

# Lauren S. Aulet

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**Assistant Professor**, University of Massachusetts Amherst Fall 2025 – Present  
Department of Psychological and Brain Sciences  
Primary Appointment: Cognition and Cognitive Neuroscience Area  
Secondary Appointments: Developmental Science Area; Neuroscience & Behavior Program

## Education

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<b>Carnegie Mellon University</b> President's Postdoctoral Fellow Advisors: Dr. Jessica Cantlon	2021 - 2025
<b>Emory University</b> Ph.D. in Psychology (Cognition and Development) Advisor: Dr. Stella Lourenco	2015 - 2021
<b>State University of New York at Geneseo</b> B.A. in Psychology, <i>magna cum laude</i> Minors: Cognitive Science and Philosophy Edgar Fellows Honors Program	2010 - 2014

## Publications (Journal articles, chapters, and proceedings)

\*indicates shared authorship

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- Aulet, L. S.\***, Kersey, A. J.\*, & Cantlon, J. F. (2026). Number words recruit numerosity-related cortex in 3- to 5-year-old children. *Developmental Cognitive Neuroscience*.
- Aulet, L. S.**, & Cantlon, J. F. (2025). Segmentation as a bottleneck in numerical cognition. *Scientific Reports*, *15*(1), 42777.
- Aulet, L. S.**, Kaicher, C. M., & Cantlon, J. F. (2025). Intersection of spatial and numerical cognition in the developing brain. *Cerebral Cortex*, *35*(6), bhaf126.
- Aulet, L. S.** & Lourenco, S. F. (2023). Visual adaptation reveals non-opponent multichannel coding for numerosity. *Frontiers in Psychology*, *14*, 1125925.
- Aulet, L. S.** & Lourenco, S. F. (2022). No intrinsic number bias: evaluating the role of perceptual discriminability in magnitude categorization. *Developmental Science*, e13305.
- Lourenco, S. F. & **Aulet, L. S.** (2022). A theory of perceptual number encoding. *Psychological Review*, *130*(1), 155.
- Aulet, L. S.** & Lourenco, S. F. (2021). Perceived number is not abstract. *Behavioral and Brain Sciences*, *44*, E179.
- Aulet, L. S.**, Yousif, S. R., & Lourenco, S. F. (2021). Spatial-numerical associations from a novel paradigm support the Mental Number Line account. *Quarterly Journal of Experimental Psychology*, *74*, 1829–1840
- Aulet, L. S.** & Lourenco, S. F. (2021). The relative salience of numerical and non-numerical dimensions shifts over development: A reply to Tomlinson, DeWind, and Brannon (2020). *Cognition*, *210*, 104610.

- Aulet, L. S.** & Lourenco, S. F. (2021). Numerosity and cumulative surface area are perceived holistically as integral dimensions. *Journal of Experimental Psychology: General*, 150, 145 – 156.
- Aulet, L. S.**, Chiu, V. C., Prichard, A., Spivak, M., Lourenco, S. F., & Berns, G. S. (2019). Canine sense of quantity: evidence for numerical ratio-dependent activation in parietotemporal cortex. *Biology Letters*, 15, 20190666.
- Lourenco, S. F. & **Aulet, L. S.** (2019). Cross-magnitude interactions across development: Longitudinal support for a general magnitude system. *Developmental Science*, 22, e12707.
- Aulet, L. S.** & Lourenco, S. F. (2018). The developing mental number line: Does its directionality relate to 5- to 7-year-old children's mathematical abilities? *Frontiers in Psychology*, 9, 1142.
- Lourenco, S. F., Cheung, C., & **Aulet, L. S.** (2018). Is visuospatial reasoning related to early mathematical development? A critical review. In: Henik A and Fias W, eds. *Heterogeneity of Function in Numerical Cognition*. San Diego: Academic Press, 2018: 177-209.
- Aulet, L. S.**, Yousif, S. R., & Lourenco, S. F. (2017). Numbers uniquely bias spatial attention: A novel paradigm for understanding spatial-numerical associations. In G. Gunzelmann, A. Howes, T. Tenbrink, & E. J. Davelaar (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 75-80). Austin, TX: Cognitive Science Society.
- Lourenco, S. F., **Aulet, L. S.**, Ayzenberg, V., Cheung, C. -N., & Holmes, K. J. (2017). Right idea, wrong magnitude system. *Behavioral and Brain Sciences*, 40, e177.

### **Manuscripts under review and in preparation**

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- Aulet, L. S.** (revision under review). Before the number sense: A multi-stage framework for naturalistic number perception. *Psychonomic Bulletin & Review*.
- Gaudette, L. M., Olmez, J. L., & **Aulet, L. S.** (revision under review). Registered Report: Children's visual perspective taking in the absence of egocentric response lures. *Developmental Psychology*.
- Gacetta, E. B., Laws, M. L., **Aulet, L. S.**, Ozyadin, T. S., Tsay, J. S., Mahon, B. Z., Zapanta, C., & Cantlon, J. F. (revision under review). Naturalistic spatial education engages distinct neural networks for mental rotation, cognitive load, and linguistic demands. *Proceedings of the National Academy of Sciences*.
- Aulet, L. S.** (revision under review). Dot array stimulus toolbox: An open-source solution for generating and analyzing non-symbolic number stimuli. [[PsyArXiv](#)]. *Behavioral Research Methods*.
- Aulet, L. S.** (under review). Counting training creates number-biased representations in deep neural networks. *Cognitive Science*.
- Laws, M. L., Gacetta, E. B., Ozyadin, T. S., **Aulet, L. S.**, & Cantlon, J. F. (under review). Spatial visualization training closes cognitive and neural gaps between learners via parietal plasticity. *Nature Human Behaviour*.
- Aulet, L. S.** & Cantlon, J. F. (in prep). Children show adult-like mental rotation activation with distinct functional connectivity.
- Aulet, L. S.** (in prep). Recycling and co-option are dissociable mechanisms of cortical reorganization.

