

Michèle Mazzocco
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Education

- 1989-1992 Postdoctoral Fellowship in Developmental Neuropsychology
 University of Colorado Health Sciences Center, Denver, Colorado

- 1988 Ph.D., Experimental Psychology
 Area of Concentration: Cognitive Development
 Arizona State University, Tempe, Arizona

- 1983 M.Ed. Elementary Education
 Area of concentration: Early Childhood Education
 Arizona State University, Tempe, Arizona

- 1981 B.S. Psychology
 Arizona State University, Tempe, Arizona
 Graduated *Summa Cum Laude*

Positions

- 2012-present Professor, Institute for Child Development, University of Minnesota

- 2012-2016 Research Director, Center for Early Education and Development, University of Minnesota

- 1993-2012 Professor Instructor (with tenure) and Associate Professor, and Assistant Professor of Psychiatry and Behavioral Sciences, Johns Hopkins School of Medicine

- 2009- present Professor (joint appointment), and Adjunct Professor (since 2012), Johns Hopkins University School of Education

- 1997-2012 Affiliated teaching faculty at the Johns Hopkins University Department of Psychological and Brain Sciences, College of Arts and Sciences (joint appointment)

- 2001–2012 Associate Professor and Professor of Population and Family Health Sciences, Johns Hopkins Bloomberg School of Public Health (joint appointment)

- 2007-2008 AAAS Congressional Science Policy Fellow, sponsored by the *Society for Research in Child Development*. This was a one-year sabbatical appointment during which I served as an education policy fellow for U.S. Senator Jeff Bingaman (NM).

- 2005 Visiting Professor, Vivian Smith Institute of the International Neuropsychological Society. Xylocastro, Greece
- 1990-1992 Adjunct Instructor, Department of Psychology
University of Denver
- 1988 Site Coordinator (for Phoenix, AZ site) National Child Care Staffing Study
- 1983-1984 Teacher [preschool], Kachina Country Day School, Phoenix, Arizona
- 1982-1983 Lead Teacher for Parent/Infant and Parent/Toddler programs, Child Development Laboratory Preschool, Arizona State University

Publications - Papers (excludes chapters and submitted papers)

(Underlined names indicate students/trainees whose authorship on the publication I mentored;

ⁿ indicates a commentary or review paper (not peer-reviewed)

ⁱ indicates invited peer-reviewed article, review, or encyclopedia entry)

^a indicates authorship listed alphabetically for members of a consortium or network group

Connor, C. M., Mazzocco, M. M. M., Kurtz, T., Crowe, E., Tighe, E., Wood, T., & Morrison, F. (in press). Using assessment to individualize early mathematics instruction. *Journal of School Psychology*

Wilkey, E. D., Barone, J. C., Mazzocco, M. M. M., Vogel S. E., & Price, G. R. (2017) The effect of visual parameters on neural activation during nonsymbolic number comparison and its relation to math competency. *Neuroimage*, 159, 430-442.

Mazzocco M.M.M., Chan, J.Y., & Bock, A.M. (2017). Early executive function and mathematics relations: Correlation does not ensure concordance. *Advances in Child Development and Behavior*.

Tosto, M. G., Petrill, S. A., Maylkh, S., Malki, K., Haworth, C. M. A., Mazzocco, M. M. M., Thompson, L., Opfer, J., Bogdanova, O. Y., & Kovas, Y. (2017) Number sense and mathematics: Which, when, and how? *Developmental Psychology*, 53(10), 1924-1939.

Chan, J.Y.C., & Mazzocco, M. M. M. (2017). Competing features influence children's attention to number. *Journal of Experimental Child Psychology*, 156, 62-81.

Ward, J., Mazzocco, M. M., Bock, A. M., & Prokes, N. (2017). Are content and structural features of counting books aligned with research on numeracy development? *Early Childhood Research Quarterly*. 39, 47-63.

Tosto, M. Asbury, K., Mazzocco M.M.M., Petrill, S., Kovas, Y. (2016). From classroom environment to mathematical achievement: The mediating role of self-perceived ability and subject interest. *Learning and Individual Differences*, 50, 260-269.

- Brown, E.C., Mazzocco, M.M., Rinne, L.F., & Scanlon, N.S. (2016). Uncanny sums and products may prompt wise choices: Semantic misalignment and numerical judgments. *Journal of Numerical Cognition*, 2(2), 116–139, doi:10.5964/jnc.v2i2.21
- Grimm, K.J., Mazza, G., & Mazzocco, M.M.M. (2016) Advances in methods for assessing longitudinal change. *Educational Psychologist*, 51(3-4), 342-353.
- Lukowski, S. L., DiTrapani, J., Jeon, M., Wang, Z., Schenker, V. J., Doran, M. M., Hart S.A., Mazzocco, M. M., Willcutt E.G., Thompson L.A., & Petrill, S. A. (2016). Multidimensionality in the measurement of math-specific anxiety and its relationship with mathematical performance. *Learning and Individual Differences*. In press.
- ^aAlcock, L., Ansari, D., Batchelor, S., Bison, M., De Smedt, B., Gilmore, C., Göbel, S., Hannula-Sormunen, M, Hodgen, J., Inglis, M., Jones, I., Mazzocco, M., McNeil, N., Scheider, M., Simms, V., & Weber, K. (2015). Challenges in mathematical cognition: A collaboratively-derived research agenda. *Journal of Numerical Cognition*. Vol. 2(1), 20–41, doi:10.5964/jnc.v2i1.10
- Wang, Z. Lukowski, S.L., Hart, S.A., Lyons, I. M., Thompson, L.A., Kovas, Y., Mazzocco, M. M., Plomin, R. & Petrill, S. A. (2015). Is Mathematical Anxiety Always Bad for Math Learning? The Role of Math Motivation. *Psychological Science*. 26(12) 1863–1876
- Rinne, L., & Mazzocco, M.M.M. (2014). Knowing Right From Wrong in Mental Arithmetic Judgments: Calibration of Confidence Predicts the Development of Accuracy, PLoS ONE 9(7): e98663. doi:10.1371/journal.pone.0098663.
- Mazzocco, M.M.M., Murphy, M.M., Brown, E., Rinne, L., & Herold, K.H. (2013). Persistent consequences of atypical early number concepts. *Frontiers in Psychology*, 4, article 486.
- Kaufmann, L., Mazzocco, M.M.M., Dowker, A., von Aster, M., Goebel, S., Grabner, R., Henik, A., Jordan, N.C., Karmiloff-Smith, A.D., Kucian, K., Rubinsten, O., Szucs, D., Shalev, R., Nuerk, H (2013). Dyscalculia from a developmental and differential perspective. *Frontiers in Psychology*, 4, article 516.
- ⁱMazzocco, M. M. M., & Räsänen, P. (2013). Contributions of longitudinal studies to evolving definitions and knowledge of developmental dyscalculia. *Trends in Neuroscience and Education*, 2, 65-73.
- ⁱMazzocco, M.M.M., & Grimm, K. (2013). Growth in Rapid Automated Naming from Grades K – 8 in Children with Math or Reading Disabilities. *Journal of Learning Disabilities*, 46, 517-533. doi: 10.1177/0022219413477475).
- Mazzocco, M.M.M., Myers, G. F., Lewis, K. E., Hanich, L. B., & Murphy, M. M. (2013). Limited knowledge of fraction representations differentiates middle school students with mathematics learning disability (dyscalculia) vs. low mathematics achievement. *Journal of Experimental Child Psychology*, 115, 371-387.

