Clara A. Sava-Segal

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Education

2026 Dartmouth College

Ph.D. in Cognitive Neuroscience, Department of Psychological and Brain Sciences

Advisor: Emily S. Finn, Ph.D.

2023 Dartmouth College

Masters of Science in Cognitive Neuroscience

Advisor: Emily S. Finn, Ph.D.

2018 The University of Chicago

Bachelor's in Psychology & Comparative Human Development | Minor: Biology

General Honors & Honors in Psychology Thesis Advisor: Daniel Casasanto, Ph.D.

Thesis: Unconscious Processing of Approximate Number in the Human Visual System

Grants, Fellowships & Funding

F31 Ruth L. Kirschstein Predoctoral Individual NRSA (Role: PI) 2024-2026

"Neural mechanisms of interpretation shifting and memory formation in ambiguous social contexts"

National Institutes of Mental Health (NIMH)

2025 Arts Integration Grant

"Living Interpretations: A Digital Exploration of Ambiguity in Art"

Hopkins Center for the Arts, Dartmouth College

2021-2024 Graduate Research Fellowship (NSF GRFP)

National Science Foundation

2016-2017 Jeff Metcalf Undergraduate Research Fellow

University of Chicago

2014-2018 Presidential Scholar

University of Chicago

Awards & Travel Funding

Dartmouth College, Department of Psychological and Brain Sciences

2024 Outstanding Graduate Student Teacher | Introduction to Neuroscience

Dartmouth Center for Advancement of Learning

2024 Travel Grant | \$350

Psychological and Brain Sciences Department, Dartmouth College

2023 Outstanding Graduate Student Teacher | Introduction to Neuroscience

Dartmouth Center for Advancement of Learning

2022 Citation for Meritorious Performance | Research Presentation (Qualifying Exam)

Psychological and Brain Sciences Department, Dartmouth College

2022 Graduate Student Award Winner

Cognitive Neuroscience Society

2022,2023,2024 Neukom Travel Grant | \$1000

Neukom Institute for Computational Science, Dartmouth College

2018 Psi Chi Research Award Winner 2018 Milgrom Education Impact Fellowship

2017 Crerar Science Writing Prize - 3rd Place

Insight into the Evolutionary Purpose of Memory: Pairing Behavioral and Neurobiological Data

2014-2018 Dean's List, University of Chicago

Preprints

1. Sava-Segal, C., Grall, C., Finn, E.S. (2025) Narrative 'twist' shifts within-individual neural representations of dissociable story features. *bioRxiv*.

