonia
Gerald A. Grant

Modern Management of Tuberous Sclerosis
Elizabeth Thiele

Open Papers

10:20 am-12:00 pm
PARALLEL SESSION 2
Functional Neuro-oncology

Moderators: Carl Hacker, Shabbar F. Danish

Learning Objectives:
▶ Describe non-invasive functional brain mapping techniques
▶ Name invasive functional brain mapping techniques
▶ Discuss stereotactic techniques for brain tumor mapping

Resting State fMRI and Passive Brain Mapping for Tumor Surgery
Yanmei Tie

Novel Behavioral and Cognitive Tasks for Stimulation Mapping
Michael E. Sughrue

Laser for Metastatic Lesions
Ian Yu Lee

Focused Ultrasound, Liquid Biopsy, and Chemotherapy Potentiation
Albert H. Kim

Open Papers

1:00-3:00 pm
PLENARY SESSION 2
Ethics in Neuromodulation

Moderators: Ellen L. Air, Elizabeth C. Tyler-Kabarar

Learning Objectives:
▶ Describe ethical consideration in application of artificial intelligence
▶ Discuss ethical considerations in movement disorder research
▶ Recognize ethical considerations in neuromodulation for neuropsychiatric disease

Welcome and Introduction of Panel Discussion
Ellen L. Air

Panel on Human/Machine Interactions with Ayanna Howard
Ayanna Howard, Ellen L. Air, Robert Gross, Nate Rowland

Disparities in Access to Neuromodulation
Shivanand Lad

Ethics in DBS Research
Kelly D. Foote

Ethics of Neuromodulation in Psychiatric Disease
Simon Ducharme

Panel Discussion and Audience Questions
# MEETING AGENDA

## Sunday, June 5, Continued

### 3:40-6:00 pm  PARALLEL SESSION 3
**Advances in Movement Disorders**

*Moderators:* Suneil K. Kalia, Zelma HT Kiss

**Learning Objectives:**
- Discuss use of closed-loop programming of DBS in movement disorders
- Describe image-based DBS programming techniques
- Evaluate the risks and benefits of focused ultrasound for Parkinson’s Disease

- **Closed Loop DBS for Movement Disorders**
  - Stephanie Cernera

- **Cortical Stimulation for Treatment of Mood in Parkinson’s Disease**
  - Coralie de Hemptinne

- **Image-based DBS Programming**
  - Alfonso Fasano

- **Focused Ultrasound for Treatment of Parkinson’s Disease**
  - Jose Obeso

- **Open Papers**

### 3:40-6:00 pm  PARALLEL SESSION 4
**Advances in Epilepsy**

*Moderators:* Eyi Emisi Damisah, Richard Rammo

**Learning Objectives:**
- Describe imaging techniques to identify cortical dysplasia
- Discuss the application of computational analysis to identify seizure foci
- List the factors that impact target selection in neuromodulation of epilepsy

- **Imaging Advancements in Cortical Dysplasia**
  - Chima Oluigbo

- **Computational Analysis in Epilepsy Surgery**
  - Sridevi Sarma

- **Novel Surgical Techniques in Medically Intractable Epilepsy**
  - Sarat P. Chandra

- **Target Selection in Neuromodulation for Epilepsy**
  - Jorge Alvaro Gonzalez-Martinez

- **Open Papers**

### 6:00-8:00 pm  OPENING RECEPTION

Enjoy the start of the Biennial Meeting at the Opening Reception at the Loews Atlanta Hotel. Enjoy time reconnecting with your colleagues and friends over hors d’oeuvres and cocktails.
Monday, June 6

8:00-9:20 am

PLENARY SESSION 3
Molecular Neuromodulation

Moderators: Jorge A. Gonzalez-Martinez, Suneil K. Kalia

Learning Objectives:
▶ Discuss surgical optimization of molecular neuromodulation
▶ Describe viral-based gene therapy delivery
▶ Evaluate the impact of LIFU in molecular neuromodulation

