

# Mark Schurgin

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## Education & Professional Experience

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2017-present	Postdoctoral Research Scientist Advisor: Dr. Timothy Brady	<i>University of California, San Diego</i>
2017	Ph.D. Cognitive Psychology Advisor: Dr. Jonathan Flombaum	<i>Johns Hopkins University</i>
2014	M.A. Cognitive Psychology Advisor: Dr. Jonathan Flombaum	<i>Johns Hopkins University</i>
2010-2012	Lab Manager Visual Cognition Lab (Dr. Steven Franconeri) Social Affective & Cultural Neuroscience Lab (Dr. Joan Chiao)	<i>Northwestern University</i>
2010	B.A. Psychology	<i>Vassar College</i>

## Research Interests

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General: Memory, Perception, Learning, Cognition

Specific: Object recognition; long-term memory; visual working memory; core knowledge; spatial relations and distortions; perception and action; visual strategies and human performance

## Awards & Fellowships

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2018	New Investigator Award, American Psychological Association Award to honor outstanding new investigators / early-career psychologists (Division: Experimental Psychology).
2017	G. Stanley Hall Scholar's Award Johns Hopkins University award recognizing a graduate student who has demonstrated exceptional scholarly progress in dissertation research.

- 2017 Walter L. Clark Teaching Award  
Johns Hopkins University award recognizing a graduate student who has demonstrated an aptitude for instruction in the classroom, leveraging their knowledge and communication skills to enhance the undergraduate education experience.
- 2016-2017 Dean's Teaching Fellowship  
Johns Hopkins University fellowship given to an outstanding graduate student to teach an advanced undergraduate course of their design.
- 2016 Walter L. Clark Service Award  
Johns Hopkins University award recognizing a graduate student who has demonstrated an excellent record of community service.
- 2016 Graduate Representative Organization (GRO) Travel Award  
Johns Hopkins University GRO award to assist in conference travel expenses.
- 2013-2015 Robert S. Waldrop & Dorothy L. Waldrop Graduate Fellowship  
Johns Hopkins University fellowship given to exceptional graduate students to ease the financial burden of graduate work to allow students to focus on their research.
- 2013 Best Talk / Paper Award  
At the 21<sup>st</sup> annual meeting on Object Perception, Attention, and Memory (OPAM) the award given to best talk / paper.

## Publications

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- Schurgin, M. W. (in press). Visual Memory, the Long and the Short of it: A Review of Visual Working Memory and Long-Term Memory. *Attention, Perception, & Psychophysics*.
- Schurgin, M. W., & Flombaum, J. I. (in press). Visual Working Memory is More Tolerant Than Visual Long-Term Memory. *Journal of Experimental Psychology: Human Perception and Performance*.
- Schurgin, M. W., & Flombaum, J. I. (2017). Exploiting Core Knowledge for Visual Object Recognition. *Journal of Experimental Psychology: General, 146*(3), 362-375.\*  
\*selected as the best JEP:General paper of the year by the editorial board
- Petre, B., Tetreault, P., Mathur, V. A., Schurgin, M. W., Chiao, J. Y., Huang, L., & Apkarian, A. V. (2017). A central mechanism enhances pain perception of noxious thermal stimulus changes. *Scientific Reports, 7*:3894.
- Schurgin, M. W., & Flombaum, J. I. (2015). Visual long-term memory has weaker fidelity than working memory. *Visual Cognition, 23*(7), 859-862.
- Schurgin, M. W., Nelson, J., Iida, S., Ohira, H., Chiao, J. Y., & Franconeri, S. L. (2014). Eye movements during emotional recognition in faces. *Journal of Vision, 14*(13):14, 1-16.
- Schurgin, M. W., & Flombaum, J. I. (2014). How undistorted spatial memories can produce distorted responses. *Attention, Perception, & Psychophysics, 76*(5), 1371-1380.

Schurgin, M. W., Reagh, Z. M., Yassa, M. A., & Flombaum, J. I. (2013). Spatiotemporal Continuity Alters Long-Term Memory Representation of Objects. *Visual Cognition*, 21(6), 715-718.

