

Deborah A. Barany, Ph.D.

Department of Kinesiology • Mary Frances Early College of Education • Department of Interdisciplinary
Biomedical Sciences • School of Medicine • University of Georgia •
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RESEARCH INTERESTS

Goal-directed movement; Action observation; Neuroimaging; Brain stimulation; Neurorehabilitation

EDUCATION

- 2013 - 2016 **Ph.D.** Dynamical Neuroscience
University of California, Santa Barbara
Dissertation: *The Neural Dynamics of Continuous Movement*
Advisor: Dr. Scott Grafton
- 2011 - 2013 **M.A.** Psychology
University of California, Santa Barbara
Thesis: *Decoding Human Sensorimotor Transformations for Goal-Directed Movement*
Advisor: Dr. Scott Grafton
- 2007 - 2011 **B.A.** Neuroscience with honors and Mathematics with honors, *summa cum laude*
Hamilton College, Clinton, NY
Thesis: *Behavioral and Neural Correlates of Movement Preparation*
Advisor: Dr. Jonathan Vaughan

ACADEMIC APPOINTMENTS

- 2020 - **Assistant Professor**
Department of Kinesiology, Mary Frances Early College of Education,
Department of Interdisciplinary Biomedical Sciences, School of Medicine (since 2024),
University of Georgia, Athens, GA
Program Faculty, Division of Neuroscience
Director: Brain and Action Laboratory
Co-Director: Neurostimulation Laboratory
Associate Director of Human Imaging, Bio-Imaging Research Center (since 2024)
- 2020 - **Assistant Professor**
Augusta University/University of Georgia Medical Partnership, Athens, GA
Adjunct Faculty, Department of Neuroscience and Regenerative Medicine,
Medical College of Georgia, Augusta, GA
- 2018 - 2020 **Postdoctoral Fellow**
Department of Kinesiology, University of Georgia, Athens, GA
Advisor: Dr. Tarkesh Singh
- 2016 - 2018 **Postdoctoral Fellow**
Department of Neurology, Emory University, Atlanta, GA
Advisors: Drs. Cathrin Buetefisch and Krish Sathian

EXTERNAL GRANTS AND FELLOWSHIPS

2025 - 2028	National Science Foundation Neural and Cognitive Mechanisms of Instructor Drawing in STEM Learning <i>Role: Co-PI (Co-PI: Fiorella)</i> <i>Award: \$736,187</i>
2025 - 2026	Georgia Clinical and Translational Science Alliance (CTSA) Pilot Grants Program Eye Movements as a Window to Understand Brain Network Dysfunction after Mild Traumatic Brain Injury <i>Role: PI</i> <i>Award: \$60,398</i>
2024 - 2025	Dairy Management Inc. Perinatal intake of dairy products and cognitive development of offspring through the manipulation of gut microbiome <i>Role: Co-I (PI: Park)</i> <i>Award: \$180,582</i>
2023 - 2024	National Center of Neuromodulation for Rehabilitation The Effect of Mild Traumatic Brain Injury on Corticospinal Excitability During Complex Action Preparation <i>Role: PI</i> <i>Award: \$37,500</i>
2022 - 2024	United States Department of the Army Pharmacologic Intervention with CMX-2043 for the Acute Treatment of Neurotrauma and Traumatic Brain Injury <i>Role: Co-I (PI: West)</i> <i>Award: \$311,628</i>
2022 - 2023	Georgia Clinical and Translational Science Alliance (CTSA) Pilot Grants Program Building a Stroke Patient Research Network in Athens and Northeast Georgia <i>Role: Co-I (PI: Xu)</i> <i>Award: \$60,400</i>
2022 - 2023	Oregon Health & Science University Medical Research Foundation Motor Prediction Under Uncertainty in Healthy Aging <i>Role: Consultant (PI: Marneweck)</i> <i>Award: \$50,000</i>
2018 - 2020	American Heart Association Postdoctoral Fellowship Abnormally High Activity in Motor Cortex Following Stroke: Reorganization or Increased Motor Demand? <i>Role: PI</i> <i>Award: \$106,532</i>
2014	Sigma Xi Grants-in-Aid of Research Representations of Goal and Direction in Goal-Directed Movements <i>Role: PI</i> <i>Award: \$1,000</i>
2011 - 2014	National Science Foundation Graduate Research Fellowship <i>Role: PI</i> <i>Award: \$90,000</i>

INTERNAL GRANTS AND FELLOWSHIPS

2025	College of Education Early Career Faculty Award Grant, University of Georgia
2024	University of Georgia Presidential Interdisciplinary Seed Grant (PI: Kyle Johnsen)
2022	Interdisciplinary Grant Proposal Incentive Program Award, University of Georgia

2021	Department of Kinesiology Seed Grant, University of Georgia
2017	NIH Georgia StrokeNet Fellow, Emory University
2016	T32 Postdoctoral Training Grant, Translational Research in Neurology, Emory University
2015	Affiliates Graduate Dissertation Fellowship, University of California, Santa Barbara
2014	Graduate Teaching Fellowship, University of California, Santa Barbara
2011	Elihu Root Fellowship for Graduate Study, Hamilton College
2010	University of Rochester Center for Visual Science Summer Fellowship
2010	Edward Huntington Memorial Mathematical Scholarship, Hamilton College
2008 - 2010	Dean of Faculty Summer Science Research Grant, Hamilton College

HONORS AND AWARDS

2026	AU/UGA Medical Partnership Excellence in Scholarship - Translational
2026	AU/UGA Medical Partnership Excellence in Teaching
2025	Faculty Research Mentor Award, UGA Center for Undergraduate Research Opportunities
2024	AU/UGA Medical Partnership Excellence in Teaching
2020	American Society for Neurorehabilitation TIGRR Workshop Support
2017	Best poster award, Emory Postdoctoral Research Symposium
2014	Runner-up, Grad Slam 3-minute research talk competition Graduate Division, University of California, Santa Barbara
2013	Student Travel Award, American Psychological Association
2011	USA Today All-USA College Academic Third Team
2011	Senior Prize in Neuroscience, Hamilton College
2011	Sigma Xi Scientific Research Society, Hamilton College chapter
2011	Capital One Academic All-America Second Team (tennis)
2011	Milton H. Jannone Scholar-Athlete Award, Hamilton College
2010	Barry M. Goldwater Scholarship National award for undergraduates preparing for career in STEM
2010	Phi Beta Kappa, Hamilton College chapter
2010	Psi Chi Honor Society in Psychology, Hamilton College chapter