- Grimm, K., Zhang, Z., Hamagami, F., & Mazzocco, M.M.M. (2013). Modeling nonlinear change via latent change and latent acceleration frameworks: examining velocity and acceleration of growth trajectories. *Multivariate Behavioral Research*, 48:1, 117-143, doi.org/10.1080/00273171.2012.755111
- Price, G.R., Mazzocco, M.M. & Ansari, D. (2013). Why Mental Arithmetic Counts: Brain activation during single digit arithmetic predicts high-school math scores. *The Journal of Neuroscience*, 33, 156-163.
- Matejko, M, Price, G.R., Mazzocco, M. M., & Ansari, D. (2013). Individual differences in left parietal white matter predict math scores on the Preliminary Scholastic Aptitude Test. *NeuroImage*. 604-610.
- Mazzocco, M. M. M., Hanich, L. B., & Noeder, M. (2012). Primary School Age Students' Spontaneous Comments about Math Reveal Emerging Dispositions Linked to Later Mathematics Achievement, *Child Development Research*, vol. 1, 2012, Article ID 170310, 12 pp, 2012. doi:10.1155/2012/170310.
- Raches, D., & Mazzocco, M.M.M. (2012) Emergence and trajectory of mathematical difficulties in young children with Barth syndrome. *Journal of Developmental and Behavioral Pediatrics*, 33, 328-335.
- Mazzocco, M.M.M., Feigenson, L., & Halberda, J. (2011) Preschoolers' Precision of the Approximate Number System Predicts Later School Mathematics Performance. *PLoS One* DOI 10.1371/journal.pone.0023749
- Mazzocco, M.M.M., Feigenson L., & Halberda, J. (2011) Impaired acuity of the approximate number system underlies mathematical learning disability. *Child Development*, 82, 1224-1237.
- Hale, J. & Expert White Paper Consensus group^a. (2010). Critical issues in response-to-intervention, comprehensive evaluation, and specific learning disabilities identification and intervention: An expert white paper consensus. *Learning Disabilities Quarterly*, 33, 223-236. [^aI am one of 57 members of this group.]
- Mazzocco, M. M. M., & Hanich, L. B. (2010). Math achievement, numerical processing, and executive functions in girls with Turner syndrome: Do girls with Turner syndrome have math learning disability? *Learning and Individual Differences*, 20, 70-81.
- Ross, J. L., Mazzocco, M.M.M., Kushner, H., Kowal, K., Cutler, G.B., Jr, Roeltgen, D. (2009). Effects of treatment with oxandrolone for 4 years on the frequency of severe arithmetic learning disability in girls with Turner syndrome, *Journal of Pediatrics*, 155(5):714-20.
- Murphy, M. M., & Mazzocco, M. M. M. (2009). The trajectory of mathematics skills and working memory thresholds in girls with fragile X syndrome. *Cognitive Development*, 24, 430-449.

- ⁿMazzocco, M. M. (2009). Mathematical learning disabilities. *The Maryland Psychologist*, 55 (2), 9-14.
- Mazzocco, M. M. M. (2009). Mathematical learning disability in girls with Turner syndrome: A challenge to defining MLD and its subtypes. *Developmental Disabilities Research Reviews*, 15, 35-44.
- ⁿDennis, M., Berch, D. B., & Mazzocco, M. M. M. (2009). Mathematical learning disabilities in special populations: Phenotypic variation and cross-disorder comparisons. *Developmental Disabilities Research Reviews*, 15, 80-89.
- Halberda, J., Mazzocco, M.M.M., & Feigenson, L. (2008). Individual differences in non-verbal number acuity correlate with maths achievement. *Nature*. 455(2):665-668.
- Mazzocco, M.M.M., & Devlin, K.T. (2008). Parts and ‘holes’: Gaps in rational number sense in children with vs. without mathematical learning disability. *Developmental Science*. 11:681-691.
- Mazzocco, M.M.M., Devlin, K.T., & McKenney, J.L. (2008). Is it a fact? Timed arithmetic performance of children with mathematical learning disabilities (MLD) varies as a function of how MLD is defined. *Developmental Neuropsychology*. 33:318-344
- Murphy, M.M., & Mazzocco, M.M.M. (2008). Rote numeric skills may mask underlying mathematical disabilities in girls with fragile X syndrome. *Developmental Neuropsychology*. 33:345-364.
- Murphy, M.M., & Mazzocco, M.M.M. (2008). Mathematics learning disability in girls with fragile X or Turner syndrome during late elementary school. *Journal of Learning Disabilities*. 41:29-46.
- Roberts, J., Mazzocco M. M. M., Murphy M. M., & Hoehn-Saric R. (2008). Arousal Modulation in Females with Fragile X or Turner Syndrome. *Journal of Autism and Developmental Disorders*. 38:20-27.
- Murphy M.M., Mazzocco M.M.M., Hanich L. B., & Early M.C. (2007). Cognitive characteristics of children with mathematics learning disability (MLD) vary as a function of the cut-off criterion used to define MLD. *Journal of Learning Disabilities*. 40:458-478.
- Mazzocco M.M.M., & Kover, S.T. (2007). A longitudinal assessment of the development of executive functions and their association with math performance. *Child Neuropsychology*, 13, 18-45.
- Lasker A.G., Mazzocco M.M.M., & Zee D.S. (2007). Ocular motor indicators of executive dysfunction in fragile X and Turner syndromes. *Brain and Cognition*. 63, 203-220.

