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## **1. Personal Information**

### **A. Education**

Doctor of Philosophy, (Ph.D.), 2005  
Developmental Psychology  
University of Pittsburgh, Pittsburgh, PA

Masters of Science (M.S.), 2002  
Developmental Psychology  
University of Pittsburgh, Pittsburgh, PA

Bachelor of Arts (B.A.), 1998  
Psychology  
Bryn Mawr College, Bryn Mawr, PA

### **B. Professional Experience**

2015 - Present     *Associate Professor of Human Development and Quantitative Methodology,*  
University of Maryland, College Park, MD

2008 - 2015     *Assistant Professor of Human Development and Quantitative Methodology,*  
University of Maryland, College Park, MD

2005 - 2007     *Postdoctoral Research Associate with Robert Siegler, Ph.D., Cognitive*  
*Development Lab, Carnegie Mellon University, Pittsburgh, PA*

## **2. Research**

(\*denotes student author)

### **A. Books**

#### **i. Edited books**

Wentzel, K., & **Ramani, G. B.** (Eds.) (2016). *Handbook of social influences in school contexts: Social-emotional, motivation, and cognitive outcomes.* New York, NY: Taylor & Francis Publishers.

## ii. Chapters in edited books

- Ramani, G. B.**, \*Daubert, E. N., & \* Scalise, N. R. (in press). Role of play and games in building children's foundational numerical knowledge. To appear in D. Berch, D. Geary, & K. Mann Koepke (Eds.), *Mathematical Cognition and Learning Series*.
- \*Scalise, N. R., Gladstone, J. R., & **Ramani, G. B.** (in press). Motivation and mathematics in early childhood. To appear in O. Saracho & B. Spodek (Eds.), *Contemporary Perspectives on Research on Motivation in Early Childhood Education*.
- Ramani, G. B.** (2017). When worlds unite: Role of social interactions in children's mathematical development. In P. Lemairs (Ed.), *Cognitive Development from a Strategy Perspective: A Festschrift For Robert Siegler* (pp. 61-77). New York, NY: Routledge.
- Ramani, G. B.**, \*Zippert, E., & \*Daubert, E. (2016). The influence of same- and cross-age peers on children's literacy and mathematical development. In K. Wentzel & G. B. Ramani (Eds.), *Handbook of social influences in school contexts: Social-emotional, motivation, and cognitive outcomes* (pp. 96-112). New York, NY: Taylor & Francis Publishers.
- Rowe, M., **Ramani, G. B.**, & Pomerantz, E. (2016). Parental involvement and children's achievement: A domain-specific perspective. In K. Wentzel & D. Miele (Eds.) *Handbook of motivation at school* (pp. 459-476). New York, NY: Routledge.
- Ramani, G. B.**, & Siegler, R. S. (2014). How informal learning activities can promote children's numerical knowledge. In R. C. Kadosh & A. Dowker (Eds.), *Oxford handbook of numerical cognition* (pp. 1135-1154). Oxford, UK: Oxford University Press.
- Siegler, R. S., & **Ramani, G. B.** (2011). Improving low-income children's number sense. In S. Dehaene & E. M. Brannon (Eds.), *Space, time, and number in the brain: Searching for the foundations of mathematical thought. Attention and performance series, Vol. XXIII* (pp. 343-354). London, UK: Academic Press.

## iii. Encyclopedia entries

- \*Daubert, E. N., **Ramani, G. B.**, Rubin, K. (2018). Play-based learning and social development. In A. Pyle & E. Jackman (Eds.), *Encyclopedia on Early Childhood Development*. Canada: Centre of Excellence for Early Childhood Development and the Strategic Knowledge Cluster on Early Child Development.
- Ramani, G. B.**, & \*Eason, S. H. (2015). Zone of proximal development. In G. W. Scarlett (Ed.), *Classroom management: An A-to-Z guide* (pp. 885-886). Thousand Oaks, CA: Sage Publications.

**Ramani, G. B.,** & \*Zippert, E. (2015). Cooperative learning groups. In G. W. Scarlett (Ed.), *Classroom management: An A-to-Z guide* (pp. 190-193). Thousand Oaks, CA: Sage Publications.

## **B. Articles in Refereed Journals** (Maiden name: Balaraman)

\*Daubert, E. N., **Ramani, G. B.,** Rowe, M. L., \*Eason, S. H., & \*Leech, K. A. (in press). Sum thing to talk about: Caregiver-preschooler math talk in low-income families in the United States. *Bordon. Journal of Education. Special Issue: Mathematics and the Science of Mathematics Education: Evidence from Difference Nations.*

\*Eason, S., & **Ramani, G. B.** (2017). Parental scaffolding and children's executive function: Working memory and planning as moderators during joint problem solving. *Infant and Child Development, 26*(2), 1-24.

**Ramani, G. B.,** Jaeggi, S. M., \*Daubert, E., & Buschkuehl, M. (2017). Domain-general and domain-specific training to improve kindergarten children's mathematics. *Journal of Numerical Cognition, 3*(2), 468-495.

Scalise, N., Daubert, N. A., & **Ramani, G. B.** (2017). Narrowing the early mathematics gap: A play-based intervention to promote Head Start preschoolers' number skills. *Journal of Numerical Cognition, 3*(3), 559-581.

\*Zippert, E. & **Ramani, G. B.** (2017). Parents' estimations of preschoolers' number skills relate to at-home number-related activity engagement. *Infant and Child Development, 26*(2), 1-24.

Brownell, C. A., & **Early Social Development Research Lab** (2016). Prosocial behavior in infancy: The role of socialization. *Child Development Perspectives, 10*(4), 222-227.

\*Muenks, K., Miele, D. B., **Ramani, G. B.,** Stapleton, L. M., & Rowe, M. L. (2015). Parental beliefs about the fixedness of abilities. *Journal of Applied Developmental Psychology, 41,* 78-89.

