



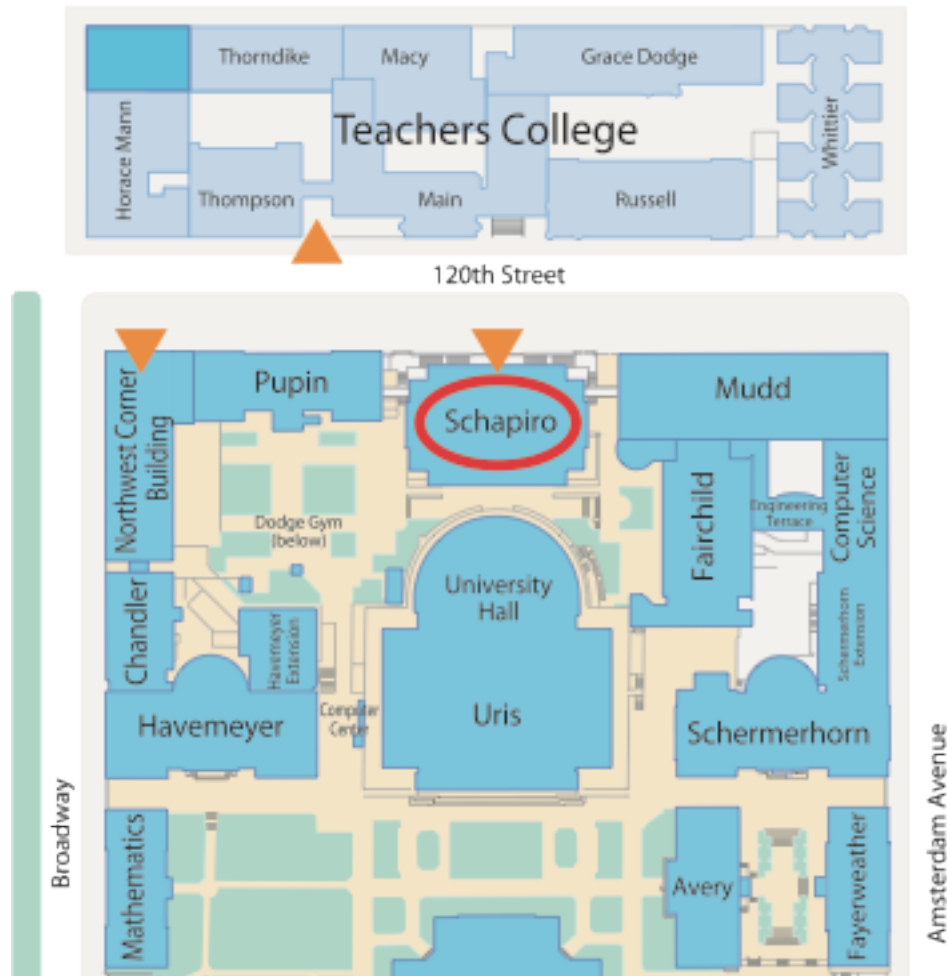
# *Sense to Synapse*

*Biophysical Mechanisms of Perception*

*April 19th, 2012*

- 9:00 **Welcome** (Davis Auditorium, Schapiro CEPSR)
- 9:05 **Introduction**  
Elizabeth Olson  
Department of Otolaryngology / Head and Neck Surgery, Columbia University
- 9:15 **Olfaction Keynote**  
*Making Sense of Scents: Mammalian Olfaction*  
Stuart Firestein  
Department of Biological Sciences, Columbia University
- 10:00 *A Physical Model and Bayesian Inference Guides the Design and Analysis of Chemosensory Arrays*  
Julia Tsitron  
Department of Computational Biology and Molecular Biophysics / BioMaPS  
Institute for Quantitative Biology, Rutgers University
- 10:10 *Response Dynamics of C. Elegans Chemosensory Neurons*  
Saul Kato  
Center For Theoretical Neuroscience, Columbia University
- 10:20 **Coffee Break** (Schapiro CEPSR)
- 10:45 **Vision Keynote**  
*Visual transformations and the loss of peripheral information*  
Eero Simoncelli  
Center for Neural Science / Courant Institute of Mathematical Sciences /  
Department of Psychology, New York University

- 11:30 *SynCAM 1 Contributes to Synapse Organization and Function in the Retina*  
Adema Ribic  
Department of Molecular Biophysics and Biochemistry, Yale University
- 11:40 *A Function for Whirlin in Proprioceptor Mechanotransduction*  
Joriene de Nooij  
Department of Biochemistry and Molecular Biophysics, Columbia University
- 11:50 **Lunch** (Schapiro CEPSR)
- 12:50 **Taste Keynote**  
*Human Taste Cell Culture: To Study Taste*  
M. Hakan Ozdener  
Monell Center / Temple University
- 1:35 *The Molecular Basis of Acid Insensitivity in the African Naked Mole-Rat*  
Ewan St. John Smith  
NYU Langone Medical Center, New York University
- 1:45 *Expression Cloning of a High-Affinity TRPA1 Antagonist using a Recombinant Membrane-tethered Spider Toxin Library*  
Michael Nitabach  
Yale School of Medicine, Yale University
- 1:55 **Coffee Break** (Schapiro CEPSR)
- 2:20 **Hearing Keynote**  
*Making an Effort to Listen: Mechanical Amplification by Myosin Molecules and Ion Channels in Hair Cells of the Inner Ear*  
Jim Hudspeth  
Laboratory of Sensory Neuroscience, The Rockefeller University
- 3:05 *Phantom Tones and Suppressive Masking by Active Nonlinear Oscillation of the Hair-Cell Bundle*  
J  r  mie Barral  
Center for Neural Science, New York University
- 3:15 **Touch Keynote**  
*Mechanosensory Mechanisms in a Mammalian Touch Receptor*  
Ellen Lumpkin  
Department of Dermatology / Department of Physiology and Cellular Biophysics,  
Columbia University
- 4:00 End



## *Columbia University, Morningside Campus*

### Organizers:

Dáibhid Ó Maoiléidigh & Christopher Bergevin

### Webpage:

<http://www.columbia.edu/cu/s2s/>

### Directions:

<http://www.cs.columbia.edu/theory/directions.html>