- Tsui J.M., & Mazzocco M.M.M. (2007). Effects of math anxiety and perfectionism on timed versus untimed math testing in mathematically gifted sixth graders. *Roeper Review*, 29, 132-139.
- Mazzocco M.M.M., Henry A.E., & Kelley R.I. (2007). Barth syndrome is associated with a cognitive phenotype. *Journal of Developmental and Behavioral Pediatrics*, 28, 22-30.
- Bondy C. & The Turner Syndrome Consensus Study Group^a. Guidelines for the Care of Girls and Women with Turner Syndrome. *Journal of Clinical Endocrinology & Metabolism* (2007); 92:10-25. [^aI am one of 36 members of this study group.]
- ⁿMazzocco M.M.M. (2007). Early predictors of mathematical learning difficulties: Variations in children's difficulties with math. *Exchange*, 151, 51-54.
- ⁿMazzocco M.M.M. (2006). The cognitive phenotype of Turner syndrome: Specific learning disabilities. *International Congress Series*, 1298, 83-92.
- Russell H.F., Wallis D., Mazzocco M.M.M., Moshang T., Zackai E., Zinn A., Ross J.E., & Muenke M. (2006). Increased prevalence of Attention-Deficit/Hyperactivity Disorder (ADHD) in girls with Turner syndrome with no evidence of an imprinting effect for cognitive performance or ADHD. *Pediatric Psychology*, 31, 945-955.
- Mazzocco M.M.M., Thompson L., Sudhalter V., Belser R.C., Lesniak-Karpiak K., & Ross J.L. (2006). Language use in females with fragile X or Turner syndrome during initial social interactions. *Journal of Developmental and Behavioral Pediatrics*, 27, 319-328.
- Mazzocco M.M.M., Singh Bhatia N., & Lesniak-Karpiak K. (2006). Visuospatial skills and their association with math performance in girls with fragile X or Turner Syndrome. *Child Neuropsychology*, 12, 87-110.
- Murphy M.M., Mazzocco M.M.M., Gerner G., & Henry A.E. (2006). Mathematics learning disability in girls with Turner Syndrome or fragile X syndrome. *Brain and Cognition*, 6, 195-210.
- Garrett A.J., Mazzocco M.M.M., & Baker L. (2006). Development of the metacognitive skills of prediction and evaluation in children with or without math disability. *Learning Disabilities Research and Practice*, 21, 77-88.
- Lachance J., & Mazzocco M.M.M. (2006). A longitudinal analysis of sex differences in math and spatial skills in primary school age children. *Learning and Individual Differences*, 16, 195-216.
- Kirk J., Mazzocco M.M.M., & Kover S.T. (2005). Assessing executive dysfunction in girls with fragile X or Turner syndrome using the Contingency Naming Test. *Developmental Neuropsychology*, 28, 755-777.

Mazzocco M.M.M., & Thompson R.E. (2005). Kindergarten predictors of math learning disability. *Learning Disabilities Research and Practice, 20*, 142-155.

ⁱMazzocco M.M.M. (2005). Challenges in identifying target skills for math disability screening and intervention. *Journal of Learning Disabilities, 38*, 318-323.

^mMazzocco M.M.M., & ⁺Gerner G.G. (2004). Genetic disorders and learning disability. *Perspectives on Language and Literacy, 30*, 18-23.

Lesniak-Karpiak K., Mazzocco M.M.M., & Ross J.L. (2003). Behavioral assessment of social anxiety in females with Turner or fragile X syndrome. *Journal of Autism and Developmental Disorders, 33*, 55-67.

Mazzocco M.M., Myers G.F., Thompson L.A., & Desai S.S. (2003). Possible explanations for children's literal interpretations of homonyms. *Journal of Child Language, 30*, 879-904.

Mazzocco M.M.M., & Myers G.F. (2003). Complexities in identifying and defining mathematics learning disability in the primary school age years. *Annals of Dyslexia, 53*, 218-253.

Keysor C.S., Mazzocco M.M.M., McLeod D., & Hoehn-Saric R. (2002). Physiological arousal in females with fragile X or Turner syndrome. *Developmental Psychobiology, 1*, 133-146.

Mazzocco M.M.M., & Myers G.F. (2002). Maximizing enrollment efficiency for school based education research. *Journal of Applied Social Psychology, 32*, 1577-1587.

ⁱKeysor C.S., & Mazzocco M.M.M.. (2002). A developmental approach to understanding fragile X syndrome in females. *Microscopy Research and Techniques, 57*, 179-186.

Teisl J.T., Mazzocco M.M.M., & Myers G.F. (2001). Assessing the utility of kindergarten teacher ratings for predicting first grade academic achievement. *Journal of Learning Disabilities, 34*, 286-293.

Mazzocco M.M.M., & Kelley R. (2001). Preliminary evidence for a cognitive phenotype in Barth syndrome. *American Journal of Medical Genetics, 102*, 372-378.

Myers G.F., Mazzocco M.M.M., Maddalena A., & Reiss A.L. (2001). No widespread psychological effect of the fragile X premutation in childhood: Evidence from a preliminary controlled study. *Journal of Developmental and Behavioral Pediatrics, 22*, 353-359.

Mazzocco M.M.M. (2001). Math learning disability and math LD subtypes: Evidence from studies of Turner syndrome, fragile X syndrome, and Neurofibromatosis type 1. *Journal of Learning Disabilities, 34*, 520-533.

Mazzocco M.M.M. (2000). Advances in research on the fragile X syndrome. *Mental Retardation and Developmental Disabilities Research Reviews, 6*, 96-106.