**Ramani, G. B.,** Rowe, M.R., \*Eason, S., & \*Leech, K. (2015). Math talk during informal learning activities in Head Start families. *Cognitive Development, 35,* 15-33.

Murphy, P. K., Rowe, M., **Ramani, G. B.,** & Silverman, R. (2014). Promoting critical-analytic thinking in children and adolescence at home and in school. *Educational Psychology Review, 26*(4), 561-578.

**Ramani, G. B.,** \*Zippert, E., \*Schweitzer, S., & \*Pan, S. (2014). Preschool children's joint block building during a guided play activity. *Journal of Applied Developmental Psychology, 35,* 326-336.

**Ramani, G. B.,** & Brownell, C. A. (2014). Preschoolers' cooperative problem solving:

- Integrating play and problem solving. *Journal of Early Childhood Research*, 12(1), 92-108.
- Ramani, G. B.**, Siegler, R. S., & \*Hitti, A. (2012). Taking it to the classroom: Number board games as a small group learning activity. *Journal of Educational Psychology*, 104(3), 661-672.
- Ramani, G. B.** (2012). Influence of a playful, child-directed context on preschool children's peer cooperation. *Merrill-Palmer Quarterly*, 58(2), 159-190.
- Ramani, G. B.**, & Siegler, R. S. (2011). Reducing the gap in numerical knowledge between low- and middle-income preschoolers. *Journal of Applied Developmental Psychology*, 32(3), 146-159.
- Ramani, G. B.**, Brownell, C. A., & Campbell, S. A. (2010). Positive and negative peer interaction in 3- and 4-year-olds in relation to regulation and dysregulation. *Journal of Genetic Psychology*, 171(3), 218-250.
- Brownell, C. A., Nichols, S., Svetlova, M., Zerwas, S., & **Ramani, G. B.** (2010). The head bone's connected to the neck bone: When do toddlers represent their own body topography? *Child Development*, 81, 797-810.
- Siegler, R. S., & **Ramani, G. B.** (2009). Playing linear number board games—but not circular ones—improves low-income preschoolers' numerical understanding. *Journal of Educational Psychology*, 101(3), 545-560.
- Ramani, G. B.**, & Siegler, R. S. (2008). Promoting broad and stable improvements in low-income children's numerical knowledge through playing number board games. *Child Development*, 79(2), 375-394.
- Siegler, R. S., & **Ramani, G. B.** (2008). Playing board games promotes low-income children's numerical development. *Developmental Science*, 11(5), 655-661. Translated into Italian and published in *Difficoltà in Matematica* (2014), 10(2). Retrieved from <http://rivistedigitali.erickson.it/difficolta-in-matematica/>
- Brownell, C. A., Zerwas, S., & **Ramani, G. B.** (2007). "So big": The development of body self-awareness in toddlers. *Child Development*, 78(5), 1426-1440.
- Brownell, C. A., **Ramani, G. B.**, & Zerwas, S. (2006). Becoming a social partner with peers: Cooperation and social understanding in one- and two-year-olds. *Child Development*, 77(4), 803-821.
- Cassidy, K., Werner, R., Rourke, M., Zubernis, L., & **Balaraman, G.** (2003). The relationship between psychological understanding and positive social behavior. *Social Development*, 12(2), 198-221.

### C. Invited Articles and Commentaries

**Ramani, G. B.** & \*Eason, S. (2015). It all adds up: Learning early math through play and games. *Phi Delta Kappan*, 96(1), 27-32.

Siegler, R. S. & **Ramani, G.** (2006). Early development of estimation skills. *APS Observer*, 19(5), 34. Preschool Children's Math Exploration During Play with Peers

Zerwas, S., **Balaraman, G.**, & Brownell, C. A. (2004). Constructing an understanding of mind with peers. (Invited commentary). *Behavioral and Brain Sciences*, 27(1), 130.

Brownell, C. A., Zerwas, S., & **Balaraman, G.** (2002). Peers, cooperative play, and the development of empathy in children. (Invited commentary). *Behavioral and Brain Sciences*, 25(1), 28-29.

Volpicelli, J. R., **Balaraman, G.**, Hahn, J., Wallace, H., & Bux, D. (1999). The role of uncontrollable trauma in the development of PTSD and alcohol addiction. *Alcohol Research and Health*, 23(4), 256-262.

### D. Presentations, Abstracts, and Other Professional Papers Presented

#### i. International and national invited presentations

Ramani G. (2018, May). *Incorporating guided play into home numeracy activities*. Guiding Guided Play Workshop, Rutgers University, Newark, NJ.

Ramani, G. (2018, March). *Early math matters*. Keynote Speaker, Zeno, Make a Move for Math, Seattle, WA.

Ramani, G. (2017, May). *Role of play and games in the development of children's numerical knowledge*. Math Cognition Conference, Nashville, TN

Ramani, G. (2017, March). *Improving foundational mathematical knowledge in young children*. Interdisciplinary Mind and Brain Seminar Series, University of Pennsylvania, Philadelphia, PA.

Ramani, G. (2017, January). *Mathematical activities for early childhood classrooms*. Department of Psychology, Temple University, Philadelphia, PA.

Ramani, G. (2016, June). *When worlds unite*. Hommage for Dr. Robert Siegler, Aix en Provence, France

Ramani, G. (2014, April). *How shared activities can promote Head Start children's math skills*. Counseling, Developmental, and Educational Psychology Department, Boston College, Boston, MA.

Ramani, G. (2014, March). *The development of preschool children's mathematical skills*.

Department of Psychology, University of Virginia, Charlottesville, VA.

Ramani, G. (2012, April). *Using informal learning activities to improve children's numerical knowledge*. Committee on Education Workshop, University of Chicago, Chicago, IL.

Ramani, G. (2007, March). *Promoting young children's numerical understanding*. Department of Psychology, West Virginia University, Morgantown, WV.