PUBLICATIONS

- McCurdy, J. R., Jarvis, B., Whitman, E., Ariga, K., Khan, A. & **Barany, D. A.** (*Under Review*). Motor Intention Drives Corticospinal Facilitation during Interception Planning. preprint doi: 10.64898/2026.01.13.699289
- Kreter, N.K., Sager, C., **Barany, D.A.**, Dundon, N.M., & Marneweck, M. (*Under Review*). Age-Related Shift Towards Feedforward Motor Control Under Uncertainty.
- Shumski, E. J., **Barany, D. A.**, Schmidt, J. D., & Lynall, R. C. (*Under Review*). Intermittent Burst Theta Stimulation Effects on Jump Landing Biomechanics, Functional Reaction Time, and Perceived Task Demands.
- Khan, O.A., Rahman, S., Pottumuthu, S.K., Singh, T., **Barany, D.A.**, & Modlesky, C.M. (*Under Review*). Aberrant prefrontal cortex activity contributes to impaired motor planning during moving target interception in children with cerebral palsy.
- McCurdy, J. R., Zlatopolsky, D., Doshi, R., Xu, J., & **Barany, D. A.** (2025). Corticospinal excitability during timed interception depends on the speed of the moving target. *Journal of Neurophysiology*, 134, 517-28. doi: 10.1152/jn.00153.2025

- Schantz, S. L., LePage, T. H., Dubrof, S. T., Sneed, S. E., Cheek, S. R., Park, H. J., **Barany, D.A.**, Kinder, H.A., Duberstein, K.J., DeWahl, D.A., Baguisi, A.B., Stern, J.O., Kaiser, E.E., & West, F. D. (2025). CMX-2043 Treatment Limits Neural Injury Pathophysiology and Promotes Neurological and Cognitive Recovery in a Pediatric Porcine Traumatic Brain Injury Model. *Journal of Neurotrauma*.
- Shumski, E. J., **Barany, D. A.**, Schmidt, J. D., & Lynall, R. C. (2025). The Influence of Concussion History on Turning Gait Performance. *Gait & Posture*. doi: 10.4085/1062-6050-0681.24
- Shumski, E.J., **Barany, D.A.**, Schmidt, J.D., & Lynall, R.C. (2025). The Influence of Concussion History and Progressively Increasing Cognitive Load on Jump Landing and Cutting Reaction Time, Biomechanics, and Task Demands. *Journal of Athletic Training*. doi: 10.4085/1062-6050-0681.24
- Khan, O.A., Singh, T., **Barany, D.A.**, & Modlesky, C.M. (2024). Accuracy deficits during robotic time-constrained reaching are related to altered prefrontal cortex activity in children with cerebral palsy. *Journal of NeuroEngineering and Rehabilitation*, 21(1), 216. doi: 10.1186/s12984-024-01502-x
- *Caceres, A.H., ***Barany, D.A.**, & Dundon, N.M., Smith, J., & Marneweck, M. (2024). Neural encoding of direction and distance across reference frames in visually guided reaching. *eNeuro*, 11(12). doi: 10.1523/ENEURO.0405-24.2024
*joint first authorship
- Fookan, J., Baltaretu, B. R., **Barany, D. A.**, Diaz, G., Semrau, J. A., Singh, T., & Crawford, J. D. (2023). Perceptual-Cognitive Integration for Goal-Directed Action in Naturalistic Environments. *Journal of Neuroscience*, 43(45), 7511-7522. doi: 10.1523/JNEUROSCI.1373-23.2023
- Barany, D. A.**, Lacey, S., Matthews, K. L., Nygaard, L. C., & Sathian, K. (2023). Neural basis of sound-symbolic pseudoword-shape correspondences. *Neuropsychologia*, 188, 108657. doi: 10.1016/j.neuropsychologia.2023.108657
- Gómez-Granados, A., Kurtzer, I., Gordon, S., ***Barany, D. A.**, & *Singh, T. (2023). Object motion influences feedforward motor responses during mechanical stopping of virtual projectiles: A preliminary study. *Experimental Brain Research*, 241(4), 1077-1087. doi: 10.1007/s00221-023-06576-y
*joint senior authorship
- Fagan, M. M., Welch, C. B., Scheulin, K. M., Sneed, S. E., Jeon, J. H., Golan, M. E., Cheek, S.R., **Barany, D.A.**, Oeltzschner, G., Callaway, T.R., Zhao, Q., Park, H.J., Menezes, J., Duberstein, K.J., & West, F. D. (2023). Fecal microbial transplantation limits neural injury severity and functional deficits in a pediatric piglet traumatic brain injury model. *Frontiers in Neuroscience*, 17: 1249539. doi: 10.3389/fnins.2023.1249539
- Bueteffisch, C.M., Haut, M.W., Revil, K.P., Shaeffer, S., Edwards, L., **Barany, D.A.**, Belagaje, S., Nahab, R., Shenvia, N., & Easley, K. (2023). Stroke lesion volume and injury to motor cortex output determines extent of contralesional motor cortex reorganization. *Neurorehabilitation and Neural Repair*, 37(2-3), 119-130. doi: 10.1177/15459683231152816
- Revill, K.P., **Barany, D.A.**, Vernon, I.M., Rellick, S., Caliban, A., Tran, J., Belagaje, S., Nahab, F., Haut, M.W., & Bueteffisch, C.M. (2022). Evaluating the Abnormality of Bilateral Motor Cortex Activity in Subacute Stroke Patients Executing a Unimanual Motor Task with Increasing Demand on Precision. *Frontiers in Neurology*, 13:836716. doi: 10.3389/fneur.2022.836716

- *Gómez-Granados, A.M, ***Barany, D. A.**, Schrayner, M., Kurtzer, I., Bonnet, C., & Singh, T. (2021). Age-related deficits in rapid visuomotor decision-making. *Journal of Neurophysiology*. 126(5):1592-1603. doi: 10.1152/jn.00073.2021
*joint first authorship
- Hui, S.C., [and 134 others, including **Barany, D.A.**] (2021). Frequency drift in MR spectroscopy at 3T. *Neuroimage*, 241, 118430, doi: 10.1016/j.neuroimage.2021.118430
- Barany, D. A.**, Reville, K. P., Caliban, A., Vernon, I., Shukla, A., Sathian, K., & Buettelisch, C. M. (2020). Primary motor cortical activity during unimanual movements with increasing demand on precision. *Journal of Neurophysiology*. 124(3):728-739. doi: 10.1152/jn.00546.2019
- *Latchoumane, C.V., ***Barany, D.A.**, Karumbaiah, L., & Singh, T. (2020). Neurostimulation and reach-to-grasp function recovery following acquired brain injury: insight from pre-clinical rodent models and human applications. *Frontiers in Neurology*, 11, 835. doi: 10.3389/fneur.2020.00835.
*joint first authorship
- Barany, D. A.**, Gómez-Granados, A., Schrayner, M., Cutts, S. A., & Singh, T. (2020). Perceptual decisions about object shape bias visuomotor coordination during rapid interception movements. *Journal of Neurophysiology*, 123(6):2235-2248. doi: 10.1152/jn.00098.2020
- Marneweck, M., **Barany, D.A.**, Santello, M. & Grafton, S.T. (2018). Neural representations of sensorimotor memory- and digit position-based load force adjustments before the onset of dexterous object manipulation. *The Journal of Neuroscience*, 38(20), 4724-4737. doi: 10.1523/JNEUROSCI.2588-17.2018
- Barany, D.A.**, Shapiro, A.D., & Lee, T.G. (2015). Multivariate fMRI approaches to flexible sensorimotor maps in parietal cortex. *The Journal of Neuroscience*, 35(34), 11763-11765. doi: 10.1523/JNEUROSCI.2307-15.2015
- Barany, D.A.**, Della-Maggiore, V., Viswanathan, S., Cieslak, M., & Grafton, S. T. (2014). Feature interactions enable decoding of sensorimotor transformations for goal-directed movement. *The Journal of Neuroscience*, 34(20), 6860-6873. doi: 10.1523/JNEUROSCI.5173-13.2014
- Vaughan, J., **Barany, D.A.**, & Rios, T. (2012). The cost of moving with the left hand. *Experimental Brain Research*, 220(1), 11-22. doi: 10.1007/s00221-012-3110-z
- Vaughan, J., **Barany, D.A.**, Sali, A.W., Jax, S.A., & Rosenbaum, D.A. (2010). Extending Fitts' Law to three-dimensional obstacle-avoidance movements: Support for the posture-based motion planning model. *Experimental Brain Research*, 207(1-2), 133-138. doi: 10.1007/s00221-010-2431-z

