Melissa-Evelyn Libertus, PhD
Department of Psychology · Learning Research and Development Center
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Academic appointments

2018 – present:	Associate professor, Dept. of Psychology, University of Pittsburgh, USA
2013 – 2018:	Assistant professor, Dept. of Psychology, University of Pittsburgh, USA
2013 – present:	Research scientist, Learning Research and Development Center University of Pittsburgh, USA
2010 – 2013:	Postdoctoral fellow, Dept. of Psychological and Brain Sciences Johns Hopkins University, USA Advisors: Lisa Feigenson & Justin Halberda

Education

2006 – 2010:	PhD in Psychology and Neuroscience, Duke University, USA Advisor: Elizabeth M. Brannon
2004 – 2006:	M.A. in Psychology and Neuroscience, Duke University, USA Advisor: Elizabeth M. Brannon
2001 – 2004:	B.Sc. in Cognitive Science (summa cum laude), University of Osnabrück, Germany Advisor: Inge Schwank

Scholarships and Awards

2015:	Association for Psychological Science (APS) Rising Star Award
2015:	Sofja Kovalevskaja Award, Alexander-von-Humboldt-Foundation (declined)
2014:	International Mind Brain and Education Society (IMBES) Early Career Award
2011:	Developmental Science Early Career Research Prize
2011:	Building Bridges Travel Award, German Scholars Organization
2009 – 2010:	Katherine Goodman Stern Fellowship, Duke University
2009:	Frances Degen Horowitz Millennium Scholar, Society for Research in Child Development
2007 – 2009:	Three Conference Travel Grants, Duke University
2006 – 2007:	George H. Hitchings New Investigator Award in Health Research and Training, Triangle Community Foundation
2006 – 2009:	Four Summer Vertical Integration Scholarships, Duke University
2004 – 2005:	Fulbright Scholarship (declined)
2002 – 2006:	German National Merit Foundation Scholarship (Studienstiftung des Deutschen Volkes)

GRANTS

External grants

Current

"Quantitative and remote methods to study early cognitive development and heterogeneity in ASD"
Heising-Simons Foundation
PIs: Elena Tenenbaum, Shafali Jeste
Role: Consultant
Funded period: 12/2021-11/2023

Total costs: $500,000

“Early Emergence of Socioeconomic Disparities in Mathematical Understanding”
National Science Foundation (DRL 1920545)
PI: Elizabeth Votruba-Drzal, Co-Is: Heather Bachman, Melissa Libertus
Funded period: 09/2019-08/2022
Total costs: $2,108,317

“Cognitive and Biological Mechanisms in Pediatric Voice Therapy”
National Institutes of Health (R01DC017923)
PI: Katherine Verdolini Abbott, Co-Is: Patrick Barth, Dimitar Deliyski, Joseph Dohar, Melissa Libertus, Rita Patel
Funded period: 09/2019-08/2025
Total subaward: $430,646

“How Parents Support Young Children’s Mathematical Thinking Across SES”
National Institutes of Health (R01HD093689)
PI: Melissa Libertus, Co-Is: Heather Bachman, Elizabeth Votruba-Drzal
Funded period: 05/2019-04/2024
Total costs: $3,056,395

“Intrinsic and extrinsic influences on young children's mathematical abilities”
James S. McDonnell Foundation
PI: Melissa Libertus
Funded period: 01/2019-12/2024
Total costs: $600,000

"Collaborative Research: Math Cognition In Toddlers From Latino and White families: Contributions Of Home Experiences With Mothers and Fathers"
National Science Foundation (HRD 1760844)
PIs: Catherine Tamis-LeMonda, Natasha Cabrera, Melissa Libertus
Funded period: 08/2018-07/2022
Total costs: $450,000 (University of Pittsburgh only)

“NCS-FO: Neurobehavioral Integration of Visual and Semantic Number Knowledge and its Role for Individual Variation in the Math Ability of Children and Adults”
National Science Foundation (DUE 1734735)
PIs: Marc Coutanche, Julie Fiez, Melissa Libertus
Funded period: 09/2017 – 11/2022
Total costs: $982,661

Completed

“APA Summer Undergraduate Psychology Research Experience (SUPRE)”
APA
PI: Jana Iverson; Co-PIs: Julie Fiez, Lauren Hallion, Tristen Inagaki, Melissa Libertus, Anna Marsland, Ed Orehek, Elizabeth Votruba-Drzal, Aidan Wright
Funded period: 06/2018 – 07/2018
Total costs: $21,869

“APA Summer Undergraduate Psychology Research Experience (SUPRE)”
APA
PI: Jana Iverson; Co-PIs: Julie Fiez, Melissa Libertus, Elizabeth Votruba-Drzal, Aidan Wright
Funded period: 05/2017 – 07/2017
Total costs: $21,874

"Tell me about math: A longitudinal training study on the effects of parent-child interactions and parental cognition on children's math abilities"
National Science Foundation (DUE 1534830)
PI: Melissa Libertus, Co-PIs: Klaus Libertus, Aidan Wright
Funded period: 09/2015 – 08/2019
Total costs**:** $499,750

"Revealing the importance of math-related parent-child interactions via EEG hyperscanning"
National Science Foundation (Supplement to DUE 1534830)
PI: Melissa Libertus, Co-PIs: Klaus Libertus, Aidan Wright
Funded period: 09/2016 – 08/2019
Total costs**:** $ 99,194

Internal grants

Current

"Personalizing Family Routines to Support 3-Year-Olds' Math Skills"
Learning Research and Development Center Internal Award
PI: Diana Leyva, Co-PI: Melissa Libertus
Funded period: 09/2020 – 08/2022
Total costs: $149,364

Completed

"Using human intracranial recordings to examine the spatiotemporal dynamics of symbolic and non-symbolic number processing"
Learning Research and Development Center Internal Award
PI: Melissa Libertus, Co-PI: Avniel Ghuman
Funded period: 07/2019 – 06/2021
Total costs: $38,000

"Students in cognitive development learn to apply knowledge and communicate effectively through blog posts for parents"
Discipline-Based Science Education Research Center
PIs: Emily Braham, Melissa Libertus
Funded period: 09/2017 – 12/2017
Total costs: $2,000

"How Low- and High-SES Parents Support Young Children's Mathematical Thinking"
Learning Research and Development Center Internal Award
PI: Melissa Libertus, Co-PIs: Heather Bachman, Elizabeth Votruba-Drzal
Funded period: 07/2017 – 06/2019
Total costs**:** $149,962

"How parents of low and high socioeconomic status support preschool-aged children's mathematical thinking"
Central Research Development Funds (CRDF), University of Pittsburgh
PI: Melissa Libertus
Funded period: 07/2017 – 06/2019
Total costs: $16,000

"The dangers of computation without quantitative meaning: Testing the case of symbolic estrangement"
Learning Research and Development Center Internal Award

PI: Melissa Libertus, Co-PIs: Julie Fiez, Christian Schunn
Funded period: 05/2014 – 06/2016
Total costs**:** $87,955

“Tell me about math: A longitudinal training study on the effects of parent-child interactions and parental cognition on children’s math abilities”
Learning Research and Development Center Internal Award
PI: Melissa Libertus, Co-PI: Klaus Libertus
Funded period: 05/2015 – 02/2016
Total costs**:** $149,873

PUBLICATIONS

Publications in peer-reviewed journals

* denotes graduate student mentee; ** denotes undergraduate student mentee

1. *Silver, A., Elliott, L., Reynvoet, B., Sasanguie, D., **Libertus, M.** (in press). Teasing apart the unique contributions of cognitive and affective predictors of math performance. *Annals of the New York Academy of Sciences*.

2. Ribner, A., **Libertus, M.** (in principle acceptance as a Registered Report). Mechanisms Underlying Transfer from Domain-Specific and Domain-General Cognitive Training to Children’s Math Skills. *Child Development*.

3. **Libertus, M.**, *Duong, S., *Fox, D., Elliott, L., McGregor, R., Ribner, A., *Silver, A. (in press). A Rational Explanation for Links between the ANS and Math. *Behavioral and Brain Sciences.*

4. Reynvoet, B., Ribner, A., Elliott, L., Van Steenkiste, M., Sasanguie, D., **Libertus, M.** (in press). Making Sense of the Relation between Number Sense and Math. *Journal of Numerical Cognition.*

5. Feinstein, H., Dasdogen, U., **Libertus, M.**, Awan, S., Galera, R., Dohar, J., Verdolini Abbott, K. (in press). Cognitive mechanisms in pediatric voice therapy – an initial examination. *Journal of Voice*.

6. Elliott, L., *Silver, A., **Imbeah, A., **Libertus, M.** (2022). Actions may speak louder than words: Comparing methods of assessing children’s spontaneous focusing on number. *Journal of Experimental Child Psychology, 214,* 105301.

7. Ribner, A., Coulanges, L., Friedman, S., **Libertus, M.**, and the i-Fam Team (2021). Screen Time in the COVID Era: International Trends of Increasing Use Among 3- to 7-Year-Old Children. *The Journal of Pediatrics, 239*, 59-66.

8. Elliott, L., **Zheng, P., **Libertus, M.** (2021). Individual Differences in Parental Support for Numeracy and Literacy in Early Childhood. *Education Sciences, 11*(9), 541.

9. Leyva, D., **Libertus, M.**, McGregor, R. (2021). Relations between Subdomains of Home Math Activities and Corresponding Math Skills in 4-Year-Old Children. *Education Sciences, 11*(10), 594.

10. *Silver, A., Elliott, L., **Libertus, M.** (2021). Parental math input is not uniformly beneficial for young children: The moderating role of inhibitory control. *Journal of Educational Psychology, Advance online publication. https://doi.org/10.1037/edu0000679*

11. *Silver, A., Elliott, L., *Braham, E., Bachman, H., Votruba-Drzal, E., Tamis-LeMonda, C., Cabrera, N., **Libertus, M.** (2021). Measuring emerging number knowledge in toddlers. *Frontiers in Psychology, 12,* 703598.

12. *Duong, S., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2021). What's in a question? Parents' question use in dyadic interactions and the relation to preschool-aged children's math and language abilities. *Journal of Experimental Child Psychology, 211*, 105213.

13. Möhring, W., Ribner, A., Segerer, R., **Libertus, M.**, Kahl, T., Troesch, L., Grob, A. (2021). Children's growth in spatial skills: Causes and consequences for later mathematical thinking. *Learning and Instruction, 75,* 101515.

14. Shivaram, A., Chavez, Y., Anderson, E., Fritz, A., Jackson, R., Edwards, L., Powers, S., **Libertus, M.,** Hespos, S. (2021). Brief Interventions Influence the Quantity and Quality of Caregiver-Child Conversations in an Everyday Context. *Frontiers in Developmental Psychology, 12,* 2228.