Repurposing DBS for Optical Control
Meaghan Creed

Surgical Delivery of Recombinant Proteins and Gene Therapy
Krystof Bankiewicz

Molecular Optimization of Delivery-Viral Based Approaches to to Non-invasive Whole Brain Delivery
Victoria Gradinaru

LIFU-Delivery of Molecular Modulators
Vibhor Krishna

10:00 am-12:00 pm

PLENARY SESSION 4
Motor and Sensory Neuromodulation

Moderators: Lora Wallis Kahn

Learning Objectives:
▶ Explain the factors influencing timing of DBS in PD
▶ Describe impact of VNS on stroke recovery
▶ Evaluate the impact of closed loop SCS on SCI recovery

Debate: Early vs. Late Surgery for Parkinson’s Disease

Early Surgery is Better
David Charles

Late Surgery is Better
Tiago A. Mestre

Discussion

VNS for Stroke Recovery
Seth Hays

BrainGate Update
Bolu Ajiboye

Closed Loop Stimulation for Spinal Cord Injury
David Borton

Top Rated Abstracts

12:00-1:00 pm

HONORED GUEST LUNCH
Roy Bakay in Memorial
Speakers: Mahlon DeLong, Julie Pilitsis

Mahlon Delong, MD, Professor Emeritus at Emory, and Julie Pilitsis, MD, PhD, Dean of the Charles E. Schmidt College of Medicine at Florida Atlantic University, to share recollections of Roy's life and career and his lasting legacy, so that he may continue to influence the lives and careers of those in our field who never had the great fortune to meet, benefit from, and enjoy him.
Monday, June 6, Continued

1:00-3:00 pm
PARALLEL SESSION 5
Controversies in Neuromodulation
Moderator: Camilla Kilbane, Jon T. Willie
Learning Objectives:
▶ Discuss the risks and benefits of lesioning for OCD
▶ Describe imaging and neurophysiology approaches to DBS targeting and programming
▶ Discuss the relative benefits of robotic vs traditional DBS implantation

Debate: Lesion vs. DBS in OCD
Kelly D. Foote, Nicole McLaughlin

Debate: DTI and rsMRI vs. Neurophysiology for DBS Targeting
Joshua M. Rosenow, Mojgan Modaie

Bigger Impact? Directional vs. Closed Loop Stimulation in Parkinson’s Disease
Ashwin Viswanathan, Leonardo Almeida

Is Robotic Surgery Really Faster, More Accurate?
Georgios Naros, Ashwini D. Sharan

Open Papers

1:00-3:00 pm
PARALLEL SESSION 6
Advancements in Pain
Moderators: Rushna Ali, Sharona Ben-Haim
Learning Objectives:
▶ List new indications for SCS
▶ Review validated outcome measures in pain treatment
▶ Describe types and impact of newer stimulation algorithms for SCS

New Indications for SCS
Erika A. Petersen

Outcome Measures Beyond VAS
Jason M. Schwalb

New Stimulation Algorithms—What’s the Data?
Steven M. Falowski

Pain Control at the End of Life (Neuroablation for Cancer Pain)
Ido Strauss

Open Papers

3:30-5:00 pm
POSTER SESSION
with Wine & Cheese
Moderator: Zelma HT Kiss
Learning Objectives:
▶ Describe advances in movement disorder surgery technology
▶ Incorporate new strategies in epilepsy surgery into your practice
▶ Identify promising new techniques in psychiatric neurosurgery

5:00-5:30 pm
ASSFN BUSINESS MEETING
Presiding Officer: Joseph S. Neimat

Tuesday, June 7

7:00-8:00 am
BREAKFAST SESSION 3 $55
ASSFN Research Grant Program
Moderators: Jennifer A. Sweet, Nader Pouratian