Peer-Reviewed Publications

- * Denotes shared authorship; underline indicates trainee
- 1. Salehi, S., Schrouff, J., Dehaqani, M.R.A., **Sava-Segal, C.**, Raccah, O., Baek, S. (2024) Spatiotemporal dynamics of face subcategory information in the human temporal cortex. *Scientific Reports*.
- 2. Pinheiro-Chagas, P., **Sava-Segal, C.***, Akkol, S.*, Daitch, A., Parvizi, J. (2024). Spatiotemporal dynamics of successive activations across the human brain during a simple cognitive task. *Journal of Neuroscience*.
- 3. Sava-Segal, C., Richards, C., <u>Leung, M.</u>, Finn, E.S. (2023). Individual variability in neural event segmentation reflects stimulus content and interpretation. *Cerebral Cortex*.
- 4. Liu, N.*, Pinheiro-Chagas, P.*, **Sava-Segal, C.**, Kastner, S., Chen, Q., Parvizi, J. (2021). Overlapping Neuronal Population Responses in the Human Parietal Cortex during Visuospatial Attention and Arithmetic Processing. *Journal of Cognitive Neuroscience*.
- 5. Veit, M.J., Kucyi, A., Hu, W., Zhang, C., Zhao, B., Guo, Z., Yang, B., Sava-Segal, C., Perry, C., Zhang, J., Zhang, K., Parvizi, J. (2021). Temporal order of signal propagation within and across intrinsic brain networks. *Proceedings of the National Academy of Sciences (PNAS)*.
- 6. Brookshire, G., Mangelsdorf, H., **Sava-Segal, C.**, Perry, C., Zhang, J., Zhang, K., Parvizi, J. (2021). Reis, K., Nusbaum, H., Goldin-Meadow, S., Casasanto, D. (2021). Expertise modulates neural stimulus-tracking in frontal but not occipital cortex. *eNeuro*.
- 7. Parvizi, J., Braga, R., Kucyi, A., Veit, M.J., Pinheiro-Chagas, P., Perry, C.M., Sava-Segal, C., Zeineh, M.M., van Staalduinen, E.K., Henderson, J.M., Markert, M. (2021). Altered Sense of Self During Seizures in the Posteromedial Cortex. *Proceeding of the National Academy of Sciences (PNAS)*.
- 8. Akkol, S., Kucyi, A., Hu, W.H., Zhao, B., Zhang, C., Sava-Segal, C., Liu, S., Razavi, B., Zhang, J., Zhang, K., Parvizi, J. (2021). Intracranial electroencephalography reveals selective task-evoked responses and resting state connectivity of periventricular heterotopias. *Journal of Neuroscience*.
- 9. Vesuna, S.*, Kauvar, I.*, Gore, F., Oskotsky, T., **Sava-Segal, C.**, Henderson, J.M., Nuyujukian, P., Parvizi, J., Deisseroth, K. (2020). Deep posteromedial cortical rhythm underlying dissociation. *Nature*, 586, 87-94.
- 10. Lucero, C., Brookshire, G., **Sava-Segal, C.**, Bottini, R., Goldin-Meadow, S., Vogel, E.K., Casasanto, D. (2020). Unconscious Number Discrimination in the Human Visual System. *Cerebral Cortex*, 30(11), 5821-5829.
- 11. Sun, Y., Liu, X., Li, B., **Sava-Segal, C.**, Wang, A., Zhang, M. (2020). Effects of Repetition Suppression on Sound Induced Flash Illusion with Aging. *Frontiers in Psychology*, 11, 216.
- 12. Wang, A., Sang, H., He, J., Sava-Segal, C., Tang, X., Zhang, M. (2019). The Effects of Cognitive Expectation on Sound-induced Flash Illusion. *Perception*, 48(12), 1214–1234.
- 13. Wang, C.-Z., Hou, L., Wan, J.Y., Yao, H., Yuan, J., Zeng, J., Park, C.-W., Kim, S.H., Seo, D.-B., Shin, K.-S., Zhang, C.-F., Chen, L., Zhang, Q.-H., Liu, Z., Sava-Segal, C., Yuan, C.S. (2018). Ginseng berry polysaccharides on inflammation-associated colon cancer: Inhibiting T cell differentiation, promoting apoptosis, and enhancing the effects of 5-fluorouracil. *Journal of Ginseng Research*, 44(2), 282-290.

- 14. Yao, H., Wan, J.Y., Zeng, J., Huang, W.-H., **Sava-Segal, C.**, Li, L., Niu, X., Wang, Q., Wang, C.-Z., Yuan, C.S. (2018). Effects of compound K, an enteric microbiome metabolite of ginseng, in the treatment of inflammation associated colon cancer. *Oncology Letters*, 15(6), 8339-8348.
- 15. Wang, C.-Z., Yao, H., Zhang, C.-F., Chen, L., Wan, J.Y., Huang, W.-H., Zeng, J., Zhang, Q.-H., Liu, Z., Yuan, J., Bi, Y., Sava-Segal, C., Du, W., Xu, M., Yuan, C.S., (2018). American ginseng microbial metabolites attenuate DSS-induced colitis and abdominal pain. *International Immunopharmacology*, 64:246-251.
- Wan, J.Y., Huang, W.-H., Zheng, W., Park, C.W., Kim, S.H., Seo, D.B., Shin, K.S., Zeng, J., Yao, H.,
 Sava-Segal, C., Wang, C.-Z., Yuan, C.S. (2017). Multiple Effects of Ginseng Berry Polysaccharides: Plasma CholesterolLevel Reduction and Enteric Neoplasm Prevention. American Journal of Chinese Medicine. 45(06), 1293–1307.