## **ii. Regional invited presentations**

Ramani, G. (2018, March). *Early math development in the home*. NASA Goddard Child Development Center, Greenbelt, MD.

Ramani, G. (2017, November). *Role of play and games in building children's mathematical knowledge*. Center for Children, Relationship and Culture, Department of Human Development and Quantitative Methodology, University of Maryland, College Park, MD.

Ramani, G. (2016, November). *Promoting early math matter in the classroom*. Keynote Speaker at the Southern Maryland Professional Development for Early Childhood Educators, College of Southern Maryland, La Plata, MD

Ramani, G. (2015, November). *Teaching mathematics using games and play*. Maryland Early Childhood Care and Education Research Forum, Maryland State Department of Education, Towson, MD.

Ramani, G. (2015, September). *Play and learning: The benefits of guided play*. Port Discovery Children's Museum. Baltimore, MD.

Ramani, G. (2014, April). *The role of informal learning activities on young children's numerical development*. Center for Children, Relationship and Culture, Department of Human Development and Quantitative Methodology, University of Maryland, College Park, MD.

Ramani, G. (2014, March). *Numerical knowledge of children in Head Start programs*. Department of Psychology, University of Maryland, Baltimore County, Baltimore, MD.

Ramani, G. (2014, January). *Problem solving during play in preschool age children*. Cognitive and Linguistic Development: Translations of Research for Educational Applications, Developmental Science Workshop, University of Maryland, College Park, MD.

Ramani, G., & Rowe, M. (2013, October). *Young children's critical thinking*. Seeking Common Ground: A Multidisciplinary Examination of Critical, Analytic Thinking in

Learning Development, AERA-Sponsored Conference, University of Maryland, College Park, MD.

- Ramani, G. (2012, October). *Games to improve early mathematical development*. Department of Psychology, George Mason University, Fairfax, VA.
- Ramani, G. (2012, March). *Superhero play in preschool classrooms*. Fort Hunt Preschool Continuing Education Seminar, Alexandria, VA.
- Ramani, G. (2011, October). *Spiderman and Cinderella: Dramatic play in preschool children*. Potomac Association of Cooperative Teachers Professional Development Conference for Early Childhood Educators, Falls Church, VA.
- Ramani, G. (2011, May). *Play and young children's number skills*. Montgomery County Professional Development Schools, Silver Spring, MD
- Ramani, G. (2009, February). *Want to play?: Benefits of play for children's development*. Professional Development Day for Early Childhood Professionals, George Mason University, Fairfax, VA.
- Ramani, G. (2009, February). *Playing number board games improves preschool children's numerical understanding*. Center for Children, Relationship and Culture, Department of Human Development, University of Maryland, College Park, MD.
- Ramani, G. (2008, April). *Utilizing play to promote children's social and emotional development*. Fairfax Futures' Fourth Annual School Readiness Symposium, Fairfax, VA.
- Ramani, G. (2008, November). *Improving preschool children's numerical knowledge*. Developmental Psychology Seminar, Department of Psychology, University of Maryland, College Park, MD.
- Ramani, G. (2007, February). *Playing numerical board games increase the numerical knowledge of Head Start children*. Department of Human Development, University of Maryland, College Park, MD.

## ii. Refereed conference presentations

- Ramani, G. B.,** \*Zippert, E. L., \*Daubert, E. N., & \*Scalise, N. R. (2017, October). *Using cognitive science to inform the design of math apps*. In N. C. Jordan & C. Barbieri (Chairs), Usable knowledge for improving mathematics learning: Bridging research in cognition and development with educational practice in diverse contexts. Paper presented at the biennial meeting of Cognitive Development Society, Portland, OR.
- Eason, S. H., & **Ramani, G. B.** (2017, April). *Parents' and preschoolers' talk about fractions during playful and didactic activities*. In M. Libertus (Chair), Understanding variability

in early home numeracy and its impact on children's math abilities. Paper presented at the Society for Research in Child Development Biennial Meeting, Austin, TX.

\*Scalise, N. R., \*Daubert, E. D., & **Ramani, G. B.** (2017, April). *Short- and long-term effects of playing card games on low-income children's early mathematics skills.* In B. Hassinger-Das (Chair), *Not Just Playing Around: The Role of Toys and Games in Playful Learning.* Paper presented at the Society for Research in Child Development Biennial Meeting, Austin, TX.

**Ramani, G. B.**, \*Eason, S., \*Zippert, E., \*Daubert, E., & \*Scalise, N. (2015, October). *Improving numeracy skills in early childhood.* In B. Rittle-Johnson (Chair), *Early math matters: Development of number, shape and pattern knowledge in early childhood.* Paper presented at the biennial meeting of Cognitive Development Society, Columbus, OH.

\*Daubert, E., **Ramani, G. B.**, & Rowe, M. (2015, March). *Math-talk between caregiver-preschooler dyads during three informal play activities.* In B. Hassinger-Das (Chair), *Learning to play: Identifying and assessing key elements of playful learning.* Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

**Ramani, G. B.**, Jaeggi, S., \*Daubert, E., & Buschkuehl, M. (2015, March). *Domain-general and domain-specific training to improve low-income children's mathematics.* In G. B. Ramani & S. Jaeggi (Chairs), *The role of working memory in children's mathematical achievement.* Paper presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

**Ramani, G. B.**, Rowe, M. L., \*Eason, S. H., & \*Leech, K. A. (2013, April). *Parent talk about math during informal learning activities in Head Start families.* In G. Ramani (Chair), *The role of input and interaction in early numeracy development.* Paper presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.

\*Muenks, K. M., Miele, D., Rowe, M. & **Ramani, G. B.** (2013, April). *Parental beliefs about children's math and reading ability predict self-reported parenting behavior.* In E. Pomerantz (Chair), *New directions in research on parents' involvement in children's education.* Poster symposium presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.