- Teisl J.T., Reiss A.L., & Mazzocco M.M.M. (1999). Maximizing the specificity of a questionnaire for determining at-risk status for fragile X syndrome. *American Journal of Medical Genetics*, 83, 281-285.
- Mazzocco M.M.M., & Reiss A.L. (1999). Size of the FMR2 gene is not associated with normal variation in intelligence. *Intelligence*, 27, 175-182.
- Mazzocco M.M.M., Myers G.F., Harum K.H., & Reiss A.L. (1999). Children's participation in genetic prevalence research: Influences on enrollment and reports of parent satisfaction. *Journal of Applied Social Psychology*, 29, 2308-2327.
- Mazzocco M.M.M. (1999). Developmental changes in indicators that literal interpretation of homonyms are associated with conflict. *Journal of Child Language*, 26, 393-417.
- Mazzocco M.M.M., Baumgardner T.L., Freund L.S., & Reiss A.L. (1998). Social functioning among girls with fragile X or Turner syndrome and their sisters. *Journal of Autism and Developmental Disorders*, 28, 509-517.
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- Kates W.R., Mostofsky S., Zimmerman A., Mazzocco M.M.M., Landa R., Warsofsky I., & Reiss A.L. (1998). Neuroanatomic and neurocognitive differences in MZ twins discordant for autism. *Annals of Neurology*, 43, 782-791.
- Mazzocco M.M.M. (1998). A process approach to describing math difficulties in girls with Turner syndrome. *Pediatrics (supplement)*, 108, 492-496.
- Mazzocco M.M.M., Sonna N.L., Shapiro B.K., Pinit A., & Reiss A.L. (1998). Effective procedures for conducting genetic screening studies with children. *Journal of Applied Social Psychology*, 28, 23-40.
- Mazzocco M.M.M., Myers G., Hamner J.L., Panoscha R., Shapiro B.K., & Reiss A.L. (1998). The prevalence of the FMR1 and FMR2 mutations among preschoolers with language delay. *Journal of Pediatrics*, 132, 795-801.
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- Mazzocco M.M.M., Sonna N.L., Teisl J.T., Shah N., Pinit A., Shapiro B.K., & Reiss A.L. (1997). The FMR1 and FMR2 mutations are not common etiologies of academic difficulty in school age children. *Journal of Developmental and Behavioral Pediatrics*, 18, 22-28.
- Mazzocco M.M.M., & Reiss A.L. (1997). Normal variation in size of the FMR-1 gene is not associated with variation in intellectual performance. *Intelligence*, 24, 355-366.
- Mazzocco M.M.M., Denckla M.B., Singer H., Scanlon D.M., Vellutino F.R., & Reiss A.L. (1997). Neurogenetic and neurodevelopmental pathways to learning disabilities. *Learning Disabilities*, 8, 31-42.
- Mazzocco M.M.M., & Holden J.A. (1996). Neuropsychological profiles of three sisters homozygous for the fragile X premutation. *American Journal of Medical Genetics*, 64, 323-328.
- Mazzocco M.M.M., Freund L.S., Baumgardner T.L., Forman L., & Reiss A.L. (1995). Neuropsychological and psychosocial effects of the FMR-1 full mutation. A case report of monozygotic twins discordant for fragile X syndrome. *Neuropsychology*, 9, 470-480.
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- Mazzocco M.M.M., Turner J.E., Denckla M.B., Hofman K.J., Scanlon D.C., & Vellutino F.R. (1995). Language and reading deficits associated with Neurofibromatosis Type 1: Evidence for a not-so-nonverbal learning disability. *Developmental Neuropsychology*, 11, 503-522.
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- Mazzocco M.M.M., Nord A.M., van Doorninck W., Greene C.L., Kovar C.G., & Pennington B.F. (1994). Cognitive development among children with early treated phenylketonuria. *Developmental Neuropsychology*, 10, 133-151.
- Mazzocco M.M.M., Pennington B.P., & Hagerman R.J. (1994). Social cognition deficits in females with fragile X. *Journal of Autism and Developmental Disorders*, 24, 473-485.
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expanded FMR-1 mutation associated with protein expression. *American Journal of Medical Genetics*, 4, 298-308.

Mazzocco, M.M.M., & Reiss, A.L. (1994). Genetic advances and disorders. *Current Opinion in Psychiatry*, 7, 392-396.

Mazzocco, M.M.M., Pennington, B.P., & Hagerman, R.J. (1993). The neurocognitive phenotype of female carriers of fragile X: Additional evidence for specificity. *Developmental and Behavioral Pediatrics*, 14, 328-335.

Wilson P.G., & Mazzocco M.M.M.. (1993). Awareness and knowledge of fragile X syndrome among special educators. *Mental Retardation*, 31, 221-227.

Staley LW, Hull CE, Mazzocco M.M.M. Thibodeau SN, Snow K, Wilson VL, Taylor A, McGavran L, Weiner D, Riddle J, O'Connor R, & Hagerman RJ. (1993). Molecular clinical correlations in children and adults with Fragile X Syndrome. *American Journal of Diseases of Children*, 147, 723-726.

Mazzocco M.M.M., & O'Conner R.A. (1993). Fragile X syndrome: A guide for teachers of young children. *Young Children*, 49, 73-77.

Mazzocco M.M.M., Pennington B.F., Cronister A.S., & Hagerman R.J. (1992). Specific frontal lobe deficits among women with the fragile X gene. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31, 1141-1148.

Mazzocco M.M.M., Yannicelli S., Nord A.M., Davidson-Mundt A.J., Greene C.L., et al. (1992). Cognition and tyrosine supplementation among school aged children with phenylketonuria. *American Journal of Diseases of Children*. 146, 1261-1264.

Mazzocco M.M.M., Hagerman R.J., & Pennington B.F. (1992). Problem solving limitations among cytogenetically expressing fragile X women. *American Journal of Medical Genetics*, 43, 78-86.

Invited Editorials

ⁿMazzocco, M.M. (2016). A note on visual-constructional deficit in Turner's syndrome. Money, J., Alexander, D., Eherhardt, A. *J Pediatr* 1966; 69(1):126-127. *Journal of Pediatrics*,

ⁿMazzocco, M.M. (2016). Mathematics awareness month: Why should pediatricians be aware of mathematics and numeracy? *Journal of Developmental and Behavioral Pediatrics*, 37(3), 251-253.

Edited Journal Special Issues and Books

M. M. M. Mazzocco (publication forthcoming, 2018). (Guest Co-Editor) Special Issue: Parents Supporting Early Mathematical Thinking. *Early Childhood Research Quarterly*.