CONFERENCE PRESENTATIONS

Regional, National, and International Conferences

- Gaither, J., Giulumian, V., Branch, A., & **Barany, D.A.** (March 2026). How does place of residence affect stroke risk factors and outcomes? A single site retrospective analysis. Talk (J.G.) presented at Southeast Regional Clinical & Translational Science Conference, Pine Mountain, GA.

- Mahmoudi, H. & **Barany, D.A.** (November 2025) Speed-Dependent Effects of Auditory Pitch Glides on Interception Performance. Poster presented at the 66th Annual Meeting of the Psychonomic Society, Denver, CO.
- Barany, D.A.** (April 2025). Modulation of human corticospinal excitability while timing interceptive hand movements. Talk (D.B) presented at the Neural Control of Movement Annual Meeting, Panama City, Panama.
- McCurdy, J.R., Mahmoudi, H., Jarvis, B., & **Barany, D.A.** (April 2025). Modulation of corticospinal excitability in an upper-limb obstacle-avoidance reaching task. Poster presented at the Neural Control of Movement Annual Meeting, Panama City, Panama.
- Kreter, N., **Barany, D.A.**, & Marneweck, M. (April 2025). Action planning and execution under sensory uncertainty in younger and older adults. Poster presented at the Neural Control of Movement Annual Meeting, Panama City, Panama.
- Rhangos, I., Bushra, A., Shabbir., K., Dry, R., Moore, A., Xu, J., & **Barany, D.A.** (March 2025). Evaluating Ischemic Stroke Outcomes from Lesion Location Characteristics: A Retrospective Analysis of a Regional Primary Stroke Center. Poster presented at the Annual Meeting of the American Society of Neurorehabilitation, Atlanta, GA.
- Mahmoudi, H. & **Barany, D.A.** (March 2025). The influence of auditory pitch contour on timing manual interception of moving targets. Poster presented at the Cognitive Neuroscience Society Annual Meeting, Boston, MA.
- Jarvis, B., McCurdy, J., Sequeira, M., Mahajan, S., Nestlehutt, H., & **Barany, D.A.** (March 2025). Investigating Corticospinal Excitability Modulation Prior to Goal-Dependent Moving Target Preparation. Poster presented at the Georgia Neurological Society Conference, Atlanta, GA.
- Rhangos, I., Bushra, A., Shabbir., K., Dry, R., Moore, A., Xu, J., & **Barany, D.A.** (March 2025). Evaluating Ischemic Stroke Outcomes from Lesion Location Characteristics: A Retrospective Analysis of a Regional Primary Stroke Center. Talk (I.R.) presented at the Georgia Neurological Society Conference, Atlanta, GA.
- Rahman, S., Khan, O.A., Singh, T., **Barany, D.A.**, & Modlesky, C.M. (October 2024). Deficits in upper limb goal-directed reaching in children with unilateral and bilateral cerebral palsy compared to typically developing children. Talk (S.R) presented at the American Academy for Cerebral Palsy and Developmental Medicine Annual Meeting, Quebec City, Quebec, Canada.
- Barany, D.A.**, Lacey, S., Nygaard, L., & Sathian, K. (October 2024). Neural representations of auditory and visual features underlying sound symbolism. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.
- McCurdy, J.R., Ariga, K., Whitman, E., & **Barany, D.A.** (October 2024). Goal-dependent modulation of corticospinal excitability during perception of moving targets. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.
- Moore, A., Rhangos, I., Shabbir., K., Dry, R., Bushra, A., Xu, J., & **Barany, D.A.** (September 2024). A Single-Center, Retrospective Analysis of Ischemic Stroke Patient Characteristics Before and After the COVID-19 Pandemic. Poster presented at the Annual Meeting of the American Neurological Association, Orlando, FL.

Rhangos, I., Shabbir., K., Dry, R., Moore, A., Bushra, A., Xu, J., & **Barany, D.A.** (August 2024). Lesion Location Influences on Stroke Recovery: A Single-Center Retrospective Analysis. Poster presented at the Steven L. Wolf Research Symposium, Emory University, Atlanta, GA.

Nestlehutt, H., Mahajan, S., Sequeira, M., Jarvis, B., Frazier, W., Castellano, E., Bushra, A., Xu, J., & **Barany, D.A.** (August 2024). A Retrospective Analysis of the Relationship between Pre-Existing Hypertension and Outcomes After Ischemic Stroke. Poster presented at the Steven L. Wolf Research Symposium, Emory University, Atlanta, GA.

Barany, D.A., Delaney, C., Mahmoudi, H., & Marneweck, M (May 2024). Neural Representations of Visual Motion for Perception and Interception. Talk (D.B.) Presented at the Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

Giffen, K.P., **Barany, D.A.**, VanLeuven, A.J., Szymik, B.G., & Hesse, D.W. (March 2024). Station-based Neuroanatomy Laboratory Instruction with Donor Specimens Exploits Limited Pre-clinical Curricular Time to Increase Student Engagement. Poster to be presented at the American Association for Anatomy Connected 2024, Toronto, Ontario, Canada.

Barany, D.A. (November 2023). Gaze-dependent cortical activity patterns when intercepting a moving target. Talk presented at the Annual Meeting of the Society for Neuroscience, Washington, D.C.

McCurdy, J.R., Xu, J., & **Barany, D.A.** (November 2023). Corticospinal excitability while preparing interception movements depends on the visual motion properties of the target. Poster presented at the Annual Meeting of the Society for Neuroscience, Washington, D.C.

Khan, O.A, Singh, T., **Barany, D.A.**, & Modlesky, C.M. (September 2023). Reaching Accuracy Deficits are Related to Altered Prefrontal Cortex Activity in Children With Cerebral Palsy: A Functional Near-Infrared Spectroscopy (Fnirs) Study. Poster presented at the American Academy for Cerebral Palsy and Developmental Medicine Annual Meeting, Chicago, IL

McCurdy, J.R., & **Barany, D.A.** (April 2023). Bidirectional effects of eye movements on manual interception and motion perception. Poster presented at the Neural Control of Movement Annual Meeting, Victoria, British Columbia, Canada.

