



Cassondra Eng

Postdoctoral Scholar, Psychiatry

Bio

BIO

Dr. Eng is a NIH funded T32 Sports Neuroscience Postdoctoral Scholar in the Center for Interdisciplinary Brain Sciences Research. She investigates optimizing immersive interventions that promote neurological, cognitive, and physical health outcomes from a multimethodological approach. Dr. Eng's research program focuses on attentional processes in varying technologically-enhanced contexts, with a focus on the neurophysiological mechanisms that produce differential outcomes using portable functional near-infrared spectroscopy (fNIRS), a modern neuroimaging technique ideal for children and neurodiverse populations because it is noninvasive and permits mobility in naturalistic settings. She specializes in utilizing behavioral, neurophysiological, and statistical methods across development: standard task-based and clinical norm-referenced assessments of attention, quantitative and qualitative assessments of children's behavior and learning in ecological contexts; eye tracking, fNIRS, EEG, cardiovascular changes related to performance and stress; mixed effects modeling, multivariate analysis, educational data mining, and modern longitudinal data analysis.

Dr. Eng earned her Ph.D. from Carnegie Mellon University in Developmental Psychology and Cognitive Neuroscience and Program for Interdisciplinary Education Research Certification through an Institute of Education Sciences-funded Predoctoral Fellowship after completing an NIH funded Post-Baccalaureate Research Education Program at Virginia Tech. She advocates for educational neuroscience: the field bridging cognitive science, psychology, educational technology, human-computer interaction, computer science and related disciplines to understand the optimal learning contexts that support brain development and cognitive skills crucial for overall wellbeing and success.

HONORS AND AWARDS

- 1st Place Sigma Xi Presentation Competition, Carnegie Mellon University (2023)
- Bio-X Undergraduate Summer Research Program Star Mentor Award, Stanford University (2023)
- Early Career Research Contributions Conference Award, Society for Research in Child Development (2023)
- Flux Society for Developmental Cognitive Neuroscience Invited Speaker Award, Jacobs Foundation-Sponsored Science of Learning Scientific Program Committee (2023)
- Trailblazing Trainee Award Program, Stanford University Department of Psychiatry and Behavioral Sciences (2023)
- Dick Hayes Departmental Service Award, Carnegie Mellon University (2022)
- Invited Diploma Ceremony Commencement Speaker, Carnegie Mellon University (2022)
- National Science Foundation (NSF)-sponsored Diversity Travel Award, Cognitive Development Society (2022)
- Outstanding Teaching Award, Carnegie Mellon University Dietrich College of Humanities & Social Sciences (2022)
- Program in Interdisciplinary Education Research Fellowship, Institute of Education Sciences (2022)
- Outstanding Service Award, Carnegie Mellon University Department of Psychology (2021)

- People's Choice Poster Award, International Society for Developmental Psychobiology (2021)
- Roberta Klatzky Outstanding Publication Award, Carnegie Mellon University (2021)
- The Society for Research in Child Development Conference Award, Carnegie Mellon University Graduate Student Assembly Provost (2021)
- Top Presentation Award, Annual Biomedical Research Conference for Minority Students (2021)
- Dietrich College Presidential Fellowship Award, Carnegie Mellon University (2020)
- Dissertation Research Funding Award, Student and Early Career Council Society for Research in Child Development (2020)
- Distinguished Scientist Award, Meta Reality Labs Research (2020)
- Graduate Project Research Grant, Carnegie Mellon University Provost and Graduate Student Assembly (2020)
- Laura Bassi Scholarship, Oxford and Cambridge Universities Editing Press (2020)
- The International Conference on Immersive Learning Conference Award, Carnegie Mellon University Graduate Student Assembly Provost (2020)
- Top Presentation Award, Annual Biomedical Research Conference for Minority Students (2020)
- Graduate Travel Conference Award, Society for Research in Child Development (2019)
- International Society for Developmental Psychobiology Travel Award, NICHD, Columbia Division of Developmental Neuroscience in Psychiatry, John Wiley and Sons Publishing (2019)
- The Society for Neuroscience Conference Award, Carnegie Mellon University Graduate Student Assembly Provost (2019)
- Top Graduate Student Research Symposium Award, National Science Foundation (NSF)-sponsored Game-based Assessment Conference (2019)
- Top Presentation Award, Annual Biomedical Research Conference for Minority Students (2019)
- International Society for Developmental Psychobiology Travel Award, NICHD, Columbia Division of Developmental Neuroscience in Psychiatry, John Wiley and Sons Publishing (2018)
- The Society for Neuroscience Conference Award, Carnegie Mellon University Graduate Student Assembly Provost (2018)
- The Cognitive Development Society Conference Award, Carnegie Mellon University Graduate Student Assembly Provost (2017)
- International Society for Developmental Psychobiology Conference Conference Award, Carnegie Mellon University Graduate Student Assembly Provost (2016)
- Superior Academic Achievement Award, The Pennsylvania State University (2015)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Carnegie Mellon University (2022)
- Master of Science, Carnegie Mellon University (2019)
- Diploma, Virginia Polytechnic Institute & State University (2016)
- Bachelor of Science, Pennsylvania State University (2015)
- Ph.D., Carnegie Mellon University , Cognitive Neuroscience, Developmental Psychology (2022)
- M.S., Carnegie Mellon University (2019)
- R25 NIH PREP, Virginia Tech , Developmental Science (2016)
- B.S., The Pennsylvania State University , Psychology, Neuroscience (2015)

STANFORD ADVISORS

- Allan Reiss, Postdoctoral Faculty Sponsor

LINKS

- <https://cassondraeng.github.io/>: <https://cassondraeng.github.io/>
- LinkedIn: <https://www.linkedin.com/in/cassondra-eng/>

Publications

PUBLICATIONS

- **A Literature Review on the Effects of Exergame Interventions on Executive Function in Youth** *Technology, Mind, Behavior*
Eng, C. M., Flynn, R., Erik, T., A, F.
2023; 4 (3)
- **Longitudinal Investigation of Executive Function Development Employing Task-Based, Teacher Reports, and fNIRS Multimethodology in 4- to 5-year-old Children.** *Developmental science*
Eng, C. M., Pocsai, M., Fulton, V. E., Moron, S. P., Thiessen, E. D., Fisher, A. V.
2022: e13328
- **Contingent Responsivity in E-Books Modeled From Quality Adult-Child Interactions: Effects on Children's Learning and Attention** *DEVELOPMENTAL PSYCHOLOGY*
Eng, C. M., Tomasic, A. S., Thiessen, E. D.
2020; 56 (2): 285-297
- **Doctoral Colloquium-Enhancing Brain Plasticity and Cognition Utilizing Immersive Technology and Virtual Reality Contexts for Gameplay**
Eng, C. M., Calkosz, D. M., Yang, S. Y., Williams, N. C., Thiessen, E. D., Fisher, A., Economou, D., Klippel, A., Dodds, H., PenaRios, A., Lee, M. J., Beck, D., Pirker, et al
IEEE.2020: 395-398
- **Keep it simple: streamlining book illustrations improves attention and comprehension in beginning readers.** *Nature Science of Learning*
Eng, C. M., Godwin, K., Fisher, A. V.
2020; 5 (14): 1-10