8:00-9:30 am
PLENARY SESSION 5
Neurosurgical Insights into Fundamental Neuroscience
Moderators: Wael Assad, Sameer A. Sheth
Learning Objectives:
▶ Describe neuronal signals of cognition
▶ Evaluate neuronal signals of speech
▶ Discuss neuronal signals of mood

Neuronal Firing Encodes Social Cognition
Ueli Rutishauser

Episodic Memory Guides Expectations of Future Events
Kareem A. Zaghloul

Decoding Speech
Edward F. Chang

Decoding Mood and Cognition from Human ECoG
Maryam Shanechi

Questions and Discussion

TO SAVE,
REGISTER AND
SECURE HOUSING
BY MAY 4 AT
CNS.ORG/ASSFN
**Tuesday, June 7, Continued**

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Topic</th>
<th>Moderators</th>
<th>Learning Objectives</th>
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<tr>
<td>10:00 am-12:00 pm</td>
<td>PARALLEL SESSION 7</td>
<td>Cognitive and Affective Neuromodulation</td>
<td>Casey H. Halpern, Jessica Wilden</td>
<td>Discuss neuromodulation approaches for Alzheimer’s and memory</td>
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<td>Identify targets for neuromodulation of PTSD</td>
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<td>Identify targets for neuromodulation of traumatic brain injury</td>
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<td>ADVANCE Trial for Alzheimer’s</td>
<td>Francisco A. Ponce</td>
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<td>CT-DBS for TBI Trial</td>
<td>Jaimie M. Henderson</td>
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<td>Neuromodulation for PTSD</td>
<td>Jean-Philippe Langevin</td>
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<td>Neuromodulation for Memory</td>
<td>Michael J. Kahana</td>
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<td>Closed-loop Neuromodulation and Studies of Memory</td>
<td>Cory S. Inman</td>
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<td>Laser Ablation for OCD</td>
<td>Peter C. Warnke</td>
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<td>10:00 am-12:00 pm</td>
<td>PARALLEL SESSION 8</td>
<td>Valley of Death</td>
<td>Shabbar F. Danish, Joseph S. Neimat</td>
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<td>Discuss barriers to starting a company</td>
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<td>Identify approaches to build successful companies</td>
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<td>Discuss key elements of bringing new technology to market</td>
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<td>Starting a New Company-A Neurosurgeon’s Perspective</td>
<td>Eric C. Leuthardt</td>
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<td>Starting a Company-An Engineer’s Perspective</td>
<td>Pierre D’Haese</td>
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<td>CEO Perspective: Filling Unmet Needs</td>
<td>Dan Powell</td>
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<td>CEO Perspective: Bringing Technology to Market</td>
<td>Shawn Glinter</td>
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<td>1:00-3:00 pm</td>
<td>PLENARY SESSION 6</td>
<td>Clinical Trials and Tribulations</td>
<td>Kathryn L. Holloway, R. Mark Richardson</td>
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<td>Discuss selecting optimal outcomes for clinical trials</td>
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<td>Describe mitigation of challenges to conducting research in COVID</td>
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<td>Discuss the UH3 support mechanism for innovative research activities</td>
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<td></td>
<td>Optimizing Trial Design: Should We Benchmark Existing Tech?</td>
<td>Paul S. Larson, Andre Machado</td>
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<td></td>
<td></td>
<td>Clinical Trial Innovations in a Post-COVID World</td>
<td>Jim McNerny, Julie G. Piletsis, Francisco A. Ponce</td>
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<td></td>
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<td>UH3 Trials and Tribulations</td>
<td>Nader Pouratian, Ausaf A Bari, Casey H. Halpern</td>
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<tr>
<td>3:00-3:30 pm</td>
<td>Awards Ceremony</td>
<td></td>
<td>Ellen L. Air, Robert E. Gross</td>
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</tbody>
</table>

* All speakers and topics are subject to change.
MEETING REGISTRATION
Register today using one of these four methods:
Online: cns.org/assfn
Fax: 972-349-7715
Phone: 800-931-9543 or 972-349-5539
Mail: ASSFN Registration Center
6100 W. Plano Parkway, Suite 3500
Plano, TX 75093

The ASSFN Registration Center is not responsible for faxes or emails not received due to circumstances beyond their control.

