

8TH INTERNATIONAL WORKSHOP ON ADVANCES IN ELECTROCORTICOGRAPHY



THURSDAY, OCTOBER 15 -
FRIDAY, OCTOBER 16, 2015

HYATT REGENCY McCORMICK PLACE
2233 S. Martin L King Drive
Chicago, IL 60626 USA

National Center for Adaptive Neurotechnologies
Wadsworth Center



WHO SHOULD ATTEND

This program has been carefully designed to appeal to two target audiences. The program will be of interest to the scientist with an interest in theory and application of electrocorticographic (ECoG) signals recorded from the surface of the brain in humans or animals. The program will also have a strong appeal to neurologists, neurosurgeons, or clinical neurophysiologists whose practice involves functional brain mapping for epilepsy surgery or non-epilepsy lesionectomies.

ABOUT THE SYMPOSIUM

Electrocorticography (ECoG) is the technique of interacting with the brain electrically by stimulating or recording from the surface of the brain. ECoG has been used for decades for select clinical purposes – most commonly to identify functional and epileptic brain areas in people with epilepsy – and occasionally for research. The important role of ECoG for basic research and its potential to create a new range of clinical applications have long been under-appreciated.

Over the past several years, the unique qualities of ECoG have become widely and increasingly recognized by scientists engaged in basic and translational research. Basic research suggests that ECoG can elucidate brain function in ways that cannot be readily achieved using other imaging modalities, and translational research is producing exciting new ECoG-based applications that are already becoming available in the clinic.

This two-day ECoG workshop highlights current understanding and advances in scientific, engineering, and clinical domains that are relevant to ECoG recordings in humans or animals. It will be the 8th workshop in a highly successful workshop series. It follows an informal workshop at the American Epilepsy Society Annual Meeting in 2008, the first formal ECoG workshop in Upstate New York in 2009, the second ECoG workshop in San Diego, CA, in 2010 (satellite to SfN), the third ECoG workshop in Washington, DC, in 2011 (satellite to SfN), the fourth ECoG workshop in New Orleans, LA, in 2012 (satellite to SfN), the fifth ECoG workshop in San Diego, CA, in 2013 (satellite to SfN), and the sixth ECoG workshop in Berlin, Germany, in March 2014 and the 7th ECoG Workshop in Washington, DC, in November 2014 (satellite to SfN). To date, the results of these workshops have been reported in five highly visible Proceedings articles that were published by *Epilepsy and Behavior*.

LEARNING OBJECTIVES

At the conclusion of this conference, the participant should be able to:

- Discuss the nature of brain signals recorded electrocorticographically (ECoG).
- Know about emerging understanding of ECoG physiology and of emerging techniques to record it.
- Have an overview of current efforts in ECoG-based neuroscience.
- Contrast standard electrical brain stimulation and real-time functional ECoG mapping.
- Discuss the role of high frequency ECoG in functional assessment of brain activity.
- Recognize the emerging value of high frequency ECoG recordings in the evaluation of epilepsy surgery candidates and lesionectomy candidates.

ACCREDITATION

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

Albany Medical College designates this live activity for a maximum of *9.75 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

TUITION

	By October 1, 2015:	After October 1, 2015:
Single Day Registration	\$195.00	\$220.00
Students	\$170.00	\$170.00
Two Day Registration	\$280.00	\$340.00
Students	\$250.00	\$250.00

Tuition includes admission to the symposium lunch and beverage breaks.

TUITION REFUND POLICY

Tuition refunds, are possible if notification is received by October 1. After that date, no refunds will be issued. Refunds will be processed upon receipt of a written request.

NEED INFORMATION?

For information regarding the conference, contact the Office of Continuing Medical Education by phone at (518) 262-5828, fax at (518) 262-5679 or e-mail at pricej@mail.amc.edu.

For emergency calls during the conference, call the Hyatt Regency at (312) 567-1234.

WEB SITES

Conference Website - www.ecog.info

Albany Medical Center - www.amc.edu

Hyatt Regency McCormick Place - <http://mccormickplace.hyatt.com/en/hotel/home.html>

CONFIRMATION

All registrants will receive a confirmation. If you register and do not receive a confirmation notice within one week of your registrations, please call the Office of Continuing Medical Education at (518) 262-5828 to be sure we have received your information.

SPECIAL NEEDS

Should you have a disability, dietary restrictions, or require other special arrangements, please call the Office of CME by October 1 to discuss your needs.

ATTIRE

Attire during the conference sessions is neat casual. Since everyone has a different comfort level, we suggest that you bring a sweater or light jacket.

ON-LINE SYLLABUS

Printed syllabus material will NOT be available at the conference. If syllabus material is available, it will be posted on-line prior and after the conference. In order to receive access to the syllabus material, you must provide your e-mail address on the registration form. You will receive access information via e-mail. If you do not receive access information, please call (518) 262-5828.

