ERIK BROCKBANK

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EDUCATION

University of California, San Diego *2018–2023 (expected)*
Ph.D. *Psychology and Cognitive Science* (GPA: 3.93 / 4.0)

Stanford University *2014*
B.S., M.S. *Symbolic Systems* (GPA: 3.63 / 4.0)

ACADEMIC HONORS AND AWARDS

Cognitive Science Society Computational Prize ($1,000) *June 2020*
UCSD Anderson Graduate Research Fellowship ($1,500) *Sep. 2019*
UCSD Katzin Graduate Fellowship ($50,000) *Sep. 2018*
K. Jon Barwise Award for distinguished contributions to Stanford Symbolic Systems *Jun. 2014*

LEADERSHIP EXPERIENCE

UCSD Psychology Department Graduate Statistics Advisor *Sep. 2019 - present*
UCSD Psychology Data Science Club Club Leader *May 2019 - present*
UCSD Psychology Colloquium Series Graduate Student Officer *May 2019 - present*
UCSD Psychology Student Speaker Series Graduate Student Officer *May 2019 - present*
Stanford Symbolic Systems Student Society Founder *2013*
Stanford Symbolic Systems Department Undergraduate Advising Fellow *2013, 2014*

RESEARCH EXPERIENCE

UC San Diego Computational Cognition Lab *Sep. 2018 - present*
Ph.D. Student

· Bayesian computational modeling of numerical cognition, intuitive physics, and behavioral game theory (PI: Edward Vul)

UC San Diego Early Learning & Cognition Lab *Sep. 2018 - present*
Ph.D. Student

· Research on hypothesis generation in learning tasks (PI: Caren Walker)

Stanford Virtual Human Interaction Lab *Sep. 2012 - Jun. 2014*
Master's Student, Research Assistant

· Master's thesis on learning in virtual environments (Advisors: Jeremy Bailenson, Daniel Schwartz)
· Research assistant and programmer

Kidaptive *Jun. 2013 - Sep. 2013*
Research & Development Intern

· Efficacy study to inform educational product design (PI: Michael Frank, Stanford University)

Stanford AAA Lab (School of Education) *Mar. 2011 - Sep. 2011*
Research Assistant

· Research assistant and programmer (PI: Daniel Schwartz)

PUBLICATIONS AND PAPERS

Brockbank, E., Vul, E. & Barner, D. (in preparation). Mapping internal states to formal systems: modeling human numerosity estimation.

Brockbank, E., & Walker, C. (in preparation). Explanation Supports Hypothesis Generation in Learning.

Brockbank, E., & Vul, E. (in preparation). Human Adaptive Adversarial Reasoning.

Brockbank, E., & Vul, E. (2020). Recursive Adversarial Reasoning in the Rock, Paper, Scissors Game. In *Proceedings of the 42nd Annual Conference of the Cognitive Science Society.*

Brockbank, E., & Walker, C. (2020). Explanation Supports Hypothesis Generation in Learning. In *Proceedings of the 42nd Annual Conference of the Cognitive Science Society.*

Oey, L.A., Destefano, I., Brockbank, E., & Vul, E. (2020). Formalizing interdisciplinary collaboration in the CogSci community. In *Proceedings of the 42nd Annual Conference of the Cognitive Science Society.*

Brockbank, E., & Vul, E. (2019). Mapping visual features onto numbers. In A.K. Goel, C.M. Seifert, & C. Freksa (Eds.), *Proceedings of the 41st Annual Conference of the Cognitive Science Society* (pp. 1443–1449). Montreal, QB: Cognitive Science Society.

Brockbank, E., & Smith, K. & Vul, E. (2019). When do people use containment heuristics for physical predictions? In A.K. Goel, C.M. Seifert, & C. Freksa (Eds.), *Proceedings of the 41st Annual Conference of the Cognitive Science Society* (pp. 1450–1456). Montreal, QB: Cognitive Science Society. (Retraction November, 2019)

Brockbank, E. (2014). Embodied Problem Solving: Gesturing and Mathematics in Virtual Reality. Unpublished master's thesis.

CONFERENCE PRESENTATIONS

Brockbank, E., & Vul, E. (2020, July). Recursive Adversarial Reasoning in the Rock, Paper, Scissors Game. Talk at the 42nd Annual Conference of the Cognitive Science Society.

Brockbank, E., & Walker, C. (2020, July). Explanation Supports Hypothesis Generation in Learning. Talk at the 42nd Annual Conference of the Cognitive Science Society.

Oey, L.A., Destefano, I., Brockbank, E., & Vul, E. (2020, July). Formalizing interdisciplinary collaboration in the CogSci community. Talk at the 42nd Annual Conference of the Cognitive Science Society.

Brockbank, E., & Vul, E. (2020, July). Adaptive Reasoning in Rock-Paper-Scissors. Talk at the 53rd Annual Conference of the Society for Mathematical Psychology.

Brockbank, E., & Vul, E. (2019, July). Mapping visual features onto numbers. Poster presented at the 41st Annual Conference of the Cognitive Science Society. Montreal, Quebec, Canada.

Brockbank, E., Smith, K., & Vul, E. (2019, July). When do people use containment heuristics for physical predictions? Poster presented at the 41st Annual Conference of the Cognitive Science Society. Montreal, Quebec, Canada.

Brockbank, E., & Vul, E. (2019, June). Mapping visual features onto numbers. Poster presented at the 45th Annual Conference of the Society for Philosophy and Psychology. San Diego, California, USA.

TEACHING EXPERIENCE

Teaching Assistant Psychology of Parenting	*Mar. - Jun. 2020*
Teaching Assistant Introduction to Psychology	*Sep. - Dec. 2019*
Teaching Assistant Industrial & Organizational Psychology	*Jul. - Aug. 2019*
Teaching Assistant Developmental Psychology	*Jan. - Mar. 2019*
Teaching Assistant Media Economics (Comm. dept.)	*Mar. - Jun. 2014*
Teaching Assistant Introduction to Cognitive Science	*Jan. - Mar. 2014*
Teaching Assistant Introduction to Cognitive Psychology	*Sep. - Dec. 2012*

TECHNICAL SKILLS

Languages	Python; Golang; experience with Java, C++, C
Analytics	R; Python (matplotlib); Matlab; Excel
Web	HTML; CSS; Javascript (jQuery, Flask, node.js, D3.js)
Databases	MySQL; HiveQL
Tools	github, Anaconda/Jupyter
Other	Spanish (fluent)