Buetefisch, C.M., Revill, K.P., **Barany, D.A.**, Shaeffer, S., Nahab, F., & Belagaje, S.R. (March 2023). Effects of contralesional motor cortex LF-rTMS on learning a skilled hand task in the subacute phase post stroke. Poster presented at the Annual Meeting of the American Society of Neurorehabilitation, Charleston, SC.

McCurdy, J.R., Zlatopolsky, D., Xu., J., & **Barany, D.A.** (September 2022). Influence of visual motion parameters on corticospinal excitability during target interception. Poster presented at the Brainbox Initiative Conference, Virtual Conference.

McCurdy, J.R., Zlatopolsky, D., Khan, A., Xu., J., & **Barany, D.A.** (July 2022). Modulation of human corticospinal excitability while preparing to intercept a moving target. Poster presented at the Neural Control of Movement Annual Meeting, Dublin, Ireland.

Gomez-Granados, A., Singh, T., & **Barany, D.A.** (July 2022). Anticipatory and compensatory control modulation during mechanical stopping of a virtual projectile. Poster presented at the Neural Control of Movement Annual Meeting, Dublin, Ireland.

- Tomei, A. & **Barany, D.A.** (March 2022). Analyzing pediatric head movement during task-based functional MRI. Poster presented at the Southeast Regional Clinical & Translational Science Conference, Pine Mountain, GA.
- Bueteifisch, C.M., Haut., M.W., Revill, K.P., Shaeffer, S., Edwards, L., **Barany, D.A.**, Belagaje, S.R., Nahab, F., & Easely, K. (March 2022). Contralesional M1 reorganization depends on stroke lesion volume and functional output of M1 of the lesioned hemisphere. Poster presented at the Annual Meeting of the American Society of Neurorehabilitation, St. Louis, MO.
- Barany, D.A.**, Gallman, E., VanLeuven, A.J., & Fiorella, L. (June 2021). Drawing insight from medical student drawings. Talk (D.B) presented at the Annual Meeting of the International Association of Medical Science Educators, Virtual Conference.
- Barany, D.A.**, Khan, O.A., Gómez-Granados, A.M., Singh, T., & Modlesky, C.M. (April 2021). Impaired visuomotor integration during rapid reaching and interception in children with cerebral palsy. Poster presented at the Annual Meeting of the American Society of Neurorehabilitation, Virtual Conference.
- Revill, K.P., **Barany, D.A.**, Tran, J.T., Belagaje, S.R., Nahab, F., & Bueteifisch, C.M. (April 2021). The role of contralesional motor cortex during the early subacute phase of stroke recovery. Poster presented at the Annual Meeting of the American Society of Neurorehabilitation, Virtual Conference.
- Barany, D. A.**, Lacey, S.A., Nygaard, L.C., & Sathian, K. (January 2021). Neural basis of sound-symbolic pseudoword-shape correspondences. Poster presented at the Society for Neuroscience Global Connectome, Virtual Conference.
- Barany, D. A.**, Schroyer, M. Gómez-Granados, A.M., & Singh, T. (October 2019). Eye movements necessary for decision-making interfere with eye-hand coordination during rapid reaching. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.
- Gómez-Granados, A.M., **Barany, D.A.**, Schroyer, M., & Singh, T. (October 2019). Oculomotor deficits in older adults may contribute to deficits in perceptual decision-making and limb motor performance in a rapid sensorimotor task. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.
- Revill, K.P., **Barany, D.A.**, Caliban, A., Vernon, I., Belagaje, S., Nahab, F., & Bueteifisch, C.M. (October 2019). Task dependent contralesional motor cortex activation in the early subacute phase of stroke recovery. Poster presented at the Annual Meeting of the American Society of Neurorehabilitation, Chicago, IL.
- Barany, D. A.**, Schroyer, M. Gómez-Granados, A.M., Singh, T. (April 2019). Visual feedback processing during a rapid sensorimotor decision task. Poster presented at the 29th Annual Meeting of the Society for the Neural Control of Movement, Toyama, Japan.
- Barany, D. A.**, Revill, K.P., Caliban, A. Vernon, I., Sathian, K., & Bueteifisch, C.M. (July 2018). Primary motor cortical activity patterns during post-stroke hand movements of increasing demand. Poster presented at the Progress in Clinical Motor Control Conference, State College, PA.
- Barany, D. A.**, Revill, K.P., Caliban, A. Vernon, I., Sathian, K., & Bueteifisch, C.M. (November 2017). Abnormally high activation in ipsilateral motor cortex after stroke: Reorganization or increased motor

demand? Poster presented at the at the Annual Meeting of the American Society of Neurorehabilitation, Baltimore, M.D.

Barany, D. A., Revill, K.P., Caliban, A. Sathian, K., & Buetefisch, C.M. (November 2017). Demand on accuracy of hand movements is associated with distinct neural activity patterns in primary motor cortex. Poster presented at the at the Annual Meeting of the Society for Neuroscience, Washington, D.C.

Marneweck, M., **Barany, D.A.**, & Grafton, S.T. (April 2017). Distinguishable cerebellar and sensorimotor representational patterns for anticipatory control of object manipulation at constrained and unconstrained grasp contacts. Poster presented at 27th Annual Meeting of the Society for the Neural Control of Movement, Dublin, Ireland.

Barany, D. A., Revill, K.P., Caliban, A. Sathian, K., & Buetefisch, C.M. (March 2017). Organization of human motor cortex during demand-dependent movement. Poster presented at the Brain Health Conference, Emory University, Atlanta, GA.

Barany, D. A., Viswanathan, S., & Grafton, S.T. (November 2016). Continuous decoding of movement from fMRI in a goal-directed manual tracking task. Poster presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA.

Schaefer, R., Desai, M., **Barany, D.A.**, & Grafton, S.T. (July 2016). Neural activations of metaphor use in music performance. Poster presented at the International Conference for Music Perception and Cognition, San Francisco, CA.

Barany, D. A., Viswanathan, S., Cieslak, M., Caddigan, E., & Grafton, S.T. (October 2015). Decoding the cortical dynamics of continuous tracking movements from fMRI. Talk (D.B.) presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.

Lee, T.G., **Barany, D. A.**, & Grafton, S.T. (October 2015). Choking under pressure due to high incentives as a change in state distinct from motivated performance. Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.

Barany, D. A., Viswanathan, S., Cieslak, M., Caddigan, E., & Grafton, S.T. (April 2015). Decoding directional selectivity in the human motor system from the dynamics of continuous tracking. Poster presented at 25th Annual Meeting of the Society for the Neural Control of Movement, Charleston, SC.

Barany, D. A., Gilbert, J., & Grafton, S.T. (March 2015). Planning interceptive actions to moving targets with ambiguous paths. Poster presented at 1st International Convention of Psychological Science, Amsterdam, The Netherlands.