15. *Silver, A., Elliott, L., **Libertus, M.** (2021). When beliefs matter most: Examining children's math achievement in the context of parental math anxiety. *Journal of Experimental Child Psychology, 201,* 104992.

16. Bachman, H., Elliott, L., Navarro, M., *Duong, S., Votruba-Drzal, E., **Libertus, M.** (2020). Triangulating multi-method assessments of parental support for early math development. *Frontiers in Education, 5,* 241.

17. *Silver, A., Elliott, L., **Imbeah, A., **Libertus, M.** (2020). Understanding the unique contributions of home numeracy, inhibitory control, the approximate number system, and spontaneous focusing on number for children's math abilities. *Mathematical Thinking and Learning, 22*(4), 1-16.

18. **Libertus, M.**, Odic, D., Feigenson, L., Halberda, J. (2020). Visual training of approximate number sense improves auditory number sense and school math ability. *Frontiers in Psychology, 11,* 2085.

19. **Thippana, J., *Elliott, L., **Gehman, S., Libertus, K., **Libertus, M.** (2020). Parents' Use of Number Talk during Play at Home: Exploring Variability across Activities and Families. *Early Childhood Research Quarterly, 53,* 249-259.

20. Hellgren, K., Jacobson, L., Frumento, P., Bolk, J., Aden, U., **Libertus, M.**, Benassi, M. (2020). Cerebral visual impairment captured with a structured history inventory in extremely preterm born children aged 6.5 years. *Journal of American Association for Pediatric Ophthalmology and Strabismus, 24*(1), 28.e1-28.e8.

21. **Hanner, E., *Braham, E., *Elliott, L., **Libertus, M.** (2019). Increasing Math Talk in Adult-Child Interactions through Grocery Store Signs. *Mind Brain and Education, 13*(2), 110-118.

22. *Elliott, L., Feigenson, L., Halberda, J., **Libertus, M.** (2019). Bidirectional, longitudinal associations between math ability and approximate number system acuity in childhood. *Journal of Cognition and Development, 20*(1), 56-74.

23. *Braham, E., *Elliott, L., **Libertus, M.** (2018). Using Hierarchical Linear Models to Examine Approximate Number System Acuity: The Role of Task Parameters and Participant Characteristics. *Frontiers in Psychology, 9,* 2081.

24. *Navarro, M., *Braham, E., **Libertus, M.** (2018). Intergenerational associations of the approximate number system in toddlers and their parents. *British Journal of Developmental Psychology, 36*(4), 521-539.

25. *Braham, E., **Libertus, M.**, McCrink, K. (2018). Increasing Children's Spontaneous Focus on Number through Guided Parent-Child Interactions in a Children's Museum. *Developmental Psychology, 54*(8), 1492-1498.

26. *Braham, E., **Libertus, M.** (2018). When Approximate Number Acuity Predicts Math Performance: The Moderating Role of Math Anxiety. *PLoS One, 13*(5), e0195696.

27. Kersey, A., *Braham, E., Csumitta, K., **Libertus, M.**, Cantlon, J. (2018). No intrinsic gender differences in children's earliest numerical abilities. *npj Science of Learning, 3*(1), 12.

28. Wang, J., **Libertus, M.,** Feigenson, L. (2018). Hysteresis-induced changes in preverbal infants' approximate number precision. *Cognitive Development, 47*, 107-116.

29. **Zheng, P, **Libertus, M.** (2018). The Role of Parental Education and Income on Parents' Academic Beliefs and the Provision of Home Learning Opportunities for 4-8-year old Children. *Journal of Educational and Developmental Psychology, 8*(1), 118-132.

30. *Liu, R., Schunn, C., Fiez, J., **Libertus, M.** (2018). The integration between non-symbolic and symbolic numbers: Evidence from an EEG study. *Brain and Behavior, 8,* e00938.

31. **Libertus, M.**, Feigenson, L., Halberda, J. (2018). Infants extract frequency distributions from variable approximate numerical information. *Infancy, 23*(1), 29-44.

32. **Libertus, M.,** *Liu, A., Pikul, O., Jacques, T., Cardoso-Leite, P., Halberda, J., Bavelier, D. (2017). The impact of action videogame training on mathematical abilities in adults. *AERA Open, 3*(4), 1-13.

33. Möhring, W., *Liu, R., **Libertus, M.** (2017). Infants' speed discrimination: Effects of different ratios and spatial orientations. *Infancy*, *22*(6), 762-777.

34. Libertus, K., **Libertus, M.**, Einspieler, C., Marschik, P. (2017). "What" matters more than "Why" - Neonatal behaviors initiate social responses. *Behavioral and Brain Sciences, 40,* e394.

35. **Libertus, M.,** *Braham, E., *Liu, R. (2017). Infants discriminate number: Evidence against the prerequisite of visual object individuation and the primacy of continuous magnitude. *Brain and Behavioral Sciences, 40,* e176.

36. *Braham, E., **Libertus, M.** (2017). Intergenerational Associations in Numerical Approximation and Mathematical Abilities. *Developmental Science, 20*(5), e12436.

37. **Libertus, M.**, Forsman, L., Aden, U., Hellgren, K. (2017). Deficits in Approximate Number System Acuity and Mathematical Abilities in 6.5-year-old Children Born Extremely Preterm. *Frontiers in Psychology, 8,* 1175.

38. *Elliott, L., *Braham, E., **Libertus, M.** (2017). Understanding Sources of Individual Variability in Parents' Number Talk with Young Children. *Journal of Experimental Child Psychology, 159*, 1-15.

39. **Libertus, M.**, Odic, D., 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.

40. Pailian, H., **Libertus, M.**, Feigenson, L., Halberda, J. (2016). Developmental Changes in Visual Short-Term Memory (VSTM) Capacity Between Ages 3 and 8 Years. *Attention, Perception, & Psychophysics, 78,* 1556-1573.

41. Einspieler, C., Bos, A., **Libertus, M.**, Marschik, P. (2016). The general movement assessment helps us to identify preterm infants at risk for cognitive dysfunction. *Frontiers in Psychology, 7*.

42. **Libertus, M.**, Odic, D., Feigenson, L., Halberda, J. (2015). A Developmental Vocabulary Assessment for Parents (DVAP): Validating parental report of vocabulary size in 2-7-year-olds. *Journal of Cognition and Development, 16*(3), 442-454.

43. *Keller, L. E., **Libertus, M.** (2015). Inhibitory control may not explain the link between approximation and math abilities in kindergarteners from middle class families. *Frontiers in Developmental Psychology, 6*, 685.

44. **Libertus, M.** (2015). The role of intuitive approximation skills for school math abilities. *Mind, Brain, and Education, 9*(2), 112-120.

45. **Libertus, M.**, 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.

46. **Libertus, M.**, Marschik, P. B., Einspieler, C. (2014). Number word use in toddlerhood predicts number recall performance at seven years of age. *PLoS ONE 9(6): e98573. doi:10.1371/journal.pone.0098573*

47. **Libertus, M.**, Starr, A., Brannon, E. (2014). Number trumps area for 7-month-old infants. *Developmental Psychology, 50*(1), 108-112.

48. Starr, A., **Libertus, M.**, Brannon, E. (2013). Number sense in infancy predicts mathematical abilities in childhood. *Proceedings of the National Academy of Sciences, 110*(45), 18116-18120.

Article was featured in Science, Nature, one of top 100 stories in 2013 in Discover, National Geographic, Washington Post, and on NSF Science 360

49. **Libertus, M.**, Feigenson, L., Halberda, J. (2013). Numerical approximation abilities correlate with and predict informal but not formal mathematics abilities. *Journal of Experimental Child Psychology, 116*(4), 829-838.

50. Hellgren, K., Halberda, J., Forsman, L., Aden, U., **Libertus, M.** (2013). Compromised approximate number sense in extremely preterm school-aged children. *Developmental Medicine and Child Neurology, 55*(12), 1109-1114.

51. Starr, A., **Libertus, M.**, Brannon, E. (2013). Infants show ratio-dependent number discrimination regardless of set size. *Infancy, 18*(6), 927-941.

52. Feigenson, L., **Libertus, M.**, Halberda, J. (2013). Links between the intuitive sense of number and formal mathematics ability. *Child Development Perspectives, 7*(2), 74-79.

53. Odic, D., **Libertus, M.**, Feigenson, L., Halberda, J. (2013). Developmental change in the acuity of approximate number and area representations. *Developmental Psychology, 49*(6), 1103-1112.

54. **Libertus, M.**, Feigenson, L., Halberda, J. (2013). Is Approximate Number Precision a Stable Predictor of Math Ability? *Learning and Individual Differences, 25,* 126-133.

One of the most highly cited papers in Learning and Individual Differences during 2014, 2015, and 2016

55. **Libertus, M.**, Odic, D., Halberda, J. (2012). Intuitive sense of number correlates with math scores on college-entrance examination. *Acta Psychologica, 141*(3), 373-379.

56. Möhring, W., **Libertus, M.**, Bertin, E. (2012). Speed discrimination in 6- and 10-month-old infants follows Weber's Law. *Journal of Experimental Child Psychology, 111,* 405-418*.*

57. Wu, C.-T., **Libertus, M.**, **Meyerhoff, K., Woldorff, M. (2011). The temporal dynamics of object in visual cortex during the transition from distributed to focused spatial attention. *Journal of Cognitive Neuroscience, 23*(12), 4094-4105*.*

58. Cantlon, J., Davis, S., **Libertus, M.**, **Kahane, J., Brannon, E., Pelphrey, K. (2011). Intra-parietal white matter development predicts numerical performance in young children. *Learning and Individual Differences, 21*(6), 672-680*.*

59. **Libertus, M.**, Feigenson, L., Halberda, J. (2011). Preschool acuity of the approximate number system correlates with school math ability. *Developmental Science, 14*(6), 1292-1300*.*

One of top 5 downloads for 2013, 2014, 2015; article was featured in New York Times, Science Daily, and on MSNBC

60. **Libertus, M.**, Brannon, E., Woldorff, M. (2011). Parallels in stimulus-driven oscillatory brain responses to numerosity changes in adults and seven-month-old infants. *Developmental Neuropsychology, 36*(6), 651-667.

61. Libertus, M., Brannon, E. (2010). Stable individual differences in number discrimination in infancy. *Developmental Science, 13*(6), 900-906.

