

## National Science Foundation-Gallaudet University Science of Learning Center, Visual Language and Visual Learning (VL2)

#### **About the Ph.D. in Educational Neuroscience Program**

Growing from our mission to educate the next generation of students, scholars in our National Science Foundation-Gallaudet University Science of Learning Center, Visual Language and Visual Learning (VL2) created the pioneering Ph.D. in Educational Neuroscience (PEN) Program. The PEN program encompasses research in how humans learn across the lifespan, from infants to adults, with a special interest in the neuroplasticity of visually-guided learning that contributes to language learning and bilingualism, reading and literacy, and higher cognitive processes (such as action perception, math and numeracy, memory and attention, emotional and social development, and more). The PEN Program at Gallaudet University further provides a unique strength in groundbreaking scientific discoveries about learning that have important translational significance for the education of all children, especially young visual learners.

#### **Proud Sponsors**

The 2021-2022 PEN Distinguished Lecture Series in Educational Neuroscience is sponsored by the Ph.D. in Educational Neuroscience (PEN) Program, the National Science Foundation-Gallaudet University Science of Learning Center, Visual Language and Visual Learning (VL2); and Gallaudet University. We wish to specifically thank the William H. and Ruth Crane Schaefer Endowment for supporting our PEN Distinguished Lecturers funding.

#### **Contact Us**

#### Ph.D. in Educational Neuroscience (PEN) Program

Acting PEN Program Director
Dr. Laura-Ann Petitto
202.651.5866 (V)
202.558.9782(VP)
vl2@gallaudet.edu
https://vl2.gallaudet.edu/phd-program

#### **Distinguished Lecture Series**

Director Dr. Ilaria.Berteletti 202.651.5623 (V) 202.779.9683 (VP) ilaria.berteletti@gallaudet.edu The Ph.D. In Educational Neuroscience (PEN) Program and Gallaudet University are proud to announce the

2021-2022

# PEN Distinguished Lecture Series in Educational Neuroscience

#### THEME:

From brain development to developing virtual brains

This series honors world-renowned scientists and aims to form a bridge between basic science discoveries and their meaningful benefits for society.

This year, all lectures will be virtual. Register in advance: https://gallaudet.zoom.us/webinar/register/ WN\_g5U\_NnU5QvSAfEgUHsGvGA













#### **About This Year's Presenters**

This high-profile lecture series honors our presenters -- true pioneers in science -- who work in a variety of sister disciplines to Educational Neuroscience. This year we will again host our PEN Distinguished Lecture Series online with formal presentations followed by Q&A sessions with the audience. Our presenters will virtually open the doors to their research labs and share their field-advancing discoveries, which range from the factors impacting brain development to the application of neuroscientific discoveries for the creation of virtual human brains.

**The PEN Distinguished Lecture Series in Educational Neuroscience** honors researchers who have changed the landscape of science. We invite them to share their discoveries as we forge new links across research communities within Gallaudet University, Washington D.C., and the world.

To view this year's and all previous presentations, please visit: http://vl2.gallaudet.edu/pen-distinguished-lecture-series

### **Presenters**

Project Baby X: Bringing technology to life

Dr. Mark Sagar
CEO, Soul Machines
October 7, 2021
2-3 p.m. EST

The co-founder and CEO of Al avatar start-up Soul Machines, he and his team are developing autonomously animated virtual humans with virtual brains and nervous systems, capable of highly expressive face-to-face interaction and real-time learning. Dr. Sagar is also director of the Laboratory for Animate Technologies at the Auckland Bioengineering Institute. Dr. Sagar's team brings technology to life, pioneering new technologies that realistically embody biologically based models of neural networks and neural systems with highly expressive faces to create live interactive virtual humans capable of emotional response and real-time learning, thereby redefining human interaction with artificial intelligence. This has the potential to impact everything from human-machine cooperation in assistive, commercial, educational, and creative tasks to the future of storytelling with autonomous characters.

