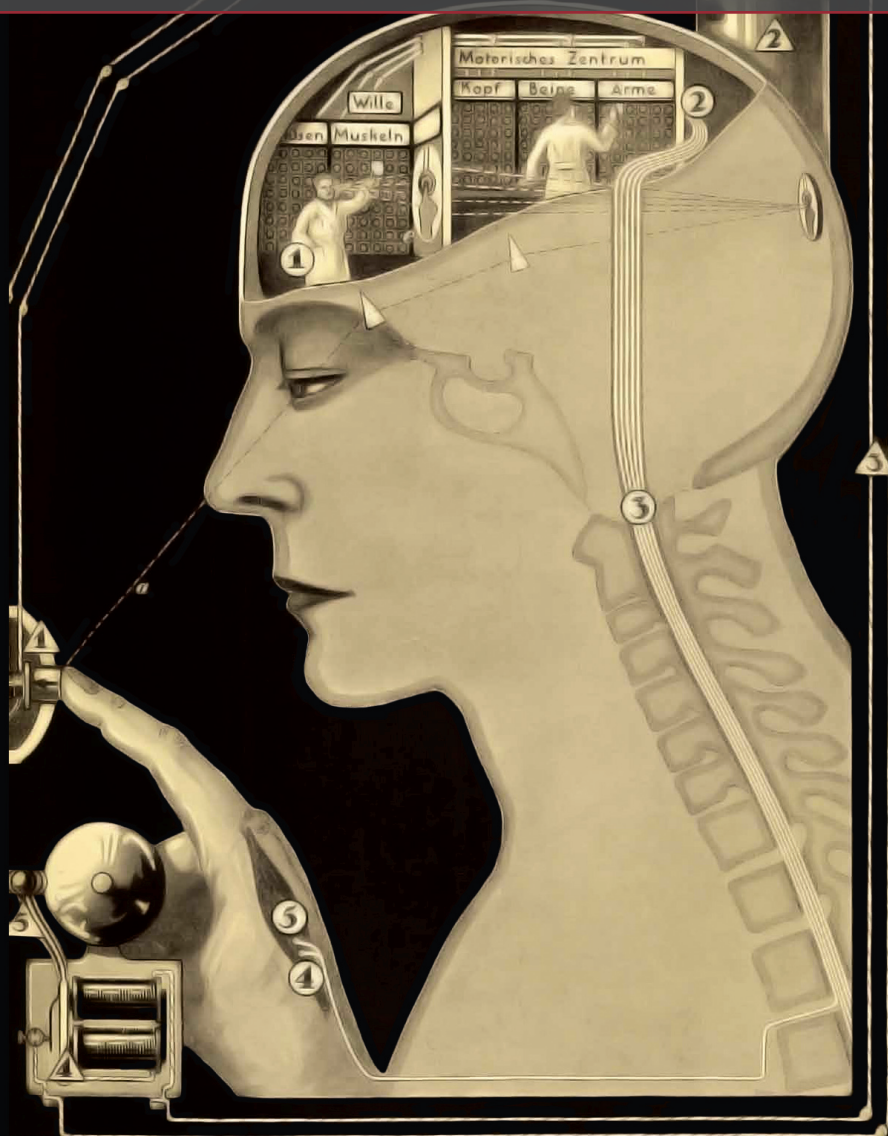


4TH INTERNATIONAL WORKSHOP ON ADVANCES IN ELECTROCORTICOGRAPHY



THURSDAY, OCTOBER 11 - FRIDAY, OCTOBER 12, 2012

HYATT FRENCH QUARTER

800 Iberville Street

New Orleans, LA 70112, USA



Wadsworth Center

New York State Department of Health

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, and clinical neurophysiologists whose practice involves functional brain mapping for epilepsy surgery and non-epilepsy lesionectomies.

ABOUT THE SYMPOSIUM

Increasing understanding of brain function and increasingly sophisticated methods for recording and interpreting signals from the surface of the brain (electrocorticography (ECoG)) are opening up exciting new opportunities for using these signals for clinical or research purposes. These developments have sparked tremendous interest in human and animal ECoG recordings to investigate the basis of normal brain function related to motor control, language, or memory, as well as of abnormal function such as epileptic seizures. This workshop reviews recent research findings in this area and demonstrates examples for the emerging translation of these new findings into clinical care.

This two-day workshop is held as an official satellite to the annual meeting of the Society for Neuroscience (SfN) in New Orleans, Louisiana. It follows a hugely successful 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 that was held prior to the SfN meeting in San Diego in 2010, and the third ECoG workshop that was held prior to the SfN meeting in Washington, DC.

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 cognitive 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 EEG 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 12.25 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

TUITION

Tuition By:	September 15, 2012:	After September 15, 2012:
Single Day Registration	\$180.00	\$205.00
Students	\$155.00	\$155.00
Two Day Registration	\$260.00	\$310.00
Students	\$230.00	\$230.00

Tuition includes admission to the symposium lunch and beverage breaks.

TUITION REFUND POLICY

Tuition refunds, minus a \$35.00 administrative charge, are possible if notification is received by September 15. After that date, one half of the paid registration fee, minus the administrative charge, can be refunded. 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 French Quarter at 1-504-586-0800.

WEB SITES

Conference Website: www.ecog.info

The Hyatt French Quarter: www.frenchquarter.hyatt.com

Albany Medical Center: www.amc.edu

CONFIRMATION

Registrations will be confirmed by e-mail. Should you register and not receive a confirmation notice, call the Office of Continuing Medical Education 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 September 15 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.