## Awards, Honors, and Research Support

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Carnegie Mellon University Presidential Postdoctoral Fellowship (PPFP)	2021 – 2023
Simon Innovation Fund, Carnegie Mellon University	2022
Center for Minds, Brands, and Machines (CBMM) Summer Course	2021
FoVea Travel and Networking Award	2020
Elsevier/Vision Research Travel Award (Vision Sciences Society)	2020
National Institute of Health (NIH) T32 Training Fellowship	2017 – 2020
Cognitive Development Society – Diversity Travel Award	2017
National Science Foundation Graduate Research Fellowship Program – Honorable Mention	2016
Emory Diversity Graduate Fellowship	2015 – 2021

## Invited Talks

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UMass Amherst, Department of Psychological and Brain Sciences (Cognitive Area)	February 2026
UMass Amherst, NeuroSalon	December 2025
UMass Amherst, Human Magnetic Resonance Center	November 2025
UMass Amherst, Department of Psychological and Brain Sciences (Developmental Area)	October 2025
Temple University, Department of Psychology	February 2024
UMass Amherst, Department of Psychological and Brain Sciences (Cognitive Area)	December 2023
Colgate University, Department of Psychological and Brain Sciences	November 2023
Carnegie Mellon University, Department of Psychology	January 2023
Haskins Laboratories, LLAMB (Language, Learning, and Multisensory Brain) Laboratory	July 2022
Carnegie Mellon University, Visual Cognition Group	September 2021
INSERM-CEA, Cognitive Neuroimaging Lab (UNICOG), NeuroSpin	March 2021
Johns Hopkins University, Perception & Mind Laboratory	March 2021
George Washington University, Department of Psychology	February 2021
University of Iowa, Department of Psychology	November 2020
Emory University, Department of Psychology (Cognition & Development Program)	November 2018

## Teaching Experience

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### Course Instructor

PSYC 391 Brains, Minds, and Machines	Fall 2026
PSYC 891 Cognitive and Neural Development	Spring 2026
PSYC 315H/615 Honors Cognitive Psychology	Fall 2025
PSYC 730 – Mechanisms of Learning Pro-Seminar (Co-Instructor), Emory University	2018 – 2019
PSYC 200W – Lab in Experimental Methods, Emory University	Fall 2017

### Teaching Assistant

PSYC 111 – Introduction to Psychology, Emory University. Instructor: Dr. Sara Botto	Spring 2021
PSYC 209 – Perception and Action, Emory University. Instructor: Dr. Lynne Nygaard	Fall 2019
PSYC 310 – Cognitive Development, Emory University. Instructor: Dr. Stella Lourenco	Fall 2016, 2018
PSYC 111 – Introduction to Psychology, Emory University. Instructor: Dr. Zainab Delawalla	Spring 2017
PSYC 100 – Introductory Psychology, SUNY Geneseo, Instructor: Dr. Steven Kirsh	Fall 2013

### Guest Lecturer

PSYC 110 – Introduction to Psychology, Emory University. Instructor: Dr. Andrew Kazama	Fall 2017
PSYC 310 – Cognitive Development, Emory University. Instructor: Dr. Stella Lourenco	Fall 2016 – 2019
PSYC 111 – Introduction to Psychology, Emory University. Instructor: Dr. Elizabeth Kim	March 2016

### SAT/ACT & GRE Instructor

Kaplan Test Prep	October 2014 – September 2015
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### Outreach and Mentorship

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Cognitive Development Society – Mentorship Program	2025 - Present
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Atlanta Science Festival	2017 – 2020
Fernbank Museum – Adventures in Science Day	2016 – 2020
Jane Goodall’s Roots & Shoots – Toomer Elementary School (Atlanta, GA)	2015 – 2016
Association for Psychological Sciences Student Caucus (APSSC) Mentorship Program	2014 – 2015
Huffington Post Girls in STEM Mentorship Program	2013

### **Adhoc Reviewer**

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*Animal Cognition, Cognition, Cognitive Processing, Cognitive Psychology, Cognitive Science, Communications Biology, Developmental Cognitive Neuroscience, Developmental Psychology, IEEE: Transactions on Cognitive and Developmental Systems, Journal of Cognition and Development, Journal of Cognitive Psychology, Journal of Experimental Child Psychology, Journal of Experimental Psychology: Learning, Memory, and Cognition, Journal of Experimental Psychology: General, Journal of Neuroscience, Journal of Numerical Cognition, Nature Communications, Neuroimage, Proceedings of the Cognitive Sciences Society, Proceedings of the Royal Society B, Psychonomic Bulletin & Review.*