

# Lisa Feigenson

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## **APPOINTMENTS**

- 2023 - *Chair*, Department of Psychological and Brain Sciences,  
Johns Hopkins University, Baltimore, MD
- 2015 - 2023 *Director of Graduate Studies*, Department of Psychological and Brain Sciences,  
Johns Hopkins University, Baltimore, MD
- 2014 - *Professor*, Department of Psychological and Brain Sciences,  
Johns Hopkins University, Baltimore, MD
- 2010 - 2014 *Associate Professor*, Department of Psychological and Brain Sciences,  
Johns Hopkins University, Baltimore, MD
- 2006 - *Joint Appointment* in the Department of Cognitive Science,  
Johns Hopkins University, Baltimore, MD
- 2004 - 2010 *Assistant Professor*, Department of Psychological and Brain Sciences,  
Johns Hopkins University, Baltimore, MD
- 2003 – 2004 *Postdoctoral Fellow*, Laboratoire de Sciences Cognitives et Psycholinguistique,  
Ecole Normale Supérieure, CNRS, Paris, France
- 2001 – 2003 *Visiting Graduate Student Fellow*, Department of Psychology  
Harvard University, Cambridge, MA

## **EDUCATION**

- 2003 New York University Ph.D. in Cognitive Psychology  
Advisor: Susan Carey
- 1997 Cornell University B.A. in Psychology, *Summa cum laude*  
Advisor: Elizabeth Spelke

## **AWARDS AND HONORS**

- 2024 Elected Fellow, Society for Experimental Psychology
- 2016 Johns Hopkins University Dean's Award for Excellence in Teaching and Service
- 2015 National Academy of Sciences Troland Research Award
- 2014 Finalist, Johns Hopkins University Excellence in Teaching Award
- 2013 Finalist, Johns Hopkins University Excellence in Teaching Award
- 2011 Johns Hopkins University Dean's Award for Excellence in Scholarship
- 2010 Boyd McCandless Early Career Award, American Psychological Association
- 2007 James S. McDonnell Foundation Scholar Award
- 2005 Finalist, Johns Hopkins University Excellence in Teaching Award

2003	Fyssen Foundation Post-doctoral Fellowship Award
2003	Certificate of Distinction in Teaching, Harvard University
2002	Certificate of Distinction in Teaching, Harvard University
2001	Martin Braine Memorial Fellowship, Department of Psychology, New York University
2000	Fellowship to the Summer Institute in Cognitive Neuroscience, Dartmouth, NH
1998	National Science Foundation Graduate Fellowship
1997	Henry Mitchell MacCracken Graduate Fellowship Prize, New York University
1997	Thomas A. Ryan Undergraduate Research Prize in Psychology, Cornell University

## **GRANT SUPPORT**

“Understanding error-driven learning in infancy and early childhood”

NSF 2044433

Principal Investigator: Lisa Feigenson

Funded Period: 7/2022- 6/2025

Total costs: \$649,999

“Collaborative research: A multi-lab investigation of the conceptual foundations of early number development”

NSF 2201966

Principal Investigator: David Barner, UCSD

Funded Period: 9/2021- 8/2026

Total costs: \$1,165,082

## **Completed**

“The role of surprise in enhancing early learning”

NIH R21 HD077407

Principal Investigator: Lisa Feigenson

Funded Period: 9/2014- 9/2016

Total costs: \$445,500

Scored 1.0 percentile

“Indexing Crazy 8s: Measuring the Effects of an Extended Extra-Curricular Math Experience on Children’s Math Attitudes and Performance”

Overdeck Family Foundation

Principal Investigator: Lisa Feigenson

Funded period: 9/2014-8/2017

Total costs: \$566,965

“Creating communities of learners for informal cognitive science education”

NSF 1113648

PI: Rebecca Kipling, Boston Museum of Science

Funded Period: 8/2011-7/2014

Total costs: \$1,736,685

Sub-award to JHU: \$89,697

“Spatial localization through learning: An information theoretic approach”

JHU Science of Learning Research Award

PI: Jonathan Flombaum; Co-PIs: Lisa Feigenson and Bruno Jedynak

Funded Period: 6/2013-5/2015

Total costs: \$120,000

“Development and function of nonverbal number approximation”

NIH R01 HD057258

Co-Investigators: Lisa Feigenson and Justin Halberda

Funded Period: 5/2009-4/2014

Total costs: \$1,607,363

Scored 0.3 percentile

“Developmental origins of hierarchically-organized mental representations”