ACKNOWLEDGEMENT

We gratefully acknowledge the following organizations for providing support for this conference:

US Army • Fondazione Neurone

8TH INTERNATIONAL WORKSHOP ON A

DAY 1 - THURSDAY, OCTOBER 15, 2015

- 8:30a-9:00a **Welcome, General and Session Introductions**
Gerwin Schalk, PhD, and Anthony Ritaccio, MD
- 9:00a-9:45a **ECoG Mapping in Presurgical Planning for Epilepsy:
Pros and Cons**
Nick F. Ramsey, PhD, University Medical Center Utrecht
- 9:45a-10:00a **Break**
- 10:00a-10:45a **The RNS System: Clinical Update and Insights
from Chronic ECoG Monitoring**
Martha J. Morrell, MD, NeuroPace
(CME Credit is NOT available for this lecture)
- 10:45a-11:15a **Break**
- 11:15a-12:00p **Functional Organization of Human Auditory Cortex**
Edward Chang, MD, University of California, San Francisco
- 12:00p-1:00p **Lunch**
- 1:00p-1:45p **Population-Level Analysis of ECoG Data – Why and How**
Nitin Tandon, MD, The University of Texas Health Science Center
- 1:45p-2:00p **Break**
- 2:00p-2:45p **Design Considerations for Chronic ECoG BCIs:
Time-Varying Effects of Electrode Impedance and Signal Statistics**
Jesse Wheeler, Senior Biomedical Engineer, Charles Stark Draper Laboratory
(CME Credit is NOT available for this lecture)
- 2:45p-3:00p **Break**
- 3:00p-3:45p **Electrocorticography as a Research Tool in Patients
Undergoing Surgery for Movement Disorders**
Philip A. Starr, MD, PhD, University of California, San Francisco
- 3:45p-4:15p **Break**
- 4:15p-5:00p **Epileptic High-Frequency Oscillations in Electrocorticography**
Maeike Zijlmans, MD, PhD, University Medical Center Utrecht
- 5:00p-5:15p **Break**
- 5:15p-6:00p **Studies of Multimodal Perception and Memory**
Ken A. Paller, PhD, Northwestern University

ADVANCES IN ELECTROCORTICOGRAPHY

DAY 2 - FRIDAY, OCTOBER 16, 2015

- 8:30a-9:00a **General and Session Introductions**
Anthony Ritaccio, MD, and Gerwin Schalk, PhD
- 9:00a-9:45a **Electrocorticography of Human Parietal Cortex
During Episodic Memory Retrieval**
Brett L. Foster, PhD, Stanford University
- 9:45a-10:00a **Break**
- 10:00a-10:45a **Technology Considerations for Enabling Research Tools
to Probe Cortical and Subcortical Neural Networks**
Tim Denison, PhD, Medtronic Neuromodulation
(CME Credit is NOT available for this lecture)
- 10:45a-11:15a **Break**
- 11:15a-12:00p **Neural Correlates of Tourette Syndrome in the
Human Thalamocortical Network**
Aysegul Gunduz, PhD, University of Florida
- 12:00p-1:00p **Lunch**
- 1:00p-1:45p **Building Cortical Control Columns:
Adaptations in a Chronic ECoG BCI**
Daniel W. Moran, PhD, Washington University in St. Louis
- 1:45p-2:00p **Break**
- 2:00p-2:45p **Network Mechanisms of Emotional Processing**
Jack J. Lin, MD, University of California, Irvine
- 2:45p-3:00p **Break**
- 3:00p-3:45p **High-Resolution Brain Machine Interfaces
Using Flexible Silicon Electronics**
Jonathan Vivoti, PhD, Duke University
- 3:45p-4:15p **Break**
- 4:15p-5:00p **Flexible Transparent Electronic Devices
for Interfacing with the Cortex**
Justin Williams, PhD, University of Wisconsin-Madison
- 5:00p-5:15p **Break**
- 5:15p-6:00p **Cognition is Rhythmic**
Earl K. Miller, PhD, Massachusetts Institute of Technology
- 6:00p **Reception**

FACULTY COURSE DIRECTORS

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University Medical Center Utrecht

Stichting Epilepsie Instellingen Nederland

The Netherlands

CONFERENCE REGISTRATION FORM **OCTOBER 15-16, 2016**
8TH INTERNATIONAL WORKSHOP ON ADVANCES IN ELECTROCORTICOGRAPHY

TUITION <i>(Only paid registrations can be accepted.)</i>	By October 1, 2015	After October 1, 2015
Single Day Registration	\$195.00	\$220.00
Students	\$170.00	\$170.00
Two Day Registration	\$280.00	\$340.00
Students	\$250.00	\$250.00

Name & Degree *(as to appear on conference materials):* _____

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E-mail Address *(You must provide an e-mail address to gain access to the on-line syllabus):* _____

PLEASE REGISTER ME FOR THE FOLLOWING SESSIONS:

- Thursday, October 15, 2015 Friday, October 16, 2015 Both Thursday & Friday
October 15-16, 2015

PLEASE INDICATE METHOD OF PAYMENT:

- My check for \$_____, payable to Albany Medical College is enclosed.
 Please charge my credit card for the amount of \$_____.
(For credit card payment, complete information below.)
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NAME AS IT APPEARS ON CARD:

Card Number: _____ Exp. Date: ____/____/____

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METHOD OF REGISTRATION: MAIL OR FAX

RETURN THIS FORM WITH PAYMENT TO:

Office of Continuing Medical Education
Electrocorticography Workshop
Albany Medical College, Mail Code – 1 J408
47 New Scotland Avenue, Albany, New York 12208-3479

FAX: (518) 262-5679 registrations accepted for Visa, MasterCard, Discover and American Express only. Fax registrations without credit card payment cannot be processed. This is a secure fax. Please register one person per form. This form may be photocopied.

Registrations are also being accepted on-line at www.webadvisor.amc.edu

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