

Curriculum Vitae  
**Anastasia Kiyonaga**

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## Appointments

- University of California, San Diego** 2020-  
Assistant Professor, Cognitive Science  
Affiliated Faculty: Neuroscience Graduate Program
- University of California, Berkeley** 2015-2019  
Postdoctoral Fellow, Helen Wills Neuroscience Institute  
Advisor: Mark D'Esposito

## Education

- Duke University** 2010-2015  
Ph.D., Psychology & Neuroscience  
Advisor: Tobias Egner
- University of Pennsylvania** 2007-2009  
M.S.Ed., Human Development
- University of Virginia** 1999-2003  
B.A., Psychology

## Publications (My Bibliography and ORCID ID: <https://orcid.org/0000-0002-7586-3447>)

\* = shared authorship; ^ = student trainee

### Peer-reviewed

- Kiyonaga A\***, Scimeca JM\*, & D'Esposito M (accepted in principle). Dissociating the causal roles of frontal and parietal cortex in working memory capacity. *Nature Human Behaviour*.  
*This is a Registered Report that has been approved after Stage 1 peer-review.* DOI: [10.6084/m9.figshare.7145873.v1](https://doi.org/10.6084/m9.figshare.7145873.v1)
- Miller JA\*^, **Kiyonaga A\***, Ivry RB, & D'Esposito M (2020). Prioritized verbal working memory content biases ongoing action. *Journal of Experimental Psychology: Human Perception and Performance*, 46, 1443-1457. DOI: [10.1037/xhp0000868](https://doi.org/10.1037/xhp0000868)
- Kiyonaga A** & Scimeca JM (2019). Practical considerations for navigating Registered Reports. *Trends in Neurosciences*, 42, 568-572. DOI: [10.1016/j.tins.2019.07.003](https://doi.org/10.1016/j.tins.2019.07.003)
- Kiyonaga A\***, Dowd EW\*, & Egner T (2017). Neural representation of working memory content is modulated by visual attentional demand. *Journal of Cognitive Neuroscience*, 29, 2011-2024. DOI: [10.1162/jocn\\_a\\_01174](https://doi.org/10.1162/jocn_a_01174)
- Kiyonaga A**, Scimeca JM, Bliss DP, & Whitney D (2017). Serial dependence across perception, attention, and memory. *Trends in Cognitive Sciences*, 21, 493-497. DOI: [10.1016/j.tics.2017.04.011](https://doi.org/10.1016/j.tics.2017.04.011)  
**Commentary:** Dyson (2017). Serial dependence in audition: Free, fast, and featureless? *Trends in Cognitive Sciences*, 21, 819-820.
- Kiyonaga A** & Egner T (2016). Center-surround inhibition in working memory. *Current Biology*, 26, 64-68. DOI: [10.1016/j.cub.2015.11.013](https://doi.org/10.1016/j.cub.2015.11.013)

