

Motor Control, Cognition, & Neuroimaging Laboratory at Penn State

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The MCCN Lab investigates how brain structure and function, cognition, and personality traits influence the control of reaching and grasping movements.

Our research uses systems neuroscience techniques including:

- Functional magnetic resonance imaging (fMRI)
- Structural MRI
- Kinetic movement analysis
- Kinematic movement analysis
- Assessments of cognition and processing speed
- Genetics

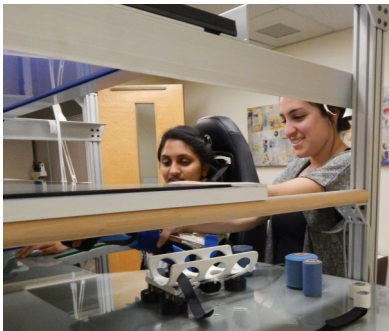


Welcome to our lab, John and Taylor!



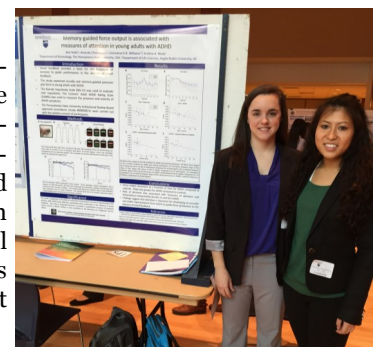
Research News

Our research team is comprised of graduate and undergraduate research assistants, and Dr. Kristina Neely, the lab director. Three undergraduate research assistants presented research in the spring semester. Read more about their projects below!



Nicki Morreale is a Schreyer's Honors College Student graduating in May 2015. Her thesis research examined handedness in young adults with ADHD. Participants completed reaching tasks using the Kinereach virtual reality workstation. Participants pointed targets that could appear in various regions across the workspace. Nicki examined how often participants chose to reach with their left hand compared to how often they chose to reach with their right hand. She then compared this data to a previous study involving a healthy adult population, and found that the young adults with ADHD chose to reach with their left hand more often than young adults from the previous study. As a result of her thesis research, we are expanding her research project and are currently recruiting research participants for the handedness study. Call us today if you would like to participate!

Amanda Chennavasin and Arie Yoder are undergraduates majoring in Bioengineering and Kinesiology, respectively. They have been working on research projects examining precision grip force control for the last year. On April 8, they presented their research at the 2015 Undergraduate Exhibition at Penn State. This annual event communicates and celebrates the participation of undergraduate students in research and creative endeavors. Amanda's project examined the spatial and temporal requirements of instantaneous visual feedback to guide isometric force production in healthy young adults. Arie's project investigated how force output changes with and without visual feedback during isometric force production. She then correlated the force measures with measures of attention in young adults with and without ADHD. Congrats to Amanda and Arie for giving great poster presentations!



Thank you research participants! We enjoy getting to know you and look forward to seeing you soon!

- Dr. Kristina Neely, Lab Director
- Sara Barth, Study Coordinator
- Nicki Morreale, Schreyer's Honors College Student
- Samantha Blouch, Amanda Chennavasin, Arie Yoder, Kaylee Raudenbush, Jackie Tucker, and Anuja Jonnalagadda, Undergraduate Assistants
- John Huhn, Graduate Research Assistant
- Taylor Bigelow, Clinical Research Assistant

Now Recruiting Research Volunteers!

- Young adults ages 18-25 with and without ADHD
- Healthy adults ages 50-85

If you are interested in participating in one of our studies please call or email us, we'd love to hear from you!

Phone: 814-867-5024

Email: neelymccnlab@gmail.com