Barany, D. A., Gilbert, J., & Grafton, S.T. (November 2014). Planning reaches to intercept targets with ambiguous moving paths. Poster presented at 55th Annual Meeting of the Psychonomic Society, Long Beach, CA.

Barany, D. A., Della-Maggiore, V., Viswanathan, S., Cieslak, M., & Grafton, S. T. (November 2013). Dissociating intrinsic and extrinsic reference frames in the human motor system. Poster presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA.

Barany, D. A., Della-Maggiore, V., Viswanathan, S., Cieslak, M., & Grafton, S. T. (August 2013). Dissociating movement parameters in the human motor system. Poster presented at the 121st Annual Meeting of the American Psychological Association, Honolulu, HI.
**Abstract selected as finalist for the "Cutting-Edge Research From Emerging Psychological Scientists" poster session*

Cieslak, M., **Barany, D.A.**, Viswanathan, S., & Grafton, S.T. (October 2012). Dynamics of effector selection in a time-dependent decision task. Poster presented at the Annual Meeting of the Society for Neuroscience, New Orleans, LA.

Barany, D.A., Viswanathan, S., & Grafton, S.T. (April 2012). Limited visuomotor adaptation to variable amplitude gains within a movement trajectory. Poster presented at 22nd Annual Meeting of the Society for the Neural Control of Movement, Venice, Italy.

Vaughan, J., Keating, H., **Barany, D. A.**, & Rosenbaum, D. A. (November 2010). Dexterity and reaching around obstacles with a tool. Paper presented at 51st Annual Meeting of the Psychonomic Society, St. Louis, MO.

Vaughan, J., **Barany, D.A.**, Sali, A.W, Jax, S.A, & Rosenbaum, D.A. (November 2009). Movement time when circumventing obstacles in a 3-D workspace. Poster presented at 50th Annual Meeting of the Psychonomic Society, Boston, MA.

Barany, D.A., Sali, A.W, & Vaughan, J. (June 2009). Fitting Fitts' Law: Motor lab research in 3-D. Fifth International Conference for Posture-Based Movement, Moss Rehabilitation Research Institute, Philadelphia, PA.

Campus and Local Conferences

Jiang, G., Wicker, M., Fiorella, L. & **Barany, D.A.** (April 2026). Linking the Effects of Dynamic Movement and Pupil Dilation to Reveal Learning Effectiveness During Action Observation. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.

Jackson. E., Whitehead, L., Goda, R., & **Barany, D.A.** (April 2026). The Effect of TMS on Saccadic Accuracy and Reaction Time in Complex Motor Tasks. Poster presented at the Center for Undergraduate Opportunities Research Symposium, Athens, GA.

Senthil Kumar. S., Courville, E., & **Barany, D.A.** (April 2026). Examining Brain-Behavior Relationships in a Complex Visuomotor Task. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.

*Branch, A., Giulumian, V., Gaither, J., & Barany, D.A. (November 2025). The Relationship Between Human Motor Cortical Inhibition and Saccadic Eye Movements During Complex Reaching Tasks. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA. *Best Poster Award (2nd place)

Gaither, J., Giulumian, V., Branch, A., & Barany, D.A. (November 2025). How does place of residence affect stroke risk factors and outcomes? A single site retrospective analysis. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.

- Giulumian, V., Branch, A., Gaither, J., & Barany, D.A. (November 2025). Unmasking Hidden Concussion Deficits: Using Saccadic Eye Movements as Biomarkers for Concussion. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- Mbughuni, N., McCurdy, J., & **Barany, D.A.** (April 2025). Effects of TMS on Motor Performance and Reaction Time in Complex Tasks. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Doshi, R., McCurdy, J., & **Barany, D.A.** (April 2025). Examining the Influence of Proximal Muscle Activity on Motor-Evoked Potential Responses in Distal Muscles. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Hawthorne, G-A., McCurdy, J., & **Barany, D.A.** (April 2025). Relationship between Corticospinal Excitability During Interceptive Movement and Performance. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Frazier, A., & **Barany, D.A.** (April 2025). The Neural Basis of Hand-Eye Coordination: Investigating the Relationship between Brain Structure and Motor Performance. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Senthil Kumar. S., & **Barany, D.A.** (April 2025). Examining the Relationship Between Primary Motor Cortex Activation and Interception Performance. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- *Jarvis, B., McCurdy, J., Sequeira, M., Mahajan, S., Nestlehatt, H., & **Barany, D.A.** (October 2024). Investigating Corticospinal Excitability Modulation Prior to Goal-Dependent Moving Target Preparation. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA. *Best Poster Award (2nd place)
- *Sequeira, M., McCurdy, J., Jarvis, B., Mahajan, S., Nestlehatt, H., & **Barany, D.A.** (October 2024). The Effect of Transcranial Magnetic Stimulation on Movement Onset and Muscle Activation in a Complex Upper-Limb Task. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA. *Best Poster Award (3rd place)
- Mahajan, S., Nestlehatt, H., Jarvis, B., Sequeira, M., Frazier, W., Castellano, E., Bushra, A., Xu, J., & **Barany, D.A.** (October 2024). A Retrospective Analysis of the Impact of Obesity and Diabetes on Stroke Severity. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- Nestlehatt, H., Mahajan, S., Sequeira, M., Jarvis, B., Frazier, W., Castellano, E., Bushra, A., Xu, J., & **Barany, D.A.** (October 2024). A Retrospective Analysis of the Relationship between Pre-Existing Hypertension and Outcomes After Ischemic Stroke. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- *Doshi, R., McCurdy, J.M., & **Barany, D.A.** (April 2024). A Multi-Muscle Analysis of Resting versus Active Motor Threshold Using Transcranial Magnetic Stimulation. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA. *Best Paper Award, Life Sciences Division

- Ariga, K., Whitman, E., McCurdy, J.M., & **Barany, D.A.** (April 2024). Role of Eye Movement Strategy in Motion Perception and Target Interception. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Jenson, L., McCurdy, J.M., & **Barany, D.A.** (April 2024). The Effect of Transcranial Magnetic Stimulation on Eye Movements During Motion Perception and Target Interception. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Hussain, A. & **Barany, D.A.** (April 2024). Quantifying the Accuracy of Decoded Gaze Position from a Task-Based fMRI Dataset. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Arora, A. & **Barany, D.A.** (April 2024). Implementing and Quantifying Real-Time Eye Movement Feedback in a Mock fMRI Environment. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Castellano, E., Frazier, W., Sosnovsky, J., Bushra, A., **Barany, D.A.**, Xu, J. (April 2024). Exploring the Relationship Between Ischemic Stroke and Comorbidities: Diabetes, Hypertension, and BMI. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Rhangos, I., Shabbir., K., Dry, R., Moore, A., Bushra, A., Xu, J., & **Barany, D.A.** (October 2023). The Association of Lesion Location on Stroke Recovery Prognosis: A Retrospective Analysis. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- Moore, A., Rhangos, I., Shabbir., K., Dry, R., Bushra, A., Xu, J., & **Barany, D.A.** (October 2023). A Retrospective Analysis of Pre/Post-COVID Characteristics of Ischemic Stroke Patients. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- Dry, R., Moore, A., Rhangos, I., Shabbir., K., Bushra, A., Xu, J., & **Barany, D.A.** (October 2023). Does socioeconomic status and distance from hospital affect patient outcomes for ischemic stroke? Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- Shabbir., K., Dry, R., Moore, A., Rhangos, I., Bushra, A., Xu, J., & **Barany, D.A.** (October 2023). Does the presence of comorbid depression affect ischemic stroke outcomes? Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- Delaney, C., McCurdy, J.R., & **Barany, D.A.** (July 2023). Effect of Target Velocity on Inhibition of Planned Interception Movements. Poster presented at the Summer Research Experience in Neuroscience (NSURE) Symposium, Athens, GA.
- Arora, A. & **Barany, D.A.** (April 2023). Integrating Real-Time Accelerometer Data to Quantify Extraneous Movement During Mock fMRI Scans. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Doshi, R., McCurdy, J.R., & **Barany, D.A.** (April 2023). Investigating Brainsight Neuronavigation Methods for Transcranial Magnetic Stimulation. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Khan, A., McCurdy, J.R., & **Barany, D.A.** (April 2023). Effects of Different Eye Movements on Motion Perception and Interceptive Timing. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.