## Manuscripts Under Review

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Schurgin, M. W., & Flombaum, J. I. (under review). Properties of Visual Episodic Memory Following Repeated Encounters with Objects.

## Manuscripts In Preparation

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Schurgin, M. W., Cunningham, C.A., Egeth, H.E., & Brady, T. F. (in prep). Episodic Memory Penetrates Active Storage in Visual Working Memory.

Schurgin, M. W., Wixted, J. T., & Brady, T. F. (in prep). Continuous Memory Strength Rather Than Fixed Capacity in Working Memory.

Schurgin, M. W. & Brady, T. F. (in prep). The Role of Global Ensemble Information vs Complexity in Visual Working Memory.

Schurgin, M. W., Cunningham, C.A., & Flombaum, J. I. (in prep). Visual Search Abilities Dynamically Manage Performance Under Noisy Conditions.

Mathur, V. A., Schurgin, M. W., Saeed, S. W., Reber, P. J., Apkarian, A. V., Paice, J. A., Richeson, J., & Chiao, J. Y. (in prep). Race modulates neural sensitivity to own and other's pain.

## Presentations

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Schurgin, M. W., Cunningham, C. A., Egeth, H. E., & Brady, T. F. (2018). Episodic Memory Replaces Active Maintenance in Working Memory When Available. Talk to be presented at the 18<sup>th</sup> annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

Brady, T. F., Schurgin, M. W., & Wixted, J. T. (2018). No distinction between capacity and resolution: A single memory strength parameter explains the shape of visual working memory response distributions. Poster to be presented at the 18<sup>th</sup> annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

Schurgin, M. W., Cunningham, C. A., Egeth, H. E., & Brady, T. F. (2017). The Effect of Episodic Memory on Active Storage in Visual Working Memory. Talk presented at the 25<sup>th</sup> annual meeting on *Object Perception, Attention and Memory (OPAM)*, Vancouver, BC.

Flombaum, J. I., & Schurgin, M. W. (2016). Exploiting Core Knowledge for Visual Object Recognition. Talk presented at the 57<sup>th</sup> annual meeting of the *Psychonomic Society*, Boston, MA.

Schurgin, M. W., & Flombaum, J. I. (2016). First Impressions in Visual Long-Term Memory. Poster presented at the 24<sup>th</sup> annual meeting on *Object Perception, Attention, and Memory (OPAM)*, Boston, MA.

- Schurgin, M. W., & Flombaum, J. I. (2016). Visual Working Memory Has Greater Tolerance Than Visual Long-Term Memory. Poster presented at the 16<sup>th</sup> annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- Schurgin, M. W., & Flombaum, J. I. (2015). Visual Long-Term Memory Has Weaker Fidelity Than Working Memory. Talk presented at the 23<sup>rd</sup> annual meeting on *Object Perception, Attention, and Memory (OPAM)*, Chicago, IL.
- Schurgin, M. W., & Flombaum, J. I. (2015). Invariant Object Recognition Enhanced by Object Persistence. Poster presented at the 15<sup>th</sup> annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- Schurgin, M. W., Reagh, Z. M., Yassa, M. A., & Flombaum, J. I. (2014). Building Tolerant Long-Term Memories Through (Object) Persistence. Poster presented at the 14<sup>th</sup> annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.
- Schurgin, M. W., Reagh, Z. M., Yassa, M. A., & Flombaum, J. I. (2013). Spatiotemporal Continuity Alters Long-Term Memory Representation of Objects. Talk presented at the 21<sup>st</sup> annual meeting on *Object Perception, Attention, and Memory (OPAM)*, Toronto, Canada.\*  
 \*won award for best talk of the conference
- Schurgin, M. W., & Flombaum, J. I. (2013). Interactions between perception, fixation, and attention determine the endpoint of an action. Poster presented at the 13<sup>th</sup> annual meeting of the *Vision Sciences Society*, Naples, FL.
- Schurgin, M. W., Levinthal, B. R., List, A., Sherman, A., Suzuki, S., Grabowecky, M., & Franconeri, S. L. (May 2011). Infinite X: Illusions of perpetual increases in magnitude. Demonstration presented at the 11<sup>th</sup> Annual Meeting of the *Vision Sciences Society*, Naples, FL.