James S. McDonnell Foundation Scholar Award

Principal Investigator: Lisa Feigenson

Funded period: 9/2007-8/2013

Total costs: \$600,000

“Development of short-term memory: Chunking in infancy”

NIH R03 HD054416

Principal Investigator: Lisa Feigenson

Funded Period: 9/2007-8/2009

Total costs: \$164,000

“Summer Research Experience for Students and Science Educators”

NIH 3R01 HD507258—01A2S2

Co-Investigators: Lisa Feigenson and Justin Halberda

Funded Period: 5/2010-9/2010

Total costs: \$6,396

“Summer Research Experience for Students and Science Educators”

NIH 3R01 HD507258—01A2S1

Co-Investigators: Lisa Feigenson and Justin Halberda

Funded Period: 6/2009-10/2009

Total costs: \$6,396

**Sponsored Grants**

Federal:

“Mechanisms for enhancing early learning”

NSF 17 Graduate Research Fellowship

Awarded to Jasmin Perez

Funded Period: 2017-2020

“Role of visual experience in numerical processing”

NSF 14 Graduate Research Fellowship

Awarded to Shipra Kanjlia (co-sponsors Marina Bedny and Lisa Feigenson)

Funded Period: 2014-2017

“Violation of expectation and its role in infant learning”

NSF 11 Graduate Research Fellowship

Awarded to Aimee Stahl (sponsor Lisa Feigenson)

Funded Period: 2011-2014

“Logical reasoning in human infants”

NSF 06-592 Graduate Research Fellowship

Awarded to Mariko Yamaguchi (co-sponsors Lisa Feigenson, Justin Halberda)

Funded Period: 2006-2009

University:

“Do violations of social expectations shape infants learning?”

Provost’s Undergraduate Research Award

Awarded to Joanna Zhou, JHU undergraduate; Faculty research sponsor Lisa Feigenson

Funded Period: 2023-24

Total costs: \$3000

“Temporal characteristics of the surprise-induced enhancement of learning effect in preschool-aged children”

Provost’s Undergraduate Research Award

Awarded to Spandana Mandalaju, JHU undergraduate; Faculty research sponsor Lisa Feigenson

Funded Period: 2016

Total costs: \$2500

“Heterogeneous object arrays increase working memory capacity in 7-month old infants”

Provost’s Undergraduate Research Award

Awarded to Arin Tuerk, JHU undergraduate; Faculty research sponsor Lisa Feigenson

Funded Period: 2007

Total costs: \$3000

“Use of chunking to increase spatial working memory capacity in preschool-aged children”

Provost’s Undergraduate Research Award

Awarded to Karen Ho, JHU undergraduate; Faculty research sponsor Lisa Feigenson

Funded Period: 2012

Total costs: \$790

## **REFEREED JOURNAL ARTICLES**

† = student or post-doctoral author

Stahl, A.E. & Feigenson, L. (2024). Young children distinguish the impossible from the merely improbable. *Proceedings of the National Academy of Sciences*.

Cao, Q. † & **Feigenson, L.** (2024). Children’s understanding of coincidences. *Cognition*.

Stahl, A.E., Pareja, D. † & **Feigenson, L.**, (2023). Early understanding of ownership helps infants efficiently organize objects in memory. *Cognitive Development*, 65, 101274.

Wang, J. † & **Feigenson, L.**, (2023). What aspects of counting help infants attend to numerosity? *Infancy*, 28 (2), 218-239.

Smith-Flores, A.S. † & **Feigenson, L.** (2022). “Yay! Yuck!” Toddlers use others’ emotional responses to reason about hidden objects. *Journal of Experimental Psychology*, 221, 105464.

Smith-Flores, A.S. †, Perez, J. †, Zhang, M.H. †, & **Feigenson, L.** (2022). Online measures of looking and learning in infancy. *Infancy*, 27(1), 4-24.

Perez, J. † & **Feigenson, L.** (2021). Violations of expectation trigger infants to search for explanations. *Cognition*, 218, 104942.

Perez, J. † & **Feigenson, L.** (2021). Stable individual differences in infants’ responses to violations of intuitive physics. *Proceedings of the National Academy of Sciences*, 118 (27).

Smith-Flores, A. † & **Feigenson, L.** (2021). Preschoolers represent others’ false beliefs about emotions. *Cognitive Development*, 101081.

Kanjlia, S. †, **Feigenson, L.**, & Bedny, M. (2021). Neural basis of approximate number in congenital blindness. *Cortex*, 142, 342-356.

Wang, J. † & **Feigenson, L.**, (2021). Dynamic changes in numerical acuity in 4-month-old infants. *Infancy*, 26(1), 47-62.