62. **Libertus, M.**, Brannon, E. (2009). Behavioral and neural basis of number sense in infancy. *Current Directions in Psychological Science, 18*(6), 346-351*.*

63. **Libertus, M.**, **Pruitt, L., Woldorff, M., Brannon, E. (2009). Induced alpha-band oscillations reflect ratio-dependent number discrimination in the infant brain. *Journal of Cognitive Neuroscience, 21*(12), 2398-2406*.*

64. Cantlon, J., **Libertus, M.**, Pinel, P., Dehaene, S., Brannon, E., Pelphrey, K. (2009). The Neural Development of an Abstract Concept of Number. *Journal of Cognitive Neuroscience, 21*(11), 2217-2229*.*

65. Cantlon, J., Cordes, S., **Libertus, M**., Brannon, E. (2009). Numerical Abstraction: It ain't broke. *Behavioral and Brain Sciences, 32*, 331-332.

66. **Libertus, M.**, Brannon, E., Pelphrey, K. (2009). Developmental changes in category-specific brain responses to numbers and letters in a working memory task. *Neuroimage, 44*(4), 1404-1414.

67. Cantlon, J., Cordes, S., **Libertus, M.**, Brannon, E. (2009). Comment on Log or Linear? Distinct Intuitions of the Number Scale in Western and Amazonian Indigene Cultures. *Science, 323*, 38b.

68. Brannon, E., **Libertus, M.**, Meck, W., Woldorff, M. (2008). Electrophysiological measures of time processing in infant and adult brains: Weber's law holds. *Journal of Cognitive Neuroscience, 20*(2), 193-203*.*

69. **Libertus, M.**, Woldorff, M., Brannon, E. (2007). Electrophysiological evidence for notation independence in numerical processing. *Behavioral and Brain Functions, 3(1).*

70. Schwank, I., Armbrust, S., **Libertus, M.** (2003). Prädikative versus funktionale Denkvorgänge beim Konstruieren von Algorithmen [Predicative versus functional thinking processes while constructing algorithms]. *Zentralblatt für Didaktik der Mathematik* [ZDM The International Journal on Mathematics Education]*, 35 (3),* pp.79-85.

Publications under review

1. Bachman, H., Elliott, L., *Duong, S., Votruba-Drzal, E., **Libertus, M.** (invited resubmission). SES associations with early number and spatial skills: The mediating role of executive function. *Journal of Experimental Child Psychology.*

2. Koch, G., **Libertus, M.**, Fiez, J., Coutanche, M. (invited resubmission). Representations within the intraparietal sulcus distinguish both numerical tasks and stimuli. *Journal of Cognitive Neuroscience.*

3. Miller, P., Betancur, L., Kammerzell, J., Votruba-Drzal, E., **Libertus, M.**, Bachman, H. (invited resubmission). Relations between Play and Preschoolers' Self-Regulation and Academic Skills. *Journal of Applied Developmental Psychology.*

4. *Ren, X., *Liu, R., Coutanche, M., Fiez, J., **Libertus, M.** (invited resubmission). Numerical Integration between Symbolic and Non-symbolic Numerical Information: Evidence for Task-Dependence and Its Link to Math Abilities in Adults. *Cognition.*

5. *Silver, A., **Libertus, M.** (invited resubmission). Environmental influences on math performance in early childhood. *Nature Reviews Psychology.*

6. *Silver, A., Suh, D., Tamis-LeMonda, C., Cabrera, N., **Libertus, M.** (invited resubmission). Registered Report: Investigating the relations between parent engagement and toddlers' math performance. *British Journal of Developmental Psychology.*

Publications in preparation

1. *Duong, S., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (in prep). Exploring the Role of Parent and Child Factors in Parental Questioning During Shared Book Viewing.

2. Elliott, L., *Silver, A., Ribner, A., **Libertus, M.** (in prep). Individual differences in American families' responses to the COVID-19 pandemic.

3. Elliott, L., Bachman, H., Votruba-Drzal, E., Miller, P., **Libertus, M.** (in prep). Unpacking the Home Math Environment: Examining Dimensionality and Selection Factors in Parent Surveys.

4. *Liu, R., **Libertus, M.** (in prep). Anterior and posterior EEG activity in non-symbolic number and symbolic number comparison in 7- to 8-year-old children: a multivariate approach.

5. *Liu, R., Tremel, J., Fiez, J., Durisko, C., Schunn, C., Coutanche, M., **Libertus, M.** (in prep). The integration of symbolic and non-symbolic number representations in the human brain.

6. *Liu, A., Schunn, C., Fiez, J., **Libertus, M.** (in prep). Adjusting for adults' number estimation biases reveals symbolic integration of double-digit numbers.

7. *Ren, X., Coutanche, M., Fiez, J., **Libertus, M.** (in prep). The neural basis for number processing and its relation to individual differences in adults' mathematical skills.

8. Ribner, A., *Silver, A., Elliott, L., **Libertus, M.** (in prep). Exploring effects of an early math intervention: The importance of parent-child interaction.

9. *Silver, A., Chen, Y., Smith, D., Tamis-LeMonda, C., Cabrera, N., **Libertus, M.** (in prep). Predicting mothers' and fathers' engagement in math activities with their toddlers.

10. *Silver, A., Elliott, L., **Huerga, L., Ribner, A., **Libertus, M.** (in prep). Predicting parental academic engagement in the context of COVID-19.

11. *Silver, A., Elliott, L., Ribner, A., **Libertus, M.** (in prep). Children's knowledge counts: Home math activities are most beneficial for children with stronger number knowledge.

12. *Silver, A., **Libertus, M.**, Wang, J. (in prep). Registered Report: Does spontaneous focusing on number explain the link between approximate number system hysteresis and children's math performance?

Book chapters

1. **Libertus, M.**, *Duong, S., *Silver, A. (2020). Mathematical Cognition. In: Benson, J.B. (Ed.), *Encyclopedia of Infant and Early Childhood Development, 2nd edition*, Vol. 2, Elsevier, pp. 311–318.

2. Resnick, L., **Libertus, M.**, Schantz, F. (2019). The Future of Dialogic Education: An Opportunity and a Challenge. In: Mercer, N., Wegerif, R., Major, L. (Eds.) *The Routledge International Handbook of Research on Dialogic Education.* Routledge.

3. **Libertus, M.** (2019). Understanding the Link Between the Approximate Number System and Math Abilities. In: Geary, D. C., Berch, D. B., Mann Koepke, K. (Eds). *Cognitive Foundations for Improving Mathematical Learning.* Elsevier.

PRESENTATIONS

Invited Talks and Colloquia

09/2020: Technion, Israel Institute of Technology, Israel
05/2019: University of Science and Technology Beijing, China
03/2018: Colloquium, University of Bologna, Italy
07/2017: Colloquium, KU Leuven, Belgium
12/2016: Colloquium, Bucknell University, USA
10/2016: Developmental Brownbag, Carnegie Mellon University, USA
04/2016: Neuroscience and Education lab, New York University, USA
09/2013: Developmental Brownbag, Carnegie Mellon University, USA
03/2013: JRG-Auswahlsymposia, University of Tübingen, Germany
03/2013: Workshop on Early Childhood Development, University of Zurich, Switzerland
02/2012: Colloquium, Stanford University, USA
02/2012: Developmental Brownbag, Stanford University, USA
01/2012: Colloquium, Peabody College, Vanderbilt University, USA
01/2012: Colloquium, Dept. of Psychology and Learning Research and Development Center, University of Pittsburgh, USA
11/2011: Regional ERP/EEG Research Meeting, Baltimore, USA
06/2011: Colloquium, University of Tübingen, Germany
05/2011: Colloquium, University of Gießen, Germany
05/2011: Colloquium, Karolinska Institute, Sweden
07/2009: Laboratory for Child Development, Johns Hopkins University
05/2009: Internal seminar, Institute of Cognitive Neuroscience, University College London, UK

05/2009: Colloquium, Centre for Brain and Cognitive Development, Birkbeck College, University of London, UK
05/2009: Colloquium, Institute for Empirical Research in Economics, University of Zurich, Switzerland
05/2009: Colloquium, Institute of Cognitive Science, University of Osnabrück, Germany
09/2007: NeuroMath Workshop, University of Osnabrück, Germany

Conference Presentations - Oral

* denotes graduate student mentee; ** denotes undergraduate student mentee

1. *Ren, X., Coutanche, M., Fiez, J., **Libertus, M.** (11/2021). The Neural Basis for Number Processing and its Relation to Individual Differences in Adults' Mathematical Skills. *Mathematical Cognition and Learning Society (MCLS) Conference, Online symposium series.*

2. Elliott, L., *Silver, A., **Imbeah, A., **Libertus, M.** (04/2021). Math skills predict children's spontaneous focusing on number through behavior, not talk. *Mathematical Cognition and Learning Society (MCLS) Conference, Online symposium series.*

3. Reynvoet, B., Ribner, A., Elliott, L., Van Steenkiste, M., Sasanguie, D., **Libertus, M.** (04/2021). Making Sense of the Relation between Number Sense and Math. *Mathematical Cognition and Learning Society (MCLS) Conference, Online symposium series.*

4. **Libertus, M.**, Miller, P., Elliott, L., Bachman, H., Votruba-Drzal, E. (04/2021). Relations among SES and children's approximate number system, number and spatial skills. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

5. *Duong, S., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (04/2021). Parents' Sensitivity to Child-Level Factors and the Relation to Parental Questioning During Dyadic Interactions. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

6. *Silver, A., Elliott, L., **Libertus, M.** (04/2021). Parental math talk is not uniformly beneficial for young children: The moderating role of inhibitory control. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

7. Ribner, A., ***Silver, A., Elliott, L., & **Libertus, M.** (03/2021). Exploring effects of an early math intervention: The importance of parent-child interaction. *Mathematical Cognition and Learning Society (MCLS) Conference, Online symposium series.*

8. Hespos, S., Shivaram, A., Anderson, E., Chavez, Y., Fritz, A., Jackson, R., Edwards, L. Powers, S., **Libertus, M.** (2020). Promoting playful learning using food pantry signs. *SRCD Special Topic Meeting: Learning through Play and Imagination. St Louis, MO, USA (rescheduled due to COVID-19).*

9. Elliott, L., Betancur, L., Bachman, H. J., Votruba-Drzal, E., **Libertus, M.** (06/2020). When time is tight, how do parents make math happen? *Mathematical Cognition and Learning Society (MCLS) Conference, Dublin, Ireland (cancelled due to COVID-19).*

10. Möhring, W., Ribner, A., Segerer, R., **Libertus, M.**, Kahl, T., Troesch, L., Grob, A. (06/2020). Preschoolers' growth in spatial abilities: Causes and Consequences for later mathematical thinking. *Mathematical Cognition and Learning Society (MCLS) Conference, Dublin, Ireland (cancelled due to COVID-19).*

11. *Silver, A., Elliott, L., **Libertus, M.** (06/2020). When beliefs matter most: Examining children's math achievement in the context of parental math anxiety. *Mathematical Cognition and Learning Society (MCLS) Conference, Dublin, Ireland (cancelled due to COVID-19)*