Conference Proceedings

- * Denotes shared authorship; underline indicates trainee
- 1. Sava-Segal, C., Finn, E.S. (2024). Self- Versus Other-Generated Interpretations of Ambiguous Social Stimuli are Asymmetrically Remembered. Presented at *Proceedings of the 8th Annual Conference on Cognitive Computational Neuroscience*.
- 2. <u>Benson, T.</u>, **Sava-Segal, C.**, Finn, E.S. (2024). Valence, but Not Content, of Narrative Interpretations of Naturalistic Stimuli are Predicted by Personality Traits. Presented at *Proceedings of the 8th Annual Conference on Cognitive Computational Neuroscience*.

Invited and Conference Talks

- 1. Sava-Segal, C., Benson, T., Igbalajobi, D., Finn, E.S. (March, 2025). Within-individual neural patterns differ for memories of self- and other-generated interpretations of the same stimuli. Data Blitz to be presented at *Cognitive Neuroscience Society*, Boston, MA.
- 2. Sava-Segal, C., Benson, T., Finn, E.S. (Oct. 2024). Nanosymposium on Neural Bases of Human Social Cognition and Connection, Society for Neuroscience (SfN). Real-world social inputs trigger shifts in neural activity patterns and reinterpretations of ambiguous stimuli.
- 3. Sava-Segal, C. (April. 2024). Invited Lab Meeting, Section on Learning and Plasticity (PI Chris Baker) NIH. Cognitive and neural mechanisms underlying the subjective interpretations of complex experiences.
- 4. Sava-Segal, C. (Jan. 2024). Invited Lab Meeting, IMPACT Lab (PI Chujin Lin), UCSD. Cognitive and neural mechanisms underlying the subjective appraisal of complex experiences.
- 5. Sava-Segal, C. Grall, C., Bartolino, K., Equita, J., Benson, T., Finn, E.S. (July 2023). Oral Presentation at Organization of Human Brain Mapping, Montreal, CA. Narrative 'twists' shift neural representations.
- 6. Sava-Segal, C. (November 2022). Invited Lab Meeting Baldassano and Aly Lab Meeting at Columbia University, NY. Individual variability in neural event segmentation reflects stimulus content and interpretation.
- 7. Sava-Segal, C. (March 2022). Invited Lab Meeting Whifield-Gabrieli Lab at Northeastern U., Boston, MA. Individual variability in neural event segmentation reflects stimulus content and interpretation.
- 8. Sava-Segal, C. (August 2021). Invited Lab Meeting University of Chicago Psychology Dept., Chicago, IL. Exploring Idiosyncrasies in the Appraisal of Naturalistic Events.

Department Talks

- 1. Sava-Segal, C.* (July 2024). Cognitive Brown Bag Talk Series at Dartmouth College, NH. Narrative 'twist' shifts neural representations.
- 2. Sava-Segal, C.* (April 2023, May 2023). Cognitive Brown Bag Talk Series and Social Area Talk Series at Dartmouth College, NH. Shifting interpretations of ambiguous naturalistic images.
- 3. Sava-Segal, C.* (August 2022). Text Analysis (Natural Language Processing) Meeting at Dartmouth College, Hanover, NH. (Re)appraisal of ambiguous stimuli.