M. M. M. Mazzocco (2011). (Invited Guest Editor) Special Issue: Children's Difficulties with School Mathematics. *Perspectives on Language and Literacy* (Publication of the International Dyslexia Association; not peer reviewed.)

M. M. M. Mazzocco (2009). (Guest Editor) Special Issue: Pathways to Mathematical Learning Difficulties and Disabilities. *Developmental Disabilities Research Reviews*, 15, p 1-89.

M. M. M. Mazzocco (2008). (Invited Guest Editor) Special Issue, Mathematical Ability, Performance, and Achievement. *Developmental Neuropsychology*, 33(3)

D. B. Berch & M. M. M. Mazzocco (Eds.) (2007). *Why Is Math So Hard for Some Children? The Nature and Origins of Mathematical Learning Difficulties and Disabilities*. Baltimore, MD: Brookes Publishers.

M. M. M. Mazzocco & J. L. Ross (Eds.) (2007). *Neurogenetic Developmental Disorders: Variation of Manifestation in Childhood*. Cambridge, MA: MIT Press.

Invited Book chapters and Encyclopedia Entries (Includes invited chapters in progress)

Mazzocco, M. M. M. (under review) Understanding the basics: building conceptual knowledge and characterizing obstacles to the development of arithmetic skills. To appear in Fritz-Stratmann, Haase, & Räsänen (Eds), *International Handbook of Mathematical Learning Disabilities: From lab to practice*. Springer Publishers.

Mazzocco, M. M. M., & Vukovic, R. (in press) Specific learning disability: Mathematics. In Alfonso & Dawn Flanagan, Eds: *Essentials of Specific Learning Disability Identification*. Hoboken, N.J.: Wiley Publishers.

Mazzocco, M. M. M., Chan, J.Y.C., & Prager, E.O. (in press). Working memory and SLD: Math. In Tracey P. Alloway (Ed.), *Working Memory and Neurodevelopmental Disorders*. Taylor and Francis Publishers.

Mazzocco M.M.M., Chan, JY, & Sera, M. (2016). Contextual sensitivity in young children's magnitude judgments: When is bigger really more? in (Henik, Ed) *Continuous Issues in Numerical Cognition*, Elsevier. pp 82-105.

Mazzocco M.M.M., Quintero, A., Murphy, M.M., & McCloskey M. (2016). Genetic Syndromes as Model Pathways to Mathematical Learning Difficulties: Fragile X, Turner, and 22q deletion syndromes. In Berch, Geary, & Mann-Koepke (Eds) *Mathematical Cognition and Learning Series, Volume 2: Neural Substrates and Genetic Influences*, Elsevier, pp. 325-357.

Mazzocco M.M.M. (2015). The Contributions of Syndrome Research to the study of dyscalculia. in Kadosh and Dowker (Eds), *Handbook of Numerical Cognition*, Oxford University Press, pp 678-695.

- Berch, D.B., & Mazzocco, M.M.M. (2011). Turner Syndrome. In J Kreutzer, J DeLuca, & B Caplan (Eds), *Encyclopedia of Clinical Neuropsychology*. New York, NY: Springer
- Murphy, M.M., Mazzocco M.M.M., & McCloskey M. (2010). Mathematics disabilities in fragile X and Turner syndromes. In M. Barnes (Ed): *Genes, Brain, and Development: The Neurocognition of Genetic Disorders*. Cambridge, UK: Cambridge University Press, pp 143-174.
- ¹Mazzocco, M. (2009). Cognitive processes underlying numeracy. *Encyclopedia of Language and Literacy Development* (pp. 1-11). London, ON: Canadian Language and Literacy Research Network <http://www.literacyencyclopedia.ca/pdfs/topic.php?topId=285>
- ¹Mazzocco M.M.M., & Holden J.J.A. (2007). Fragile X syndrome. In: I. Brown & M. Percy (Eds.), *Intellectual and Developmental Disabilities*. Baltimore, MD: Brookes Publishing. pp 173-187.
- Mazzocco M.M.M. (2007). When a genetic disorder is associated with learning disabilities. In M.M.M. Mazzocco & J.L. Ross & (Eds.), *Neurogenetic Developmental Disorders: Variation of Manifestation in Childhood*. Cambridge, MA: MIT Press, pp 415-436.
- Mazzocco M.M.M., Murphy M.M., & McCloskey M. (2007). The contribution of syndrome research to understanding mathematics learning disability: the case of fragile X and Turner syndromes. In D. Berch & M.M.M. Mazzocco (Eds.), *Why is Math So Hard for Some Children? The Nature and Origins of Mathematical Learning Difficulties and Disabilities*. Baltimore, MD: Brookes Publishers. pp 173-193.
- Gersten R., Clark B., & Mazzocco M.M.M. (2007). Historical and contemporary perspectives on mathematical learning disabilities. In D. Berch & M.M.M. Mazzocco (Eds.), *Why is Math So Hard for Some Children? The Nature and Origins of Mathematical Learning Difficulties and Disabilities*. Baltimore, MD: Brookes Publishers. pp 7-27.
- Mazzocco, M.M.M. Issues in Defining Mathematical Learning Disabilities and Difficulties. In D.B. Berch & M.M.M. Mazzocco (Eds.), *Why is Math So Hard for Some Children: The Nature and Origins of Mathematical Learning Difficulties and Disabilities*. (2007); Baltimore, MD: Brookes Publishers, pp 29-47.
- Mazzocco M.M.M., & McCloskey M. (2005). Math performance in girls with Turner or fragile X syndrome. In Campbell, J (Ed.), *Handbook of Mathematical Cognition*. Hove, East Sussex, Great Britain and New York: Psychology Press, pp 269 -297.
- Mazzocco M.M.M., & Reiss AL. A behavioral neurogenetics approach to understanding the fragile X syndrome. In Tager-Flusberg, H (Ed.), *Neurodevelopmental Disorders: Contributions to a New Framework from the Cognitive Neurosciences*. (1999); Cambridge, MA: MIT Press. pp 43-63.

