

Edward F. Ester

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Employment

2020-present: Assistant Professor, Department of Psychology & Institute for Neuroscience,
University of Nevada, Reno

2016-2020: Assistant Professor, Department of Psychology, Center for Complex Systems &
Brain Sciences, and FAU Brain Institute, Florida Atlantic University

2012-2016: Postdoctoral Fellow, Department of Psychology, UC San Diego

Education

Ph.D, Psychology, University of Oregon, 2011

M.S., Psychology, Villanova University, 2006

B.A., Psychology, Nazareth College of Rochester, 2004

Peer-reviewed Manuscripts (Google Scholar: 2310 citations, h-index 19, i-10 index 23)

1. Ester EF, Sprague TC, Serences JT (2020) Categorical Biases in Human Occipitoparietal Cortex. *J Neurosci.* 40:917-931.
2. Nouri A, Ester EF (2020) Recovery of information from latent memory stores decreases over time. *Cogn. Neurosci.* 11:101-110.
3. Ester EF, Nouri A, Rodriguez L (2018) Retrospective cues mitigate information loss in human cortex during working memory storage. *J Neurosci.* 38:8538-8548.
4. Marini F, Scott J, Aron AR, Ester EF (2017) Distractors induce dimension-specific disruptions in spatial working memory. *Atten Percept Psychophys* 79:1384-1392
5. Ester EF, Sutterer DW, Serences JT, Awh E (2016) Feature-based attentional modulations in human frontoparietal cortex. *J Neurosci* 36:8188-8199
6. Sprague TC, Ester EF, Serences JT (2016) Restoring latent visual working memory representations in human cortex. *Neuron* 91:694-707
7. Ester EF, Rademaker RL, Sprague TC (2016) How do visual and parietal cortex contribute to short-term memory? *eNeuro* 3(2)

8. Ester EF, Zilber E, Serences JT (2015) Substitution and pooling in visual crowding induced by similar and dissimilar distractors. *J Vis*, 15:4
9. Ester EF, Sprague TC, Serences JT (2015) Parietal and frontal cortex encode stimulus-specific mnemonic representations during visual working memory. *Neuron* 87:681-693
10. Itthipuripat S, Ester EF, Deering S, Serences JT (2014) Sensory gain outperforms efficient read-out mechanisms in predicting attention-related improvements in behavior. *J Neurosci* 34: 13384-13398
11. Sprague TC, Ester EF, Serences JT (2014) Reconstructions of information in visual spatial working memory degrade with memory load. *Curr Biol* 24:2174-2180
12. Ester EF, Klee D, Awh E (2014) Visual crowding cannot be wholly explained by feature pooling. *J Exp Psychol Human* 40:1022-1033
13. Ester EF, Ho TC, Brown SD, Serences JT (2014) Variability in visual working memory ability limits the efficiency of perceptual decision making. *J Vis* 14:4
14. Ester EF, Fukuda K, May LM, Vogel EK, Awh E (2014) Evidence for a fixed capacity limit in attending multiple locations. *Cogn Affect Behav Neurosci* 14:62-77
15. Ester EF, Anderson DE, Serences JT, Awh E (2013) A neural measure of precision in visual working memory. *J Cogn Neurosci* 25:754-761
16. Ester EF, Drew T, Klee, D Vogel EK, Awh E (2012) Neural measures reveal a fixed item limit in subitizing. *J Neurosci* 32:7169-7177
17. Ho TC, Ester EF (2012) Target enhancement and distractor suppression in naturalistic visual search. *J Neurosci* 32:16539-16540
18. Stevens A, Maron L, Nigg J, Cheung D, Ester EF, Awh E (2012) Increased sensitivity to perceptual interference in adults with attention deficit hyperactivity disorder. *J Int Neuropsych Soc* 18:511-520
19. Umemoto A, Drew T, Ester EF, Awh E (2010) A bilateral advantage for storage in visual working memory. *Cognition* 117:69-79
20. Ester EF, Serences JT, Awh E (2009) Spatially global representations in human primary visual cortex during working memory maintenance. *J Neurosci* 29:15258-15265
21. Barton BB, Ester EF, Awh E (2009) Discrete resource allocation in visual working memory. *J Exp Psychol Human* 35:1359-1367

22. Serences JT, Ester EF, Vogel EK, Awh E (2009) Stimulus-specific delay activity in human primary visual cortex. *Psychol Sci* 20:207-214
23. Folk CL, Ester EF, Troemel K (2009) How to keep attention from straying: Get engaged! *Psychon B Rev* 16:127-132
24. Ester EF, Awh E (2008) The processing locus of interference from salient singleton distractors. *Vis Cogn* 16:166-181