Academic Posters

*Denotes presenter; underline indicates trainee

- 1. Sava-Segal, C., Benson, T., Igbalajobi, D., Finn, E.S. (2025). Within-individual neural patterns differ for memories of self- and other-generated interpretations of the same stimuli. To be presented at *Cognitive Neuroscience Society*, Boston, MA.
- 2. Sava-Segal, C., Finn, E.S. (2024). Self- Versus Other-Generated Interpretations of Ambiguous Social Stimuli are Asymmetrically Remembered. Presented at *Proceedings of the 8th Annual Conference on Cognitive Computational Neuroscience*, Boston, MA.
- 3. Benson, T., Sava-Segal, C., Finn, E.S. (2024). Valence, but Not Content, of Narrative Interpretations of Naturalistic Stimuli are Predicted by Personality Traits. Presented at *Proceedings of the 8th Annual Conference on Cognitive Computational Neuroscience*, Boston, MA.
- 4. Sava-Segal, C.*, Benson, T., Finn, E.S. (2024). Multivariate neural pattern changes reflect within-subject shifts in subjective interpretations. Presentation accepted at *Organization for Human Brain Mapping*, Seoul, Korea.
- 5. Sava-Segal, C.*, Benson, T., Finn, E.S. (2024). Multivariate neural pattern changes reflect within-subject shifts in subjective interpretations. Presentation at *Social Affective Neuroscience Society*, Toronto, CA.
- 6. <u>Benson, T.</u>, **Sava-Segal, C.***, Finn, E.S. (2024). Positive or ruminative: How traits shape sentiment and appraisal of ambiguous stimuli. Presentation at *Society for Personality and Social Psychology*, San Diego, CA.
- 7. Uruñuela, E., Sava-Segal, C.*, <u>Leung, M.</u>, Finn, E.S., Caballero-Gaudes, C. (2023). A Multi-Subject Deconvolution Algorithm for the Analysis of Naturalistic fMRI Data. Presentation at *ISMRM Iberian Chapter 3rd Annual Meeting*.
- 8. Sava-Segal, C.*, Grall, C., Bartolino, K., Bloch, E., Equita, J., Benson, T., Finn, E.S. (2023). Narrative 'twists' shift neural representations. Presentation at Organization of Human Brain Mapping, Montreal, CA.
- 9. Sava-Segal, C.*, Finn, E.S. (2023). Shifting interpretations of multistable, "naturalistic" stimuli. Presentation at Cognitive Neuroscience Society, San Francisco, CA.
- 10. Sava-Segal, C.*, Finn, E.S. (2022). Individual variability in neural event segmentation reflects stimulus content and interpretation. Presentation at the *Organization of Human Brain Mapping*, Glasgow, UK.
- 11. Sava-Segal, C.*, Zhang, C., Zhao, B., Kucyi, A., Tao, A., Ko, H.J., Yih, J., Parvizi, J. (2022). Direct cortical recordings in the human brain during race categorization of faces. Presentation at *Cognitive Neuroscience Society*, San Francisco, CA.
- 12. Pinheiro-Chagas, P., Sava-Segal, C., Akkol, S., Braga, R., Daitch, A., Parvizi, J. (2022). Successive ignition of cortical sites across the human brain during arithmetic processing. Presentation at *Cognitive Neuroscience Society*, San Francisco, CA.
- 13. **Sava-Segal, C.***, Finn, E.S. (2021). Exploring the role of event boundaries in idiosyncratic memory formation. Presentation at the *Organization of Human Brain Mapping*, virtual.

