# Serra E. Favila

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#### **EDUCATION**

2016 M.A. New York University Psychology

2011 B.A. Stanford University Human Biology, with Distinction and Honors

### **RESEARCH POSITIONS**

2013— Graduate Student — Department of Psychology, New York University

PI: Brice Kuhl and Jonathan Winawer

2011–2013 Research Assistant — Department of Psychology, Stanford University

PI: Anthony Wagner

#### **FUNDED RESEARCH**

2017–2023 NIH Neuroscience Blueprint and NINDS

D-SPAN F99/K00 Award (F99 NS105223)

Title: Spatiotemporal dynamics of episodic memory retrieval

Role: PI Total: \$297,050

2013–2016 National Science Foundation

Graduate Research Fellowship

#### **AWARDS AND HONORS**

2016 NIH NEI Visual Neuroscience Traineeship (T32 EY007136)

2014 Dean's Student Travel Grant, New York University

2013 Opportunity Fellowship, New York University

2011 Joshua Lederberg Award for Academic Excellence in Human Biology, Stanford University

2011 Chicano/Latino Community Scholar Prize for Academic Excellence, Stanford University

2010 Undergraduate Advising and Research Major Grant, Stanford University

2007 National Merit Scholar

#### **PUBLICATIONS**

**Favila SE**, Samide R, Sweigart SC, & Kuhl BA (2018). Parietal representations of stimulus features are amplified during memory retrieval and flexibly aligned with top-down goals. *Journal of Neuroscience*, 38, 7809–7821.

Carr VA, Bernstein JD, **Favila SE**, Rutt BK, Kerchner GA, & Wagner AD (2017). Individual differences in associative memory among older adults explained by hippocampal subfield structure and function. *Proceedings of the National Academy of Sciences, USA*, 114, 12075–12080.

Chanales AJH, Oza A, **Favila SE**, & Kuhl BA (2017). Overlap among spatial memories triggers repulsion of hippocampal representations. *Current Biology*, 27, 2307–2317.e5.

Brown TI, Carr VA, LaRocque KF, **Favila SE**, Gordon AM, Bowles B, Bailenson JN, & Wagner AD (2016). Prospective representation of navigational goals in the human hippocampus. *Science*, 352, 1323–1326.

**Favila SE**, Chanales AJH, & Kuhl BA (2016). Experience-dependent hippocampal pattern differentiation prevents interference during subsequent learning. *Nature Communications*, 7, 11066.

**Favila SE** & Kuhl BA (2014). Stimulating memory consolidation. *Nature Neuroscience (News and Views)*, 17, 151–152.

#### CONFERENCE PRESENTATIONS

**Favila SE**, Kuhl BA, & Winawer J (2018). Neural encoding of spatial information during visual perception and memory retrieval. Poster accepted at *Society for Neuroscience*, San Diego, CA.

Long NM, **Favila SE**, & Kuhl BA (2018). The cortical locus of stimulus representations is influenced by the state of the memory system. Poster accepted at *Society for Neuroscience*, San Diego, CA.

Wang S-F, Carr VA, **Favila SE**, Bailenson JN, Brown TI, Jiang J, & Wagner AD (2018). Representations of local information in human medial temporal lobe during memory-guided spatial navigation. Poster presented at *International Conference on Learning & Memory*, Huntington Beach, CA.

**Favila SE**, Long NM, & Kuhl BA (2016). Stimulus-specific memory representations in lateral parietal cortex. Poster presented at *Society for Neuroscience*, San Diego, CA.

Chanales AJH, **Favila SE**, & Kuhl BA (2016). Overlap between real-world spatial routes triggers divergence of their hippocampal representations. Talk presented at *Society for Neuroscience*, San Diego, CA.

Brown TI, LaRocque KF, Carr VA, **Favila SE**, Gordon AM, Bowles B, Bailenson JN, & Wagner AD (2016). Mechanisms of prospective navigation in the human brain. Talk presented at *Society for Neuroscience*, San Diego, CA.

- Wang S-F, Carr VA, **Favila SE**, Bailenson JN, & Wagner AD (2016). Functional connectivity in the human medial temporal lobe during memory-guided spatial navigation. Poster presented at *Society for Neuroscience*, San Diego, CA.
- **Favila SE**, Samide R, & Kuhl BA (2016). Distributed cortical representations of visual features and items in perception and memory. Poster presented at *Cognitive Neuroscience Society*, New York, NY.
- **Favila SE**, Samide R, & Kuhl, BA (2015). Distributed cortical representations of visual features in perception and memory. Poster presented at *Society for Neuroscience*, Chicago, IL.
- Brown TI, LaRocque KF, **Favila SE**, Carr VA, Gordon AM, Bowles B, & Wagner AD (2015). Prospective representation of navigational events in the human hippocampus. Poster presented at *Society for Neuroscience*, Chicago, IL.
- **Favila SE**, Chanales AJH, & Kuhl BA (2015). Hippocampal pattern separation is tuned by experience for the benefit of future learning. Talk presented at *Manhattan Area Memory Meeting*, Princeton, NJ.
- Brown TI, LaRocque KF, **Favila SE**, Carr VA, Gordon AM, Bowles B, & Wagner AD (2015). Prospective representation of navigational goals in the human MTL. Poster presented *Cognitive Neuroscience Society*, San Francisco, CA.
- **Favila SE**, Chanales AJH, & Kuhl BA (2014). High discrimination demands reduce interference during later learning. Poster presented at *Society for Neuroscience*, Washington, DC.
- Carr VA, Bernstein JD, **Favila SE**, Wagner AD, & Kerchner GA (2013). Individual differences in associative memory among older adults predicted by high-resolution MRI metrics of hippocampal structure and function. Talk presented at *Society for Neuroscience*, San Diego, CA.
- Carr VA, Bernstein JD, **Favila SE**, Wagner AD, & Kerchner GA (2013). High-resolution imaging of medial temporal lobe subfield structure and function in Mild Cognitive Impairment. Poster presented at *Alzheimer's Association International Conference*, Boston, MA.
- Carr VA, **Favila SE**, Arena D, Bailenson JN, & Wagner AD (2012). Modulation of medial temporal lobe activity by reward value during virtual navigation: A high-resolution fMRI study. Talk presented at *Society for Neuroscience*, New Orleans, LA.
- Carr VA, **Favila SE**, Bernstein JD, Wagner AD, & Kerchner GA (2012). Successful associative memory formation and retrieval in healthy older adults is associated with hippocampal subfield activation. Poster presented at *Alzheimer's Association International Conference*, Vancover, BC.
- Carr VA, **Favila SE**, & Wagner AD (2010). High-resolution investigation of relational pattern separation in the medial temporal lobe using a rapid fMR-adaptation approach. Poster presented at *Society for Neuroscience*, San Diego, CA.
- Carr, VA, **Favila SE**, & Wagner AD (2010). High-resolution fMRI of relational pattern separation in the human medial temporal lobe. Poster presented at *Cognitive Neuroscience Society*, Montreal, QC.

## **TEACHING**

Fall 2016	Cognitive Neuroscience — NYU PSYCH–UA 25	Teaching Assistant
Fall 2015	Perception — NYU PSYCH–UA 22	Teaching Assistant

## PROFESSIONAL SOCIETIES

Cognitive Neuroscience Society Society for Neuroscience

## **REVIEWING**

Cerebral Cortex | eLife | Journal of Cognitive Neuroscience