**Ramani, G. B.**, & Siegler, R. S. (2011, April). *A small group activity to improve numerical understanding in a Head Start population.* In M. Kolkman & E. Krosbergen (Chairs), *Improving math abilities: The effects of domain general and domain specific training.* Paper presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.

Siegler, R. S., & **Ramani, G. B.** (2009, May). *Improving low-income children's*



*mathematical understanding*. In C. O'Donnell & E. Albro (Chairs), Developing preschool through middle school students' understandings of fundamental concepts in mathematics. Paper presented at the annual meeting of the Association for Psychological Science, San Francisco, CA.

**Ramani, G. B., & Siegler, R. S.** (2009, April). *Improving low- and middle-income preschool children's numerical knowledge and arithmetic learning by playing a linear board game*. In J. Horst (Chair), Global perspectives on how SES influences children's math performance across tasks. Paper presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

Siegler, R. S., & **Ramani, G. B.** (2009, April). *Applying cognitive analyses to improving the numerical understanding of preschoolers from low-income backgrounds*. In E. Albro (Chair), Can findings from Developmental Science transform instruction and improve education outcomes? Paper presented at the biennial meeting of the Society for Research in Child Development, Denver, CO.

**Ramani, G. B., & Siegler, R. S.** (2009, February). *Playing linear number board games improves children's mathematical knowledge*. In C. O'Donnell (Chair), IES-funded studies that produce trustworthy evidence of the effects of curriculum and curriculum policy interventions on mathematics achievement in PreK-16 settings. Paper presented at the annual meeting of the Society for Research in Educational Effectiveness, Arlington, VA.

**Ramani, G. B., & Siegler, R. S.** (2007, March). *Improving the numerical estimation of Head Start children*. In S. Levine (Chair), Mathematics and spatial development: The role of input. Paper presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.

Brownell, C. A., Zerwas, S., **Ramani, G. B.**, Nichols, S. R., & Svetlova, M. L. (2007, March). *Objective representations of one's own body: Early developments in awareness of the size and topography of one's body*. In C. A. Brownell & V. P. Slaughter (Chairs), Early developments in body representation: Action, knowledge, self-awareness. Paper presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.

**Balaraman, G.,** Zerwas, S., & Brownell, C. A. (2005, April). *Joint play and problem solving in young toddlers*. In S. Zerwas (Chair) Cooperative Play and Problem Solving in Young Children. Student symposium presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.

### iii. Refereed conference posters

\*Daubert, E. N., & **Ramani, G.** (2017, October). *Math and memory in bilingual preschoolers: The relations between bilingualism, working memory, and numerical knowledge*. Poster presented at the biennial Meeting of the Cognitive Development Society, Portland, OR.

- Scalise, N., **Ramani, G. B.**, & Zeno. (2017, October). *A play-based mathematics intervention for Head Start families*. Poster presented at the biennial Meeting of the Cognitive Development Society, Portland, OR.
- \*Scalise, N., \*Daubert, E. N., & **Ramani, G.** (2017, May). *Which card is more? A numerical card game intervention for Head Start preschoolers*. Poster presented at the Mathematical Cognition and Learning Conference, Nashville, TN.
- \*Daubert, E. N., \*Scalise, N. R., & **Ramani, G. B.** (2017, April). *Home mathematics and literacy activities of low- and high-SES caregivers and their preschoolers*. Poster presented at the Society for Research in Child Development Biennial Meeting, Austin, TX.
- \*Scalise, N. R., & **Ramani, G. B.** (2017, April). *Characteristics of low-income preschoolers' numerical abilities: A latent profile analysis*. Poster presented at the Society for Research in Child Development Biennial Meeting, Austin, TX.
- \*Zippert, E. & **Ramani, G. B.**, (2017, April). *Measuring preschoolers' early math experiences: What parents say they do, what we observe, and predictors of both*. Poster presented at the Society for Research in Child Development Biennial Meeting, Austin, TX.
- \* Daubert, E. N. & Ramani, G. B. (2016, April). *Enhanced mathematics understanding in bilingual preschoolers: The role of working memory*. Poster presented at the meeting of the Annual Math Center Conference: Bringing Cognitive Science Research to the Classroom, Arlington, VA.
- \*Scalise, N., Daubert, E., & **Ramani, G. B.** (2016, April). *Narrowing the early mathematics gap: A play-based intervention to promote Head Start preschoolers' number skills*. Poster presented at the annual American Educational Research Association, Washington, D.C.  
*Awarded the Outstanding Graduate Student Poster Award for Division C*
- \*Zippert, E. L., \*Daubert, E. N., \*Scalise, N. R., & **Ramani, G. B.** (2016, October). *The Great Race goes digital: Effects of tablet number game instructions on parent math talk*. Poster presented at the SRCD Special Topic Meeting: Technology and Media in Children's Development, Irvine, CA.
- \*Daubert, E., & **Ramani, G. B.** (2015, October). *The role of bilingualism and working memory on early math development in preschoolers*. Poster presented at the biennial meeting of the Cognitive Development Society, Columbus, OH.
- \*Scalise, N., Daubert, E., & **Ramani, G. B.** (2015, October). *Playing numerical card games promotes Head Start preschoolers' early math skills*. Poster presented at the biennial meeting of the Cognitive Development Society, Columbus, OH.