- Lowe, M., Zlatopolsky, D., McCurdy, J.R., & **Barany, D.A.** (April 2023). The Role of Exercise on Cognitive-Motor Control in a Spatial Stroop Task. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Ariga, K., Zlatopolsky, D., McCurdy, J.R., & **Barany, D.A.** (April 2023). Studying Cognitive Control in the Spatial Stroop Task: Is it Possible to Learn over Time? Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- *Sabir, F., Haidekker, M., & **Barany, D.A.** (September 2022). Validating a new MR-compatible tablet for assessing brain activity during visually-guided hand movements. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA. *Best Poster Award (2nd place)
- Zlatopolsky, D & **Barany, D.A.** (April 2022). Measuring the timecourse of corticospinal excitability in a predictive timing task. Talk presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Tomei, A. & **Barany, D.A.** (September 2021). Analyzing pediatric head movement during task-based functional MRI. Poster presented at the Annual Medical Partnership Student Research Symposium, Athens, GA.
- Kombo, M. & **Barany, D.A.** (July 2021). Eye of the Decider: Examining Smooth Pursuit Eye Movements During Visual Decision-Making. Poster presented at the Summer Undergraduate Research Experience in Neuroscience (NSURE) Symposium, Athens, GA.
- Zlatopolsky, D., Gordon, S., & **Barany, D.A.** (April 2021). Assessing the variability of motor cortex excitability using transcranial magnetic stimulation. Talk presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Hlava, Q. & **Barany, D.A.** (April 2021). Altering computational tools to better identify eye movements in healthy older and younger adults. Poster presented at the Center for Undergraduate Opportunities Research Symposium, Athens, GA.
- Lohlein, R., Shakoor, A., & **Barany, D.A.** (April 2021). Engaging smooth pursuit following a decision-related perturbation to understand how decision-making affects motion processing. Talk presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Slater, C., Schrayner, M., & **Barany, D.A.** (April 2021). Evaluation of eye-hand movement patterns and performance during a visuomotor tracking task. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Lohlein, R., **Barany, D.A.**, Gómez-Granados, A.M., & Singh, T. (April 2020). Hand and eye kinematics for varying object velocities during a complex decision-making interception task. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.
- Hlava, Q., **Barany, D.A.**, & Singh, T. (April 2020). Using novel computational tools to improve eye-tracking analysis in older and younger adults. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.

Shakoor, A., **Barany, D.A.**, & Singh, T. (April 2020). Engaging smooth pursuit following a decision-related perturbation to understand how motor and decision signals affect motion processing. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.

Turner, E.R., **Barany, D.A.**, & Singh, T. (April 2019). How uncertainty affects motor planning in older adults. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.

Sial, N., **Barany, D.A.**, & Singh, T. (April 2019). The assessment of GABA levels in motor and visual learning by MRS in Parkinson's Disease. Poster presented at the Center for Undergraduate Research Opportunities Symposium, Athens, GA.

Gilbert, J.S., **Barany, D.A.**, Volz, L.J., & Grafton, S.T. (May 2016). Unraveling the components of action formation. Poster presented at the Undergraduate Research Symposium, University of California, Santa Barbara.

Berlin, K., **Barany, D.A.**, & Grafton, S.T. (May 2016). Movement planning while already in motion. Poster presented at the Undergraduate Research Symposium, University of California, Santa Barbara

Gilbert, J.S., **Barany, D.A.**, & Grafton, S.T. (May 2015). How our movement influences what we see. Poster presented at the the Undergraduate Research Symposium, University of California, Santa Barbara.

Barany, D.A., & DeAngelis, G.C. (July 2010). Deviations from optimality in the normalization model of multisensory integration. Poster presented at Center for Visual Science Undergraduate Summer Fellowship Poster Session, Rochester, NY.

Barany, D.A., Sali, A.W, & Vaughan, J. (October 2009). Fitting Fitts' Law: Predicting movement times for an obstacle avoidance task in 3-D. Poster presented at Hamilton College Science Poster Session, Clinton, NY.

INVITED AND CAMPUS TALKS

April 2026 *Working on the Right Moves: Cortical Contributions to Complex Reach Planning.* Action Club Speaker Series, Pennsylvania State University, State College, PA.

March 2026 *How We Learn from Instructor and Self-Generated Drawings* (Keynote with Dr. Logan Fiorella). Southeastern Medical Illustrators Meeting, Athens, GA.

December 2024 *fMRI Activity Patterns Underlying the Neural Control of Visually-Guided Reaching.* Georgia Magnetic Resonance Symposium, Emory University, Atlanta, GA.

October 2024 *Neurophysiology of Complex Action Preparation: Insights for Mild Traumatic Brain Injury Motor Recovery.* Georgia Seminar Series for Neurotrauma Research and Collaboration, Virtual Presentation.

July 2024 *Behavioral and Neural Mechanisms of Intercepting a Moving Target.* Current Topics in Perception and Cognition Colloquium, University of Giessen, Giessen, Germany.