- 14. Brookshire, G.*, Mangelsdorf, H.H., **Sava-Segal, C.**, Reis, K., Nusbaum, H., Goldin-Meadow, S., Casasanto, D. (2021). Expertise modulates neural tracking of dance and sign language. Poster presented at 2021 meeting of the Cognitive Science Society.
- 15. Rauschecker, A., Sava-Segal, C.*, Liu, S., Na, R., Raccah, O., Parvizi, J. (2020). (2021). Effects of stimulus properties and task on electrophysiological dynamics in the human visual word form area. Presentation at *Cognitive Neuroscience Society* (virtual), Boston, MA.
- 16. Pinheiro-Chagas, P.*, Sava-Segal, C., Akkol, S., Daitch, A. L., Parvizi, J. (2019). Spatiotemporal dynamics of arithmetic processing in the human brain. Presentation at *Society for Neuroscience*, Chicago, IL.
- 17. Braga, R.B.*, **Sava-Segal, C. A.**, Poldrack, R. A., Parvizi, J. (2019). Fast temporal characterization of distributed association networks within the individual using intracranial recording and repeated sampling functional MRI. Presentation at *Society for Neuroscience*, Chicago, IL.
- 18. Sava-Segal, C.*, Lucero, C., Casasanto D. (2018). Unconscious Processing of Approximate Number in the Human Visual System. Poster presented at *Ninetieth Annual Midwestern Psychological Association*, Chicago, IL.
- 19. Sava-Segal, C.*, Lucero, C., Casasanto D. (2018). Unconscious Processing of Approximate Number in the Human Visual System. Poster presented at *Chicago Area Undergraduate Research Symposium*, Chicago, IL.
- 20. Sava-Segal, C.*, Lucero, C., Casasanto D. (2018). Using Steady-State Visually Evoked Potentials to Determine a Neural Basis for the Unconscious Processing of Approximate Number Sense. Poster presented at *UCISTEM Undergraduate Research Symposium*, Chicago, IL.

Relevant Research Training

PI: Jay Van Bavel, PhD

2020-Present	Graduate Student Functional Imaging & Naturalistic Neuroscience Lab Psych. & Brain Sciences Dept. Dartmouth College PI: Emily Finn, PhD
2018-2020	Lab Manager/Research Assistant Lab. of Behavioral & Cognitive Neuroscience Neurology Dept. Stanford University PI: Josef Parvizi, MD, PhD
2015-2018	Undergraduate Research Assistant Experience & Cognition Lab Department of Psychology University of Chicago PI: Daniel Casasanto, PhD
2017-2018	Undergraduate Research Assistant Awh Vogel Lab Department of Psychology/ Institute of Mind and Biology University of Chicago Pls: Edward Vogel, PhD & Edward Awh, PhD
2017-2018	Undergraduate Research Assistant Parkinsonian & Neurodegenerative Diseases Lab Neurology Dept., University of Chicago PI: Christopher Gomez, MD, PhD
2016-2018	Medical Editor/Research Assistant Department of Anesthesia & Critical Care University of Chicago PIs: Chun-Su Yuan, MD & Chong-Zhi Wang, PhD
Sept-Dec '16	Research Intern Perception & Action Group, Institut Neurosciences Cognition Université Paris Descartes PI: Véronique Izard, PhD
July-Sept '15	Summer Research Assistant Social Perception & Evaluation Lab Psychology Dept NYU

Additional Research Training

2022	Neurohackademy	Seattle,	WA
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Neuromatch Academy, Computational Neuroscience Course | Virtual
 Conte Center for Active Sensing Retreat | Columbia University, NYC

Academic Teaching Experience

*Denotes full course design and lecturing

2025, Winter Study Leader | Diverse Minds: What We Know and Don't Know About Psychiatric

Disorders and Dementias 1*

Osher Lifelong Learning Institute, Dartmouth College

2024, Spring Study Leader | Brain and Behavior 2 – How do we process the world around us?*

Osher Lifelong Learning Institute, Dartmouth College

2023, Fall Teaching Assistant | PSYC 6: Introduction to Neuroscience

Guest Lecture: Molecular mechanisms of memory Awarded: Outstanding Graduate Student Teacher