Editorial Activities

Editorial Board Membership

Cognitive Development, December 2014 – present

Educational Researcher

Journal of Developmental and Behavioral Pediatrics 2007 - 2016

Journal of Learning Disabilities, 2001-2004

Journal of Mathematical Cognition, 2014-present (Inaugural member)

Journals - Reviewer (yellow highlights indicate article reviews completed in 2017)

American Journal of Mental Retardation

American Journal of Medical Genetics

Assessment for Effective Intervention

Behavior Genetics

Biological Psychiatry

Brain and Cognition

Child Development

Child Development Perspectives

Child Development Review

Child Neuropsychology

Cognition

Cognitive Development

Cognitive Psychology

Cortex

Current Directions in Psychological Science

Development and Psychopathology

Developmental Neuropsychology

Developmental Psychobiology

Developmental Psychology

Developmental Science

Early Childhood Research Quarterly

Educational Researcher

Frontiers in Psychology, Developmental Psychology section

Infant and Child Development

Journal of Applied Developmental Psychology (1)

Journal of Autism and Developmental Disorders

Journal of Child Language

Journal of Child Psychology and Psychiatry

Journal of Clinical and Experimental Neuropsychology

Journal of Cognition and Development

Journal of Cognitive Psychology

Journal of Developmental and Behavioral Pediatrics

Journal of Educational Psychology (2)

Journal of Experimental Child Psychology

Journal of the International Neuropsychological Society

Journal of Learning Disabilities

Journal of Medical Genetics

Journal of Numerical Cognition (1)

Journal of Research on Educational Effectiveness
Learning and Individual Differences
Learning Disabilities Research and Practice
Lifespan and Disability
Neuropsychologia
Neuropsychology
PLoS One
Psychological Science
Psychonomic Bulletin and Review
Remedial and Special Education
Scandinavian Journal of Education Research
Trends in Cognitive Science

Report/book/chapter reviewer

Volume entitled, “The mathematical brain across the lifespan”, Marinella Cappelletti
And Wim Fias (Eds), *Progress in Brain Research* series

Brookes Publishing
Elsevier Academic Press
National Council for Teachers of Mathematics
National Research Council, National Academies of Science
Psychology Press
Routledge Psychology Press

Institutional Service since 2010

2017-present Member, Human Capital Research Collaborative Advisory Board

2017-2018 Member, CEED Governance Council
Member, Prelims Committee
Chair, MA Program Admissions Committee
Member, CEHD Consultative Committee (Co-Chair)
Faculty Liason, CPPO

2014-2017 Faculty representative to the University Senate and Faculty Senate

2016-17 Member, ICD Graduate Admissions Committee (General)
Member, CEHD Online Programs Committee
Member, CEHD Consultative Committee
Member, ICD Prelims Committee

2015-16 Chair, Institute of Child Development (ICD) Graduate Admissions Committee
(General)
Member, ICD Brown Bag Colloquium Committee

- 2014-15 Chair, Institute of Child Development (ICD) Graduate Admissions Committee (General)
Member, ICD Brown Bag Colloquium Committee
Chair, Grievance Committee
- 2013-2014 Chair, Institute of Child Development (ICD) Graduate Admissions Committee (General)
Member, ICD Brown Bag Colloquium Committee
Review Committee, University of Minnesota Distinguished McKnight Professorship Competition
- 2012-13 Member, ICD Graduate Student Admissions Committee (Clinical)
Member, ICD Brown Bag Colloquium Committee
Review Committee, University of Minnesota Distinguished McKnight Professorship Competition
- 2011-12 PhD Development Committee, School of Education, Johns Hopkins University
2007-2012 Women's Leadership Council, Office for Women in Science and Medicine, Johns Hopkins University

Extramural Sponsorship

Current

2016-2019 Principal Investigator "Contextual sensitivity and early number concept development: Pathways to MLD among children with or without Turner syndrome." National Science Foundation.

2016 – 2020 Co-PI (Carol Connor, PI, UC Irvine), "Optimizing Learning Opportunities for Students - Early Learning Observation System," Institute of Education Sciences, Early Learning Research Network Award.

2016 – 2017 Co-PI (Kathleen Cramer, PI, STEM Center). "GopherMath"
GopherMath is a collaborative endeavor by faculty faculty in Educational Psychology (Dr Robin Coddling and Keisha Varma), Curriculum and Instruction (Dr. Kathy Cramer and Erin Baldinger) and Child Development (Michele Mazzocco). The overarching goal of the study is to improve children's rational number concept development through teacher professional development, parent engagement, and strengthening whole number skills and concepts. The contribution of the Mazzocco Lab is to study the foundational role of whole number concepts in rational number learning. This research is a partnership with the Minneapolis Public Schools, and is supported by General Next and the University of Minnesota.

2016-2017 Consultant (Zan Gao, PI), "Trial of Exergaming Activities on Cognition and Health of Preschoolers, NIH R56, Grant Number: 1R56HL130078 - 01

2014-2018 Principal Investigator (Subcontract, Stanford University), "Development and Research in Early Mathematics Education Network," Heising-Simons Foundation. The goal of

this award involves two of the four DREME Network projects being pursued as part of the collaborative Network led by Stanford University, PI Deborah Stipek. Dr. Mazzocco leads the project, "Making More of Math Instruction: Using Math Activities to Support Math and Executive Function Skills in Early Childhood" and is a contributor to the project, "Early Caregivers' Engagement in Math Activities with Young Children." Two year Renewal awarded to each project in July 2016.

Completed (Select, related to current research program)

2014-2016 Principal Investigator, "Transition *Numbers Work!* to the Center for Early Education and Development." This Saint Paul Foundation funded work is for a planning process to develop a plan to transition the Numbers Work! early childhood mathematics program to the Center for Early Education and Development as an evidence based professional preparation and research program.

2016 Principal Investigator "Enhancing Early Math via Educator Support and Professional Development," Minnesota Philanthropy Partners.

2014-2015 **Principal Investigator**, "Numerical Ambiguity in Adults," University of Minnesota, Office of the Vice President for Research Grant in Aid Program (competitive internal award). The goal of the project is to evaluate individual differences in adults' responses to numbers in context.

2011-2013 **Principal Investigator**, Spencer Foundation, "Metacognitive influences on children's math achievement."

2008-2011 **Principal Investigator**, Barth Syndrome Foundation Investigator Initiated Project, "Early Indices of Learning Difficulties in Young Boys with Barth Syndrome"

1997-2009 **Principal Investigator** on NIH funded R01-HD034061, "Cognitive and Genetic Correlates of Early Math Skills. (Includes initial award, administrative supplement award, and competitive renewal.)