- \*Eason, S., \*Muenks, K., **Ramani, G. B.**, Rowe, M., & Miele, D. (2015, March). *Parents' domain-specific ability mindsets influence support during reading and math tasks with preschoolers*. Poster presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
- \*Zippert, E., \*Eason, S., \*Marshall, S., & **Ramani, G. B.** (2015, March). *How do preschoolers explore math during play?* Poster presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.
- \*Daubert, E., Jaeggi, S., Buschkuhl, M., & **Ramani, G. B.** (2014, November). *Domain-general and domain-specific training to improve children's numerical knowledge*. Poster presented at the annual meeting of the Psychonomic Society, Long Beach, CA.
- \*Zippert, E., & **Ramani, G. B.** (2014, August). *Calibrating the quality of parents' beliefs about children's early math development*. Poster presented at the annual meeting of the American Psychological Association, Washington, DC.
- \*Eason, S., **Ramani, G. B.**, \*Martello, A., & \*Star, E. (2014, May). *What do you think they should do next? Preschoolers' problem-solving strategies during cooperative play*. Poster presented at the annual meeting for the Jean Piaget Society, San Francisco, CA.
- \*Zippert, E., & **Ramani, G. B.** (2013, May). *Parents' beliefs about child's math abilities relate to at-home math activity engagement*. Poster presented at the annual meeting for Association for Psychological Science, Washington, DC.
- \*Eason, S., & **Ramani, G. B.** (2013, April). *How is the effectiveness of parental guidance influenced by children's executive function?* Poster presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.
- \*Eason, S., \*Leech, K., **Ramani, G. B.**, & Rowe, M. (2013, April). *Children's executive function relates to the frequency and quality of shared book reading with parents*. Poster presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.
- \*Leech, K., Rowe, M., & **Ramani, G. B.** (2012, June). *Head Start parents' use of extended discourse during three activities and children's vocabulary skill*. Poster presented at the biennial meeting of Head Start's National Research Conference, Washington, DC.
- Ramani, G. B.**, Rowe, M. L., \*Eason, S. H., & \*Leech, K. A. (2011, October). *Count on it? Math talk during parent-child interactions in Head Start families*. Poster presented at the biennial meeting of the Cognitive Development Society, Philadelphia, PA.
- \*Zippert, E., \*Schweitzer, S., \*Pan, S., & **Ramani, G. B.** (2011, October). *"This is the door": Examining preschool children's block building*. Poster presented at the biennial

meeting of the Cognitive Development Society, Philadelphia, PA.

- Ramani, G. B.**, \*Hitti, A., \*Zippert, E. & Siegler, R. S. (2011, April). *Relations between early number skills and language ability in Head Start children*. Poster presented at the biennial meeting of the Society for Research in Child Development, Montreal, Canada.
- Ramani, G. B.**, & Siegler, R. S. (2010, June). *Promoting low-income children's numerical knowledge through playing board games as a small group learning activity*. Poster presented at the annual meeting of the Institute of Education Sciences, Washington, DC.
- Ramani, G. B.**, & Siegler, R.S. (2009, June). *Playing a linear board game promotes low- and middle-income preschool children*. Poster presented at the annual meeting of the Institute of Education Sciences, Washington, DC.
- Ramani, G. B.**, & Siegler, R. S. (2009, May). *Improving low-income preschoolers' numerical knowledge and arithmetic learning by playing a linear board game*. Poster presented at the annual meeting of the Association for Psychological Science, San Francisco, CA.
- Ramani, G. B.**, & Siegler, R. S. (2008, June). *Learning to learn arithmetic by playing a linear board game*. Poster presented at the annual meeting of the Institute of Education Sciences, Washington, DC.
- Ramani, G. B.** (2007, March). *Cooperative play and problem solving in preschool children*. Poster presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.
- Brownell, C. A., Svetlova, M. L. Nichols, S. R., Zerwas, S., **Ramani, G. B.**, & Rinberg, Y. (2007, March). *"The head bone's connected to the neck bone": Toddlers' knowledge of their own body topography*. Poster presented at the biennial meeting of the Society for Research in Child Development, Boston, MA.
- Brownell, C. A, Nichols, S., Svetlova, M., Zerwas, S., & **Ramani, G. B.** (2006, July). *Where's your nose?: Toddlers' knowledge of their own body topography*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Kyoto, Japan.
- Brownell, C. A., Svetlova, M., Nichols, S., Zerwas, S., & **Ramani, G. B.** (2006, July). *Self-understanding and body self-awareness in toddlers*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Kyoto, Japan.
- Ramani, G. B.**, & Siegler, R.S. (2006, June). *Improving numerical estimation of Head Start children*. Poster presented at the annual meeting of the Institute of Education Sciences, Washington, DC.

- Balaraman, G., & Siegler, R. S.** (2005, April). *It's more than just a game: Effects of children's board game play on the development of numerical estimation*. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.
- Nichols, S., Brownell, C. A., **Balaraman, G.**, & Zerwas, S. (April, 2005). *Does mental state language relate to cooperative play and cooperative problem-solving in toddler peers*. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.
- Balaraman, G.**, Brownell, C. A., Zerwas, S., & Kimmel, A. (2004, May). *Relations between temperament and early peer interaction in toddlers' joint play and cooperative problem solving*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Chicago, IL.
- Brownell, C. A., **Balaraman, G.**, Zerwas, S., Adalja, A., & Sancaktar, M. (2004, May). *Through the looking glass: Toddlers' scale errors with self and dolls*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Chicago, IL.
- Brownell, C. A., **Balaraman, G.**, Zerwas, S., & Adalja, A. (2004, May). *Toddlers in wonderland: Self errors and self-understanding*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Chicago, IL.
- Zerwas, S., Brownell, C.A., **Balaraman, G.**, & Adalja, A. (2004, May). *My size or the doll's size? Doll play and scale errors in toddlers*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Chicago, IL.
- Balaraman, G. R.** (2003, April). *Children's self-regulation and peer interaction at 36 and 54 months: Concurrent and longitudinal relations*. Poster presented at the biennial meeting of the Society for Research in Child Development, Tampa, FL.
- Brownell, C. A., **Balaraman, G.**, Zerwas, S., Mariaskin, A., & Kimmel, A. (2003, April). *Peer social skill and social understanding in toddlers: Joint play, joint attention, and cooperative problem-solving*. Poster presented at the biennial meeting of the Society for Research in Child Development, Tampa, FL.
- Balaraman, G.**, & Brownell, C.A. (2002, April). *Self-regulation and peer social competence in young preschool children*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Toronto, Canada.
- Brownell, C.A., **Balaraman, G.**, Mariaskin, A., Perseo, K., & Zerwas, S. (2002, April). *Joint play and cooperative problem-solving in toddlers: Relations between social skills and social understanding*. Poster presented at the biennial meeting of the International Conference on Infant Studies, Toronto, Canada.

