

Bradley L. Schlaggar, M.D., Ph.D.

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Biography

Bradley L. Schlaggar, MD, PhD, is the A. Ernest and Jane G. Stein Associate Professor of Developmental Neurology, in Neurology, of Radiology, of Anatomy & Neurobiology, and of Pediatrics, at Washington University School of Medicine, St Louis, Missouri. Originally from Chicago, Illinois, Dr. Schlaggar received his Honors ScB magna cum laude in Neural Science from Brown University in 1986, and his MD and PhD degrees from Washington University School of Medicine in 1994. Dr. Schlaggar's graduate thesis, *The Specification of Neocortical Areas*, was carried out in the laboratory of Dr. Dennis OLeary. His thesis work addressed a fundamental question in developmental neurobiology: what is the relative contribution of intrinsic and extrinsic factors in the development and differentiation of neocortical areas. His thesis work was published in *Science*, *Nature*, *PNAS*, *Annual Review of Neuroscience*. For that work, he received the Wendel S. Krieg Cortical Scholars Award. In 1999, he completed his pediatric neurology residency training at Washington University School of Medicine & St. Louis Children's Hospital, where he now serves as the Director of Pediatric Neurology Residency Training, the Director of the Pediatric Movement Disorders Program, and the Associate Director of the Division of Pediatric and Developmental Neurology. From 1999-2001, he was a fellow in cognitive neuroscience with Dr. Steven Petersen, beginning their now 13 year collaboration. In 2002 Dr. Schlaggar received a Burroughs Wellcome Fund Career Award in Biomedical Sciences, a John Merck Scholars Fund Award in the Neurobiology of Developmental Disabilities, and a Dana Foundation Clinical Hypotheses in Neuroimaging Award. In 2003 he received the Child Neurology Society Young Investigator Award. In 2007 he was awarded the Tourette Syndrome Association Humanitarian of the Year Award. In 2009 he was awarded the Norman Geschwind Prize in Behavioral Neurology by the American Academy of Neurology. He has been listed annually in the "Best Doctors in America" since 2005 for Child Neurology. Dr. Schlaggar's current research efforts, funded primarily by the NIH, are directed at understanding the brain's functional network architecture in both typically and atypically developing children.

Presentation Abstract (Development of the Brain's Functional Networks)

A full understanding of the development of the brain's functional network architecture requires both an understanding of developmental changes in neural processing in individual brain regions, and an understanding of changes in inter-regional interactions. Resting state functional connectivity MRI (rs-fcMRI) is increasingly being used to study functional interactions between brain regions in both adults and children. In this presentation I will briefly review methods used to study functional interactions and networks with rs-fcMRI and how these methods have been used to define developmental changes in network functional connectivity. The implementation of multivariate pattern analysis methods using support vector machine classification and regression has allowed us to make predictions about the maturity of the brain's functional network architecture in individuals. The implications of these approaches for understanding typical and atypical development of the brain's functional network architecture will be discussed.