2003-2006 **Principal Investigator** on NICHD funded RO3-HD044082, "Biochemical correlates of cognition in Barth syndrome"

2001-2003 **Principal Investigator**, Spencer Foundation Small Grant Award, "Early predictors of poor math achievement"

2000-2002 **Principal Investigator**, Neurofibromatosis Foundation Inc. – Mid-Atlantic, "Specification of the Cognitive Phenotype of NF1"

1993-1997 **Co-Investigator** and Project Coordinator on NIMH funded RO1-MH50047, "Neuropsychiatric and Molecular Association in Fragile X Syndrome"

- 1996-2000 **Co-Investigator** on NIH funded P50-HD25806, NINDS, “Cognitive Disabilities in Fragile X and Turner Syndromes”
- 1998-1999 **Principal Investigator**, National Neurofibromatosis Foundation funded research, “Specification of the Cognitive Phenotype of NF1”

Research: Grant Proposal Reviews

- 2017 Ad Hoc Reviewer, NSF EHRCore Research
- 2016 Panel Member, NSF EHR Core Research
- 2015 Reviewer, NSF Faculty Early Career Development (CAREER) Program
- 2015 Reviewer, Action Medical Research (UK)
- 2014 Reviewer, Action Medical Research for Children, United Kingdom
Reviewer, Austrian Science Fund (FWF), February 2014.
- 2013 Reviewer, Medical Research Council (London, UK); math disorders, 8/14/13
Reviewer, Cognition and Perception Special Panel (telephone), 6/19/2013
Mail reviewer, NIH SBIB Pediatric and Fetal Applications, 2/26/2013 & 9/25/13
Mail reviewer, NIH Cognition and Perception Study Section, 2/7-8/2013;
11/7/2013
Ad hoc Electronic Proposal Review, NSF, October 21, 2013
- 2011 Reviewer, NICHD Special Emphasis Panel: Cognitive Development, April 27,
and November 18, 2011
- 2009-2011 Member, Math and Science Education Review Panel, Institute for Education
Sciences
- 2008 Reviewer, National Science Foundation Panel for Presidential Awards for
Excellence in Math and Science Teaching (PAEMST), August 17-19, Arlington,
Virginia

Reviewer, NICHD RFA: Mathematical Cognition and Specific Learning
Disabilities, Rockville, Maryland, April 29, 2008
- 2006 NIH Special Emphasis Panel: “International Brain Disorders,” November 27
- 2005 NICHD Special Emphasis Panel (RFA): “Developing Outcome Measures for
Young Children,” Bethesda, Maryland, June 15

NIH Special Emphasis Panel: “Math Skills Development,” July 23

NIH Special Emphasis Panel: “International Brain Disorders,” November 17

Ad hoc Reviewer for the Barth Syndrome Foundation

- 2004 Mathematics and Science Education Research, Institute of Education Sciences (IES), U.S. Department of Education, “Mathematics and Science Education Research,” Fairfax, Virginia, March 25 - 26
- NIH-NINDS “Fogarty Pediatric Applications” (RFA) Washington, D.C., August 6
- Ad hoc Reviewer for The International Dyslexia Association Research Grant Program
- 2003 NIH - NINDS Training Grant (NST) Committee, Washington, D.C., Feb. 13 - 14
- NICHHD Special Emphasis Panel Meeting, Bethesda, MD., April 7 - 8, 2003
- NIH – NINDS Training Grant (NST) Committee, Washington, D.C., August 5 - 6
- 2002 NIH - NINDS Training Grant (NST) Committee, Washington, D.C., February 28 -March 2
- NIH - NINDS “Loan Repayment Program” (LRP) Committee, Bethesda, Maryland, May 10
- 2001 NINDS Special Emphasis Panel, “Gene Discovery” (RFA), Washington, D.C., December 6 - 7
- 2000 NIH Center for Scientific Review, Biobehavior and Behavioral Processes – 6, Washington, D.C., June 29-30
- 1998 Ad Hoc Reviewer for the International Dyslexia Association Grant Program

Teaching - Courses

Undergraduate courses taught

Developmental Learning Disabilities (upper division course in developmental psychology)

Developmental Psychology (upper division and lower division sections)

Child Development (in Departments of Psychology, Education, and Nursing)

Principles of Learning

Introduction to Psychology

Learning Environments for Infants and Toddlers

Special Topics in Child Psychology: Developmental Perspectives on Personal Integrity

Cognitive Development

Careers in Child Psychology

Graduate courses taught

Social Development in Childhood

Human Growth and Development: Preschool/School Age

Numeracy and Literacy (co-taught)

Other previous classroom teaching

Basic Neuropsychology (gifted junior high school program at University of Denver)
Lead Teacher for child development laboratory school

Professional Societies and Research Groups - Current Memberships:

American Psychological Society (Awarded *Fellow* Status in 2009)
 Cognitive Development Society
 Society for Research in Child Development
 Mathematical Cognition and Learning Society (Inaugural board member in 2016-17)

Selected Invited Presentations

- 2018 Invited presenter: Early Mathematics Learning: Reasons, Research, and Practice. Reading Corps National Meeting 2018, Minneapolis, MN, February 28, 2018
- 2017 Invited Panel Member: Dyscalculia Understood. Eagle Hill Community School, Greenwich CT, December 12, 2017
- 2017 Invited presenter: Lukowski & Mazzocco, Early Math and Executive Function Skills as Predictors of MLD: Correlation Does Not Ensure Concordance. Presentation included in the Premier Poster Session on Theoretical and Methodological Advances, NSF Conference on *STEM Education, Learning Disabilities, and the Science of Dyslexia*, September 26, 2017.
- 2017 Invited presenter: Mazzocco, Coddington, Prager, & Branjord. Numerosity predictors of arithmetic fluency in Grade 3 to 5. University of Massachusetts at Amherst, Department of Psychology Meeting on Number Workshop, October 4, 2017.
- 2017 Invited Panel Discussant, *Science Matters: The Developing Brain*, Grade Level Reading Week Conference Funder Huddle, Denver, Colorado, June 14, 2017.
- 2016 Invited Speaker, *Early number concepts and misconceptions*. Invited Speaker, *Mathematics and executive functions skills*. Presented at the Sixth annual meeting of DanSMA (Dansk Special Matematik, or the Association of Danish Special Mathematics) in Hvaslo, Denmark, October 8.
- 2015 Invited Plenary Speaker, *Numbers in context: Numerical ambiguity in function and meaning*. Presented at the 8th biennial meeting of the Nordic Research network on Special Needs Education in Mathematics (NORSMA 8), Kristianstad University, Kristianstad, Sweden, November 20.
- Invited Keynote Speaker, *Early Brain Development and its Implications for Learning and Early Childhood Education*. Presented at the Minnesota Rural Education Association Annual Meeting, Brainerd, MN, November 17.