Wang, J. †, Halberda, J., & **Feigenson, L.** (2021). Emergence of the link between the Approximate Number System and symbolic math ability. *Child Development*, 92(2), e186-e200.

- Silver, A.M.<sup>†</sup>, Stahl, A.E., Loitiole, R.<sup>†</sup>, Smith, A., & **Feigenson, L.** (2020). When not choosing leads to not liking: choice-induced preferences in infancy. *Psychological Science*, 31(11), 1422-1429.
- Libertus, M.E.<sup>†</sup>, Odic, D.<sup>†</sup>, **Feigenson, L.**, & Halberda, J. (2020). Effects of visual training of approximate number sense on auditory number sense and school math ability. *Frontiers in Developmental Psychology*.
- Wang, J.<sup>†</sup> & **Feigenson, L.**, (2019). Is empiricism innate? Bias for nurture over nature in people's beliefs about the origins of human knowledge. *Open Mind*, 3, 89-100.
- Wang, J.<sup>†</sup> & **Feigenson, L.**, (2019). Infants recognize counting as numerically relevant. *Developmental Science*, 22(6), e12805.
- Elliott, L.E.<sup>†</sup>, Halberda, J., **Feigenson, L.**, & Libertus, M.E. (2019). Bidirectional, Longitudinal Associations between Math Ability and Approximate Number System Acuity in Childhood. *Journal of Cognition and Development*, 20(1), 56-74.
- Stahl, A.E.<sup>†</sup> & **Feigenson, L.** (2019). Violations of core knowledge shape early learning. *Topics in Cognitive Science*, 11(1), 136-153.
- Wang, J.<sup>†</sup>, Libertus, M.E., & **Feigenson, L.**, (2018). Hysteresis-induced changes in preverbal infants' approximate number precision. *Cognitive Development*, 47, 107-116.
- Kanjlia, S.<sup>†</sup>, Lane, C.<sup>†</sup>, **Feigenson, L.**, & Bedny, M. (2018). Numerical cognition is resilient to dramatic changes in early sensory experience. *Cognition*, 179, 111-120.
- Stahl, A.E.<sup>†</sup> & **Feigenson, L.** (2018). Infants use linguistic group distinctions to chunk items in memory. *Journal of Experimental Child Psychology*, 172, 149-167.
- Libertus, M.E.<sup>†</sup>, Halberda, J., & **Feigenson, L.** (2018). Infants extract frequency distributions from variable approximate numerical information. *Infancy*, 23(1), 29-44.
- Wang, J.<sup>†</sup> Halberda, J., & **Feigenson, L.** (2017). Approximate number sense correlates with mathematics performance ability in gifted adolescents. *Acta Psychologica*, 176, 78-84.
- Stahl, A.E.<sup>†</sup> & **Feigenson, L.** (2017). Expectancy violations promote learning in young children. *Cognition*, 163, 1-14.
- Kibbe, M.M.<sup>†</sup> & **Feigenson, L.** (2017). A dissociation between small and large numbers in young children's ability to "solve for x" in non-symbolic math problems. *Cognition*, 160, 82-90.
- Wang, J.<sup>†</sup>, Odic, D., Halberda, J., & Feigenson, L. (2017). Better together: multiple lines of evidence for a link between approximate and exact number representations. *Journal of Experimental Child Psychology*, 153, 168-172.
- Kanjlia, S.<sup>†</sup>, Lane, C.<sup>†</sup>, **Feigenson, L.**, & Bedny, M. (2016). Absence of visual experience modifies the neural basis of numerical thinking. *Proceedings of the National Academy of Sciences*, 113(40), 11172-11177.
- Libertus, M.E.<sup>†</sup>, Odic, D.<sup>†</sup>, **Feigenson, L.**, & Halberda, J. (2016). The precision of mapping between number words and the Approximate Number System predicts children's formal math abilities. *Journal of Experimental Child Psychology*, 150, 207-226.
- Wang, J.<sup>†</sup>, Odic, D.<sup>†</sup>, Halberda, J., & **Feigenson, L.** (2016). Changing preschoolers' approximate number system changes their symbolic math performance. *Journal of Experimental Child Psychology*, 147, 82-99.
- Pailian, H.<sup>†</sup>, Libertus, M.E.<sup>†</sup>, **Feigenson, L.**, & Halberda, J. (2016). Visual working memory storage capacity increases between ages 3 and 8 years, controlling for gains in attention, perception, and executive control. *Attention, Perception, and Psychophysics*, 1-18.
- Kibbe, M.M.<sup>†</sup> & **Feigenson, L.** (2016). Infants use temporal regularities to chunk objects in working memory. *Cognition*, 146, 251-263.
- Stahl, A.E.<sup>†</sup> & **Feigenson, L.** (2015). Observing the unexpected enhances infants' learning and exploration. *Science*, 348 (6230), 91-94.
- Zosh, J.M.<sup>†</sup> & **Feigenson, L.** (2015). Array heterogeneity prevents catastrophic forgetting in infants. *Cognition*, 136, 365-380.
- Kibbe, M.M.<sup>†</sup> & **Feigenson, L.** (2014). Recoding and decoding in toddler working memory. *Cognitive Psychology*, 75, 55-79.
- Kibbe, M.M.<sup>†</sup> & **Feigenson, L.** (2014). Young children "solve for x" using the approximate number system. *Developmental Science*, 18(1), 38-49.
- Stahl, A.E.<sup>†</sup> & **Feigenson, L.** (2014). Social knowledge facilitates chunking in infancy. *Child Development*, 85(4), 1477-1490.

