SARAH SOLOMON

ssolomon4@binghamton.edu - Vestal, NY

POSITION

Assistant Professor Vestal, NY
Binghamton University | Psychology | Cognition & Brain Sciences Fall 2024-present

EDUCATION

University of Pennsylvania Philadelphia, PA
Ph.D. in Psychology | Advisor: Sharon Thompson-Schill 2014-2019

> *Defense date:* May 24, 2019
> *Dissertation:* Relating conceptual structure with flexible concept use
> *Additional Committee Members:* Russell Epstein (chair), Lyle Ungar
> *Certificate:* IGERT Traineeship in Complex Scene Perception

University of Delaware Newark, DE
B.S./M.A. in Cognitive Science 2007-2012
B.S. in Psychology 2007-2011
B.A. in Philosophy 2007-2011

ADDITIONAL TRAINING

Postdoctoral Research Fellow Philadelphia, PA
University of Pennsylvania | Advisor: Anna Schapiro 2019-2024

Research Specialist Philadelphia, PA
University of Pennsylvania | Advisor: Sharon Thompson-Schill 2012-2014

GRANTS & FELLOWSHIPS

NIH National Institute of Mental Health R21 2022-2024
The emergence of abstract structure knowledge across learning and sleep $422,938

Postdocs cannot submit as Principal Investigator; submitted with Dr. Schapiro as PI

NSF Graduate Research Fellowship 2016-2019

AWARDS

Abstract Award Concepts, Actions, and Objects (CAOS) Workshop 2023
New Attendee Travel Grant Computational and Systems Neuroscience COSYNE Conference 2022

Society for the Neurobiology of Language Honorable Mention for Dissertation Award	2020
NSF Graduate Research Fellowship Award Recipient	2015
NSF Graduate Research Fellowship Honorable Mention	2014
Eugene Dupont Award Full merit scholarship at University of Delaware	2007-2011
IBM Watson Scholarship undergraduate scholarship	2007-2011
Halsey McPhee Award for top graduating student in Psychology	2011
Louis A. Arena Award for Outstanding Achievement in Cognitive Science	2011
Lucia Palmer Memorial Prize for Philosophy graduate with highest GPA	2011
Sigma Xi Thesis Award for Outstanding Senior Thesis	2011
Phi Beta Kappa at University of Delaware	2011
Women of Promise Award for Dedication to academic excellence	2010
General Honors Award at University of Delaware	2009

PREPRINTS & UNDER REVIEW

Solomon, S.H., Kay, K., and Schapiro, A.C. (2024). Semantic plasticity across timescales in the human brain. *bioRxiv.*

PEER-REVIEWED PUBLICATIONS

Solomon, S.H. and Schapiro, A.C. (2023). Structure shapes the representation of a novel category. *Journal of Experimental Psychology: Learning, Memory, and Cognition.*
APA Editor's Choice Article

Xia, A.*, **Solomon, S.H.***, Thompson-Schill, S.L., and Jenkins A.C. (2023). Constructing complex social categories under uncertainty. *Cognition.*
* denotes equal contribution

Solomon, S.H. and Thompson-Schill, S.L. (2020). Feature uncertainty predicts behavioral and neural responses to combined concepts. *Journal of Neuroscience.*

Solomon, S.H. and Schapiro, A.C. (2020). Semantic search as pattern completion across as concept. *Trends in Cognitive Science: Spotlight article.*

Solomon, S.H., Medaglia, J.D., and Thompson-Schill, S.L. (2019). Implementing a concept network model. *Behavior Research Methods, 51(4), 1717-1736.*

Coutanche, M.C., **Solomon, S.H.**, and Thompson-Schill, S.L. (2019). Conceptual Combination. In D. Poeppel, G.R. Mangun and M.S. Gazzaniga (Eds.), *The Cognitive Neurosciences, 6th edition.* Boston, MA:MIT Press.

Solomon, S.H., and Thompson-Schill, S.L. (2017). Finding features, figuratively. *Brain and Language, 174, 61-71.*

Coutanche, M.C., **Solomon, S.H.**, and Thompson-Schill, S.L. (2016). A meta-analysis of fMRI decoding: Quantifying influences on human visual population codes. *Neuropsychologia, 82, 134-141.*

Solomon, S.H., Hindy, N.C., Altmann, G.T.M, and Thompson-Schill, S.L. (2015). Competition

between mutually exclusive object states in event comprehension. *Journal of Cognitive Neuroscience, 27(12) 2324-2338.*

Hindy, N.C., **Solomon, S.H.**, Altmann, G.T.M, and Thompson-Schill, S.L. (2013). A cortical network for the encoding of object change. *Cerebral Cortex, 25(4) 884-894.*

INVITED COLLOQUIA

Rochester Institute of Technology Cognitive Science Colloquium   Fall 2024

University of Edinburgh Human Cognitive Neuroscience Seminar   Jan 2021

CONFERENCE TALKS

Solomon, S.H. Recent statistics shift object representations in parahippocampal cortex. *Blitz talk given at the Annual meeting of the Cognitive Neuroscience Society, Toronto, CA, April 2024.*

Solomon, S.H. Constructing complex social categories under uncertainty *Workshop talk given at the Language, Stereotypes, and Social Cognition Workshop, Philadelphia, USA, May 2023.*

Solomon, S.H. Context-dependent object representations in parahippocampal cortex. *Talk given at the Annual meeting of the Concepts, Actions, and Objects (CAOS) Workshop, Rovereto, Italy, May 2023.*

Solomon, S.H. The what, why, and how of concept structure learning. *Workshop talk given at the Annual meeting of the Computational and Systems Neuroscience (COSYNE) Conference, Lisbon, Portugal, March 2022.*