Cassidy, K., & **Balaraman, G.** (1997, April). *Theory of mind ability in language delayed children*. Poster presented at the biennial meeting of the Society for Research in Child Development, Washington, DC.

## E. Contracts and Grants

### i. Ongoing

Spencer Foundation 04/01/2017 - 03/31/2018  
*It's More than Just Fun and Games: A Play-Based Mathematics Intervention for Head Start Families*

**G. Ramani (PI)**; Award \$35,884

National Science Foundation (NSF; #1561447) 7/1/2016 - 6/30/2019  
*Collaborative Research: Domain-General and Domain-Specific Training to Improve Children's Mathematics*

**G. Ramani (PI)**; S. Jaeggi (co-PI); Award \$749,070

### ii. Completed Grants

Heising-Simons Foundation 03/01/2017 -12/31/2017  
*Promoting Family Math Fluency in Families from Head Start: A Play-Based Mathematics Intervention*

**G. Ramani (PI)**; Award \$15,840

Spencer Foundation 08/01/2015 - 7/31/2016  
*Improving Low-income Children's Symbolic and Non-symbolic Numerical Knowledge*

**G. Ramani (PI)**; Award \$50,000

Heising-Simons Foundation 01/01/2015 - 12/31/2015  
*Using Number Games to Promote Head Start Children's Symbolic and Non-symbolic Number Skills*

**G. Ramani (PI)**; Award \$16,481

ADVANCE NSF Interdisciplinary and Engaged Seed Grant 2013-2014  
*Domain-General and Domain-Specific Training to Improve Children's Numerical Knowledge and Working Memory.*

**G. Ramani (PI)**, S. Jaeggi (Co-PI); Award \$20,000

Research and Scholarship Award, UMD Graduate School. Summer 2013  
*Parent Talk about Numbers during Informal Learning Activities.*

**G. Ramani (PI)**; Award \$9,000.

Institute of Education Sciences (IES; R305A080013) 2009-2012  
*Improving Children's Numerical Understanding.*

R. Siegler (PI), **G. Ramani (Co-PI)**; Subcontract \$145,880

University of Maryland, College of Education SPARC SEED Grant  
*The Role of Peers in Early Mathematical Development.*  
**G. Ramani (PI)**, K. Rubin (Mentor); Award \$15,000

2011-2012

## **F. Fellowships, Prizes, and Awards**

UMD Graduate School Research and Scholarship Award 2013

University of Pittsburgh Provost Development Fund Predoctoral Fellowship 2004 - 2005

Andrew Mellon Predoctoral Fellowship 2003 - 2004

Cum Laude, Bryn Mawr College 1998

Psychology Major Honors, Bryn Mawr College 1998

Howard Hughes Fellowship, Bryn Mawr College 1997

## **G. Editorships, Editorial Boards and Reviewing Activities for Journals**

### **i. Editorial boards**

*Contemporary Educational Psychology*, 2013-present

*International Journal of Behavioral Development*, 2011-2015

### **ii. Ad hoc journal reviewer**

*British Journal of Developmental Psychology*, 2009

*Child Development*, 2008, 2011, 2012 (2), 2014, 2015 (2), 2017

*Contemporary Educational Psychology*, 2008, 2012, 2013 (3), 2014 (6), 2015 (6), 2016 (5), 2017 (6), 2018 (4)

*Current Directions in Psychological Science*, 2015 (3)

*Developmental Psychology*, 2007, 2010 (2), 2014, 2015 (2), 2016, 2017(2), 2018

*Early Childhood Research Quarterly*, 2013, 2016, 2017 (2), 2018 (3)

*Early Education and Development*, 2015

*Educational Psychologist*, 2016, 2017 (2)

*European Journal of Psychology of Education*, 2009

*Infancy*, 2005

*Infant and Child Development*, 2008

*International Journal of Behavioral Development*, 2011, 2012 (3), 2013 (4), 2014 (5)

*Journal of Applied Developmental Psychology*, 2009 (2), 2013, 2015

*Journal of Cognition and Development*, 2016 (2), 2017

*Journal of Educational Psychology*, 2008, 2010, 2011, 2012 (2), 2013, 2014, 2016 (2), 2017, 2018 (2)

*Journal of Experimental Child Psychology*, 2009, 2014, 2015

*Journal of Numerical Cognition*, 2017, 2018

*Psychological Science*, 2008

*Social Development*, 2011 (2)

## **H. Press and Media Coverage**

April/May 2016 - "Social play and problem solving," *Teaching Young Children*.

4/13/2016 - "Why kids should use their fingers in math class," *The Atlantic*  
<http://www.theatlantic.com/education/archive/2016/04/why-kids-should-use-their-fingers-in-math-class/478053/>

2/23/2016 - "Learning from board games: New Monopoly game." Radio interview on *Knolwedge@Wharton*.