Medical registration includes the following:
• Daily Continental Breakfasts
• Daily Beverage Breaks
• Daily Plenary and Parallel Sessions
• Entrance to the Exhibit Hall
• One ticket to Sunday Opening Reception
• Admittance to the Poster Session with Wine & Cheese on Monday

REGISTRATION CANCELLATION/REFUND POLICY
All refund requests must be received in writing by May 4, 2022.

Requests accepted via:
Email: assfn@mcievents.com
Fax: 972-349-7715
Mail: ASSFN Registration Center
6100 W. Plano Parkway, Suite 3500
Plano, TX 75093

Cancellations made before May 4, 2022: Receive a full refund less $100 processing fee. Pre-meeting course registration fees will be refunded in full until this date.

Cancellations made after May 4, 2022, and no-shows: Absolutely no refunds will be issued after this date for registration and pre-meeting courses regardless of cause.

AMERICANS WITH DISABILITIES ACT/SPECIAL NEEDS AND REQUESTS
The ASSFN wishes to take the necessary steps to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than any other individual because of the absence of auxiliary aids and services. Please let us know if, under the ADA, you require special accommodations or services in order to attend the ASSFN Biennial Meeting.

Your requirements should be sent directly to the ASSFN Registration Center at assfn@mcievents.com, or call 800-931-9543. Please provide any requests at least 30 days prior to the Biennial Meeting to guarantee accommodation.
**REGISTRATION FEES**

### PHYSICIANS

<table>
<thead>
<tr>
<th>Description</th>
<th>Register by May 4</th>
<th>Register After May 4</th>
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<tbody>
<tr>
<td>ASSFN Member Physician (includes foreign ESSFN/WSSFN members – subject to verification)</td>
<td>$645</td>
<td>$745</td>
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<tr>
<td>Non-Member Physician</td>
<td>$845</td>
<td>$945</td>
</tr>
<tr>
<td>Non-member Physician: Join ASSFN and register (includes $300 membership application fee)</td>
<td>$1,145</td>
<td>$1,245</td>
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### NON-PHYSICIANS: PHD, RN/NP/PA

<table>
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<tr>
<th>Description</th>
<th>Register by May 4</th>
<th>Register After May 4</th>
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<tbody>
<tr>
<td>Graduate Students/Post-doctorates (Must submit a letter confirming student status.)</td>
<td>$200</td>
<td>$300</td>
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<tr>
<td>ASSFN Associate member, Non-physician (PhD, RN/NP/PA)</td>
<td>$375</td>
<td>$475</td>
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<tr>
<td>Non-member Associate, Non-physician (PhD, RN/NP/PA)</td>
<td>$525</td>
<td>$625</td>
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<tr>
<td>Nonmember Associate, Non-physician: Join ASSFN and register (PhD, RN/NP/PA) (includes $160 membership application fee)</td>
<td>$535</td>
<td>$635</td>
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### RESIDENTS/FELLOWS

<table>
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<tr>
<th>Description</th>
<th>Register by May 4</th>
<th>Register After May 4</th>
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<tr>
<td>Resident/Fellow (with letter from Program Director)</td>
<td>$325</td>
<td>$425</td>
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### ADDITIONAL COURSES

