

Seeing Color: Art, Vision, and the Brain

Artists and scientists have been fascinated and perplexed by the visual and neural mechanisms contributing to our perception of color. You trust your eyes to give an accurate representation of the world, but are the colors you see truly there? Color is often regarded as a physical property. However, the instability and relativity of color cannot be chalked up to the workings of wavelength and light. Our eyes and brain define our experience of color.

This symposium brings leading researchers and artists from across the U.S. and beyond together to discuss how we see color: an exploration of color, brightness, visual perception and the intersection of neuroscience and art.

The Duke Institute for Brain Sciences is a cross-school, campus-wide, interdisciplinary institute at Duke with a commitment to building an interactive community of brain science research and scholarship. The Institute administers a variety of constituent groups, including the Center for Cognitive Neuroscience, the Center on Addiction and Behavior Change, the Duke Center for Interdisciplinary Decision Science, Duke University's Undergraduate Studies in Neuroscience and the Graduate Cognitive Neuroscience Admitting Program.

Bass Connections is a university-wide initiative providing students with greater exposure to inquiry across the disciplines, partnership with unlikely fellow thinkers, sustained mentorship in teams, and the chance to experience the intersections of the academy and the broader world. Through Bass Connections: Brain & Society, teams tackle a current issue relating to the brain and its link to society as a whole.

The Nasher Museum of Art at Duke University promotes engagement with the visual arts among a broad community including Duke students, faculty, and staff, the greater Durham community, the Triangle region, and the national and international art community. The museum is dedicated to an innovative approach, and presents collections, exhibitions, publications, and programs that attain the highest level of artistic excellence, stimulate intellectual discourse, enrich individual lives, and generate new knowledge in the service of society. Drawing on the resources of a leading research university, the museum serves as a laboratory for interdisciplinary approaches to embracing and understanding the visual arts.



April 13, 2015
8:30 a.m. - 6 p.m.

Nasher Museum of Art at Duke University

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NASHER
MUSEUM OF ART AT DUKE UNIVERSITY

Duke
UNIVERSITY

BASS
CONNECTIONS
Brain & Society



Duke
Institute for
Brain
Sciences

Monday,
April 13

8:30 a.m. Registration and Coffee

9 a.m. Welcome

Elizabeth Johnson, Ph.D.
Associate Director, Duke Institute for Brain Sciences
Assistant Research Professor of Neurobiology, Duke University

9:10 a.m. Color: Neuroscience and Art Practice

Bevil Conway, Ph.D.
Associate Professor of Neuroscience
Wellesley College

9:50 a.m. Color in Painting

Sanford Wurmfeld
Phyllis and Joseph Caroff Professor of Fine Arts Emeritus
Hunter College, The City University of New York

10:30 a.m. Break

10:45 a.m. Color Blindness and Art: History, Physiology, Aesthetics

Michael Marmor, M.D.
Professor of Ophthalmology
Stanford University School of Medicine

11:25 a.m. Panel Discussion

MODERATOR: *William Seaman, Ph.D.*
Professor of Art, Art History, and Visual Studies
Duke University

12:10 p.m. Lunch

1:10 p.m. New Light on Old Masters: Experiments at the National Gallery

Anya Hurlbert, M.D., Ph.D.
Professor of Visual Neuroscience
Newcastle University, UK

1:50 p.m. Single- and Double-Opponent Cortical Cells in Color Perception

Robert Shapley, Ph.D.
Natalie Clews Spencer Professor of the Sciences & Professor of Neural Science
New York University

2:30 p.m. Break

2:50 p.m. How One Painter Uses Color

Chieko Murasugi, Ph.D.
Artist, Golden Belt Arts, Durham, NC

3:30 p.m. Transformations of Light and Color Through the
Aging Eyes of Claude Monet

John S. Werner, Ph.D.
Distinguished Professor of Ophthalmology & Vision Science and
Neurobiology, Physiology & Behavior
University of California, Davis

4:10 p.m. Panel Discussion

MODERATOR: *Dale Purves, M.D.*
Research Professor, Duke Institute for Brain Sciences
Duke University

4:55 p.m. Closing Remarks

5 p.m. Reception and Art Exhibition Viewing