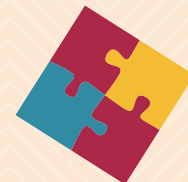




MOTOR AND BRAIN DEVELOPMENT LAB



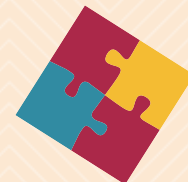
FALL 2017 NEWSLETTER

Mission Statement: The Motor Brain and Development Lab is dedicated to advancing knowledge about motor development, brain development, and independent living skills to promote and enhance quality of life for individuals with and without developmental disorders



A letter from Dr. Brittany Travers:

This fall marks the 3-year anniversary of the Waisman Center's Motor & Brain Development Lab. As I reflect on these last 3 years, I am overwhelmed by gratitude to everyone who has made this lab what it is today. I am so grateful for the time and talents of all the children and teenagers who have spent countless hours with us balancing, playing computer games, drawing with a robot, and completing brain imaging scans. I am grateful for all the parents who have sat in the waiting room, filling out the multitude of forms. I am grateful for our lab's students and staff who have passionately worked with our amazing families, problem solved inevitable technological challenges, and ensured that the research is of the highest quality. You all have such busy lives with many choices to make about how you spend your time, and I am so honored you all have chosen to spend some time with us. You have enriched our understanding of the strengths and challenges associated with autism, and it has been my genuine pleasure to get to know you. In the next few months we will be wrapping up three of our projects (with your help), and the knowledge-to-be-gained looks bright. Here's to the next couple of years!



RECENT PUBLICATIONS



RESEARCH UPDATE: DOES BALANCE TRAINING HELP INDIVIDUALS WITH AUTISM SPECTRUM DISORDER?



One of the key questions we have been asking in our lab is whether videogame-based balance training can help improve standing balance in youth with autism spectrum disorder (ASD). The results are in and will be published in the upcoming issue of the *Journal of Autism and Developmental Disabilities*.

Overall, we found that 6 weeks of balance training using our Ninja Training video game and the Wii Fit games significantly improved balance in the youth. Importantly, these improvements in balance even transferred to tasks outside of the game. Generally, participants perceived the training as beneficial and enjoyable, suggesting that this might be a fun way to train balance in the future!

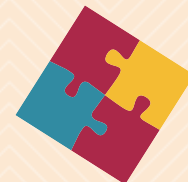
Citation: Travers, B. G., Mason, A. H., Mrotek, L. A., Ellertson, A., Dean, D. C., 3rd, Engel, C., Gomez, A., Dadalko, O. I., & McLaughlin, K. M. (in press). Biofeedback-based videogame balance training in autism. *Journal of Autism and Developmental Disorders*. doi: 10.1007/s10803-017-3310-2.

ADDITIONAL RECENT PUBLICATIONS:

1. Engel, C., Lillie, K., Zurawski, S., & Travers, B. G. (accepted). Curriculum-based handwriting programs: A systematic review with effect sizes. *American Journal of Occupational Therapy*.
3. Travers, B. G., Kirkorian, H. L., Jiang, M. J., Choi, K., Rosenberg, K. S., Pavalko, P., & Jobin, P. (in press). Knowing how to fold 'em: Paper folding across early childhood. *Journal of Motor Learning and Development*. doi: <https://doi.org/10.1123/jmld.2016-0044>
4. Dean, D. C., 3rd, Lange, N., Travers, B. G., Prigge, M. D., Froehlich, A. L., ...Lainhart, J. E. (2017). Multivariate characterization of white matter heterogeneity in autism spectrum disorder. *Neuroimage Clinical*, 13, 54-66. doi: 10.1016/j.nicl.2017.01.002Text



MOTOR AND BRAIN DEVELOPMENT LAB



RECENT GRADUATES WHERE ARE THEY NOW?



COURTNEY ENGEL,
OCCUPATIONAL
THERAPY FIELDWORK ROTATION -
UNIVERSITY OF MICHIGAN,
OUTPATIENT PEDIATRICS CENTER
ANN-ARBOR, MI



AUBREY FISHER,
OCCUPATIONAL THERAPY
FEILDWORK ROTATION -
REHAB INSTITUTE OF
CHICAGO, INPATIENT SPINAL
CORD INJURIES
CHICAGO, IL



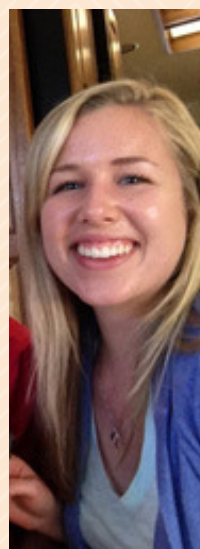
KRISTIN LILLIE,
OCCUPATIONAL THERAPY
FIELDWORK ROTATION-
FROEDTERT HOSPITAL,
INPATIENT NEUROLOGY UNIT
MILWAUKEE, WI



SAGUI LUTMAN,
OCCUPATIONAL
THERAPY FIELDWORK
ROTATION - CHILDREN'S
HOSPITAL OF WISCONSIN,
INPATIENT/ACUTE UNIT
MILWAUKEE, WI



ROBYN GEIST,
OCCUPATIONAL
THERAPY FIELDWORK
ROTATION-
COURAGE KENNY KIDS,
OUTPATIENT PEDIATRICS
COON RAPIDS, MN



KRISTI MCLAUGHLIN,
CURRENT MEDICAL
STUDENT AT THE
UNIVERSITY OF
MINNESOTA
MINNEAPOLIS, MN



NICOLE MARCZAK,
CURRENT PHYSICAL
THERAPY STUDENT
AT THE UNIVERSITY
OF NEW ENGLAND
PORTLAND, ME



DO YOU OR SOMEONE YOU KNOW WANT TO HELP WITH RESEARCH?

CHILDREN AGES 6-10 YEARS:

We are recruiting children **6-10 years old with autism, ADHD, schizophrenia, bipolar disorder, or typical development**. We hope to better understand the brain and behaviors of children with autism and autism-related disorders. Participants complete 3 hours of behavioral tasks and a one-hour MRI brain scan. All sessions will be completed at the Waisman Center. Compensation is \$50/MRI and \$10/hour. **Please contact (608) 263-0282 or motorlab@wisc.edu** for more information if interested!

ADOLESCENTS AGES 13-17 YEARS:

We are recruiting adolescents **13-17 years old with autism or with typical development** for a research study that looks at brain and behavior changes after learning skills from playing videogames. Participants will complete a 1.5-2.5 hour intake assessment and a 1-hour MRI brain scan, while parents answer questions about their child. Then, they will come to the Waisman Center, three times a week over the course of six weeks to play Wii and Kinect video games. After the six weeks, participants will complete a 1-hour end-of-study assessment and another 1-hour MRI brain scan. Compensation is \$50/ MRI scan and \$10/hour for their participation (up to \$315). **Please Contact (608) 263-0282 or videogametraining@waisman.wisc.edu** for more information if interested!

ADOLESCENTS AGES 13-17 YEARS:

We are recruiting adolescents **ages 13-17 with autism or typical development** to play computer games. We hope to understand the brain, learning, and decision making of individuals. The first session will be completed at the Waisman Center and will be 30-90 minutes. Then, the following 10 sessions will be an hour per session and will take place at the Wisconsin Institutes for Medical Research to play space-themed learning and decision-making computer games. Compensation is \$10/hour. **Please contact (608) 263-0282 or ComputerGames@waisman.wisc.edu** for more information if interested!