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<th>Description</th>
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<tr>
<td>Saturday, June 4, 10:30 am-12:30 pm Grant Writing Workshop</td>
<td>$75 – Residents/Fellow $125 – ASSFN Members/Non-Member Physicians</td>
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<tr>
<td>Saturday, June 4, 1:00-5:00 pm Beyond Standard Temporal Lobectomy — Novel Techniques for Medically Intractable Epilepsy: A Video and Hands-On Session</td>
<td>$150 – Residents/Fellow $250 – ASSFN Members/Non-Member Physicians</td>
</tr>
<tr>
<td>Saturday, June 4, 1:00-5:00 pm Incorporating New Technology into Your Movement Disorders Practice</td>
<td>$150 – Residents/Fellow $250 – ASSFN Members/Non-Member Physicians</td>
</tr>
<tr>
<td>Sunday, June 5, 7:00-8:00 am Breakfast Session 1: Mentorship Workshop</td>
<td>$55</td>
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<tr>
<td>Sunday, June 5, 7:00-8:00 am Breakfast Session 2: Establishing Centers for Neuromodulation and Technology</td>
<td>$55</td>
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<tr>
<td>Tuesday, June 7, 7:00-8:00 am Breakfast Session 3: ASSFN Research Grant Program</td>
<td>$55</td>
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ACCREDITATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Congress of Neurological Surgeons and the American Society for Stereotactic and Functional Neurosurgery. The Congress of Neurological Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA CREDIT DESIGNATION STATEMENT
The CNS designates this live activity for a maximum of 28.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CME CREDIT
A maximum of 20.25 AMA PRA Category 1 Credits™ may be earned for Scientific Sessions only.

Additional CME credits can be earned by attending the optional Saturday half day courses (8.25 credits).

Physician Assistant/Physician Extender: Attendees will receive credits for attendance at the general Scientific Sessions and for any optional events attended. Each physician assistant/physician extender should contact his or her individual membership association and certification board to determine the requirements for accepting credits. All attendees will receive a Certificate of Attendance.

NON-CME SESSIONS
Per the ACCME Standards for Integrity and Independence in Accredited Continuing Education, all NON-CME sessions at the 2022 ASSFN Biennial Meeting will be held in a separate room from accredited continuing education.

AMA DIRECT CREDIT FOR PREPARING POSTER PRESENTATION(S)
Physicians may claim AMA PRA Category 1 Credits™ directly from the AMA for preparing a poster presentation, which is also includes the published abstracts. Physicians may claim them on their AMA PRA certificate application or apply directly to the AMA for an AMA PRA Category 1 Credit™ certificate. Please visit the AMA Ed Hub for more information.

HEALTH AND SAFETY
We are working closely with the Loews Atlanta Hotel to provide a healthy, safe environment for attendees. All attendees at the 2022 ASSFN Biennial Meeting must be either be fully vaccinated by the first date of the meeting or will have a negative COVID-19 test taken within 72 hours of arrival.

Please watch for the ASSFN website for updates.
INDUSTRY INTERACTION OPPORTUNITIES

EXHIBIT HALL HOURS
Sunday, June 5: 9:30 am-4:00 pm
Monday, June 6: 7:30 am-5:00 pm
Tuesday, June 7: 8:00-10:30 am

BEVERAGE BREAKS IN THE EXHIBIT HALL
Sunday, June 5: 10:00-10:20 am and 3:00-3:40 pm
Monday, June 6: 9:20-10:00 am and 3:00-3:30 pm
Tuesday, June 7: 9:30-10:00 am

INDUSTRY SPONSORED ACTIVITIES

Sponsored Breakfast Symposia
Monday, June 6: 7:00-8:00 am
Tuesday, June 7: 7:00-8:00 am

Sponsored Lunch Symposia
Sunday, June 5: 12:00-1:00 pm
Tuesday, June 7: 12:00-1:00 pm

Sponsored Dinner Symposia
Saturday, June 4: 5:00-6:00 pm
Monday, June 6: 5:30-6:30 pm

2018 EXHIBITORS

Abbott
Ad-Tech Medical Instrument Corporation
Alpha Omega
ASSFN
Boston Scientific
Brainlab
ClearPoint
Elekta
FHC, Inc.
INSIGHTEC
Integra LifeSciences
Mazor Robotics
Medtronic
Monteris Medical
NANS
NeuroPace, Inc.
Oxford University Press
Renishaw Healthcare Inc.
Samsung Neurologica
Sceneray
Zimmer Biomet