- Coutlee, CG, **Kiyonaga A**, Korb FM, Huettel, SA, & Egner T (2016). Reduced risk-taking following disruption of the intraparietal sulcus. *Frontiers in Neuroscience*, 10, 588. DOI: [10.3389/fnins.2016.00588](https://doi.org/10.3389/fnins.2016.00588)
- Dowd EW, **Kiyonaga A**, Beck J, & Egner T (2015). Quality and accessibility of visual working memory during cognitive control of attentional guidance: A Bayesian model comparison approach. *Visual Cognition*, 23, 337-356. DOI: [10.1080/13506285.2014.1003631](https://doi.org/10.1080/13506285.2014.1003631)
- Dowd EW, **Kiyonaga A**, Egner T, & Mitroff S. (2015). Attentional guidance by working memory differs by paradigm: An individual-differences approach. *Attention, Perception, & Psychophysics*, 77, 704-712. DOI: [10.3758/s13414-015-0847-z](https://doi.org/10.3758/s13414-015-0847-z)
- Kiyonaga A** & Egner T (2014). The working memory Stroop effect: When internal representations clash with external stimuli. *Psychological Science*, 25, 1619-1629. DOI: [10.1177/0956797614536739](https://doi.org/10.1177/0956797614536739)
- Kiyonaga A**, Korb F, Lucas J<sup>^</sup>, Soto D, & Egner T (2014). Dissociable causal roles for left and right parietal cortex in controlling attentional biases from working memory. *NeuroImage*, 100, 200-205. DOI: [10.1016/j.neuroimage.2014.06.019](https://doi.org/10.1016/j.neuroimage.2014.06.019)
- Kiyonaga A** & Egner T (2014). Resource-sharing between internal maintenance and external selection modulates attentional capture by working memory content. *Frontiers in Human Neuroscience*, 8, 670. DOI: [10.3389/fnhum.2014.00670](https://doi.org/10.3389/fnhum.2014.00670)
- Kiyonaga A**, & Egner T (2013). Working memory as internal attention: Toward an integrative account of internal and external selection processes. *Psychonomic Bulletin & Review*, 20, 228-242. DOI: [10.3758/s13423-012-0359-y](https://doi.org/10.3758/s13423-012-0359-y)
- Soto D, Greene C, **Kiyonaga A**, Rosenthal C, & Egner T (2012). A parieto-medial temporal pathway for the strategic control over working memory biases in human visual attention. *Journal of Neuroscience*, 32, 17563-17571. DOI: [10.1523/JNEUROSCI.2647-12.2012](https://doi.org/10.1523/JNEUROSCI.2647-12.2012)
- Kiyonaga A**, Egner T, & Soto D (2012). Cognitive control over working memory biases of selection. *Psychonomic Bulletin & Review*, 19, 639-646. DOI: [10.3758/s13423-012-0253-7](https://doi.org/10.3758/s13423-012-0253-7)
- Stanley EA, **Kiyonaga A**, Schaldach JM, & Jha AP (2011) Mindfulness-based mind fitness: A case study of a high stress pre-deployment military cohort. *Cognitive and Behavioral Practice*, 18, 566-576. DOI: [10.1016/j.cbpra.2010.08.002](https://doi.org/10.1016/j.cbpra.2010.08.002)
- Baijal S, Jha AP, **Kiyonaga A**, Singh R & Srinivasan N (2011). The influence of concentrative meditation training on the development of attention networks during early adolescence. *Frontiers in Psychology*, 2, 153. DOI: [10.3389/fpsyg.2011.00153](https://doi.org/10.3389/fpsyg.2011.00153)
- Jha AP, Stanley EA, **Kiyonaga A**, Wong LM, & Gelfand L (2010). Examining the protective effects of mindfulness training on working memory capacity and affective experience. *Emotion*, 10, 54-64. DOI: [10.1037/a0018438](https://doi.org/10.1037/a0018438)
- Jha AP & **Kiyonaga A** (2010). Working memory-triggered dynamic adjustments in cognitive control. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 36, 1036-1042. DOI: [10.1037/a0019337](https://doi.org/10.1037/a0019337)

### **Invited Chapters & Commentaries**

- Kiyonaga A** & D'Esposito M (2020). Competition and control during working memory. In James T. Enns and M. M. Chun (eds.), *Elements in Perception*. Cambridge: Cambridge University Press. DOI: [10.1017/9781108581073](https://doi.org/10.1017/9781108581073)
- Kiyonaga A** (2019). We need a taxonomy of working memory. *Journal of Cognition*. 2(1), 35. DOI: [10.5334/joc.71](https://doi.org/10.5334/joc.71)
- Response:** Oberauer, K. (2019). Working Memory and Attention – Response to Commentaries. *Journal of Cognition*, 2(1), 30.
- Scimeca JM, **Kiyonaga A**, & D'Esposito M (2018). Reaffirming the sensory recruitment account of working memory. *Trends in Cognitive Sciences*, 22, 190-192. DOI: [10.1016/j.tics.2017.12.007](https://doi.org/10.1016/j.tics.2017.12.007)

**Response:** Xu, Y. (2018). Sensory Cortex Is Nonessential in Working Memory Storage. *Trends in Cognitive Sciences*, 22(3), 192-193.

### **Submitted**

**Kiyonaga A**, Powers J, Chiu YC, & Egnér T. Hemisphere-specific parietal contributions to working memory and attention interactions. *In revision*.

## **Fellowships and Awards**

Individual Ruth L. Kirchstein Postdoctoral National Research Service Award (NRSA), NIMH <a href="#">F32MH111204</a> : Network properties and causal mechanisms of distractor-resistant working memory	2016-2019
NIMH Summer Institute in Cognitive Neuroscience Fellowship	2014
Duke Graduate School Summer Research Fellowship	2014

## **Professional Activities**

### **Society memberships**

Association for Psychological Science • Cognitive Neuroscience Society • Psychonomic Society • Society for Neuroscience • Vision Sciences Society

### **Editorial Service**

Consulting Editor, *Journal of Cognitive Neuroscience*

### **Ad-hoc reviewing**

### **Funding Agencies**

National Science Foundation • Wellcome Sir Henry Dale Fellowship

### **Journals** (complete record at [publons.com/a/843935/](https://publons.com/a/843935/))

Acta Psychologica • Annals of the New York Academy of Sciences • Attention, Perception & Psychophysics • Child Development • Cortex • Current Biology • Current Directions in Psychological Science • eLife • eNeuro • European Journal of Neuroscience • Experimental Brain Research • Frontiers in Human Neuroscience • Frontiers in Psychology • iScience • Journal of Cognitive Neuroscience • Journal of Experimental Psychology: General • Journal of Experimental Psychology: Human Perception and Performance • Journal of Experimental Psychology: Learning, Memory and Cognition • Journal of Neurophysiology • Journal of Neuroscience • Learning & Motivation • Memory • Memory & Cognition • Nature Communications • Nature Human Behaviour • NeuroImage • Neuropsychologia • Psychological Science • Psychonomic Bulletin & Review • Quarterly Journal of Experimental Psychology • Scientific Reports • Trends in Cognitive Sciences • Vision • Visual Cognition

