

RSVP: wb2149@columbia.edu

COLUMBIA UNIVERSITY
THE ITALIAN ACADEMY FOR ADVANCED STUDIES IN AMERICA

Vision, Attention, and Emotion

A Symposium of the Art and Neuroscience Project at the Italian Academy

Tuesday, March 25, 2008, 9:30 am – 5:30 pm

New York, NY— February 13, 2008— On March 25, the Italian Academy for Advanced Studies in America at Columbia University will host a symposium on **Vision, Attention, and Emotion**. It will address the cerebral mechanisms of visual perception and visual attention and how they are linked to emotional systems. This approach is crucial to understanding the neuronal substrate of the emotions we experience when viewing a work of art. The talks of the speakers, who will include experts doing fresh and exciting work in the fields of neurophysiology and neuropsychology, promise a lively day of provocative discussion on the basis of the latest research in these areas.

9:30 am Welcome: **David Freedberg** (Director, Italian Academy)

10:00 am: **Morning Session: Physiology**
Introduction: **Anna Ipata** (Columbia)

John Reynolds (Salk Institute):
Mapping the Microcircuitry of Attention: Attentional Modulation Varies Across Cell Classes in Visual Area V4

James Bisley (UCLA):
Where to Look: The Role of Posterior Parietal Cortex in Guiding Eye Movements

Earl Miller (MIT):
Neural Mechanisms for Volitional and Reflexive Attention

Daniel Salzman (Columbia):
How Are You Feeling? Ask Your Amygdala!

Discussion moderated by David Freedberg
1:00 - 2:30 Break

2:30 pm: **Afternoon Session: Human Studies**

Steven Yantis (Johns Hopkins):
Perceiving More by Seeing Less: Brain Mechanisms of Attentional Control

Jeremy Wolfe (Harvard):
The Puzzling Relationship of Attention and Awareness: The View from Étienne Bonnot de Condillac's Château

Marlene Behrmann (Carnegie Mellon):
Fellini Had the Right Idea: Hemispatial Neglect in the World

Elizabeth Phelps (NYU):
Emotional Influences on Attention and Perception

Discussion moderated by Kevin Ochsner (Columbia); Q&A and closing remarks by David Freedberg

5:30 pm: Reception

Free and open to the public; RSVP: wb2149@columbia.edu

For further information, contact Abigail Asher, (212) 854-6787; aa2481@columbia.edu

The Art and Neuroscience Project at the Italian Academy, which embraces this symposium and other initiatives, is closely related to the Academy's concerns with cultural memory, and it is informed by the groundbreaking work being done by Italian neuroscientists both in Italy and abroad. Striving to bridge the gap between the humanities and the sciences with serious cross-disciplinary dialogue, each year the Academy sponsors a Fellowship in Art & Neuroscience, and it has become known as the leading academic institution for the advanced study of this rich interdisciplinary field. The academy also offers public events designed to spread word of the newest scientific advances and to bring together researchers in the sciences and the humanities, among them the 2006 Columbia Forum on Art and the New Biology of Mind—a conference of artists and scientists led by the Academy's Director, art historian David Freedberg, along with Arthur C. Danto and Nobel Laureate Eric R. Kandel—and the 2007 lecture on mirror neurons, embodied simulation and aesthetic experience by Vittorio Gallese, one of the principal discoverers of mirror neurons.

The Italian Academy
 1161 Amsterdam Avenue (between 116th and 118th Streets)
 New York, NY 10027
 Subway line (1) to 116th Street
italianacademy.columbia.edu.

Speakers' bios:

Marlene Behrmann is a professor in the Department of Psychology, Carnegie Mellon University, and the Center for the Neural Basis of Cognition. Her research is concerned with the psychological and neural bases of visual processing, with particular focus on the way in which the signals from the eye are transformed into meaningful and coherent percepts by the brain. She adopts an interdisciplinary approach using methods from neuropsychology and functional imaging with normal and brain-damaged individuals.

James Bisley received his Ph.D. from the University of Melbourne, Australia. After postdoctoral training at the University of Rochester, NIH and Columbia University, he became an Assistant Professor of Neurobiology at UCLA. He is also a member of the UCLA Dept of Psychology, the Brain Research Institute and the Jules Stein Eye Institute. His research is aimed at understanding the neural mechanisms underlying short-term memory, the allocation of spatial attention and visual perception.