2/13/2013 - "Ask the experts: Understanding the connection between early childhood education and financial literacy," *Cardhub*  
<http://www.cardhub.com/edu/early-childhood-education-and-financial-literacy/>

4/4/2012 - "A study on board games and numeracy: Analysis, implications, and future directions," *Tiltfactor*  
<http://www.tiltfactor.org/a-study-on-board-games-and-numeracy-analysis-implications-and-future-directions/>

11/2009 - "Board games promote math skills," *ABC Magazine*, 53-54

5/2009 - "Using games to foster cognitive skills in children," *Better Homes and Garden*, 232

8/11/2008 - "Playing number games can improve preschoolers' math skills," *The MAA Mathematical Sciences Digital Library*  
<http://www.maa.org/news/math-news/playing-number-games-can-improve-preschoolers-math-skills>

4/29/2008 - "Playing games in classroom helping pupils grasp math," *Education Week*  
[http://www.edweek.org/ew/articles/2008/04/30/35games\\_ep.h27.html](http://www.edweek.org/ew/articles/2008/04/30/35games_ep.h27.html)

3/27/2008 - "Playing numerical board games boosts number skills of low-income Preschoolers," *Science Daily*  
<http://www.sciencedaily.com/releases/2008/03/080325083304.htm>

3/24/2008 - "Board games 'boost early maths skills,'" *The Guardian*  
<http://www.theguardian.com/education/2008/mar/25/schools.uk3>

## **I. Invited Conference Participant**

2018 *Supporting Family Math*, Sponsored by the Overdeck Foundation and Heising-Simons Foundation New Orleans, LA.



- 2016 *Advancing Family Math Fluency*, Sponsored by the Overdeck Foundation and Heising-Simons Foundation, University of Chicago, Chicago, IL.
- 2013 *Evolutionary Perspectives on Educational Research, Policy, and Practice*, AERA Sponsored Conference, Evolution Institute, Arlington, VA
- 2013 *Seeking Common Ground: A Multidisciplinary Examination of Critical, Analytic Thinking in Learning Development*, AERA-Sponsored Conference, University of Maryland, College Park, MD
- 2012 *Frontiers of Innovation Workshop*, Center on the Developing Child at Harvard University, Boston, MA

### **3. Teaching, Mentoring and Advising**

#### **A. Courses Taught in the Last Five Years**

*University of Maryland; Department of Human Development and Quantitative Methodology*  
EDHD 322: The Young Child as Mathematician (undergraduate)

- Fall 2014: 27 students
- Fall 2015: 23 students
- Fall 2016: 25 students
- Fall 2017: 38 students

EDHD 386: Experiential Learning

- Fall 2017: 1 student

EDHD 411: Child Growth and Development (undergraduate)

- Spring 2013: 40 students
- Spring 2014: 41 students
- Fall 2014: 40 students
- Spring 2015: Section 0101, 40 students; Section 0201, 25 students
- Spring 2016: 39 students
- Fall 2016: 40 students

EDHD 413: Adolescent Development (undergraduate)

- Spring 2018: 41 students

EDHD 460: Educational Psychology (undergraduate)

- Spring 2016: 41 students

EDHD 489: Field Experiences in Education (undergraduate)

- Spring 2013: 4 students
- Fall 2013: 7 students
- Spring 2014: 4 students

- Spring 2015: 4 students
- Fall 2017: 1 student

EDHD 498: Special Problems in Education (undergraduate)

- Summer 2013: 1 student
- Fall 2014: 5 students
- Fall 2015: 3 students
- Spring 2016: 4 students
- Spring 2017: 3 students

EDHD 721: Cognitive Development and Learning: An Introduction (graduate)

- Fall 2012: 19 students
- Fall 2013: 14 students
- Spring 2014: 8 students
- Fall 2015: 8 students

EDHD 7790: Where Worlds Meet: Social and Cognitive Development (graduate)

- Spring 2013: 6 students

EDHD 888 & 889: Independent Study (graduate)

- Spring 2013: 1 students
- Fall 2013: 2 students
- Spring 2014: 2 students
- Fall 2014: 3 students
- Spring 2015: 3 students
- Fall 2015: 3 students
- Spring 2016: 2 students
- Fall 2016: 2 students
- Spring 2017: 2 students
- Fall 2017: 1 student
- Spring 2018: 1 student

## **B. Course or Curriculum Development**

EDHD 721: Cognitive Development Learning

I re-designed this course on cognitive development, which is a required doctoral course for graduate students in the Human Development and School Psychology programs. This course covers the major theories, issues, and areas of research in cognitive development. An emphasis is made on the application of these concepts to education, learning, and academic skills development.

EDHD 7790: Where Worlds Meet: Social and Cognitive Development

I developed an advanced graduate seminar that focuses on how children's social interactions promote their cognitive development, and also how cognitive skills can impact children's social interactions. This course presents theoretical frameworks for understanding how social interactions can influence children's learning and growth. We also analyze parent-child interactions, peer interactions, learning contexts, and mechanisms that contribute to children's social and cognitive development.

## **C. Advising**

### **i. Undergraduate thesis**

- Mara Durva, Faculty Sponsor for the Robert E. McNair Scholar Post-Baccalaureate Achievement Program

### **ii. Ph.D. advisees**

#### Current advisees:

- Emily Daubert: Entered Doctoral Program with Developmental Science Specialization in Fall 2013, *NICHD Trainee*
- Nicole Scalise: Entered Doctoral Program in with Educational Psychology Specialization in Fall 2014, *NSF Graduate Research Fellow*
- Mary DePascale, Entered Doctoral Program with Developmental Science Specialization in Fall 2017, *University of Maryland Flagship Fellow*

#### Former advisees:

- Sarah Eason: Entered Doctoral Program with Developmental Science Specialization in Fall 2010, Graduated in 2015. Currently a Post-doctoral Fellow in the Department of Psychology at the University of Chicago, Chicago, IL.
- Erica Zippert: Entered Doctoral Program with Educational Psychology Specialization in Fall 2010, Graduated in 2016. Currently a Post-doctoral Fellow at Vanderbilt University.
- Kathryn Leech: Entered Doctoral Program with Educational Psychology Specialization in Fall 2010; Became an advisee in Fall 2014. Graduated in 2016. Currently a Post-doctoral Fellow at Harvard University.