## **Teaching**

### **Courses Taught (UC San Diego)**

COGS 17: <i>Neurobiology of Cognition</i>	Spring 2020–Winter 2021
COGS 160: <i>Neuroimaging of Cognition</i>	Spring 2020, Fall 2020
COGS 260: <i>Scientific Writing Workshop</i>	Winter 2021

### **Guest Lectures (UC San Diego)**

COGS 1: <i>Introduction to Cognitive Science</i>	Spring 2020
COGS 200: <i>Cognitive Science Seminar</i>	Winter 2020
COGS 200: <i>Cognitive Science Seminar</i>	Fall 2019

### **Pedagogical Training**

UC San Diego “ <i>Course Design Series</i> ” Engaged Teaching workshop	Winter 2020
UC Berkeley “ <i>Designing a course for undergraduate neuroscience majors</i> ”	Fall 2019

**Teaching Assistantships (Duke University)**

2011-2013

*The Biological Bases of Behavior* • *Introduction to Cognitive Neuroscience*  
*Introduction to Psychology* • *Graduation with Distinction Seminar*

**Mentorship****PhD Students**

Dillan Cellier 2020-  
 Yueying (Holly) Dong 2020-  
 Matthew Fain (*Cota-Robles Fellowship recipient*) 2020-

**PhD Committees**

Kelsey Sundby (UCSD Psychology) 2020-  
 Angus Chapman (UCSD Psychology) 2020-  
 Jonathan Keefe (UCSD Psychology) 2020-  
 Frida Printzlau (University of Oxford) 2021

**Undergraduate Honor's Thesis Mentorship**

Sagarika Allavilli (UC San Diego) 2020-  
 Kaiqi Zhang (UC San Diego) 2020-  
 Stuti Bansal (UC Berkeley) 2018-2020  
 Project Title: *Structural-functional relationships in human parietal cortex for working memory capacity*  
 John Lucas (Duke University) 2011-2014  
 Project Title: *Neural mechanisms of reciprocity between working memory and attention*

**Undergraduate Research Apprenticeships**

*UC San Diego*: Keionni Thompson, Emily Madera, Zoe Tait, Weiwei Liang 2020-  
 Brian Fang  
*UC Berkeley*: Sijing (Jean) Ye, Stuti Bansal, Joseph Schenker, Lauren Schuck, 2015-2020  
 Jessica Houghton, Murray Andrews, Xinyu Li, Eugene Gil  
*Duke University*: John Lucas, Ada Aka, Hannah Gold 2010-2015

**Outreach**

**Stemanities** Judge & Panelist 2020  
 National High School Research Competition Integrating STEM and the Humanities

**NIH Bridges to the Baccalaureate (B2B)** Mentor 2016  
 Student: Juan Carlos Silva

**Invited Talks**

**George Washington University**, Cognitive Neuroscience Brownbag November 2020  
**UC San Diego**, Department of Psychology, Cognitive Brownbag November 2020  
**UCLA**, Department of Psychology, Cognitive Forum February 2020  
**Center for Open Science**, 'Being a Reviewer or Editor for Registered Reports' September 2019

## Conference Presentations

### Talks

- Miller, JA, **Kiyonaga, A**, Tambini, A, & D'Esposito, M (June 2020). Learning-related changes in working memory with frequent, longitudinal sampling. *Virtual Working Memory Symposium*
- Scimeca JM, **Kiyonaga A**, & D'Esposito M (June 2020). The capacity and control of working memory: Causal roles of frontal and parietal cortex. *Virtual Working Memory Symposium*
- Kiyonaga A**, Miller, JA, Ivry, RB, & D'Esposito, M (November 2018). Cortico-striatal control over working memory output gating. *Annual Meeting of the Society for Neuroscience, San Diego, CA.*
- Dowd EW, **Kiyonaga A**, Egner T (May 2015). Competitive tradeoffs between working memory and attention: an fMRI approach. *Annual Meeting of the Vision Sciences Society, St., Pete Beach, FL.*
- Dowd EW, **Kiyonaga A**, Beck J, & Egner T (November 2014). Probability of guessing, not precision, changes in mixture models of visual working memory during cognitive control of attentional guidance. *Annual Workshop on Object Perception, Attention, and Memory, Long Beach, CA.*
- Kiyonaga A** & Egner T (March 2014). The working memory Stroop effect: When internal representations clash with external stimuli. *North Carolina Conference on Cognition, Raleigh, NC.*
- Kiyonaga A** & Egner T (February 2013). It's about time: A mechanistic account of working memory attention interactions. *North Carolina Conference on Cognition, Raleigh, NC.*
- Trubutschek D, **Kiyonaga A**, & Egner T (October 2012). The 'what' and 'how' of working memory: Dissociating neural mechanisms of declarative and procedural components. *Annual Meeting of the Society for Neuroscience, New Orleans, LA.*
- Jha AP, & **Kiyonaga A** (April 2010). Working Memory Demands Trigger Dynamic Adjustments in Executive Control. *Annual Meeting of the Cognitive Neuroscience Society, Montreal, Canada.*
- Van Vugt M, **Kiyonaga A**, Wong LM, & Jha AP (March 2009). The Influence of Mindfulness Meditation Training on Visual Working Memory. *Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*