Sagar holds a PhD in Engineering from the University of Auckland and was a postdoctoral fellow at MIT. He was awarded Scientific and Engineering Oscars in 2010 and 2011 for his pioneering work in computer-generated faces.

Developing a theory of mind: Insights from fMRI studies of children

**Dr. Hilary Richardson** 

Lecturer in the School of Philosophy, Psychology and Language Sciences, University of Edinburgh

November 4, 2021

2-3 p.m. EST

Dr. Hilary Richardson is a Lecturer in the School of Philosophy, Psychology, and Language Sciences at the University of Edinburgh, where she uses child-friendly neuroimaging studies to learn about the development of brain regions that support social cognition and the impact of early experience on development. Prior to joining the faculty at the University of Edinburgh, she worked as a postdoctoral research fellow in the Laboratories of Cognitive Neuroscience at Boston Children's Hospital and earned her PhD in the Department of Brain and Cognitive Sciences at MIT. Dr. Richardson is a prolific author and has several publications in prestigious journals as well as book chapters.



Genes, brains, and spatial representation: Evidence from Williams syndrome

Dr. Barbara Landau

Dick and Lydia Todd Professor of Cognitive Science and Gilman Scholar, John Hopkins University

December 2, 2021

2-3 p.m. EST

Dr. Barbara Landau is a Johns Hopkins Gilman Scholar Distinguished Faculty. She is a cognitive scientist with broad interests in human cognition and its development. Dr. Landau is interested in human knowledge of language and space, the relationships between these systems, and how they are represented in the mind and brain. She focuses on the nature of the cognitive "primitives" that guide both typical and atypical development, including cases of congenital blindness, Williams syndrome, and perinatal stroke. She is an elected member of the National Academy of Sciences, a Fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and the Cognitive Science Society, and was named a Guggenheim Fellow in 2009. From 2013 to 2018, she was the Director of the Science of Learning Institute at Johns Hopkins University. Dr. Landau is an accomplished editor and has authored numerous books and scientific articles.

Socioeconomic inequality and children's brain development

**Dr. Kimberly Noble** 

Associate Professor of Neuroscience and Education, Columbia University

March 10, 2022

2-3 p.m. EST

Kimberly Noble, MD, PhD, is a Professor of Neuroscience and Education at Teachers College, Columbia University. As a neuroscientist and board-certified pediatrician, she studies how socioeconomic inequality relates to children's cognitive and brain development. Her work examines socioeconomic disparities in cognitive development, as well as brain structure and function, across infancy, childhood and adolescence. She has funding from the NIH and more than a dozen private foundations, and is one of the principal investigators of Baby's First Years, the first clinical trial of poverty reduction in the first three years of life. Dr. Noble received her undergraduate, graduate and medical degrees at the University of Pennsylvania. She was the recipient of the Association for Psychological Science Janet Taylor Spence Award for Transformative Early Career Contributions, the American Psychological Association award for Distinguished Contributions to Psychology in the Public Interest, and is a Fellow of the Association for Psychological Science. Her TED talk has received more than two million views to date, and her work has received worldwide attention in the popular press.

To Be Announced

Dr. Vinod Menon

Rachel L. and Walter F. Nichols, MD, Professor of Psychiatry and Behavioral Sciences,

Stanford University March 31, 2022 2-3 p.m. EST

Dr. Manon is the director of the Stanford Cognitive and Systems Neuroscience Laboratory, which seeks to advance fundamental knowledge of human brain function and dysfunction, and to use this knowledge to help children and adults with psychiatric and neurological disorders. His research has led to major breakthroughs in our understanding of the architecture, function, and development of the large-scale distributed human brain networks. His work has resulted in a paradigm shift in how we investigate brain function and cognition. Dr. Menon's research has been cited over 69,000 times and he has been recognized multiple times as an ISI Highly Cited Researcher with Cross-Field impact. He was also recognized by the NIH with a Merit Award for Outstanding Research.