- Libertus, M.E. <sup>†</sup>, **Feigenson, L.**, Halberda, J., & Landau, B. (2014). Understanding the mapping between numerical approximation and number words: Evidence from Williams syndrome and typical development. *Developmental Science*, 17(6), 905-919.
- Libertus, M.E. <sup>†</sup>, Odic, D., **Feigenson, L.** & Halberda, J. (2014). A developmental vocabulary assessment for parents (DVAP): Validating parental report of vocabulary size in 2- to 7-year old children. *Journal of Cognition and Development*.
- Libertus, M.E. <sup>†</sup>, **Feigenson, L.**, & Halberda, J. (2013). Numerical approximation abilities correlate with and predict informal but not formal school mathematics abilities. *Journal of Experimental Child Psychology*, 116(4), 829-838.
- Moher, M. <sup>†</sup> & **Feigenson, L.** (2013). Factors influencing infants' ability to update object representations in memory. *Cognitive Development*, 28(3), 272-289.
- Rosenberg, R.D. <sup>†</sup> & **Feigenson, L.** (2013). Infants hierarchically organize memory representations. *Developmental Science*, 16(4), 610-621.
- Odic, D. <sup>†</sup>, Libertus, M. <sup>†</sup>, **Feigenson, L.**, & Halberda, J. (2013). Developmental change in the acuity of approximate number and area representations. *Developmental Psychology*, 49(6), 1103-1112.
- Libertus, M.E. <sup>†</sup>, **Feigenson, L.**, & Halberda, J. (2013). Is approximate number precision a stable predictor of preschool math ability? *Learning and Individual Differences*, 25, 126-133.
- Feigenson, L.**, Libertus, M.E. <sup>†</sup>, & Halberda, J. (2013). Links between the intuitive sense of number and formal mathematics ability. *Child Development Perspectives*, 7(2), 74-79.
- Zosh, J.M. <sup>†</sup> & **Feigenson, L.** (2012). Memory load affects object individuation in 18-month old infants. *Journal of Experimental Child Psychology*, 113, 322-336.
- Moher, M. <sup>†</sup>, Tuerk, A.S. <sup>†</sup>, & **Feigenson, L.** (2012). Seven-month old infants chunk items in working memory. *Journal of Experimental Child Psychology*, 112(4), 361-377.
- Mazzocco, M., **Feigenson, L.**, & Halberda, J. (2011). Preschoolers' precision of the approximate number system predicts later school mathematics performance. *PLoS One*, 6(9), e23749.
- Libertus, M.E. <sup>†</sup> Halberda, J. & **Feigenson, L.** (2011). Preschool acuity of the Approximate Number System correlates with math abilities. *Developmental Science*, 14(6), 1292-1300.  
\*(one of the top 5 most downloaded articles in *Developmental Science*, 2013)
- Feigenson, L.** (2011). Predicting sights from sounds: 6-month old infants' intermodal numerical abilities. *Journal of Experimental Child Psychology*, 110(3), 347-361.
- Mazzocco, M., **Feigenson, L.**, & Halberda, J. (2011). Impaired acuity of the approximate number system underlies mathematical learning disability. *Child Development* 82(4), 1224-1237.
- Zosh, J.M. <sup>†</sup>, Halberda, J., & **Feigenson, L.** (2011). Working memory capacity for multiple ensemble collections in infancy. *Journal of Experimental Psychology: General*, 140(2), 141-158.
- Feigenson, L.** (2011). Objects, sets, and ensembles. In *Attention and Performance, Volume XIV*, Stanislas Dehaene & Elizabeth Brannon (Eds.), Oxford University Press.
- Moher M. <sup>†</sup>, **Feigenson, L.**, & Halberda, J. (2010). A one-to-one bias and fast-mapping support preschoolers' learning about faces and voices. *Cognitive Science*, 34, 719-751.
- Feigenson, L.** & Yamaguchi, M. <sup>†</sup> (2009). Limits on infants' ability to dynamically update object representations. *Infancy*, 14(2), 244-262.
- Feigenson, L.** & Halberda, J. (2008). Conceptual knowledge increases infants' memory capacity. *Proceedings of the National Academy of Sciences*, 105 (29), 9926-9930.
- Halberda, J., Mazzocco, M., & **Feigenson, L.** (2008). Individual differences in nonverbal estimation ability predict maths achievement. *Nature*, 455, 665-669.
- Halberda, J. & **Feigenson, L.** (2008). Set representations required. [Commentary] *Behavioral and Brain Sciences*, 31, 655-656.
- Halberda, J. & **Feigenson, L.** (2008). Developmental change in the acuity of the "Number Sense": The approximate number system in 3-, 4-, 5-, 6-year-olds and adults. *Developmental Psychology*, 44(5), 1457-1465.
- Feigenson, L.** (2008). Parallel non-verbal enumeration is constrained by a set-based limit. *Cognition*, 107, 1-18.
- Feigenson, L.** (2007). The equality of quantity. *Trends in Cognitive Sciences*, 11(5), 185-187.
- Halberda, J., Sires, S.F. <sup>†</sup>, & **Feigenson, L.** (2006). Multiple spatially overlapped sets can be enumerated in parallel. *Psychological Science*, 17(7), 572-576.