4TH INTERNATIONAL WORKSHOP ON A

DAY 1 - OCTOBER 11, 2012

BASIC CONCEPTS OF CLINICAL, SCIENCE, ENGINEERING, AND THEIR INTEGRATION

- 8:15a-8:30a **Welcome and Introduction**
Anthony Ritaccio, MD, and Gerwin Schalk, PhD
- 8:30a-9:15a **Keynote Address**
Nancy Kanwisher, PhD, Massachusetts Institute of Technology
- 9:15a-9:30a **Break**

I. CLINICAL

- 9:30a-9:45a **"The Case"**
Anthony L. Ritaccio, MD, Albany Medical Center
- 9:45a-10:30a **Clinical Primer**
Lawrence J. Hirsch, MD, Yale School of Medicine
- 10:30a-10:45a **Break**
- 10:45a-11:30a **Functional Mapping Using Electrical Stimulation**
Josef Parvizi, MD, PhD, Stanford University
- 11:30a-11:45a **Break**
- 11:45a-12:30p **Functional Mapping Using ECoG Recordings**
Nathan Crone, MD, Johns Hopkins University
- 12:30p-1:30p **Lunch**

II. SCIENCE

- 1:30p-2:15p **Tutorial on Basic ECoG Physiology**
Kai J. Miller, MD, PhD, Stanford School of Medicine

III. ENGINEERING

- 2:30p-3:00p **Basics of ECoG Signal Acquisition**
Peter Brunner, MS, Wadsworth Center
- 3:00p-3:30p **Basics of ECoG Signal Analysis**
Aysegul Gunduz, PhD, University of Florida

IV. INTEGRATION

- 3:45p-4:30p **Integration of Understanding and Results From the Clinical, Scientific, and Engineering Domains**
Anthony L. Ritaccio, MD, Albany Medical Center

SNEAK PEAK TO ADVANCED TOPICS

- 4:45p-5:30p **Investigating Inter-Areal Synchronization with High-Resolution Surface and Depth ECoG**
Pascal Fries, MD, PhD, Ernst Strüngmann Institute

ADVANCES IN ELECTROCORTICOGRAPHY

DAY 2 - OCTOBER 12, 2012

ADVANCED TOPICS

8:15a-8:30a **Welcome and Introduction**
Anthony Ritaccio, MD, and Gerwin Schalk, PhD

I. CLINICAL

8:30a-9:15a **Challenges in Translating Micro-ECoG into Therapies For Epilepsy**
Brian Litt, MD, University of Pennsylvania

II. SCIENCE

9:30a-10:15a **Multimodal Comparisons and Group Analysis of ECoG Data**
Nitin Tandon, MD, Memorial Hermann-Texas Medical Center

10:15a-10:30a **Break**

10:30a-11:15a **Cortical Representation of Complex Motor Behaviors**
Nick F. Ramsey, PhD, University Medical Center Utrecht

11:15a-11:30a **Break**

11:30a-12:15p **Using Resting-State Networks for Brain Mapping**
Eric C. Leuthardt, MD, Washington University in St. Louis

12:15p-1:15p **Lunch**

III. ENGINEERING

1:15p-2:00p **Optoelectronic Interfaces for Investigating Spatiotemporal Cortical Dynamics with Microelectrocorticography**
Justin C. Williams, PhD, University of Wisconsin-Madison

2:00p-2:15p **Break**

IV. INTEGRATION

2:15p-3:00p **Bi-Directional Electrographic Brain-Computer Interface**
Dan W. Moran, PhD, Washington University in St. Louis

3:00p-3:15p **Break**

3:15p-4:00p **The Initial Experience with an Electrographic Brain-Computer Interface in an Individual with Tetraplegia**
Wei Wang, MD, PhD, University of Pittsburgh

4:00p-4:15p **Break**

4:15p-4:45p **Perspectives on ECoG Research and Applications**
Gerwin Schalk, PhD, Wadsworth Center

4:45p-5:00p **Break**

5:00p-7:00p **1st International Workshop on Functional Mapping With ECoG**
7:00p **Reception**

FACULTY

COURSE DIRECTORS

RESEARCH

GERWIN SCHALK, PhD

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Albany, New York, USA

CLINICAL

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University Medical Center Utrecht
The Netherlands

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Memorial Hermann-Texas Medical Center
The University of Texas Medical School at Houston
Houston, TX, USA

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University of Pittsburgh School of Medicine
Pittsburgh, PA, USA

JUSTIN WILLIAMS, PhD

Vilas Distinguished Achievement Professor
Associate Professor
Departments of Biomedical Engineering and
Neurological Surgery
University of Wisconsin-Madison
Madison, WI, USA

CONFERENCE REGISTRATION FORM OCTOBER 11-12, 2012

4TH INTERNATIONAL WORKSHOP ON ADVANCES IN ELECTROCORTICOGRAPHY

TUITION <i>(Only paid registrations can be accepted.)</i>	By September 15, 2012	After September 15, 2012
Single Day Registration	\$180.00	\$205.00
Student	\$155.00	\$155.00
Two Day Registration	\$260.00	\$310.00
Student	\$230.00	\$230.00

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

CME Credit Tracking: _____ - _____ - _____
Month of Birth Date of Birth First 4 Characters of First Name

Specialty: _____

Institution/Affiliation: _____

Department: _____

Business Address: _____

City: _____ State: _____ Zip: _____

Business Phone: _____ Business Fax: _____

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City: _____ State: _____ Zip: _____

Home Phone: _____

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:

- Thurs., October 11, 2012 Fri., October 12, 2012 Both Thurs. & Fri., October 11 & 12, 2012

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.)

- MasterCard Visa American Express Discover

NAME AS IT APPEARS ON CARD:

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

Signature: _____

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.

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Check #: _____
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Amount: _____
C.C. Approval #: _____
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