Solomon, S.H. Dynamic geometries of semantic representations. *Workshop talk given at the Annual meeting of the Computational and Systems Neuroscience (COSYNE) Conference, Lisbon, Portugal, March 2022.*

Solomon, S.H. and Schapiro, A.C. Humans and models leverage statistics across episodes to build structured category representations. *Talk given at the Annual meeting of the Context and Episodic Memory Symposium, Philadelphia, USA, August 2021.*

CONFERENCE PROCEEDINGS AND POSTERS

Solomon, S.H., Kay, K. and Schapiro, A.C. Recent statistics shift object representations in parahippocampal cortex. *Poster presented at the Annual meeting of the Cognitive Neuroscience Society, Toronto, CA, April 2024.*

Solomon, S.H. and Schapiro, A.C. Predicting semantic representations over time in the medial temporal lobe. *Poster presented at the Annual meeting of the Society for Neuroscience, San Diego, CA, November 2022.*

Solomon, S.H. and Schapiro, A.C. Learning the internal structure of novel categories. *Poster presented at the Annual meeting of the Context and Episodic Memory Symposium, Virtual, August 2020.*

Solomon, S.H. and Schapiro, A.C. Learning the internal structure of novel categories. *Poster presented at the Annual meeting of the Cognitive Science Society, Virtual, July 2020.*

Solomon, S.H. and Schapiro, A.C. Learning the internal structure of novel categories. *Poster presented at the Annual meeting of the Cognitive Neuroscience Society, Virtual, May 2020.*

Xia, A., **Solomon, S.H.**, Thompson-Schill, S.L., and Jenkins, A.C. Constructing complex social categories from distinct group membership information. *Poster presented at the Annual meeting of the Psychonomic Society, Montréal, CA, November 2019.*

Solomon, S.H. and Thompson-Schill, S.L. Neural evidence for a new Bayesian model of adjective-noun modification. *Poster presented at the Annual workshop on Concepts, Actions, and Objects, Rovereto, Italy, May 2019.*

Solomon, S.H., Medaglia, J.D., and Thompson-Schill, S.L. Quantifying conceptual flexibility in a compositional network model. *Poster presented at the Annual meeting of the Cognitive Science Society. Madison, WI. July 2018.*

Solomon, S.H. and Thompson-Schill, S.L. Tracing the emergence of context-specific conceptual representations in the brain. *Poster presented at the Annual workshop on Concepts, Actions, and Objects, Rovereto, Italy, May 2018.*

Solomon, S.H. and Thompson-Schill, S.L. The unbearable lightness of meaning: Linking adjective informativity and flexibility. *Poster presented at the Annual meeting of the Cognitive Neuroscience Society, Boston, MA, March 2018.*

Solomon, S.H. and Thompson-Schill, S.L. Modeling individual concepts as graph theoretical networks. *Poster presented at the Annual meeting of the Psychonomic Society, Vancouver, CA, November 2017.*

Solomon, S.H. and Thompson-Schill, S.L. Modeling individual concepts as graph theoretical networks. *Poster presented at the Annual workshop on Concepts, Actions, and Objects, Rovereto, Italy, May 2017.*

Solomon, S.H. and Thompson-Schill, S.L. Interactions between concepts and properties in adjective-noun combinations. *Poster presented at the Annual workshop on Concepts, Actions, and Objects, Rovereto, Italy, May 2016.*

Solomon, S.H. and Thompson-Schill, S.L. The grass is not always greener: Property integration in adjective-noun combinations. *Poster presented at the Annual meeting of the Society for the Neurobiology of Language, Chicago, IL, October 2015.*

Solomon, S.H. and Thompson-Schill, S.L. Dynamic reweighting of conceptual properties in metaphor comprehension. *Poster presented at the Annual workshop on Concepts, Actions, and Objects, Rovereto, Italy, May 2015.*

Solomon, S.H. and Thompson-Schill, S.L. The role of LIFG in metaphor comprehension. *Poster presented at the Annual meeting of the Society for the Neurobiology of Language, Amsterdam, Netherlands, August 2014.*

Solomon, S.H., Hindy, N.C., Altmann, G.T.M., and Thompson-Schill, S.L. Single and multiple object tracking in event comprehension. *Poster presented at the Annual meeting of the Psychonomic Society, Toronto, CA, November 2013.*

TEACHING

Knowledge in the Human Brain   Fall 2024
Binghamton University, PSYC473

Research Methods   Spring 2025
Binghamton University

DIVERSITY, EQUITY, & INCLUSION

MindCORE Diversity and Equity Initiative (DivE In)   Jan 2021-present
Leader of Admissions committee for Penn MindCORE's diversity recruitment weekend. The goal of the
weekend is to bring students from historically underrepresented groups to the University of Pennsylvania
campus to learn about and prepare for the grad school admissions process.

MindCORE Step-Ahead Mentorship Program (STAMP)   Summer 2020
Mentored a Penn undergraduate and guided her through the process of successfully applying to work in a
research lab for her senior thesis.

AD HOC REVIEWING

American Journal of Psychology
Behavior Research Methods
Cognitive Science Society
PLOS ONE
Brain Structure and Function
Language, Cognition, and Neuroscience
Cerebral Cortex
Neurons, Behavior, Data analysis, and Theory
Scientific Reports
eLife
Journal of Neuroscience
Cognitive Science
JEP: Learning, Memory, and Cognition
Nature Communications
Cognition

LANGUAGES & SOFTWARE

MATLAB, HTML/CSS/JavaScript, PsychoPy, Qualtrics, Amazon Mechanical Turk, Emergent
Neural Network Simulations (golang).