Book Chapters/Invited Reviews (peer-reviewed)

1. Scolari M, Ester EF, Serences JT (2014) Feature- and object-based attentional modulations in human visual cortex. In: *The Oxford Handbook of Attention* (S. Kastner & A.C. Nobre, Eds) New York: Oxford University Press
2. Ester EF, Vogel EK, Awh E (2012) Discrete resource limits in visual attention and working memory. In: *The Cognitive Neuroscience of Visual Attention* (M. Posner, Ed.) New York: Guilford

Manuscripts submitted or in revision (all data collection complete)

1. Xie W, Cappiello M, Wittig J, Bhasin S, Zawora C, Yassa MA, Ester EF, Inati SK, Zaghoul KA, Zhang W. (submitted) The medial temporal lobe supports visual working memory precision.
2. Musser ED, Morrise SSJ, Feeney K, Pintos Lobo R, Ester EF. (submitted) The roles of salience and value in inattention among youth with attention-deficit hyperactivity disorder (ADHD): A pilot investigation and call to action.

Recent Conference Presentations (2018-present; full list available on request)

1. Nouri A, Ester EF (June 2020) Mechanisms of attentional priority in working memory are context-dependent. Poster presented at the virtual Vision Sciences Society meeting.
2. Ray S, Ester EF (June 2020) Cyclic variability in object and spatial attention. Poster presented at the virtual Vision Sciences Society meeting.
3. Nouri A, Ester EF (June 2020) Mechanisms of attentional priority in working memory are context-dependent. Talk presented at the Virtual Working Memory Symposium.
4. Ester EF, Camp J, Latortue T, Sprague TC, Serences JT. (May 2019) Rapid onset of category-selective biases in human cortex. Talk presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

5. Cox D, Ester EF, Hong SW, Yoon Y. (May 2019) Using pattern classification and EEG to reveal the temporal characteristics of categorical processing during interocular suppression. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
6. Nouri A, Ester EF (May 2019) Time-dependent recovery of retrospectively cued information during working memory storage. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
7. DiPuma A, Rivera K, Ester EF (May 2019) Simultaneous retrospective prioritization of multiple working memory representations. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
8. Pytel P, Ester EF (May 2019) Flexible retrospective prioritization of information in WM following a probabilistic cue. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
9. Pytel P, Ester EF (November 2018). Flexible attentional prioritization of working memory representations. Poster presented at the Object Perception, Attention, and Memory (OPAM) meeting, New Orleans, LA
10. DiPuma A, Ester EF (November 2018). Simultaneous prioritization of multiple working memory representations. Poster presented at the Object Perception, Attention, and Memory (OPAM) meeting, New Orleans, LA
11. Ester EF, Nouri, A., Rodriguez L. (November 2018). Retrospectively cued attention shifts mitigate information loss in human cortex during working memory storage. Talk presented at the annual meeting of the Society for Neuroscience, San Diego, CA.
12. Rodriguez, L., Nouri, A., Ester, E.F. (May 2018) Alpha-band activity tracks dynamic changes in the contents of visual working memory. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.
13. Xie W, Cappiello, M., Yassa M, Ester EF, Deshpande G., Zhang W. (May 2018) Decoding item-specific information in visual short-term memory from the hippocampal DG/CA3 subfield using high-resolution fMRI. Talk presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Extramural Funding & Support

Ongoing:

1. NSF 2050833. CAREER: Sensorimotor Representations in Visual Working Memory. Role: PI. 08/2020-03/2025

2. NIH R01 MH117132: “A Neurocognitive Mechanism for Precision of Visual Working Memory Representations”. Role: Consultant (PI: Weiwei Zhang). 03/2018-03/2023
3. NIH R01 EY032101: “Experience-dependent plasticity in mouse superior colliculus and natural visual behavior”. Role: Consultant (PI: Jennifer Hoy). 06/2021-05/2026

Pending:

1. NSF: Complementary networks for active and passive categorization. Role: PI.

Completed:

1. APA Summer Undergraduate Psychology Research Experience (SUPRE) Award. Role: PI. Total Award \$28,800. 05/01/20-08/01/20*
 - Provides full-time summer salary for up to six undergraduate research assistants from underrepresented communities. *Postponed to 2022-2023 due to COVID-19.
2. NIMH T32-MH020002, NIMH Training Program in Cognitive Neurosciences, Awarded by the Institute of Neural Computation, UC San Diego, 2012-2014
3. NIMH T32-GM007257, Systems Neurophysiology Training Grant, Awarded by the Institute of Neuroscience, University of Oregon, 2007-2010
4. 2020 FAU Summer Undergraduate Research Fellowship (SURF) award. Role: Mentor (PI: Julie Edelstein, undergraduate student). Total award \$4,000.