- Feigenson, L.** (2005). A double dissociation in infants' representation of object arrays. *Cognition*, 95, B37-B48.
- Feigenson, L., & Carey, S.** (2005). On the limits of infants' quantification of small object arrays. *Cognition*, 97, 295-313.
- Feigenson, L., Dehaene, S., & Spelke, E.S.** (2004). Origins and endpoints of the core systems of number: Reply to Fias and Verguts. *Trends in Cognitive Sciences*, 8(10), 448-449.
- Feigenson, L., Dehaene, S., & Spelke, E.S.** (2004). Core systems of number. *Trends in Cognitive Sciences*, 8, 7, 307-314.
- Feigenson, L. & Halberda, J.** (2004). Infants chunk object arrays into sets of individuals. *Cognition*, 91, 173-190.
- Feigenson, L. & Carey, S.** (2003). Tracking individuals via object-files: Evidence from infants' manual search. *Developmental Science*, 6, 568-584.
- Feigenson, L., Carey, S., & Hauser, M.** (2002). The representations underlying infants' choice of more: Object-files versus analog magnitudes. *Psychological Science*, 13, 150-156.
- Feigenson, L., Carey, S., & Spelke, E.S.** (2002). Infants' discrimination of number vs. continuous extent. *Cognitive Psychology*, 44, 33-66.

## **BOOK CHAPTERS**

- Feigenson, L.** (2016). Surprise enhances early learning. In *Core Knowledge and Conceptual Change* (David Barner and Andrew Baron, Eds.). Oxford University Press.
- Zosh, J.M. † & **Feigenson, L.** (2009). Beyond "What" and "How many": Capacity, complexity, and resolution of infants' object representations. In *The Origins of Object Knowledge*. Laurie Santos and Bruce Hood (Eds.), Oxford University Press.
- Feigenson, L.** (2007). Continuity of format and computation in short term memory development. In *Short- and Long-term Memory in Early Childhood: Taking the First Steps Toward Remembering*. Lisa Oakes and Patricia Bauer (Eds.), Oxford University Press.

## **ARTICLES UNDER REVIEW**

- Cao, Q. † & **Feigenson, L.** (in revision). Violations of social expectations enhance infants' learning.
- Cao, Q. † & **Feigenson, L.** (submitted). Early reasoning about competence and performance.
- Cao, Q. †, Mears, A. † & **Feigenson, L.** (in revision). Infants recognize the negative impact of phone distraction on performance.
- Silver, A.M. † Quintero, A.Q. † & **Feigenson, L.** (submitted). The emergence of the link between math anxiety and math performance.
- Moher, M. & **Feigenson, L.** (in revision). Infants' use of features to parse visual ensembles.
- Tuerk, A.S. †, Moher, M. †, Carey, S., & **Feigenson, L.** (submitted). Using statistical structure to increase working memory representations of approximate number.
- Odic, D. †, Libertus, M.E. †, Zhu, R., **Feigenson, L.**, & Halberda, J. (in revision). The development of verbal estimation is independent from the development of approximate number in five- to seven-year old children.
- Rosenberg, R.D. † & **Feigenson, L.** (in revision). Feature loss in infants' object chunking.
- Cherries, E.W., **Feigenson, L.**, Scholl, B.J., & Carey, S. (submitted). Cues to object persistence in infancy: Tracking objects through occlusion vs. implosion. *Cognition*.