12. **Libertus, M.**, *Braham, E., McCrink, K. (08/2019). Increasing Math Talk During Play in a Children's Museum: The Role of Parent and Child Factors. *18th Biennial European Association for Research on Learning and Instruction (EARLI) Conference, Aachen, Germany.*

13. *Silver, A., *Elliott, L., **Libertus, M.** (06/2019). The Influence of Parent and Child Factors on Preschool-aged Children's Spontaneous Focusing on Number. *Mathematical Cognition and Learning Society (MCLS) Conference, Ottawa, Canada.*

14. *Elliott, L., **Thippana, J., **Gehman, S., **Libertus, M.** (03/2019). Measuring Parental Math Stimulation for Young Children. *Biennial Meeting of the Society for Research in Child Development (SRCD), Baltimore, MD, USA.*

15. **Libertus, M.**, *Braham, E., *Elliott, L., **Hanner, E., Haslinger, A. (06/2018). Understanding variability in parental math talk and its influences on young children's math skills. *6th International Workshop on Advanced Learning Sciences, Pittsburgh, PA, USA.*

16. *Liu, R., * Braham, E., **Libertus, M.** (11/2017). Symbolic number comparison in 5- to 9-year-old children: Age-related changes in event-related potentials and their relation to formal math abilities. *Annual Meeting of the Society of Neuroscience, Washington, DC, USA.*

17. *Braham, E., **Libertus, M.**, McCrink, K. (10/2017). Improving Young Children's Spontaneous Focus on Number Through Guided Parent-Child Interactions in a Children's Museum. *Biennial Meeting of the Cognitive Development Society, Portland, OR, USA.*

18. Einspieler, C., Bos, F., **Libertus, M.**, Marschik, P. (10/2017). The general movement assessment helps us identify preterm infants at risk for cognitive dysfunction. *XXXIII International Symposium of the Polish Neonatal Society, Cracow, Poland.*

19. **Libertus, M.** (05/2017). Understanding the Link between the Approximate Number System and Math Abilities: Evidence from Training Studies and Observations of Intergenerational Transmission. *Math Cognition Conference, Nashville, TN, USA.*

20. **Libertus, M.**, *Elliott, L., *Braham, E. (04/2017). Parents' Own Number Sense and Math Abilities Explain Variability in Informal Math Talk with Their Children. *Biennial Meeting of the Society for Research in Child Development (SRCD), Austin, TX, USA.*

21. *Elliott, L., **Libertus, M.** (04/2017). Inhibitory Control and the Approximate Number System: Significant but Separate Predictors of Early Math Abilities. *Biennial Meeting of the Society for Research in Child Development (SRCD), Austin, TX, USA.*

22. Shembel, A., Verdolini Abbott, K., Galera, R., **Libertus, M.** (06/2016). Prospective Study of Voice Therapy in Children: Potential Cognitive Factors. *45th Annual Symposium of The Voice Foundation, Philadelphia, PA, USA.*

23. *Liu, A., Schunn, C., Fiez, J., **Libertus, M.** (07/2015). Symbolic Integration, Not Symbolic Estrangement, For Double-Digit Numbers. *37th Annual Meeting of the Cognitive Science Society, Pasadena, CA, USA.*

24. **Libertus, M.,** Hellgren, K., Forsman, L., Aden, U. (03/2015). Deficits in Mathematical Abilities and Approximate Number System Acuity in Children Born Extremely Preterm. *Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, USA.*

25. **Libertus, M.,** Odic, D., Feigenson, L., Halberda, J. (03/2015). Verbal number estimation predicts math ability and mediates the relation between numerical approximation and math ability. *Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, USA.*

26. Pailian, H., **Libertus, M.**, Feigenson, L., Halberda, J. (05/2014). On the dynamic nature of VWM: Separate limits for the storage and manipulation of information. *Vision Sciences Society (VSS) 14th Annual Meeting, St. Pete Beach, USA.*

27. Halberda, J., Bavelier, D., Landau, B., Hellgren, K., Forsman, L., Jacques, T., **Libertus, M.** (05/2013). Training of Number Sense transfers broadly. *Vision Sciences Society (VSS) 13th Annual Meeting, Naples, USA.*

28. **Libertus, M.**, Feigenson, L., Halberda, J. (04/2013). The Relationship Between Informal and Formal School Math Ability and Children's Basic Numerical Approximation Skills. *Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, USA.*

29. Starr, A., **Libertus, M.**, Brannon, E. (04/2013). Infants show ratio-dependent discrimination regardless of set size. *Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, USA.*

30. Halberda, J., **Libertus, M.,** Feigenson, L. (04/2013). The Approximate Number System (ANS): What is it and how might it be affecting classroom performance. *Annual Meeting of The American Educational Research Association (AERA), San Francisco, USA.*

31. **Libertus, M.**, Halberda, J., Feigenson, L. (04/2011). Approximate Number Discrimination Correlates With Math Abilities in Preschoolers. *Biennial Meeting of the Society for Research in Child Development (SRCD), Montreal, Canada.*

32. **Libertus, M.**, Wu, C., Harris, J., Woldorff, M. (11/2007). Attention can be shifted to a color pop-out prior to face-specific visual processing at that location. *Annual Meeting of the Society for Neuroscience (SfN), San Diego, USA.*

33. **Libertus, M.** (03/2007). Neuronale Marker der Zahlenverarbeitung in Säuglingen und Kindern. [Neural markers of number processing in infants and children]. *Gemeinsame Jahrestagung der Deutschen Mathematiker-Vereinigung und der Gesellschaft der Didaktik für Mathematik [Joint annual meeting of the German Association for Mathematicians and the Society for Mathematical Education], Berlin, Germany.*

34. Brannon, E., Cantlon, J., Cordes, S., Jordan, K., **Libertus, M.**, MacLean, E., & Suanda, U. (11/2006). Comparative and developmental approach to studying nonverbal numerical cognition. *Annual meeting of the Psychonomic Society, Houston, TX.*

35. **Libertus, M.** (06/2006). Electrophysiological correlates of symbolic vs non-symbolic number magnitude. *Numeracy and brain development (Numbra) Summer School, Finland.*

36. **Libertus, M.**, Armbrust, S. (09/2002). Prädikative versus funktionale Denkvorgänge beim Konstruieren von Algorithmen [Predicative versus functional thinking processes while constructing algorithms]. *Young Scientists Session, 43rd Conference of the German Psychological Society (DGPs), Berlin, Germany.*

37. Armbrust, S., Schwank, I., **Libertus, M.** (09/2002). Augenblickbewegungen beim Lösen von Matrizenaufgaben (QuaDiPF) [Eye-movements while solving matrices tasks (QuaDiPF)]. *43rd Conference of the German Psychological Society (DGPs), Berlin, Germany.*

Conference Presentations - Posters

* denotes graduate student mentee; ** denotes undergraduate student mentee

1. Coulanges, L., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2021). The influence of content and context in children's learning through screen-based media. *Annual Technology, Mind, and Society conference (virtual meeting).*

2. *Ren, X., Coutanche, M., Fiez, J., **Libertus, M.** (2021). The neural basis for number processing and its relation to individual differences in adults' mathematical skills. *Society for Neuroscience (virtual meeting).*

3. *Ren, X., *Liu, R., Coutanche, M., Fiez, J., **Libertus, M.** (2021). Numerical integration between the exact and approximate number systems: Evidence for task-dependence and its link to math abilities in adults. *7th Annual Brain Initiative Investigators Meeting (virtual meeting).*

4. Chen, Y., Mejia, V., *Silver, A., Ferraro, J., Smith, D., Cabrera, N., Tamis-LeMonda, C., **Libertus, M.** (2021). Variability in Toddlers' Learning Environments With Mothers and Fathers in Diverse Families. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

5. Sidoti, O., *Duong, S., Laird, M., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2021). Variations in parental talk about numbers and money during pretend play with 4-year-olds. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

6. Coulanges, L., Bachman, H., **Libertus, M.,** Votruba-Drzal., E. (2021). Educational screen time exposure and children's literacy and numeracy skills. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

7. *Silver, A., *Braham, E., Elliott, L., Tamis-LeMonda, C., Cabrera, N., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2021). Measuring Emerging Number Knowledge in Toddlers. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

8. Kammerzell, J., *Duong, S., Heywood, N., Isaacson, M., **Libertus, M.,** Votruba-Drzal, E., Bachman, H. (2021). Exploring Relations between Parent and Child Factors and Parental Praise in Preschool-Aged Children. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

9. *Duong, S., Elliott, L., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2021). Minute-by-minute variations in parental number talk and their implications for coding parent-child interactions. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

10. *Silver, A., **Convery, C., **Marlin, T., **Libertus, M.** (2021). Parental math talk to preschoolres is most helpful to responsive children. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

11. Montue, T., Elliott, L., Heywood, N., Podvysotska, T., Miller, P., Bachman, H., **Libertus, M.**, Votruba-Drzal, E. (2021). Differential experiences of financial strain in response to COVID-19. *Biennial Meeting of the Society for Research in Child Development (SRCD) (virtual meeting).*

12. *Duong, S., **Libertus, M.** (2020). Uncertainty resolution in numerosity comparison: The moderating role of math ability. *Society for Judgment and Decision Making (JDM) (virtual meeting).*

13. Coulanges, L., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2020). Digital media use and early learning. *National Council on Family Relations (NCFR), St. Louis, MO, USA (virtual meeting).*

14. Bachman, H., Elliott, L., Navarro, M., *Duong, S., Votruba-Drzal, E., **Libertus, M.** (2020). Triangulating multi-method assessments of parental support for early math development. *Submitted to National Council on Family Relations (NCFR), St. Louis, MO, USA (virtual meeting).*

15. **Convery, C., *Silver, A., **Marlin, T., **Libertus, M.** (2020). Parental elicitation of math concepts is most beneficial for preschoolers' math performance when children are responsive. *Home Mathematics Environment Virtual Conference.*

16. *Silver, A., Elliott, L., **Libertus, M.** (2020). Parental math talk is not uniformly beneficial for young children: The moderating role of children's executive functioning. *Home Mathematics Environment Virtual Conference.*

17. Elliott, L., Bachman, H., Miller, P., Votruba-Drzal, E., **Libertus, M.** (2020). Differential predictions of formal and informal math activities at home. *Home Mathematics Environment Virtual Conference.*

18. *Duong, S., Elliott, L., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2020). Micro-genetic exploration of variations in number talk during brief structured parent-child interactions. *Home Mathematics Environment Virtual Conference.*

19. Feinstein, H., **Libertus, M.**, Awan, S., Galera, R., Verdolini Abbott, K. (2020). Cognitive Influences in Pediatric Voice Treatment- a Preliminary Investigation. *Submitted to American Speech-Language-Hearing Association Convention, San Diego, CA, USA (cancelled due to COVID-19).*

20. *Silver, A., **Marlin, T., **Convery, C., Elliott, L., **Libertus, M.** (2020). Factors predicting parental math input with their preschool-aged child. *Interacting Brains: Adult-Child Interaction from Multiple Perspectives – Online Conference.*

21. *Duong, S., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2020). Qualitative differences in parental questioning during dyadic interactions and the relation to 4-year-old children's math abilities. *Interacting Brains: Adult-Child Interactions from Multiple Perspectives – Online Conference.*

22. Koch, G., Durisko, C., *Liu, R., **Libertus, M.**, Fiez, J., Coutanche, M. (2020). Neural representations of number across semantic, phonological, visual, and manual formats. *BRAIN Initiative Investigators Meeting, Bethesda, MD, USA (virtual meeting)*.