### Posters

- Miller, JA, Tambini, A, **Kiyonaga, A** & D'Esposito, M (March 2021). Long-term learning transforms prefrontal cortex selectivity during working memory. *Annual Meeting of the Cognitive Neuroscience Society, Virtual.*
- Miller, JA, Tambini, A, **Kiyonaga, A** & D'Esposito, M (January 2021). Long-term learning transforms prefrontal cortex selectivity during working memory. *Society for Neuroscience Global Connectome: A Virtual Event.*
- Miller, JA, **Kiyonaga, A**, Tambini, A, & D'Esposito, M (May 2020). Frequent longitudinal sampling reveals learning-related changes in working memory substrates and processes. *Annual Meeting of the Cognitive Neuroscience Society, Virtual.*
- Kiyonaga A**, Scimeca JM, & D'Esposito M (June 2019). Dissociating the causal roles of frontal and parietal cortex in working memory capacity. *Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy.*
- Kiyonaga A**, Lurie DJ, & D'Esposito M (November 2017). Network competition and reconfiguration during working memory processing. *Dynamic poster at the Annual Meeting of the Society for Neuroscience, Washington, DC.*
- Miller JA, **Kiyonaga A**, Ivry RB, & D'Esposito M (November 2017). Modulating the cortico-striatal output gate of

working memory. *Annual Meeting of the Society for Neuroscience, Washington, DC.*

**Kiyonaga A**, Manassi M, D'Esposito M, & Whitney D (May 2017). Context transitions modulate perceptual serial dependence. *Annual Meeting of the Vision Sciences Society, St., Pete Beach, FL.*

**Kiyonaga A**, Powers J, Chiu YC, & Egner T (April 2016). Causal parietal contributions to dual-task working memory and visual attention performance. *Annual Meeting of the Cognitive Neuroscience Society, New York, NY.*

**Kiyonaga A** & Egner T (May 2015). Working memory representations produce inhibition of similar (but not identical) stimuli in visual attention. *Annual Meeting of the Vision Sciences Society, St., Pete Beach, FL.*

**Kiyonaga A**, Dowd EW, & Egner T (March 2015). Working memory and visual attention compete for neural resources. *Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*

**Kiyonaga A** & Egner T (April 2014). The working memory Stroop effect: When internal representations clash with external stimuli. *Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.*

**Kiyonaga A**, Korb F, Soto D, & Egner T (November 2013). Transcranial magnetic stimulation to left and right parietal regions reveals their distinct contributions to cognitive control over working memory biases of attention. *Annual Meeting of the Society for Neuroscience, San Diego, CA.*

Coutlee C, **Kiyonaga A**, Korb F, Huettel S, Egner T (June 2013). Dissociating the contributions of frontal and intraparietal cortices to risky decisions using TMS. *Organization for Human Brain Mapping Annual Meeting, Seattle, WA.*

Dowd E, **Kiyonaga A**, Egner T, & Mitroff S (May 2013). Individual differences may reveal distinct mechanisms of attentional guidance. *Annual Meeting of the Vision Sciences Society, Naples, FL.*

**Kiyonaga A** & Egner T (April 2013). Resource-sharing between internal maintenance and external selection underlies the capture of attention by working memory content. *Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*

**Kiyonaga A**, Egner T, Soto D (February 2012). Cognitive Control over Working Memory Biases of Selection. *North Carolina Conference on Cognition, Chapel Hill, NC.*

Jha AP, Stanley EA, **Kiyonaga A**, Wong LM, & Gelfand L (October 2009). Mindfulness training counteracts heightened distractibility in a military cohort. *Annual Meeting of the Society for Neuroscience, Chicago, IL.*

**Kiyonaga A**, Wong LM, & Jha AP (March 2009). Examining the Lifespan Effects of "Control Adaptation" during Working Memory. *Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.*