## **PROFESSIONAL ACTIVITIES**

### Editorial Board

- Cognition* (2004-present)
- Journal of Experimental Psychology: General* (2011-present)
- Open Mind (2016-present)

Ad Hoc Journal Reviewing

*Animal Cognition*  
*Behavioral and Brain Sciences*  
*Behavioral Processes*  
*Biology Letters*  
*Child Development*  
*Cognition*  
*Cognitive Neuropsychology*  
*Cognitive Neuroscience*  
*Cognitive Science*  
*Developmental Neuropsychology*  
*Developmental Psychology*  
*Developmental Science*  
*Infancy*  
*Journal of Child Psychology and Psychiatry*  
*Journal of Cognition and Development*  
*Journal of Cognitive Neuroscience*  
*Journal of Comparative Psychology*  
*Journal of Educational Psychology*  
*Journal of Experimental Psychology: General*

*Journal of Experimental Psychology:*  
*Human Perception and Performance*  
*Language Learning and Development*  
*Lingua*  
*Mind and Language*  
*Nature*  
*Nature Communications*  
*Neuroscience Letters*  
*Perception and Psychophysics*  
*PLoS Biology*  
*PNAS*  
*Psychological Science*  
*Psychological Bulletin*  
*Psychonomic Bulletin and Review*  
*Quarterly Journal of Experimental Psychology*  
*Science*  
*Trends in Cognitive Sciences*  
*Visual Cognition*

Ad Hoc Reviewing: Funding Agencies

*National Institutes of Health*  
*National Science Foundation*

Co-Chair

2011 Boyd-McCandless Award committee, American Psychological Association

**INVITED TALKS**

2024 Invited Talk, Max Planck Institute for Evolutionary Anthropology, Leipzig Germany.  
 2024 Invited Seminar, Collège de France, Paris France.  
 2023 Donald Taylor Memorial Lecture, Yale University Department of Psychology  
 2022 Developmental Talk Series, University of Toronto. Held online.  
 2021 Invited Speaker, Experimental Psychology Society, Held online.  
 2021 McDonnell Foundation Workshop on the Developmental Origins of Abstract Combinatorial Thought, Held online.  
 2020 Invited Speaker, 10<sup>th</sup> Anniversary of the Budapest Cognitive Development Center Conference, Budapest, Hungary  
 2019 McDonnell Foundation Workshop on the Developmental Origins of Abstract Combinatorial Thought, Martha's Vineyard, MA  
 2019 University of Maryland, Human Development and Quantitative Methodology Colloquium, College Park, MD  
 2018 Michael Chandler Annual Invited Lecture, Department of Psychology, University of British Columbia, Vancouver, CA  
 2018 McDonnell Foundation Workshop on the Developmental Origins of Abstract Combinatorial Thought, Barcelona, Spain  
 2018 Invited Address, International Congress on Infant Studies, Philadelphia, PA  
 2018 Invited Address, Archives Jean Piaget, Geneva, Switzerland  
 2017 Brain, Mind, & Consciousness CIFAR Invited Meeting, Montreal, CA  
 2016 Neurocuriosity Workshop, University College London and Birkbeck University of London, London, UK  
 2016 CogEvo Invited Meeting, Centre for Mind/Brain Sciences, Rovereto, Italy  
 2016 Princeton University, Psychology Colloquium, Princeton, NJ