### **iii. Master's thesis committee**

- Brittney Mackel (Advisor: Torney-Purta), Graduated 2009

### **iv. Doctoral Portfolio committee**

- Megan Kelly (Advisor: Killen, EDHD) 2009
- Bridget Fredstrom (Advisor: Rubin, EDHD) 2009
- Jenna Suway (Advisor: Fox, EDHD) 2010
- Aline Hitti (Advisor: Killen, EDHD) 2011
- Kathryn Ellison (Advisor: Rubin, EDHD) 2012
- Shelby Cooley (Advisor: Killen, EDHD) 2013

- Maureen Wimsatt (Advisor: Rubin, EDHD) 2013
- Kathryn Leech (Advisor: Rowe, EDHD) 2013
- Sarah Eason (Advisor: Ramani, EDHD) 2013
- Erica Zippert (Advisor: Ramani, EDHD) 2014
- Daniela Aldoney (Advisor: Cabrera, EDHD) 2014
- Jenessa Malin (Advisor: Cabrera, EDHD) 2015
- Sonya Treller-Renfree (Advisor: Fox, EDHD) 2015
- Michael Rizzo (Advisor: Killen, EDHD) 2015
- Courtney Hattan (Advisor: Alexander, EDHD) 2016
- Lauren Singer (Advisor: Alexander, EDHD) 2016
- Emily Daubert (Advisor, Ramani, EDHD) 2016
- Nicole Scalise (Advisor, Ramani, EDHD) 2018

#### **v. Doctoral Dissertation committees**

- Megan Kelly (Advisor: Killen, EDHD) Graduated 2011
- Kelly Lynn Mulvey (Advisor: Killen, EDHD) Graduated 2013
- Lauren White (Advisor: Fox, EDHD) Graduated 2013
- Aline Hitti (Advisor: Killen, EDHD) Graduated 2013
- Bridget Fredstrom (Advisor: Torney-Purta, EDHD) Graduated 2013
- Jenna Suway (Advisor: Fox, EDHD) Graduated 2014
- Shelby Cooley (Advisor: Killen, EDHD) Graduated 2015
- Maureen Wimsatt (Advisor: Rubin, EDHD) Graduated 2015
- Sarah Eason (Advisor, Ramani, EDHD) Graduated 2015
- Daniela Aldoney (Advisor, Cabrera, EDHD) Graduated 2015
- Erica Zippert (Advisor, Ramani, EDHD) Graduated 2015
- Kathryn Leech (Advisor, Ramani, EDHD) Graduated 2016
- Amy Ho (Advisor, Wigfield, EDHD) Graduated 2016
- Alison Robey (Advisor, Dougherty, PSYCH) Graduated 2016
- Emily Rosensweig (Advisor, Wigfield, EDHD) Graduated 2017
- Evren Etel (Advisor, Slaughter, PSYCH, University of Queensland, Australia) 2017
- Courtney Hattan (Advisor, Alexander, EDHD) 2017
- Emily Daubert (Advisor, Ramani, EDHD), 2017

## **4. SERVICE**

### **A. Professional**

#### **i. Memberships in professional organizations**

American Psychological Association (APA)  
 American Psychological Society (APS)  
 Cognitive Development Society (CDS)  
 Jean Piaget Society (JPS)  
 Society for Research in Child Development (SRCD)

American Education Research Association (AERA)

## **ii. Reviewing Activities**

National Science Foundation, Ad-hoc Grant Reviewer, 2018

Successful Pathways from School to Work, University of Chicago, Grant Reviewer, 2017

Cognitive Development Society Conference, Symposium Reviewer, 2017

William T. Grant Foundation, Grant Review, 2016

Panel Chair, American Educational Research Association Conference (AERA): Division C, Section 2B: Learning and Motivation in Social and Cultural Contexts, 2015

Society for Research in Child Development Biennial Conference (SRCD): 2012 (Panel-Childhood: Social Processes), 2014 (Panel-Education, Schooling), 2016 (Panel-Cognitive Processes)

IES Grant Peer Review Panel, Early Intervention and Early Childhood Division, 2011

American Educational Research Association Conference (AERA: Division C Section Mathematics), 2010

## **iii. Consulting**

Cyberchase, PBS Animated Series, Design of computer fraction game for schools, 2016 – present

Math Content Expert, *Development of a Birth to Five Curriculum and Professional Development Modules*, Maryland State Department of Education, Center for Early Education and Intervention, 2016 – 2018

Consultant and Presenter, *Summer Institutes for Early Childhood Educators in Prince George's County: Translating Research into Practice*, Bainum Family Foundation, Principal Investigator: Dr. Christy Tirrell-Corbin

## **B. Campus**

### **i. Departmental**

- Director of Graduate Studies, Human Development, 2017 - present
- Executive Committee, Human Development and Quantitative Methodology, 2013-2016, 2017- present
- Area Head, Educational Psychology specialization, Human Development and Quantitative Methodology, 2013-2016
- Undergraduate Committee, Human Development and Quantitative Methodology, 2013-2016
- Department Chair Search Committee, Human Development Program, Department of Human Development and Quantitative Methodology, 2015
- Director of Center for Young Children (CYC) Search Committee, Human Development Program, Department of Human Development and Quantitative Methodology, 2015
- Co-chair of the Colloquia series of the Center for Children, Relationships, and Culture

(with Nathan Fox) (Fall 2009, Spring 2013).

- Faculty Search Committee, Measurement and Statistics Program, Human Development and Quantitative Methodology, 2012-2013, 2013-2014
- Ad hoc Awards Committee, Human Development, 2012-2013
- Graduate Admissions Committee, Human Development, 2010-2012
- Graduate Committee, Human Development, 2008-2009

## **ii. College**

- College of Education Graduate Council, 2017-present
- College of Education Senate Steering Committee, 2009-2010
- College of Education Awards Committee, 2008-2009
- College of Education Senate, 2008-2010

## **iii. University**

- Mentor of Year Award Committee, 2017
- Faculty Representative to University Senate, 2014-2016
- McNair Fellowship Committee, 2014, 2016
- Kirwan Faculty Research and Scholarship Prize Selection Committee, 2013-2014