23. Miller, P., Bachman, H., Betancur, L., Kammerzell, J., **Libertus, M.**, Votruba-Drzal, E. (2020). The Role of Play in Self-Regulation and Early Academic Development: Differences by SES. *SRCD Special Topic Meeting: Learning through Play and Imagination. St Louis, MO, USA (rescheduled due to COVID-19).*

24. *Silver, A. M., Smith, D., *Braham, E., Libertus, K., **Libertus, M.** (2020). Toddlers map number words to quantities, but only approximately. *International Congress of Infant Studies Biennial Congress, Glasgow, Scotland (cancelled due to COVID-19).*

25. *Silver, A. M., Benassi, M., **Libertus, M.** (2020). The development of visual form and motion discrimination over the first year of life. *International Congress of Infant Studies Biennial Congress, Glasgow, Scotland (cancelled due to COVID-19).*

26. Chen, Y., Mejia, V., Fuentes, H., Suh, D., *Silver, A., Mendelsohn, A., **Libertus, M.**, Tamis-LeMonda, C., Cabrera, N. (2020). Variability in early learning environments: Fathers,

mothers, and toddlers from diverse families. *International Congress of Infant Studies Biennial Congress, Glasgow, Scotland (cancelled due to COVID-19).*

27. *Duong, S., Bachman, H., Votruba-Drzal, E., & **Libertus, M.** (2020). 'What's after six?': Parental math questions relate to 4-year-old children's math skills. *Mathematical Cognition and Learning Society (MCLS) Conference, Dublin, Ireland (cancelled due to COVID-19).*

28. Elliott, L., Bachman, H., Navarro, M., Betancur, L., Votruba-Drzal, E., **Libertus, M.** (2020). Contextual predictors of math support: Comparing measures of math at home. *Mathematical Cognition and Learning Society (MCLS) Conference, Dublin, Ireland (cancelled due to COVID-19).*

29. *Silver, A., Elliott, L., **Libertus, M.** (2020). Frequent math activities are only helpful for preschool-aged children who have acquired some foundational number knowledge. *Mathematical Cognition and Learning Society (MCLS) Conference, Dublin, Ireland (cancelled due to COVID-19).*

30. **Imbeah, A., Elliott, L., *Silver, A., **Libertus, M.** (2019). Do actions speak louder than words? Measuring children's focusing on number. *Biennial Meeting of the Cognitive Development Society, Louisville, KY, USA.*

31. Ribner, A., Elliott, L., *Silver, A., **Libertus, M.** (2019). Exploring effects of an early math intervention: The importance of parent-child interaction. *Biennial Meeting of the Cognitive Development Society, Louisville, KY, USA.*

32. *Duong, S., **Pitulski, S., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2019). What's in a question? Parents' questions in dyadic interactions and the relation to 4-year-old children's math abilities. *Biennial Meeting of the Cognitive Development Society, Louisville, KY, USA.*

33. *Silver, A., **Marlin, T., Elliott, L., **Libertus, M.** (2019). Factors predicting parental math input with their preschool-aged child. *Biennial Meeting of the Cognitive Development Society, Louisville, KY, USA.*

34. *Silver, A., **Convery, C., Elliott, L., **Libertus, M.** (2019). Executive functioning moderates the association between parental elicitation of math concepts and preschoolers' math performance. *Biennial Meeting of the Cognitive Development Society, Louisville, KY, USA.*

35. **Hughes, J., Elliott, L., Betancur, L., **Lemmon, M., Blatt, L., Kammerzell, J., Votruba-Drzal, E., Bachman, H., **Libertus, M.** (2019). Using time diaries to measure parental support for spatial skills. *Biennial Meeting of the Cognitive Development Society, Louisville, KY, USA.*

36. Koch, G., *Liu, R., **Libertus, M.,** Fiez, J., Coutanche, M. (2019). Neural Representations of Number across Semantic, Phonological, Visual, and Manual formats. *Society for Neuroscience, Chicago, IL, USA.*

37. *Liu, R., Koch, G., Coutanche, M., Fiez, J., **Libertus, M.** (2019). Representing numerical information across different formats in the adult brain. *Mathematical Cognition and Learning Society (MCLS) Conference, Ottawa, Canada.*

38. **Williams, T., *Silver, A., Libertus, K., **Libertus, M.** (2019). Influences of Stimulus Complexity on Infant Number Discrimination: Shapes vs. Faces. *Mathematical Cognition and Learning Society (MCLS) Conference, Ottawa, Canada.*

39. *Duong, S., **Pitulski, S., Bachman, H., Votruba-Drzal, E., **Libertus, M.** (2019). Measuring the Quality of Parent-Child Interactions and the Relation to Preschool-Aged Children's Math Skills. *Mathematical Cognition and Learning Society (MCLS) Conference, Ottawa, Canada.*

40. *Braham, E., **Dillaha, A., **Libertus, M.** (2019). How Preschool Teachers Use Math Talk Across Different Instructional Times and Activities. *Mathematical Cognition and Learning Society (MCLS) Conference, Ottawa, Canada.*

41. **Patronick, J., *Elliott, L., **Libertus, M.** (2019). Maternal Gender Biases in Early Exposure to Mathematics. *Mathematical Cognition and Learning Society (MCLS) Conference, Ottawa, Canada.*

42. *Duong, S., **Libertus, M.** (2019). Children's Math Abilities and the Relation to Risky Decision Making: A Study Proposal. *Mathematical Cognition and Learning Society (MCLS) Conference, Ottawa, Canada.*

43. **Libertus, M.**, Coutanche, M., Fiez, J., *Koch, G., *Liu, R. (2019). Neural integration of visual and semantic number knowledge in 4th graders and adults. *BRAIN Initiative Investigators Meeting, Washington, DC, USA.*

44. *Braham, E., McCrink, K., **Libertus, M.** (2019). Play Prompts for Parents in Children's Museums Increase Children's Exposure to Math Talk. *Biennial Meeting of the Society for Research in Child Development (SRCD), Baltimore, MD, USA.*

45. **Imbeah, A., *Elliott, L., **Libertus, M.** (2019). Relations between Spontaneous Focusing on Number, Non-symbolic Number Processing, and Math Abilities. *Biennial Meeting of the Society for Research in Child Development (SRCD), Baltimore, MD, USA.*

46. *Elliott, L., **Zheng, P., **Libertus, M.** (2019). Individual Differences in Parental Support for Math and Literacy in Early Childhood. *Biennial Meeting of the Society for Research in Child Development (SRCD), Baltimore, MD, USA.*

47. **Thippana, J., *Elliott, L., **Gehman, S., **Libertus, M.** (2019). Examining Individual Variability in Parental Number Talk During Math Activities at Home. *Biennial Meeting of the Society for Research in Child Development (SRCD), Baltimore, MD, USA.*

48. **Gehman, S., *Elliott, L., **Thippana, J., **Libertus, M.** (2019). Toys and Number Talk Elicitation: A Gendered Perspective. *Biennial Meeting of the Society for Research in Child Development (SRCD), Baltimore, MD, USA.*

49. *Braham, E., McCrink, K., **Libertus, M.** (2018). Characteristics of Parents and their Children Explain Differences in Math Talk at a Children's Museum. *6th Biennial International Mind, Brain, and Education Society (IMBES) Conference, Los Angeles, CA, USA.*

50. *Braham, E., **Hanner, E., *Elliott, L., **Libertus, M.** (2018). Supermarket Signs Promote Math Talk among Adults and Young Children. *6th Biennial International Mind, Brain, and Education Society (IMBES) Conference, Los Angeles, CA, USA.*

51. *Liu, R., *Braham, E., **Libertus, M.** (2018). Symbolic and non-symbolic number comparisons in children rely on different brain regions: an event-related potentials (ERP) study. *6th Biennial International Mind, Brain, and Education Society (IMBES) Conference, Los Angeles, CA, USA.*

52. *Liu, R., *Braham, E., **Libertus, M.** (2018). Symbolic and non-symbolic number comparison in children: an EEG study. *6th International Workshop on Advanced Learning Sciences, Pittsburgh, PA, USA*.

53. *Braham, E., McCrink, K., **Libertus, M.** (2018). Creating Math-Related Parent-Child Interactions in a Children's Museum. *6th International Workshop on Advanced Learning Sciences, Pittsburgh, PA, USA*.