- June 2024 *Backhands and Rock Bands: Exploring the Neuroscience of Skilled Action*. Barany Symposium, Chicago, IL.
- March 2024 *Time Course of Human Corticospinal Excitability during Visually Guided Action Preparation*. The NC NM4R 2024 Showcase Symposium, Virtual Presentation.
- February 2024 *The Effect of Mild Traumatic Brain Injury on Corticospinal Excitability During Complex Action Preparation*. NC NM4R External Advisory Board Meeting, Virtual Presentation.
- December 2023 *The Effect of Mild Traumatic Brain Injury on Corticospinal Excitability During Complex Action Preparation*. NC NM4R Executive Committee Meeting, Virtual Presentation.
- September 2022 *Catch me if you can: Behavioral and neural mechanisms of intercepting a moving target*. Regenerative Bioscience Center Seminar, University of Georgia, Athens, GA.
- April 2022 *Behavioral and Neural Mechanisms of Hand-Eye Coordination in Cerebral Palsy: Brain and Action Lab*. Georgia Cerebral Palsy Research Symposium, University of Georgia, Athens, GA.
- November 2021 *Hand and eye movements during perceptual decision-making*. Frontiers in Neuroscience Seminar, Emory University, Atlanta, GA.
- May 2021 *Flexible cortical representations for visually-guided movements*. Atlanta VAMC Rehabilitation R&D Center for Visual and Neurocognitive Rehabilitation, Virtual Presentation.
- May 2021 *What can behavior tell us about the brain? Mechanisms of Disease Seminar*, AU/UGA Medical Partnership, Virtual Presentation.
- February 2021 *Sensorimotor cortical processing supporting flexible, goal-directed movements*. Neuroscience Seminar Series, University of Georgia, Virtual Presentation.
- May 2020 *Perceptual decisions about object shape bias visuomotor coordination during rapid interception movements*. Neuromechanics and Learning Journal Club, Virtual Presentation.
- April 2020 *Flexible cortical representations for visually-guided movements*. Department of Kinesiology, University of Georgia, Virtual Presentation.
- January 2020 *Somatosensory system organization*. AU/UGA Medical Partnership, Athens, GA
- December 2019 *Flexible cortical representations for visually-guided movements*. San Diego State University, San Diego, CA
- November 2019 *Flexible cortical representations for visually-guided movements*. Pennsylvania State University, State College, PA

- May 2018 *Abnormally high activation in ipsilateral motor cortex after stroke: Reorganization or increased motor demand?* NIH StrokeNet Professional Development Webinar Series
- May 2017 *Motor cortex reorganization in patients recovering from stroke.* Center for Neurodegenerative Disease Research Seminar, Emory University, Atlanta, GA
- March 2017 *Organization of human motor cortex during demand-dependent movement in healthy subjects and stroke patients.* Neurorehabilitation Seminar, Emory University, Atlanta, GA
- November 2015 *Multivoxel pattern analysis of continuous manual tracking.* Dynamical Neuroscience Seminar, University of California, Santa Barbara, Santa Barbara, CA
- April 2015 *Using multivoxel pattern analysis of fMRI data to decode goal-directed movement.* Neuroimaging Group Seminar, Emory University, Atlanta, GA
- February 2015 *Multisensory perception for action.* Cognition, Perception, and Cognitive Neuroscience Area Seminar, Department of Psychological and Brain Sciences, University of California, Santa Barbara, Santa Barbara, CA
- September 2014 *Decoding goal-directed movements from human brain activity.* Psychology Department, Hamilton College, Clinton, NY
- July 2014 *Big Ideas that Matter.* GRIT (Ground-breaking Research/Innovative Technology) talks series, University of California, Santa Barbara, Santa Barbara, CA
- April 2014 *The Brain in Action.* Grad Slam graduate student competition for best three-minute research talk, University of California, Santa Barbara, Santa Barbara, CA
- May 2013 *Dissociating intrinsic and extrinsic reference frames in the human motor system.* Graduate Mini-Convention of the Department of Psychological and Brain Sciences, University of California, Santa Barbara, Santa Barbara, CA
- May 2011 *Behavioral and neural correlates of movement preparation: Implications for obstacle avoidance.* Hamilton College Senior Project Presentations in Neuroscience, Clinton, NY.
- October 2010 *Examining optimality in two models of multisensory integration.* Hamilton College Math Department Colloquium, Clinton, NY.

PROFESSIONAL DEVELOPMENT

- August 2021 - May 2022 **Georgia CTSA Translational Education Mentoring in Science (TEAMS) Program**
Year-long mentoring program for junior investigators across Georgia CTSA institutions
- July 2021 **Training in Grantsmanship for Rehabilitation Research Peer Review Panel**
Post-TIGRR workshop mock peer review panel
- March 2021 - March 2022 **American Society for Neurorehabilitation Virtual Mentoring Program**
Year-long mentoring program for junior investigators in neurorehabilitation

- January 2021 **Training in Grantsmanship for Rehabilitation Research Workshop**
Four-day intensive grant-writing workshop for junior investigators
- May 2019 **KINARM Robotics Programming Training**
One-week course on programming custom tasks on robotic augmented reality system
Queens University, Kingston, Ontario, Canada
- December 2018 **Magnetic Resonance Spectroscopy (MRS) Editing School**
Three-day course covering MRS theory, acquisition, and analysis
Playa del Carmen, Mexico
- August 2012 **Summer School in Computational Sensory-Motor Neuroscience**
Two-week course on applying computational approaches to sensorimotor neuroscience
Northwestern University, Evanston, IL

ADDITIONAL RESEARCH TRAINING

- Summer 2010 **Undergraduate Fellowship Program in Vision Science**
Department of Brain & Cognitive Sciences, University of Rochester, Rochester, NY
Research: Developed models of multisensory integration at the single neuron level
Advisor: Dr. Greg DeAngelis
- Summer 2009 **Undergraduate Researcher in Engel Vision & Imaging Lab**
Department of Psychology, University of Minnesota, Minneapolis, MN
Research: Designed psychophysics study to measure visual cue integration
Advisor: Dr. Stephen Engel
- 2007 - 2011 **Undergraduate Researcher in Motor Lab**
Department of Psychology, Hamilton College, Clinton, NY
Research: Developed experiments extending Fitts's Law to 3D workspaces
Advisor: Dr. Jonathan Vaughan

TEACHING

Instructor

- Fall 2025 *This is Your Brain on Sports*, First Year Odyssey course, University of Georgia
- Fall 2020 - *Y1 Small Group Learning Facilitator and Y1/Y2 Brain & Behavior Instructor*,
AU/UGA Medical Partnership
- Spring 2017 *Fundamentals of Behavioral Neuroscience*, University of Georgia
- Summer 2015 *The Biological Basis of Psychology*, UC Santa Barbara

Teaching Assistant

- Fall 2014 *Introduction to Psychology*, UC Santa Barbara
- Summer 2014 *Multimedia Learning*, UC Santa Barbara
- Summer 2012 *Cognitive Psychology*, UC Santa Barbara

Guest Lecturer

- 2023 - *Neuroscience of Habit*, Psychology of Habit, Upper-Level Undergraduate Course, University of Georgia
- October 2021-22 *Neuroscience of Habit*, Applying the Science of Habit, First Year Odyssey course, University of Georgia
- March 2019 *MRI Analysis in MATLAB*, MATLAB for Sensorimotor Neuroscience, Graduate Course University of Georgia
- November 2015 *MRI in Neuroscience Research*, Lab in Biopsychology, Undergraduate course UC Santa Barbara
- November 2014 *Neuroscience in the News*, Science in the News, Undergraduate course University of Minnesota
- June 2014 *Multi Voxel Pattern Analysis of fMRI Data*, Statistical Analysis of fMRI data, Graduate course, UC Santa Barbara
- January 2012 *Introduction to fMRI*, Highland Park Sr. High School, St. Paul, MN
- January 2011 *Introduction to Neuroscience*, Highland Park Sr. High School, St. Paul, MN

