

## Speakers

### Andrea Wijtenburg, PhD

Assistant Professor  
Maryland Psychiatric Research Center  
UMB, Baltimore, MD

### Da-Ting Lin, PhD

Chief  
Neural Engineering Unit  
NIH/NIDA, Baltimore, MD

### David Leopold, PhD

Chief  
Cognitive Neurophysiology and Imaging  
NIH/NIMH, Bethesda, MD

### Dean Wong, MD, PhD

Professor  
Radiology, Psychiatry, Neurology,  
Neuroscience  
JHU, Baltimore, MD

### Hanzhang Lu, PhD

Professor  
Radiology and Radiological Science  
JHU, Baltimore, MD

### Jeff Duyn, PhD

Senior Investigator  
Advanced MRI Section  
NIH/NINDS, Bethesda, MD

### Meaghan Creed, PhD

Assistant Professor  
Pharmacology  
UMB, Baltimore, MD

### Mickael Tanter, PhD

Research Professor  
INSERM  
DP Director, Langevin Institute  
ESPCI Paris, France

### Paul Sajda, PhD

Professor  
Biomedical Engineering, Electrical  
Engineering and Radiology  
Columbia U, New York, NY

### Thomas Ernst, PhD

Professor  
Diag. Radiology and Nuc. Medicine  
UMB, Baltimore, MD

Columbia U - Columbia University; JHU - Johns Hopkins University; UMB - University of Maryland, Baltimore;  
NIDA - National Institute on Drug Abuse; NINDS - National Institute of Neurological Disorders and Stroke;  
NIMH - National Institute of Mental Health; INSERM - Institut National de la Santé et de la Recherche Médicale;  
ESPCI - Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris

### Thank you to our sponsors



### Registration

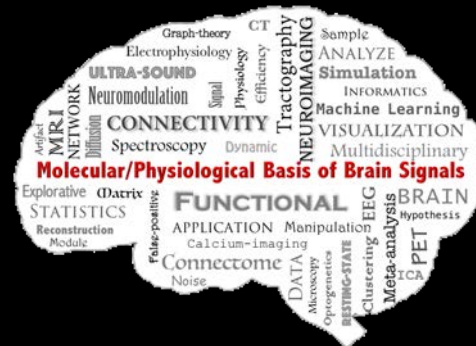
Please arrive before 9:00 AM to pick up  
your folder at the registration desk.  
Complimentary lunch is provided with  
registration.

### Organizing Committee

Rao Gullapalli, PhD  
David Seminowicz, PhD  
Shiyu Tang, BS  
Brigitte Pocta, MLA



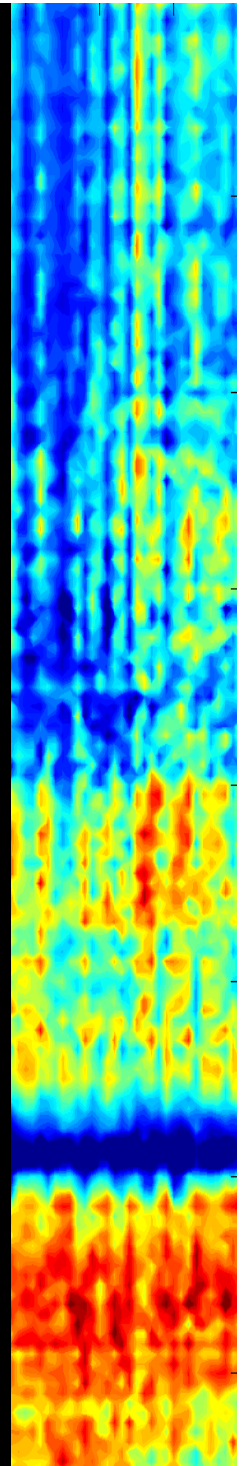
## Molecular and Physiological Basis of Brain Signals



April 25, 2018

8:30 AM - 5:00 PM

University of Maryland, Baltimore  
SMC Campus Center  
Elm Room 208 A&B



## Agenda

8:30-9:00 **Registration and Breakfast**

9:00-9:10 **Opening Remarks**

### Speaker Session 1

9:10-9:35 **Jeff Duyn, PhD, NIH/NINDS**  
*Contributions of the Autonomic Nervous System to fMRI*

9:40-10:05 **Meaghan Creed, PhD, UMB**  
*Optogenetically-inspired Neuromodulation for Substance Use Disorders*

10:10-10:35 **Da-Ting Lin, PhD, NIH/NIDA**  
*Cracking the Neural Code: In Vivo Deep Brain Calcium Imaging in Freely Behaving Mice*

10:40-10:55 **Trainee Presentation Session 1**

10:55-11:10 **Coffee Break + Posters**

### Speaker Session 2

11:15-11:40 **Paul Sajda, PhD, Columbia U**  
*Investigating Human Perceptual-Decision Making Using Simultaneously Acquired EEG and fMRI*

11:45-12:00 **Trainee Presentation Session 2**

12:00-12:25 **Mickael Tanter, PhD, INSERM, ESPCI**  
*Breaking the Fundamental Barriers of Ultrasound for Functional Ultrasound Neuroimaging*

12:30-1:40 **Lunch + Posters**

### Speaker Session 3

1:45-2:10 **Hanzhang Lu, PhD, JHU**  
*MRI of Brain Physiology*

2:15-2:40 **Dean Wong, MD, PhD, JHU**  
*Imaging of Neuroreceptors, Neuropathology and Neuromodulation: Over 3 Decades of Progress in Translation to Human Brain Disorder*

2:45-3:10 **Andrea Wijtenburg, PhD, UMB/MPRC**  
*MRS Techniques for Assessing Neurotransmitters and Neuromodulators: Applications to Schizophrenia*

## Agenda (continued)

3:15-3:40 **Thomas Ernst, PhD, UMB**  
*Prospective Motion Correction for MRI*

3:45-4:00 **Coffee Break + Posters**

### Keynote

4:05-4:50 **David Leopold, PhD, NIH/NIMH**  
*Understanding Local Neural Diversity Using Whole-brain fMRI Readout*

4:50-5:00 **Closing Remarks**

5:00-6:00 **Networking Reception**  
*Frank & Nic's West End Grille*

## Keynote Speaker

### David Leopold, PhD

Chief, Section on Cognitive Neurophysiology and Imaging  
Director, Neurophysiology Imaging Facility  
NIH/NIMH, Bethesda, MD



Dr. Leopold attained a BS in biomedical engineering from Duke University in 1991. After receiving his PhD in Neuroscience from Baylor College of Medicine in 1997, he conducted postdoctoral work at the Max Planck Institute for Biological Cybernetics in Tübingen, Germany.

Dr. Leopold arrived at the NIH in 2004 to establish his own research laboratory and to head a core facility for brain imaging in nonhuman primates. He is now a Senior Investigator and Chief of the Section on Cognitive Neurophysiology and Imaging in the Laboratory of Neuropsychology in the National Institute of Mental Health. He is also the Director of the Neurophysiology Imaging Facility, a joint core facility sponsored by the National Institute of Mental Health, National Institute of Neurological Disorders and Stroke, and National Eye Institute.