54. Van Steenkiste, M., **Libertus, M.,** Reynvoet, B., Sasanguie, D. (2018). Getting to the bottom of the link between numerosity processing and mathematical achievement. *Groupe de contact "Numbers and the Brain", Brussels, Belgium.*

55. **Thippana, J., *Elliott, L., **Libertus, M.** (2017). What Influences Variability in Parents' Number Talk in the Lab and at Home? *Biennial Meeting of the Cognitive Development Society, Portland, OR, USA.*

56. *Elliott, L., Feigenson, L., Halberda, J., **Libertus, M.** (2017). Bidirectional, Longitudinal Associations between Math Ability and Approximate Number System Acuity in Childhood. *Math Cognition Conference, Nashville, TN, USA.*

57. *Braham, E., *Liu, R., **Libertus, M.** (2017). Variability in Math Talk During Parent-Child Interactions: The Role of Parents' Math Ability and Approximate Number System Acuity. *Biennial Meeting of the Society for Research in Child Development (SRCD), Austin, TX, USA.*

58. *Braham, E., **Libertus, M.** (2016). Math anxiety moderates the relation between approximate number acuity and math performance. *International Mind Brain and Education Society Conference, Toronto, Canada.*

59. *Liu, R., *Liu, A., Schunn, C., Fiez, J., **Libertus, M.** (2016). The integration between non-symbolic and symbolic numbers and its relation to math ability. *International Mind Brain and Education Society Conference, Toronto, Canada.*

60. *Braham, E., **Libertus, M.** (2016). Math talk variability in preschool classrooms: The role of teachers' abilities and beliefs. *International Mind Brain and Education Society Conference, Toronto, Canada.*

61. *Liu, R., *Liu, A., Schunn, C., Fiez, J., **Libertus, M.** (2016). Automatic integration between non-symbolic and symbolic numbers in adults. *Math Cognition Conference, Fort Worth, TX, USA.*

62. *Liu, R., Schunn, C., Fiez, J., **Libertus, M.** (2016). Spontaneous integration between the representation of non-symbolic and symbolic numbers. *Annual Meeting of the Cognitive Neuroscience Society (CNS), New York, USA.*

63. *Braham, E., *Navarro, M., **Libertus, M.** (2015). Intergenerational Transmission of Numerical Ability: Evidence from Toddlerhood and Middle Childhood. *Biennial Meeting of the Cognitive Development Society, Columbus, USA.*

64. *Liu, R., Möhring, W., **Libertus, M.** (2015). The ratio and orientation effect in infants' and adults' speed discrimination. *Biennial Meeting of the Cognitive Development Society, Columbus, USA.*

65. Wang, J., **Libertus, M.**, Feigenson, L. (2015). Hysteresis-induced changes in infants' approximate number precision. *Biennial Meeting of the Cognitive Development Society, Columbus, USA.*

66. *Braham, E., **Libertus, M.** (2015). Parental influences on children's numerical and mathematical abilities. *Annual Meeting of the Jean Piaget Society, Toronto, Canada.*

67. *Keller, L., **Libertus, M.** (2015). Inhibitory control does not explain the link between approximation and math abilities in children. *Annual Meeting of the Jean Piaget Society, Toronto, Canada.*

68. *Braham, E., **Libertus, M.** (2015). Intergenerational Associations in Approximate Number System Acuity and Mathematical Abilities. *Math Cognition Conference, St. Louis, MO, USA.*

69. *Braham, E., **Libertus, M.** (2015). The Unique Contributions of Children's Numerical Approximation Skills for Various Math Abilities. *Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, USA*.

70. *Braham, E., Libertus, K., **Libertus, M.** (2015). Information Processing Patterns During Approximate Number Comparisons in Preschoolers and Adults: An Eye-tracking Study. *Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, USA*.

71. *Keller, L., **Libertus, M.** (2015). Examining the Importance of Child- and Parent-Level Cognitive Factors in Predicting Children's Early Math Abilities. *Biennial Meeting of the Society for Research in Child Development (SRCD), Philadelphia, USA*.

72. **Libertus, M.**, Halberda, J., Feigenson, L. (2014). Six-month-old Infants can Track Frequency Distributions of Numerosities. *19th Biennial International Conference on Infant Studies (ICIS), Berlin, Germany.*

73. **Libertus, M.**, Feigenson, L., Halberda, J. (2013). On the Stability of Individual Differences in Children's Numerical Approximation Skills. *Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, USA.*

74. Odic, D., **Libertus, M.,** Feigenson, L., Halberda, J. (2013). The quantity of quantity: are visual area and number represented by one system, or two? *Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, USA.*

75. Pailian, H., **Libertus, M.**, Feigenson, L., Halberda, J. (2013). Developmental Changes in Visual Short-Term Memory (VSTM) Capacity Between Ages 3 and 8 Years. *Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, USA.*

76. Pailian, H., **Libertus, M.**, Feigenson, L., Halberda, J. (2013). Measuring Individual Differences in Children's Visual Short-Term Memory Capacity using the Flicker Paradigm. *Biennial Meeting of the Society for Research in Child Development (SRCD), Seattle, USA.*

77. **Libertus, M.**, Starr, A., Brannon, E. (2012). Infants' sensitivity to changes in number versus surface area. *18th Biennial International Conference on Infant Studies (ICIS), Minneapolis, USA.*

78. Odic, D., **Libertus, M.**, Feigenson, L., Halberda, J. (2012). The development of number and area acuity in young children. *18th Biennial International Conference on Infant Studies (ICIS), Minneapolis, USA.*

79. Starr, A., **Libertus, M.**, Brannon, E. (2012). Small number discrimination in infancy: A case for approximate number representations. *18th Biennial International Conference on Infant Studies (ICIS), Minneapolis, USA.*

80. **Libertus, M.**, Feigenson, L., Halberda, J. (2011). Approximate Number Discrimination Predicts Later Math Ability in Preschoolers. *Seventh Biennial Meeting of the Cognitive Development Society, Philadelphia, USA.*

81. Libertus, K., **Libertus, M.** (2011). Similarities And Differences In Approximate Numerical Comparisons Between Children and Adults As Revealed By Eye Gaze. *Seventh Biennial Meeting of the Cognitive Development Society, Philadelphia, USA.*

82. **Libertus, M.**, Libertus, K. (2011). Differences in Strategies During Approximate Numerical Comparisons as Revealed by Eye-gaze Measures. *2011 Association for Psychological Science Annual Convention, Washington, DC, USA.*

83. **Libertus, M.**, Stevenson, A., Odic, D., Feigenson, L., Halberda, J. (2011). The Developmental Vocabulary Assessment for Parents (DVAP): A Novel Tool to Measure Vocabulary Size in 3- to 5-year-old Children. *Biennial Meeting of the Society for Research in Child Development (SRCD), Montreal, Canada.*

84. Möhring, W., **Libertus, M.,** Bertin, E. (2011). Speed Discrimination in 6- and 10-month-old Infant is Ratio-Dependent. *Biennial Meeting of the Society for Research in Child Development (SRCD), Montreal, Canada.*

85. **Libertus, M.**, Halberda, J., Feigenson, L. (2011). Approximate Number Discrimination Correlates With Math Abilities in Preschoolers. *Johns Hopkins 3rd Annual Postdoc Symposium, Baltimore, USA.*

86. **Libertus, M.**, Brannon, E. (2010). Behavioral Evidence for a Shared Mechanism of Number and Size Discrimination in Early but not Late Infancy. *1st Homewood Postdoctoral Poster Competition, Baltimore, USA.*

87. **Libertus, M.**, Brannon, E. (2010). Evidence for a shared system for number and area but not color discrimination in infancy. *24th Attention & Performance Meeting, Abbaye des Vaux de Cernay, France.*

88. Möhring, W., **Libertus, M.**, Bertin, E. (2010). Die Diskrimination von Geschwindigkeiten im Säuglingsalter. [Speed discrimination in infancy]. *8. LizentiandInnen- und DoktorandInnen-Kongress des Psychologischen Institutes der Universität Zürich (LiDoKo), Zürich, Schweiz. [8th Congress for Masters and PhD students at the Institute for Psychology of the University of Zurich, Switzerland].*

89. **Libertus, M.**, Brannon, E., Woldorff, M. (2010). Time course of stimulus-driven oscillatory synchronization and adaptation to numerical changes. *Annual Meeting of the Cognitive Neuroscience Society (CNS), Montreal, Canada.*

90. **Libertus, M.**, Brannon, E. (2010). Developmental trajectory of the relationship between numerical discrimination and other cognitive abilities in infancy. 17th *Biennial International Conference on Infant Studies (ICIS), Baltimore, USA.*

91. **Libertus, M.**, Brannon, E. (2009). Evidence for Weber's Law in Infants' Numerical Discriminations From A New Change Detection Paradigm. *Biennial Meeting of the Society for Research in Child Development (SRCD), Denver, USA.*

92. **Libertus, M.**, Brannon, E., Woldorff, M. (2009). Stimulus-driven oscillatory responses to numerical changes: a novel frequency-tagging EEG paradigm*. Annual Meeting of the Cognitive Neuroscience Society (CNS), San Francisco, USA.*

93. **Libertus, M.**, Brannon, E., Pelphrey, K. (2008). Working memory for numbers, letters, and faces in 8-year-old children and adults. *Annual Meeting of the Cognitive Neuroscience Society (CNS), San Francisco, USA.*

94. **Libertus, M.**, Pruitt, L., Woldorff, M., Brannon, E. (2007). Electrophysiological markers of number processing in 7-month-old infants*. Numeracy and Brain Development (Numbra) Summer School, Greece.*

95. Cantlon, J., Davis, S., **Libertus, M.**, Brannon, E., Pelphrey, K. (2007). The Integrity of White Matter Pathways and Numerical Cognition in Adults and Young Children. *Annual Meeting of the Organization of Human Brain Mapping, Chicago, USA.*

96. Cantlon, J., **Libertus, M.**, Brannon, E., Pelphrey, K. (2007). The development of abstract numerical processing in parietal cortex. *Annual Meeting of the Vision Sciences Society, Sarasota, USA.*

97. **Libertus, M.**, Pruitt, L., Woldorff, M., Brannon, E. (2007). Electrophysiological markers of number processing in 7-month-old infants. *Annual Meeting of the Cognitive Neuroscience Society (CNS), New York, USA.*

98. Cantlon, J., **Libertus, M.**, Brannon, E., Pelphrey, K. (2007). Symbolic & Non-symbolic Number in the Developing Brain. *Annual Meeting of the Cognitive Neuroscience Society (CNS), New York, USA.*

99. **Libertus, M.**, Libertus, K., Suanda, S., Woldorff, M., Meck, W., Brannon, E. (2007). Behavioral and Neurophysiological Correlates of Interval Timing in Human Infants Follow Weber's Law. *Biennial Meeting of the Society for Research in Child Development (SRCD), Boston, USA.*

100. **Libertus, M**., Woldorff, M., Brannon, E. (2006a). Electrophysiological Correlates of the Numerical Distance Effect. *5th Forum of European Neuroscience, Vienna, Austria.*

101. **Libertus, M**., Woldorff, M., Brannon, E. (2006b). Electrophysiological correlates of number comparisons. *Annual Meeting of the Cognitive Neuroscience Society, San Francisco, USA.*

102. Libertus, K., **Libertus, M.**, Woldorff, M., Meck, W., Brannon, E. (2005). Behavioral and neurophysiological correlates of time processing in human infants. *Annual Meeting of the Society for Neuroscience, Washington, D.C., USA.*

103. Brannon, E., **Libertus, M.**, Meck, W., Woldorff, M. (2005). Neurophysiological correlates of time processing are modulated by interval differences in human infants and adults. *Annual Meeting of the Cognitive Neuroscience Society, New York, USA*.

104. **Libertus, M.** (2004). Unterschiede in Eigenschaftspräferenzen bei prädikativem versus funktionalem Problemlösen. [Differences in preferences for object features in the context of predicative versus functional problem solving]. *44th Conference of the German Psychological Society, Göttingen, Germany*.