Outreach

- March 2026 Guest speaker, Athens Science Café, Athens, GA
- 2024 - *Georgia Science and Engineering Fair*
Poster Judge
- 2022 - 2023 *On the Move: Brain Health and Movement Disorders*
Co-organizer of six-part brain health seminar series for UGA and Athens communities
- 2021 - *Skype a Scientist*
Present to middle- and high-school students about neuroscience topics
- October 2020 *UGA Women in Science Mentoring Program*
Faculty mentor
- 2020 - 2021, 2025 *Neuromatch Academy Computational Neuroscience Online Summer School*
Project mentor
- September 2017 *STEM Research and Career Symposium*
Abstract and poster judge, Emory University
- March 2016 *University of California Graduate Research Advocacy Day*
Invited to speak to state legislators about research and the importance of graduate education, Sacramento, CA

- 2014 - 2015 *Science Women Achieving Greatness*
High school outreach group, Center for Science and Engineering Partnerships,
University of California, Santa Barbara
- 2014 *School for Scientific Thought*
Designed and taught 5-day neuroscience course for high school students
University of California, Santa Barbara
- 2012 - 2016 *UCSB Brain Imaging Center Tours*
Led demonstrations of real-time fMRI for student groups
University of California, Santa Barbara

MENTORING

Major Professor

- 2026 - Jakob Deitrich, PhD student, Neuroscience
2025 - Keirstin Roose, MS student, Kinesiology
2024 - 25 Reshma Seby John, MS, Artificial Intelligence
2023 - Haleh Mahmoudi, PhD student, Kinesiology
2021 - 25 Justin McCurdy, PhD, Neuroscience
2020 - 22 Margaret Schrayner, MS, Artificial Intelligence
2018 - 22 Ana Gómez-Granados, PhD, Kinesiology

Graduate Committee

- 2024 - Simin Rahman, PhD student, Kinesiology
2023 - Patrick Ihejirika, PhD candidate, Kinesiology
2022 - 25 Sarah Schantz, PhD, Animal and Dairy Science
2022 - 25 Owais Khan, PhD, Kinesiology
2022 - 24 Eric Shumski, PhD, Kinesiology
2022 - 23 Brooklyn Crabtree, PhD student, Neuroscience
2021 - 22 Rachel Johnson, PhD, Kinesiology

Graduate Rotation

- 2024 Samantha Brannen, PhD student, Integrated Life Sciences
2022 Ruchita Khisty, PhD student, Integrated Life Sciences
2022 Destiny Chandler, PhD student, Integrated Life Sciences
2022 Brice Hudson, PhD student, Integrated Life Sciences
2021 Brooklyn Crabtree, PhD student, Integrated Life Sciences
2020 Angel Pittman, PhD student, Integrated Life Sciences

Research Assistants

*UGA undergraduate student unless otherwise noted

- 2024 - 2025 Alex Branch (AU/UGA Medical Scholars Program), Evan Courville, Keyon Emami
(Medical Student), James Gaither (AU/UGA Medical Scholars Program), Vahagn
Giulumian (AU/UGA Medical Scholars Program), Rakshitha Goda, Emma Jackson,
Grace Jiang, Shivani Kumar, Nadine Mbughuni, Isabella Rhangos (Medical Student),
Mahima Sangtani (Medical Student), Luke Whitehead, Madeline Wicker

2024 - 2025	Evan Courville, Ria Doshi, Ashley Frazier, Grace-Ann Hawthorne, Brendan Jarvis (AU/UGA Medical Scholars Program), Lindsay Jenson, Shivani Kumar, Sean Mahajan (AU/UGA Medical Scholars Program), Nadine Mbughuni, Santosh Pottumuthu (MS program in computer science), Megha Sequeria (AU/UGA Medical Scholars Program), Ivey Uetsuki (Young Dawgs)
2023 - 2024	Krithi Ariga, Aryan Arora, Alex Behi, Casey Delaney (UGA NSURE summer program), Ria Doshi, Rebekah Dry (AU/UGA Medical Scholars Program), Ashley Frazier, Shreyas Gupta, Lindsay Jenson, Abraham Hussain, Alaina Moore (AU/UGA Medical Scholars Program), Isabella Rhangos (AU/UGA Medical Scholars Program), Khadeeja Shabbir (AU/UGA Medical Scholars Program), Jordan Sosnovsky, Samuel West, Emma Whitman
2022 - 2023	Nafi Alam, Krithi Ariga, Aryan Arora, Alex Behi, Ria Doshi, Abraham Hussain, Asher Khan, Farris Sabir (AU/UGA Medical Scholars Program), Samuel West, Emma Whitman, Daniel Zlatopolsky
2021 - 2022	Aryan Arora, Ria Doshi, Abraham Hussain, Zaili Gantt (UGA Young Dawgs), Sean Gordon, Asher Khan, Madalena Kombo (UGA NSURE summer program), Kristin Nwadike, Amelia Tomei (AU/UGA Medical Scholars Program), Emma Whitman, Daniel Zlatopolsky
2020 - 2021	Sean Gordon, Quinn Hlava, Regan Lohlein, Carolina Slater, Aly Shakoore, Daniel Zlatopolsky
2019 - 2020	Sean Gordon, Quinn Hlava, Regan Lohlein, Aly Shakoore, Elizabeth Turner
2018 - 2019	Naureen Sial, Elizabeth Turner
Pre 2018	Kayli Berlin (UCSB), Jason Gilbert (UCSB), Ashwin Shukla (Emory), Pavithra Rajesh (UCSB), Mali Suzuki (UCSB)

AD HOC REVIEWER

Journals

European Journal of Neuroscience
Experimental Brain Research
Frontiers in Human Neuroscience
Frontiers in Psychology
Frontiers in Neuroscience
Journal of Clinical Neurophysiology
Journal of Integrative Neuroscience
Journal of Motor Behavior
Journal of NeuroEngineering and Rehabilitation
Journal of Neurophysiology
Journal of Neuroscience
Nature Human Behaviour
NeuroImage
Neuron
Neuropsychologia

Neurorehabilitation and Neural Repair
Neuroscience Letters
PeerJ
Scientific Reports

Grants

Georgia Clinical and Translational Science Alliance Pilot Grant
Office of Global Engagement Global Research Collaboration Grant
National Center for Neuromodulation Pilot Grant Program

PROFESSIONAL AFFILIATIONS

Member, Group on Women in Medicine and Science, Medical College of Georgia
Member, Regenerative Bioscience Center, University of Georgia
Member, National Center of Neuromodulation for Rehabilitation
Member, American Academy for Cerebral Palsy and Developmental Medicine
Affiliate, Owens Institute for Behavioral Research, University of Georgia
Member, American Heart Association
Member, American Society of Neurorehabilitation
Member, Society for the Neural Control of Movement
Member, Society for Neuroscience
Member, International Association of Medical Science Educators