Invited Colloquia

1. Cognitive Neuroscience Seminar Series, UT Austin, Nov. 2020
2. Neuroscience Seminar Series, University of Nevada – Reno, Sept. 2020
3. Department of Cognitive Sciences, UC Irvine, Feb. 2019
4. Center for Complex Systems & Brain Sciences, Florida Atlantic University, Jan. 2018
5. Visual Working Memory Symposium, NYU Abu Dhabi, Feb. 2017
6. Department of Psychology, UC Riverside, Feb. 2016
7. Department of Cognitive Sciences, UC Irvine, Sept. 2015
8. Department of Psychological Sciences, Vanderbilt University, Mar. 2011
9. Department of Psychology, University of Washington, Feb. 2011

Awards & Honors

1. Elected Fellow, Psychonomic Society, Fall 2019
2. Invited Fellow, Computational Vision Summer School, Freudenstadt, Germany, 2012
3. Graduate Student Travel Award, Vision Sciences Society Meeting, 2011
4. Marthe E. Smith Memorial Science Scholarship, University of Oregon, 2011
5. Graduate Student Travel Award, Organization for Human Brain Mapping Meeting, 2011
6. Invited Fellow, Summer Institute in Cognitive Neuroscience, UC Santa Barbara, 2009

7. Ingeborg & Byron Ward Outstanding Thesis Award, Villanova University, 2007

Professional Service:

Editorial

Associate Editor, Attention Perception & Psychophysics, 2021-present

Meetings Organized

2020 & 2021 Virtual Working Memory Symposium (co-organizers: Jarrod Lewis-Peacock, UT Austin, Kirsten Adam, UC San Diego, William Ngiam, U. Chicago)

- online meeting featuring talks from undergraduate students, graduate students, and postdoctoral fellows. 79 presenters, 480+ attendees.

Ad Hoc Reviewer:

Grant Agencies: National Science Foundation
NSF Graduate Research Fellowship Program
DFG (German Research Foundation)
Israel Science Foundation
US-Israeli Binational Science Foundation
Wellcome Trust

Journals (selected): Attention, Perception, & Psychophysics; Cerebral Cortex; Cognition; Current Biology; eLife; Human Brain Mapping; Journal of Cognitive Neuroscience; JEP – Learning, Memory, & Cognition; JEP – Human Perception & Performance; JEP - General; Journal of Neuroscience; Nature Communications; Nature Human Behavior; Nature Neuroscience; NeuroImage; Neuron; PLOS Biology; PNAS; Psychological Science; Psychonomic Bulletin & Review; Science; Scientific Reports; Trends in Cognitive Sciences; Trends in Neurosciences

Departmental Service:

Thesis/Dissertation Committees (* - chair):

Bryan Conklin	Ph.D	2017-2020
Dustin Cox	Ph.D	2017-2019
Debarshi Datta	Ph.D	2018-2020
Michael Kleiman	Ph.D	2017-2019
Nicole Perez	Ph.D	2019-2020
Paige Pytel*	M.A.	2017-2019
Subhosit Ray*	M.A.	2017-2020

Past Service:

Member, FAU Brain Institute Human Neuroscience faculty search committee (2018-2020)
Member, FAU Department of Psychology Undergraduate program committee (2017-2018)
Member, FAU Department of Psychology Instructor search committee (2017-2018)
Member, FAU Department of Psychology Strategic Planning committee (2018-2019)
Member, FAU Department of Psychology Executive committee (2020-present)
Member, Center for Complex Systems Graduate Admissions Committee (2019-present)
Member, FAU Department of Psychology Graduate Program committee (2019-present)
Founding Member, FAU Open Science Group (2017-present)

Teaching

Graduate:

PSY 6930, Research Design & Practice	(FAU)
PSY 6609, Attention and Consciousness	(FAU)
PSY 0721, Advanced Psychophysiology	(UNR)

Undergraduate:

PSY 3073, Careers in Psychology	(FAU)
PSY 4240, Neuropsychology	(FAU)
PSY 3505, Cognition	(FAU)
PSY 3234, Experimental Design & Statistical Inference	(FAU)
PSY 0403, Physiological Psychology	(UNR)
PSY 0416, Cognitive Neuroscience	(UNR)
PSY 0474, Integrative Neuroscience	(UNR)

Professional Affiliations

Elected Fellow, Psychonomic Society	2019 -
Member, Society for Neuroscience	2017 -
Member, Vision Sciences Society	2017 -

References Available Upon Request