TEACHING & MENTORING

Teaching

University of Pittsburgh

Spring 2022:	Cognitive Development (PSY 2330, graduate level)
Fall 2021:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.78 out of 5)
Spring 2021:	Cognitive Development (PSY 2330, graduate level, overall teaching effectiveness: 4.43 out of 5)
Spring 2021:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.60 out of 5)
Fall 2020:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.79 out of 5)
Fall 2019:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.64 out of 5)
Fall 2018:	Cognitive Development (PSY 2330, graduate level, overall teaching effectiveness: 4.64 out of 5)
Fall 2017:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.59 out of 5)

Spring 2017:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.36 out of 5)
Fall 2016:	Cognitive Development (PSY 2330, graduate level, overall teaching effectiveness: 3.78 out of 5)
Spring 2016:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.73 out of 5)
Fall 2015:	Mind, Brain & Education (PSY 1054, advanced undergraduate level, overall teaching effectiveness: 4.86 out of 5) Human Developmental Neuroscience (PSY 2376, graduate level, overall teaching effectiveness: 4.7 out of 5)
Spring 2015:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.47 out of 5)
Fall 2014:	Cognitive Development (PSY 2330, graduate level, overall teaching effectiveness: 4.85 out of 5)
Fall 2013:	Cognitive Development (PSY 1330, advanced undergraduate level, overall teaching effectiveness: 4.63 out of 5)

Duke University

Summer 2007:	Developmental Psychology (PSY 97, undergraduate level)
Spring 2007:	Teaching and Research Ethics (graduate student seminar)

Postdoctoral mentoring

Leanne Elliott	2019 - present
Andrew Ribner	2019 - present
	National Research Service Award (1F32HD102106-01), 06/2020-05/2023

Graduate student mentoring

Primary advisor

Jorge Carvalho Pereira	Developmental Psychology	2021 - present
	University of Pittsburgh Arts & Sciences Fellowship, Fall 2021	
Danielle Fox	Cognitive Psychology	2021 - present
Xueying Ren	Cognitive Psychology	2019 - present
Shirley Duong	Cognitive Psychology	2018 - present
	National Science Foundation Graduate Research Fellowship, 2019-2022	
Alex Silver	Cognitive Psychology	2018 - present
	Dr. Ruth L. Meyers Award for Mentoring Excellence, 2021	
	LRDC Graduate Student Research Grant, 2020	
	Behavioral Brain Research Training Fellowship, 2019-2021	
Ruizhe Liu	Cognitive Psychology	2014 - 2020
	Current position: Postdoctoral fellow, Stanford University	
Emily Braham	Cognitive Psychology	2013 - 2019
	Current position: Research Associate, Education Development Center	

Previous position: Evaluation Manager, Boston Children's Museum
Elizabeth Baranger Excellence in Teaching Award, 2019
Andrew Mellon Predoctoral Fellowship, 2018-2019
Tim Post Award for Research Excellence, 2017
Dr. Ruth L. Meyers Award for Mentoring Excellence, 2017
Grant for Research in Diversity, 2017
Mentor-Mentee Course Transformation Grant, 2017
Mini-Grant Award for Research on Diversity, 2016
Behavioral Brain Research Training Fellowship, 2015-2016

Milestone committee member – University of Pittsburgh

Rebecca McGregor	Developmental Psychology, Masters	2021 - present
Ran An	Developmental Psychology, Masters	2021 - present
Linsah Coulanges	Developmental Psychology, Masters	2021 - present
Debbie Bitran	Developmental Psychology, Masters	2020 - present
Griffin Koch	Cognitive Psychology, Masters	2019 - 2020
Kevin Soo	Cognitive Psychology, Dissertation	2018 - 2019
Allison Liu	Cognitive Psychology, Dissertation	2017 - 2018
Kathryn Hauschild	Developmental Psychology, Dissertation	2017 - 2018
Dana Rosen	Clinical-Developmental Psychology, Masters & Specialty exam, Dissertation	2015 - 2019
Bart Larsen	Cognitive Psychology, Specialty exam	2016
Leanne Elliott	Developmental Psychology, Specialty exam, Dissertation	2016 - 2019

External milestone committee member

Marta Fedele	PhD mid-term evaluation, KU Leuven, Belgium	2021
Dan Suh	Dissertation committee, New York University	2021

Mentoring committee member

Jessica Macaluso	Cognitive Psychology	2021 - present
Rebecca McGregor	Developmental Psychology	2020 - present
Debbie Bitran	Cognitive & Developmental Psychology	2019 - present
Ciara Willett	Cognitive Psychology	2017 - present
Nabila Jamal Orozco	Cognitive and Developmental Psychology	2016 - present
Kevin Soo	Cognitive Psychology	2014 - 2019
Regina Calloway	Cognitive Psychology	2014 - 2019
Laura Betancur	Developmental Psychology	2014 - 2020
Joshua Tremel	Cognitive Psychology	2014 - 2016
Brendan Barstow	Cognitive Psychology	2014 - 2105
Xiaoping Fang	Cognitive Psychology	2013 - 2019

Post-baccalaureate student mentoring

Monica Navarro	Hot Metal Bridge Program (now PhD student at the University of Pittsburgh)	2014 – 2015

Undergraduate student mentoring

Bachelor of Philosophy students – University of Pittsburgh

Chelsea Carver	Psychology	2022
	Brackenridge Research Fellowship, Summer 2020	
	Chancellor's Undergraduate Research Fellowship, Fall 2021	
Olivia Knecht	Psychology	2021
	University Honors College Research Fellowship, Fall 2020	
Caitlin Convery	Psychology	2021
	Chancellor's Undergraduate Research Fellowship, Spring 2021	
	THINK Fellowship, Fall 2019	
Adwoa Imbeah	Psychology & Africana Studies major	2020
	Curiosity Grant, Fall 2019	
	THINK Fellowship, Fall 2019	
	LRDC Summer Research Internship, Summer 2019	
	Summer Undergraduate Research Award, Summer 2018	
Abigail Dillaha	Neuroscience & Psychology major	2018
	Chancellor's Undergraduate Research Fellowship, Fall 2017	
	Brackenridge Research Fellowship, Spring 2016	
Peter Zheng	Business, Economics, Political Science & Psychology major	2018
	Brackenridge Research Fellowship, Fall 2017	
	PsychDRIVE Undergraduate Research Fellowship, Summer 2017	
	Chancellor's Undergraduate Research Fellowship, Spring 2017	
	Chancellor's Undergraduate Teaching Fellowship, Spring 2017	
	Humanities, Arts, and Social Sciences Research Fellowship, Fall 2016	
Erinn Hanner	Psychology & Studio Arts major	2017
	Chancellor's Undergraduate Research Fellowship, Fall 2017	

Bachelor of Philosophy committee member – University of Pittsburgh

Sarah Lazarro	Neuroscience & Psychology major	2018
Brenna Mauro	Psychology	2017

Honors thesis students – University of Pittsburgh

Sasha Hofman	Psychology	2021
	Chancellor's Undergraduate Research Fellowship, Fall 2021	
Anisha Venkatesh	Psychology	2020
	Chancellor's Undergraduate Research Fellowship, Fall 2019	
	University Honors College Research Fellowship, Spring 2020	
Thomas Marlin	Psychology	2020
	Chancellor's Undergraduate Research Fellowship, Spring 2020	
Wyatt Macejka	Psychology	2018
	Chancellor's Undergraduate Research Fellowship, Fall 2017	
	Brackenridge Research Fellowship, Summer 2017	
	PsychDRIVE Undergraduate Research Fellowship, Summer 2017	
Jamie Patronick	Psychology	2018
Onnaleah Trentini	Neuroscience	2018
Ashley Whited	Neuroscience	2018
Joy Cui	Neuroscience	2017
	Chancellor's Undergraduate Research Fellowship, Spring 2017	
	Brackenridge Research Fellowship, Summer 2016	
Sierra Struble	Neuroscience	2017

Jyothirmayi Thippana	Neuroscience	2017
Melanie Matyi	Neuroscience	2016
	Chancellor's Undergraduate Research Fellowship, Fall 2016	
	Brackenridge Research Fellowship, Summer 2016	

Honors thesis committee member – University of Pittsburgh

2021-22: Noah Cenkner, Owen Marty, Agnes Reyes
2020-21: Brenna Owens, Maya Maurer

Directed Research in Psychology or Neuroscience – University of Pittsburgh

1. Jerusha George 2022 - present
2. Ana Larez 2022 - present
3. Namita Mahajan 2022 - present
4. Diva Kothari 2022 - present
5. Brandi Ramcoobeer 2022 - present
6. Aaron Johnson 2022 - present
7. Sivan Lurie 2021 - present
   University Honors College Research Fellowship, Spring 2022
8. Heather Booth 2021 - present
9. Jessica Lanning 2021 - present
10. Melanie Custodio 2021 - present
11. Julien Gruber 2021 - present
12. Nandini Rastogi 2021 - present
13. Laura Ruckenstein 2021 - present
14. Kalina McNeil 2021 - present
    University Honors College Research Fellowship, Spring 2022
15. Anna Stover 2021 - present
16. Laura Pickert 2021 - present
17. Kelsey Phillips 2021 - present
18. Vanshika Narala 2021 - present
    Chancellor's Undergraduate Research Fellowship, Fall 2021
19. Laura Funk 2021 - present
20. Gurleen Pal 2021 - present
21. Sierra Vogel 2020 - 2021

22. Morgan Misko 2020
23. Grace Savon 2020 - present
24. Lucia Huerga 2020 - present
25. Junyi “Chloe” Gong 2019 - 2020
26. Victoria Santiago 2019 - 2021
27. Sydney Gordner 2019 - present
28. Andrew Mills 2019 - 2021
29. Brooke O’Hare 2019 - 2020
    Chancellor’s Undergraduate Research Fellowship, Spring 2020
30. Sierra Armstrong 2019 - 2020
    University Honors College Research Fellowship, Fall 2020
31. Erin McChesney 2019
32. Maggie Browne 2019 - present
33. Catherine Powell 2019
34. Rhiannon Stangl 2019 - present
    Chancellor’s Undergraduate Research Fellowship, Spring 2020
35. Morgan Lemmon 2018 - 2019
36. Jocelyn Hughes 2018 - 2020
    Summer Undergraduate Research Award, Summer 2019
    Chancellor’s Undergraduate Research Fellowship, Spring 2020
37. Aeliya Ahmed 2018 - 2021
38. Sarah Pitulski 2018 - 2021
    Chancellor’s Undergraduate Research Fellowship, Fall 2019
39. Dara Czernikowski 2018 - 2019
40. Michaela Barley 2018
41. Shannon O’Leary 2018
42. Christine Shine 2018 - 2019
43. Kian Tabatabai 2018 - 2020
44. Chelsea Wyche 2018 - 2021
45. Georgia Williams 2018
46. Eliza Luxbacher 2018
47. Mia Nall 2018
48. Brianna Stein 2018 - 2019
49. Delaney Regan 2018
50. Erica Schweitzer 2018 - 2019
51. Donald Deep 2018 - 2019
52. Sarah Gehman 2017 - 2019
    Brackenridge Research Fellowship, Summer 2018
53. Miriam Bols 2017 - 2018
54. Taylor Williams 2017 - 2021
55. Azeen Athar 2017
56. Daniel Crawford 2017
    Brackenridge Research Fellowship, Fall 2017
57. Stephanie Quinones 2017 - 2018
    Chancellor’s Undergraduate Research Fellowship, Spring 2018
58. Aditi Sharma 2017 - 2018
59. Simran Gill 2017
60. Elias Rappaport 2017