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- 2015 Yale University, Current Work in Developmental Psychology Series, New Haven, CT
  - 2015 University of Rochester, Department of Brain and Cognitive Sciences, Rochester, NY
  - 2015 NICHD Advances in Child Development and Behavior Research Series, Bethesda, MD
  - 2015 McDonnell Foundation Workshop on the Developmental Origins of Abstract Combinatorial Thought, Harvard University, Cambridge, MA
  - 2015 Latin American School for Education, Cognitive, and Neural Sciences, San Pedro de Atacama, Chile
  - 2015 Columbia University, Psychology Department Colloquium, New York, NY
  - 2014 Université Paris Descartes, Invited Colloquium, Paris, France
  - 2014 ICREA (Catalonian Institute for Advanced Research Studies) Conference on Baby Logic, Barcelona, Spain
  - 2014 DUCOG (Dubrovnik Conference on Cognitive Science), Dubrovnik, Croatia
  - 2014 Latin American School for Education, Cognitive, and Neural Sciences, Punta del Este, Uruguay
  - 2014 Science of Learning Symposium, Johns Hopkins University, Baltimore, MD
  - 2013 Zelicof Dinner with the Dean, Johns Hopkins University, Baltimore, MD
  - 2013 Morris Symposium on Number and Quantification in the Mind/Brain, SUNY Stony Brook, Stony Brook, NY
  - 2013 Universitat Pompeu Fabra, Center of Brain and Cognition, Invited Colloquium, Barcelona, Spain
  - 2013 James S. McDonnell Foundation Scholars Meeting, Cambridge, UK
  - 2013 University of Chicago, Psychology Department Colloquium, Chicago, IL
  - 2012 NSF EHR Advisory Committee, Arlington, VA
  - 2012 Lorentz Center Workshop on Core Knowledge, Language, & Culture, Leiden, Netherlands
  - 2012 Johns Hopkins University School of Medicine, Provost's Panel on Innovation, Baltimore, MD
  - 2012 University of Delaware, Department of Psychology Brown Bag, Newark, DE
  - 2012 Rutgers University, Center for Cognitive Science Colloquium
  - 2012 Johns Hopkins University, Provost's Lecture, Baltimore, MD
  - 2012 Northwestern University, Psychology Department Colloquium, Evanston, IL
  - 2011 Rovereto Attention Workshop on Attention and Objects, University of Trento, Italy
  - 2011 Aspen Brain Forum, sponsored by the New York Academy of Sciences, Aspen, CO
  - 2011 Latin American School for Education, Cognitive, and Neural Sciences, San Pedro de Atacama, Chile
  - 2010 Boyd M McCandless Early Career Award Address, American Psychological Association Convention, San Diego, CA
  - 2010 24<sup>th</sup> Annual International Symposium on Attention and Performance, Abbey Vaux de Cerney, France
  - 2010 University of Maryland, Cognitive Science Colloquium, College Park, MD
  - 2008 University of Rochester, Department of Brain and Cognitive Sciences, Rochester, NY
  - 2008 Collège de France, Cognitive Foundations of Arithmetic Series, Paris, France
  - 2007 National Science Foundation, Opportunities and Challenges for Language Learning and Education Workshop, Arlington, VA
  - 2007 University of Illinois, Beckman Institute Cognitive Science Series, Urbana-Champaign, IL
  - 2007 Duke University, Department of Psychological & Brain Sciences Series on Magnitude Processing, Durham, NC
  - 2007 Hopkins Workshop on Language: Grammar in Cognition, Baltimore, MD
  - 2006 Gettysburg College, Department of Psychology, Gettysburg, PA
  - 2005 German-American Frontiers of Science Symposium, sponsored by the National Academy of Sciences, Irvine, CA
  - 2005 Yale University, ESRC Symposium on the Development of Physical Knowledge, New Haven, CT
  - 2005 Duke University, Department of Psychological & Brain Sciences, Durham, NC
  - 2004 University of Aix-Marseille, Cognitive Psychology Group, Aix-en-Provence, France
  - 2003 INSERM, Cognitive Neuroscience Imaging Unit, Orsay France
  - 2003 Stanford University, Department of Psychology, Palo Alto, CA

2003 McGill University, Department of Psychology, Montreal, Canada  
2003 Harvard University, Cognition, Brain, and Behavior Research Seminar, Cambridge, MA  
2003 University of Wisconsin at Madison, Department of Psychology, Madison, WI  
2003 International School for Advanced Studies (SISSA), Cognitive Neuroscience Sector, Trieste Italy  
2003 Ohio State University, Department of Psychology, Columbus, OH  
2002 Yale University, Department of Psychology, New Haven, CT  
2002 New York University, Department of Psychology, New York, NY

## **ADVISING**

### **Postdoctoral advisees**

Nicolo Cesana-Arlotti (post-doctoral student)

Research: Origins of logical thinking

Role: Co-advisor

Currently: Assistant Professor, Yale University

Andrea Quintero (former post-doctoral student)

Research: Effects of math anxiety on children's math proficiency

Role: Primary advisor

Currently: Research analyst, T Rowe Price

Melissa Kibbe (former post-doctoral student)

