



UConn BIRC Speaker Series

Tuesday, February 23rd from 12-1:30 pm ET via Zoom

Environmental influences on brain development and plasticity

Allyson Mackey, PhD, University of Pennsylvania



Abstract: Children from lower income backgrounds are at greater risk of struggling in school. My research draws on basic neuroscience to better understand how experiences associated with socioeconomic status impact brain plasticity, and to develop interventions to improve children's learning. In this talk, I will first present evidence that lower socioeconomic status is associated with accelerated maturation of the body and brain. Because brain developmental processes like myelination and inhibition constrain synaptic plasticity, early maturation may negatively impact learning. I will then discuss strategies to boost plasticity even in the face of accelerated maturation, inspired by evidence from animal models that plasticity is enhanced by motivation and associated dopamine. I will focus on two lines of work in this vein: one on identifying experiences that support persistence, and one on enhancing behavioral aspects of curiosity. I will close with a broader discussion of the role of cognitive neuroscience in informing educational policy and practice.

Bio: Allyson Mackey, Ph.D. is an Assistant Professor of Psychology at the University of Pennsylvania, and is affiliated with the Neuroscience Graduate Group, the Center for Neuroscience and Society, and the Positive Psychology Center. She is a CIFAR Azrieli Global Scholar, a Jacobs Foundation Scholar, and serves on the Scientific Advisory Council of the National Center on the Developing Adolescent. She is the recipient of the Rising Star award from the Association of Psychological Sciences. Dr. Mackey is the founder and director of the Changing Brain Lab. She studies individual differences in brain plasticity and development with an eye towards personalizing the type and timing of educational interventions. Her research is supported by the National Institute on Drug Abuse, the National Science Foundation, CIFAR, the Jacobs Foundation, and the LEGO Foundation.

Remote access Registration: <https://bit.ly/3jAiuFE>

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