2023, Winter Teaching Assistant | PSYC 6: Introduction to Neuroscience

Guest Lecture: The resting brain, attention, and consciousness

Awarded: Outstanding Graduate Student Teacher

2023, Winter Study Leader | Brain and Behavior – How are they linked?*

Osher Lifelong Learning Institute, Dartmouth College

2022, Fall Study Leader | Brain and Behavior – How are they linked?*

Osher Lifelong Learning Institute, Dartmouth College

2022, Fall Teaching Assistant | PSYC 6: Introduction to Neuroscience

Guest Lecture: Memory systems

Guest Lecture: Molecular mechanisms of Learning and Memory

2022, Spring Teaching Assistant | PSYC 11: Experimental Psychology

Department of Psychological and Brain Sciences, Dartmouth College

2018 Teaching Assistant | Core Biology: Neurobiology

University of Chicago

Academic Service

2022-Present Member | Survey Committee (Dartmouth PBS)

2022-2024 Co-organizer | Cognitive Brown Bag Talk Series (Dartmouth PBS)

External Service & Community Teaching Experience

*hover for relevant links

2020-Present	Mentor	Project SHORT
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2022 Judge | New Hampshire Science and Engineering Fair

2021, 2022 Teacher | Skype a Scientist (zoom)

2021 Guest Speaker | Women in Science Club | Stuyvesant High School, NYC (zoom)

2021 Guest Speaker | Global Youth Economics Symposium | Hunter High School, NYC (zoom)

2019-2020 Teacher | Chicago and Stanford Splash

Course 1. How do Humans Learn; Course 2: Introduction to the Mind

2019-2020 Mentor | San Jose High School (iMentor Bay Area)

2017-2018 Milgrom Education Impact Fellow | Gary Comer College Prep

2015-2018 Leadership Council Member | University of Chicago Careers in Education

2015-2016 Corps Member | Jumpstart Early Childhood Program

Educational Material Development

Pre-Grad Resource Development Subcommittee Member | Project SHORT 2020-2023 Content Creator | OCEANA 2017-2019 Optimization of the Capabilities to Engage and Acquire, using Neuroscientific methods Donders Institute for Brain, Cognition and Behavior

> App Developer | iOS Education App Microbiology *sold

Reviewing

2016-2019*

Journals - Imaging Neuroscience; Behavioral Neuroscience; Conferences - Proceedings on Cognitive Computational Neuroscience (CCN); Society for Personality and Social Psychology (SPSP)

Mentorship

2024-Present	Eli Bailit Undergraduate Research Assistant Fellowship(s): Undergraduate Research Assistantship (UGAR; 2 terms)
2024-Present	David Igbalajobi Undergraduate Research Assistant
2024-Present	Isaac Wells Undergraduate Research Assistant
2022-Present	Sofia Yawand-Wossen Undergraduate Research Assistant (Thesis Student) Fellowship(s): Undergraduate Research Assistantship (UGAR; 3 terms)
2022-2024	Tory Benson Full-time Research Assistant/ Lab Manager Project: Valence, but Not Content, of Narrative Interpretations of Naturalistic Stimuli are Predicted by Personality Traits
2022-2024	Evan Bloch Undergraduate Research Assistant (Thesis Student) Project: People with higher depressive tendencies are more idiosyncratic in their event boundaries Fellowship(s): Undergraduate Research Assistantship (UGAR; 4 terms)
2021-2024	Megan Leung Undergraduate Research Assistant Fellowship(s): James O. Freedman Presidential Scholar (3 terms); Undergraduate Research Assistantship (UGAR; 2 terms)
2023	Robin Sandell Post-Grad Research Assistant
2022	Payton Weiner Undergraduate Research Assistant Fellowship(s): Undergraduate Research Assistantship (UGAR; 2 terms)

Technical and language skills

• Programming:

- Extensive experience with Python, MATLAB, R, JsPsych
- Experience with JavaScript, HTML

Neuroscience and Psychology:

- Extensive experience with fMRI, iEEG data collection and analysis
- Experience with intracranial electrical stimulation, scalp EEG, eye tracking
- Additional: TMS training, wet lab, and animal handling techniques

· Language:

- Bilingual Proficiency: English, Romanian
- Professional Working Proficiency: Spanish, French
- Elementary Working Proficiency: German