61. Kelly Staples 2017
62. Michelle Gamburg 2016 - 2019
Brackenridge Research Fellowship, Spring 2018
63. Sonya Naik 2016 - 2017
64. Emily Pullman 2016 - 2017
65. Mahima Rajan 2016 - 2019
THINK Research Fellowship, Spring 2019
66. Xiaoyun Xu 2016 - 2017
67. Kayla Banner 2015 - 2016
68. Dana Cohen 2015
69. Lydia Grubic 2015 - 2016
70. Sejla Jukic 2015 - 2017
PsychDRIVE Undergraduate Research Fellowship, Summer 2017
71. Shreya Kolar 2015 - 2018
72. Carolyn Kotkiewicz 2015
73. Alexandra Lawall 2015 - 2016
74. Sarah Lazarro 2015 - 2016
75. Jenny Ly 2015 - 2016
76. Paige McLaughlin 2015 - 2017
77. Gabrielle Simon 2015 - 2016
78. Dominic Violi 2015 - 2016
79. Charles Yang 2015 - 2017
80. Laxmikausthubha Yaratha 2015 - 2016
81. Trevor Zwaan 2015 - 2016
DeVito-Lipner Family Student Fund, Spring 2016
82. Eva Dice 2014 - 2015
DeVito-Lipner Family Student Fund, Spring 2015
83. Amanda Hopcroft 2014
84. Rebecca Laher 2014 - 2015
85. Permveer Longia 2014 - 2015
86. Eliana Munro 2014 - 2015
DeVito-Lipner Family Student Fund, Spring 2015
Spring Undergraduate Research Award, Spring 2015
87. Megan Raymond 2014
88. Deborah Scialabba 2014
89. Leah Siegel 2014
90. Amy Veasey 2014 - 2016
91. Serena Virgi 2014 - 2015

Internship mentor – Learning Research and Development Center or Department of Psychology, University of Pittsburgh

2021: Kristi Blanco
2019: Adwoa Imbeah
2018: Georgia Williams, Chelsea Wyche
2017: Alexandra Danlag

Research mentor – Johns Hopkins University

2010 – 2013: Internship advisor at Johns Hopkins University (Rebecca Zhu, Cambria Litsey, Samantha Tuepker, Michelle Pargament, Geena Frumkin, Matthew Pulaski, Stephanie Caronna, Misti Jeffers, Brent Rappaport, Ruxue Shao, Lina Montoya, Karen Ho, Sean Ostro, Selin Zeytinoglu)

Research mentor – Duke University

2009:	Frances Degen Horowitz Millennium Scholars mentor, Society for Research in Child Development
2008 – 2009:	Independent study mentor at Duke University (Melissa Mang, Priya Patel)
2006 – 2010:	Honors theses mentor at Duke University (Diana Hancock, Priya Patel, Tina Liang, Laura Pruitt)
2006 – 2008:	Vertical Integration Program mentor at Duke University (Priya Patel, Melissa Mang, Stacey Blase, Lauren Marx, Laura Pruitt)
2005:	NSF Mechanisms of Behavior Program mentor at Duke University (Anna Nehring)

SERVICE

Journal editorial board

2020 – present: Editorial board, Journal of Experimental Child Psychology

Ad hoc journal reviewing

Acta Psychologica
Behavioral and Brain Sciences
Biological Psychology
Brain and Cognition
British Journal of Developmental Psychology
British Journal of Educational Psychology
Cerebral Cortex
Child Development
Cognition
Cognitive Science
Cognitive Neuropsychology
Current Biology
Developmental Cognitive Neuroscience
Developmental Psychobiology
Developmental Science
Early Childhood Research Quarterly
Educational Psychology
European Journal of Neuroscience
European Journal of Psychology of Education
Experimental Brain Research
Frontiers in Developmental Psychology
Human Brain Mapping
International Journal of Psychophysiology
Journal of Applied Research in Intellectual Disabilities
Journal of Behavioral Decision Making
Journal of Cognition and Development
Journal of Cognitive Neuroscience
Journal of Cognitive Psychology
Journal of Experimental Child Psychology
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
Journal of Experimental Psychology: Learning, Memory & Cognition
Journal of Numerical Cognition
Journal of Pediatric Neurology
Learning and Individual Differences
Memory & Cognition
NeuroImage
Neuropsychologia
Neuroscience Letters
Perception
Philosophical Psychology
Philosophical Transactions B
PLoS One
Proceedings of the National Academy of Sciences
Prospects (UNESCO's quarterly review of comparative education)
Psychological Research
Psychological Science
Psychonomic Bulletin & Review,
Psychophysiology
Quarterly Journal of Experimental Psychology
Research in Developmental Disabilities
Scientific Reports
Zeitschrift für Psychologie (Journal of Psychology)

Grant reviewing

Action Medical Research for Children, United Kingdom (2019)
American Institute of Biological Sciences (2021)
Deutsche Forschungsgemeinschaft (DFG), Germany (2019)
European Research Council (2022, 2019)
Institut D'Etudes Avancees de Paris (Paris Institute for Advanced Study), France (2021)
Israel Science Foundation (ISF), Israel (2021)
National Science Foundation, USA (2014, 2015, 2016, 2017, 2019, 2020, 2021)
National Institutes of Health, USA (2022)
Nuffield Foundation, United Kingdom
Research Foundation Flanders (FWO), Belgium
Swiss National Science Foundation, Switzerland

Conference organization

2022: International Congress of Infant Studies, Program co-chair, Ottawa, Canada
2018: 6th International Workshop on Advanced Learning Sciences, Steering committee, Learning Research and Development Center, University of Pittsburgh

Conference reviewing

2018: Biennial Meeting of the Society for Research in Child Development
2017: Cognitive Development Society meeting
2016: 38th Annual Meeting of the Cognitive Science Society
2015: 20th Biennial International Conference on Infant Studies
2015: 37th Annual Meeting of the Cognitive Science Society
2011: 22nd Biennial Meeting of the International Society for the Study of Behavioural Development

Society leadership

2020 – present: Communications officer and executive board member, Mathematical Cognition and Learning Society (MCLS)

Professional memberships

Cognitive Development Society (CDS), Cognitive Neuroscience Society (CNS), International Mind Brain & Education Society (IMBES), International Society on Infant Studies (ICIS), Mathematical Cognition and Learning Society (MCLS), Society for Research in Child Development (SRCD)

Departmental and university service

2020 – present: Executive committee, Learning Research and Development Center, University of Pittsburgh
2020 – present: Chair, Colloquium and Events Committee, Dept. of Psychology, University of Pittsburgh
2019: Tim Post Award committee, Dept. of Psychology, University of Pittsburgh
2019: BRIDGE Center Development Fund evaluation committee, Carnegie Mellon University and University of Pittsburgh
2018 – 2020: Space committee, Learning Research and Development Center, University of Pittsburgh
2018 – 2019: Executive committee, Learning Research and Development Center, University of Pittsburgh
2018/19, 2020/21: Executive committee, Dept. of Psychology, University of Pittsburgh
2018 – present: Faculty organizer, Cognitive Program Talk Series, University of Pittsburgh

2018 – 2019:	Colloquium committee, Dept. of Psychology, University of Pittsburgh
2018 & 2019:	Faculty search committee, Dept. of Psychology, University of Pittsburgh
2016 – 2019:	Faculty Grants Committee, Dietrich School of Arts and Sciences, University of Pittsburgh
2016 – 2019:	Co-chair, Communications Committee, Learning Research and Development Center, University of Pittsburgh
2016 – 2017:	Faculty organizer, Cognitive Brownbag Seminar, University of Pittsburgh
2014 & 2015:	Faculty search committee, Learning Research and Development Center, University of Pittsburgh
2014 – 2015:	Colloquium committee, Dept. of Psychology, University of Pittsburgh
2013:	Faculty search committee, Dept. of Psychology, University of Pittsburgh
2007 – 2010:	Co-organizer Developmental Brownbag Series Department of Psychology and Neuroscience, Duke University
2005 – 2007:	International House Orientation Peer for international graduate students

OTHER INFORMATION

Collaborators

2010 – present:	Ulrika Aden	Karolinska Institute, Sweden
2016 – present:	Heather Bachman	University of Pittsburgh, USA
2019 – present:	David Barner	University of California San Diego, USA
2013 – present:	Mariagrazia Benassi	University of Bologna, Italy
2013 – present:	Roberto Bolzani	University of Bologna, Italy
2016 – present:	Natasha Cabrera	University of Maryland, College Park, USA
2019 – present:	Sara Cordes	Boston College, USA
2016 – present:	Marc Coutanche	University of Pittsburgh, USA
2013 – present:	Julie Fiez	University of Pittsburgh, USA
2019 – present:	Elizabeth Gunderson	Temple University, USA
2010 – present:	Kerstin Hellgren	Karolinska Institute, Sweden
2019 – present:	Tzipi Horowitz-Kraus	Technion, Israel Institute of Technology, Israel
2019 – present:	Daniel Hyde	University of Illinois Urbana-Champaign, USA
2019 – present:	Einat Metzuyanim	Technion, Israel Institute of Technology, Israel
2016 – present:	Koleen McCrink	Barnard College, Columbia University, USA
2010 – present:	Wenke Möhring	University of Fribourg, Switzerland
2010 – present:	Darko Odic	University of British Columbia, Canada
2017 – present:	Bert Reynvoet	KU Leuven, Belgium
2017 – present:	Delphine Sasanguie	KU Leuven, Belgium
2019 – present:	Jessica Sullivan	Skidmore College, USA
2016 – present:	Catherine Tamis-LeMonda	New York University, USA
2019 – present:	Kristy vanMarle	University of Missouri, USA
2013 – present:	Katherine Verdolini Abbott	University of Delaware, USA
2016 – present:	Elizabeth Votruba-Drzal	University of Pittsburgh, USA