David Freedberg is Professor of Art History at Columbia University and Director of The Italian Academy for Advanced Studies in America. He is best known for his work on psychological responses to art, and particularly for his studies on iconoclasm and censorship. His recent work addresses the history of science and the importance of the new cognitive neurosciences for the study of art and its history. He is currently devoting a substantial portion of his attention to collaborations with neuroscientists working in fields of vision, movement and emotion.

Anna Ipata is a Fellow at the Italian Academy who works at the Department of Neuroscience at Columbia. She took her medical degree at the University of Pisa, Italy, where she also completed her residency in Child Neurology and Psychiatry. After receiving her Ph.D in neuroscience at the University of Verona, Italy, she joined the laboratory of neurophysiology of Prof. Michael Goldberg first at the NIH and then at Columbia. The main aim of her research is the study of the neurophysiological mechanisms of visual perception, attention and oculomotor integration in primates and humans.

Earl Miller is the Picower Professor of Neuroscience at the Massachusetts Institute of Technology and Associate Director of MIT's Picower Institute for Learning and Memory. He received his Ph.D. in Psychology and Neuroscience in 1990 from Princeton University. Professor Miller uses experimental and theoretical approaches to study the neural basis of high-level cognitive functions. Professor Miller is the recipient of numerous awards and honors for his scientific work; he has delivered numerous lectures worldwide and serves as editor for, and on the editorial boards of, major journals in neuroscience as well as on international advisory committees.

Kevin Ochsner is Professor of Psychology at Columbia University. His research interests include the psychological and neural processes involved in emotion, pain, self-regulation, self perception, and person perception. His work employs a social cognitive neuroscience approach that seeks to integrate the theories and methods of social psychology, on the one hand, and cognitive neuroscience on the other.

Elizabeth A. Phelps received her PhD from Princeton University in 1989, served on the faculty of Yale University until 1999, and is currently a Professor of Psychology and Neural Science at New York University. Her laboratory has earned widespread acclaim for its groundbreaking research on how the human brain processes emotion, particularly as it relates to learning, memory and decision making. Dr. Phelps is the recipient of the 21st Century Scientist Award from the James S. McDonnell Foundation and a fellow of the American Association for the Advancement of Science. She has served on the Board of Directors of the Association for Psychological Science and the Society for Neuroethics, was the President of the Society for Neuroeconomics and is the current editor of the APA journal *Emotion*.

John Reynolds is Associate Professor in the Systems Neurobiology Laboratory at The Salk Institute for Biological Studies. His research accomplishments in the areas of vision and attention have been selected for recognition by The McKnight Foundation, The Sloan Foundation, The McDonnell-Pew Foundation and others. He seeks to understand the neural mechanisms of selective visual attention at the level of the individual neuron and the cortical circuit, and to relate these to perception and conscious awareness.

Daniel Salzman is an Assistant Professor in the Departments of Neuroscience and Psychiatry at Columbia University. He received his M.D. and Ph.D. from Stanford University, where also obtained his clinical training in Psychiatry. Since joining the

faculty at Columbia in 2001, Dr. Salzman has focused his lab on understanding how emotion and related processes are represented and regulated in the brain.

Jeremy Wolfe (Princeton AB, '77, MIT PhD, '81) spent the early part of his career at MIT working on binocular rivalry, visual aftereffects, and accommodation. In the late 1980s, the focus of the lab shifted to visual attention. Since that time, he has published numerous articles on visual search and visual attention. In 1991, Wolfe moved to Brigham and Women's Hospital and Harvard Medical School where he is Professor of Ophthalmology. He teaches various Psychology courses at MIT and Harvard.

Steven Yantis grew up in Seattle, Washington, where he attended the University of Washington. In 1985 he earned a Ph.D. in Experimental Psychology from the University of Michigan, and then joined the faculty at Johns Hopkins University, where he is now Professor of Psychological and Brain Sciences. He received the Troland Research Award from the National Academy of Sciences in 1996. His laboratory uses functional neuroimaging and behavioral techniques to investigate human cognitive control.