Research: Working memory in infancy

Role: Primary advisor

Currently: Associate Professor of Psychology, Boston University

Melissa Libertus (former post-doctoral student)

Research: Individual differences in the approximate number system

Role: Primary advisor

Currently: Associate Professor of Psychology, University of Pittsburgh

Rebecca Rosenberg (former post-doctoral student)

Research: Chunking in infancy

Role: Primary advisor

Currently: Director, Harvard Advising Project

### **Graduate student advisees**

Sally Berson (current graduate student)

Research: Children's representations of explanations

Di Liu (current graduate student)

Research: Infants' emotion-based inferences

Nick Bisbee (current graduate student)

Research: Domain generality vs specificity in infants' early representations

Qiong Cao (Ph.D., 2024)

Research: Explanation-seeking in infancy and early childhood

Jasmin Perez (Ph.D., 2020)

Research: Hypothesis testing in infants and young children

Role: Primary Advisor

Honors: NSF Graduate Fellowship, 2017

Currently: UX Researcher, Google

Rita Loiotile (Ph.D., 2018)

Research: Effects of choice and decision on children's numerical cognition  
 Role: Co-advisor (with Marina Bedny)  
 Honors: NSF Graduate Fellowship, 2013  
 Currently: Data scientist

Shipra Kanjlila (Ph.D., 2018)

Research: Role of experience in numerical approximation  
 Role: Co-advisor (with Marina Bedny)  
 Honors: NSF Graduate Fellowship, 2014  
 Currently: Post-doctoral fellow, Carnegie Mellon University

Jenny Wang (Ph.D., 2018)

Research: Scaffolded enhancement of children's numerical approximation abilities  
 Role: Primary Advisor  
 Currently: Assistant Professor of Psychology, Rutgers University New Brunswick

Aimee Stahl (Ph.D., 2015)

Research: Infants' learning from unexpected events  
 Role: Primary Advisor  
 Honors: NSF Graduate Fellowship, 2011  
 Currently: Associate Professor of Psychology, The College of New Jersey

Mariko (Yamaguchi) Moher (Ph.D., 2011)

Research: Development of working memory processes in infancy  
 Role: Primary advisor  
 Honors: NSF Graduate Fellowship, 2009 VSS Travel Fellowship  
 Currently: Director of Donor Relations, Connecticut College

Jennifer Zosh (Ph.D., 2009)

Research: Capacity and resolution of infants' working memory  
 Role: Primary advisor  
 Currently: Professor of Psychology, Pennsylvania State University at Brandywine

Heena Lakhani (MA, 2012)

Research: Development of ensemble representations  
 Role: Primary advisor  
 Currently: NSF Grants Researcher

## **UNIVERSITY AND DEPARTMENTAL SERVICE**

2024 -	Co-Chair, Johns Hopkins University Committee on Academic Matters Citizenship Sub-Committee
2023 -	Chair, Department of Psychological & Brain Sciences
2023	Faculty Research Mentor: Women in Science and Engineering (WISE) Program
2018- 2019	Interim Chair, Homewood Institutional Review Board (HIRB)
2015- 2023	Director of Graduate Studies, Department of Psychological & Brain Sciences
2011- 2023	Board Member, Homewood Institutional Review (HIRB)
2008	Dean's Teaching Fellowship Committee
2007	Dean's Teaching Fellowship Committee
2007- 2010	Advisory board, Evolution, Cognition, & Culture project

2006 - 2007 Faculty Research Mentor: Women in Science and Engineering (WISE) Program

## **COURSES TAUGHT**

Introduction to Developmental Psychology (200.132):

2004, 2005, 2007, 2008, 2010; 2011; 2012; 2013; 2015; 2016; 2017; 2018; 2019; 2020; 2021;  
2022; 2023

Foundations of Mind (200.336):

2005, 2006, 2007, 2008, 2009, 2011, 2012; 2014; 2016

Advanced Seminar in Cognitive Development (200.813):

2004, 2005, 2007, 2008, 2009, 2010, 2011, 2012, 2013; 2014; 2015; 2016; 2017; 2018; 2019;  
2020; 2021; 2022; 2023; 2024

Core Topics in Psychological & Brain Sciences A (200.654):

2014; 2016; 2018; 2020; 2021; 2022; 2023

Core Topics in Psychological & Brain Sciences B (200.654):

2015; 2018; 2020; 2021; 2022; 2023

Career Development in Psychological and Brain Sciences (200.662): 2016; 2019; 2021; 2023