## Invited Talks

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February 2018	University of California, San Diego	Cognitive Brown Bag
January 2018	University of California, Santa Cruz	Psychology Seminar

## Teaching Experience

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### Instructor

Fall 2016

### **The Illusion of Perception**

*Johns Hopkins University*

Instructor and Course Creator (Avg Course Rating = 5 / 5): This course was open to all undergraduate and graduate students. In the course, students gained a comprehensive understanding of the ways we perceive (or fail to perceive) things in the real world by studying examples in perception, memory and awareness. Students read both empirical and theoretical writing on these topics and participated in class discussions exploring their potential ramifications: if the world isn't what we perceive, what are the implications for our society, or for ourselves?

Fall 2014      **Research Methods in Experimental Psychology**      *Johns Hopkins University*  
Instructor (Avg Instructor Rating = 4.6 / 5): This course was open to upperclassmen Psychology and Cognitive Science undergraduate students. The course gave an overview of research methods used in psychology, experimental designs, interpreting results in psychology, and research ethics. Each student completed an individual research project on a topic of his/her choosing as part of the course training. The class was taught interactively through lectures and labs.

Guest Instructor

Spring 2018      General Psychology: Biological Foundations      *University of California, San Diego*  
(Undergrad Course)

Spring 2018      Visual Cognition (Undergrad Course)      *University of California, San Diego*

Teaching Assistant

Fall 2015      Advanced Statistical Methods (Graduate Course)      *Johns Hopkins University*

Spring 2014      Intro to Cognitive Psychology (Undergrad Course)      *Johns Hopkins University*

Fall 2013      Mind, Brain & Experience (Undergrad Course)      *Johns Hopkins University*

Spring 2013      Human Sexual Orientation (Undergrad Course)      *Johns Hopkins University*

Certifications

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2017      Johns Hopkins University Teaching Institute  
Attended teaching institute program to develop and enhance university-level classroom teaching skills. The curriculum included examining the benefits of active learning, ongoing assessment, responsiveness to diversity, and examining a variety of teaching practices and principles (backward design, formative / summative assessments, etc).

2016      NIH ERP Boot Camp  
Received methodological training scholarship to attend an NIH-funded 10-day workshop at UC-Davis on how to best design, implement, and analyze ERP experiments using the latest methods and technology.

Community Engagement

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2017      Mentor, Summer Training Academy for Research Success (STARS) Program  
Mentored two STARS (non-UCSD) students in the Vision and Memory lab over the course of the summer. The STARS program is a summer research academy at UCSD providing students with experience with behavioral methods, computational tools and other necessities for pursuing Ph.D.-level research. Through community-college-based outreach, the program includes underrepresented groups both locally and nationally.

- 2016-2017 Creator & Director, Psychological & Brain Sciences High School Engagement Program  
I founded and was director of the Psychological & Brain Sciences High School Engagement Program at Johns Hopkins University. In the program Baltimore City public high school students come on-campus to visit the department of Psychological & Brain Sciences. The visit takes course over an entire day, including lectures from faculty, classroom observations, graduate student talks/panels, and lab tours.
- 2013-2017 Director & Speaker, Brain Awareness Week at Baltimore Polytechnic Institute High School  
I was director for the Brain Awareness Week event at Baltimore Polytechnic Institute, a public high school with a focus on Science, Technology, Engineering and Math (STEM) serving a large minority population. The purpose of this week is to give students lectures on general themes in neuroscience and possible career paths in science.
- 2015-2016 Mentor, Women in Science & Engineering (WISE) Student Outreach Program with Garrison Forest School  
Mentored two Baltimore high school students studying in the Visual Thinking Lab over the course of the school year. Guided the students in experiment development, conducting literature reviews, and academic writing.
- 2016 Invited Speaker, Sandy Spring Friends School  
Lectured to elementary, middle and high school students about visual illusions and psychology at the annual school science fair (serving the greater DC area).
- 2015 Invited Speaker, Patterson High School Baltimore City  
Lectured to high school students about psychology and neuroscience in a Baltimore City public high school. Mentored students and discussed what is required to pursue a degree in a STEM field.
- 2012 Organizer, Chicago Brain Week Talk Series  
Assisted in the organization of a series of community talks given by prominent Psychologists and Neuroscientists in the Chicago area.
- 2011-2012 Mentor, Student Inquiry and Research Program  
Mentored two high school students from the Illinois Mathematics and Science Academy (IMSA) in the Social Affective and Cultural Neuroscience lab over the course of a year. Guided each student on independent projects including experiment design, data collection, analysis, and developing a poster presentation for an academic conference.

