Clara A. Sava-Segal

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Education

2020-Present **Dartmouth College**
PhD, Cognitive Neuroscience
MS, Cognitive Neuroscience
Department of Psychological and Brain Sciences
Advisor: Emily S. Finn, PhD

2018 **The University of Chicago**
Bachelor's in Psychology & Comparative Human Development | Minor: Biology
General Honors & Honors in Psychology
Thesis Advisor: Daniel Casasanto, PhD
Thesis: Unconscious Processing of Approximate Number in the Human Visual System

Grants, Fellowships & Funding

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

2024 **Marie A. Center 1982 Award for Excellence in Teaching**
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 dissociablet 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., Leung, M., 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.

16. 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. 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.*

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 presented at *Cognitive Neuroscience Society*, Boston, MA.

2. **Sava-Segal, C.** (Feb., 2025). Invited Lab Social Connection Lab (PI – Elisa Baek), University of Southern California (virtual). *Individual differences in event segmentation of continuous experiences - methodological considerations.*

3. **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.*

4. **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.*

5. **Sava-Segal, C.** (Jan. 2024). Invited Lab Meeting, IMPACT Lab (PI - Chujin Lin), UCSD (virtual). *Cognitive and neural mechanisms underlying the subjective appraisal of complex experiences.*

6. **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.*

7. **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.*

8. **Sava-Segal, C.** (March 2022). Invited Lab Meeting – Whifield-Gabrieli Lab at Northeastern U., Boston, MA. (virtual) *Individual variability in neural event segmentation reflects stimulus content and interpretation.*

9. **Sava-Segal, C.** (August 2021). Invited Lab Meeting University of Chicago Psychology Dept., Chicago, IL. (virtual) *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. 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 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. Benson, T., **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.***, Leung, M., 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

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
PIs: 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
PI: Jay Van Bavel, PhD

Additional Research Training

2022 **Neurohackademy** | Seattle, WA

2021 **Neuromatch Academy, Computational Neuroscience Course** | Virtual

2019 **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

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

2020-2023 **Pre-Grad Resource Development Subcommittee Member** | Project SHORT

2017-2019 **Content Creator | OCEANA**
Optimization of the Capabilities to Engage and Acquire, using Neuroscientific methods
Donders Institute for Brain, Cognition and Behavior

2016-2019* **App Developer | iOS Education App Microbiology**
**sold*

Reviewing

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