## Academic Service

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- 2014-2017 Organizer, Psychological & Brain Sciences Event Coordination
- 2012-2016 Representative, Psychological & Brain Sciences Graduate Steering Committee
- 2013-2015 Organizer & Leader, Psychological & Brain Sciences Graduate Recruitment
- 2015 Reviewer, Association for Psychological Science Student Research Award

- 2012 Organizer, Cultural Psychology Preconference at the Society for Personality & Social Psychology (SPSP)
- 2010 Organizer, Social & Affective Neuroscience Society (SANS) Conference

Ad-hoc review for Journals:

Attention, Perception, & Psychophysics; Cognition; Consciousness and Cognition; Experimental Brain Research; Frontiers in Psychology; Journal of General Psychology; Memory & Cognition; Neuroscience and Biobehavioral Reviews; Psychological Reports; Quarterly Journal of Experimental Psychology; Visual Cognition; Vision Research

Advising

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Undergraduate Researchers

Yonghoon Chung (University of California, San Diego)	2018-present
Brittany Hawkins-Carter (University of California, San Diego)	2018-present
Sherry Wang (University of California, San Diego)	2018-present
Jamal Williams (University of California, San Diego)	2017-present
Zeljana Babic (University of California, San Diego)*	2017-present
<i>*awarded 2018 Undergraduate Research Fellowship by UCSD</i>	
Annalise Miner (University of California, San Diego)	2017-present
Kelvin Lam (University of California, San Diego)	2017-present
Audrey Ellis (Wellesley College)	2018
Faith Shank (Loyola University)	2016-2017
Alana DiSabatino (Johns Hopkins University)*	2015-2017
<i>*awarded Stanley Hall Prize by JHU for outstanding research excellence</i>	
Annapurna Vadaparty (Johns Hopkins University)	2015-2017
Cera Hassinan (Johns Hopkins University)	2015-2017
Sinan Akosman (Johns Hopkins University)	2015-2017
Saman Baban (Johns Hopkins University)	2015-2016
Victor Kang (Johns Hopkins University)	2015
Patricia Kingkeo (Johns Hopkins University)	2013-2015
Erica Lee (Johns Hopkins University)	2013-2014
Hannah Cowley (Johns Hopkins University)	2014
Gustavo Beruman (Universidad de Guadalajara)	2013
Kaan Zaimoglu (Johns Hopkins University)	2012-2013

High School Researchers

Channing Capacchione (GFS / Hopkins)	2015-2016
Ruth Tekeste (GFS / Hopkins)	2015-2016
Jennifer Ren (IMSA / Northwestern)	2011-2012
Victoria Etherton (IMSA / Northwestern)	2011-2012
Eva Meyer (IMSA / Northwestern)	2011-2012
Ruby Morales (ETHS / Northwestern)	2011

## Professional Memberships

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2018-present	American Psychological Association (APA)
2017-present	Association for Psychological Science (APS)
2015-present	Psychonomic Society
2014-present	Spatial Network
2011-present	Vision Sciences Society (VSS)
2010-2012	Spatial Intelligence Learning Center (SILC)
2011-2012	Cognitive Neuroscience Society (CNS)