Invited Speaker, *Recognizing, Assessing, and Promoting Mathematical Thinking in Preschoolers*. Presented at the Breck School Annual Workshop for preschool teachers, Breck School, Golden Valley, MN, November 11, 2015.

- 2014 Invited Seminar Speaker, *Individual Differences and Mathematics Learning Difficulties*. Presented at the Waisman Center Seminar Series, University of Wisconsin, Madison, November 14, 2014.

Invited Speaker, *Individual differences in the development of numerical thinking: Implications for supporting mathematics achievement in early and later childhood*. Presented at the Human Capital Research Consortium, University of Minnesota, September 16.

Invited Delegate, *Grand Challenges in Mathematical Cognition*, Invitation only meeting of ~ 15 international leaders in the field held at Loughborough University, UK, sponsored by the Royal Society, July 29-31.

Invited Keynote, *Mathematical Learning Difficulties in School Age Children*. Presented at the West Virginia Association of School Psychologists Annual Meeting, Charleston, West Virginia, April 24.

Invited Keynote Speaker, *The Paths to Maths: When do mathematics learning difficulties reflect dyscalculia or other maths disabilities?* Presented at the British Dyslexia Association Annual Meeting, Guildford, UK, March 28.

Invited Presenter, *Mathematical Learning Difficulties in School Age Children*. Presented at the National Association of School Psychologists Annual Meeting, Washington, D.C., February 18.

- 2013 Invited Presenter: *Mathematical Learning Difficulties in School Age Children*. Presented at the British Columbia Association of School Psychologists Annual Meeting, Vancouver, B.C., November 7.

Invited Plenary Speaker: *Come la discalculia si differenzia da altre difficoltà in matematica*. (How dyscalculia differs from other forms of mathematics difficulties) Presented at the Oasi Institute conference, I Disturbi Specifici Dell'apprendimento E I Bisogni Educativi Speciali. Screening - Diagnosi – Intervento. Troina, Sicily, September 13-14.

Presenter: Individual differences in numerical & executive function skills contribute to variation in children's arithmetic computation. Presented at the first Annual Midwestern Meeting of Mathematical Thinking in Minneapolis, MN. July 26.

Invited Workshop Presenter: Numeracy and Mathematics Achievement in School Age Children. Presented at the Punahou School 4th Annual Brain Symposium, Honolulu, Hawaii, June 12-13.

Invited Workshop Presenter: *Mathematics in Early Childhood*. Presented at the 2013 Minnesota Head Start Conference in Saint Paul, MN, March 13.

Invited Workshop Presenter: *Mathematical Learning Difficulties in School Age Children*. National Association of School Psychologists Annual Meeting, Seattle, February 12.

- 2012 Invited Workshop Presenter: *Individual Differences in Mathematics: Mathematical Learning Difficulties and Disabilities*, presented at the 33rd meeting of Learning & the Brain, Boston, MA, November 17

Invited Workshop Presenter: *Mathematical Learning Disabilities and Other Obstacles to Mathematic Success*, Ohio School Psychologists Association, Columbus, OH, November 9

Invited Symposium Chair: *Dyscalculia and Other Mathematics Learning Difficulties*, presented at the 63rd annual meeting of International Dyslexia Association, Baltimore, MD, October 24

Invited Participant, *First Cambridge University Conference and Workshop on Developmental Dyscalculia*, St. John's College, Cambridge, UK, Sept 14

Invited Discussant, *Center for Improving Learning of Fractions, Summer Leadership Event*, Institute for Education Sciences, Washington, D.C., August 1

Invited Keynote Speaker: *Predictors of Mathematics Achievement and Math Learning Difficulties in Children with Genetic Disorders*. 9th Biennial Meeting of the European Conference on Psychological Theory and Research on Intellectual and Developmental Disabilities (ECIDD), Trieste, Italy, June 16

Invited Speaker: *Building blocks and stumbling blocks to mathematics achievement*, Fourth Annual Fordham University Assessment Conference, New York, NY, May 11

Invited Keynote Presenter: *Mathematical Learning Difficulties in School Age Children*. National Association of School Psychologists Annual Meeting, Philadelphia, February 23

- 2011 Invited Presenter: *Mathematical Learning Difficulties in School Age Children*. Montana Association of School Psychologists Annual Meeting, Billings, MA, June 13 & 14, 2011.

Invited Speaker, *Verbal and Nonverbal Components of Mathematical Learning Difficulties*, Annual Meeting of the University of New Hampshire Department of Speech and Communication Disorders, Durham, New Hampshire, May 5, 2011.

Invited Speaker: *Mathematical Learning Difficulties in School Age Children*. National Association of School Psychologists Annual Meeting, San Francisco, CA, February 23 & 24, 2011.

2010 Invited Speaker: *Cognitive and Academic Skills in School Age Girls with Turner Syndrome*, 4th Annual Turner Syndrome Symposium, Penn State Hershey, Hershey, PA, November 20, 2010

Invited Speaker: *Mathematical Learning Disabilities in School Age Children*. Florida Association of School Psychologists Annual Meeting, Miami, Florida, November 5, 2010

Invited Speaker: *Introductions to Cognitive and Environmental Influences on Math Achievement and Implications for Effective Interventions*, Livingston School District and Park County Special Education Cooperative, Livingston, Montana, October 12, 2010

Invited Speaker: *Why Is Math So Hard for Some Students?* 5th Annual Conference on Learning Differences, American Community Schools of Athens, Athens, Greece. May 13 and 14.

Invited Speaker *Pathways to Mathematical Learning Difficulties* Learning and the Brain Conference, Public Information Resources, Inc., Washington, D.C., May 8, 2010

Invited Speaker: *Subtypes of Mathematical Learning Disabilities in Children: Assessment and Intervention*. 20th Annual Nelson Butters' West Coast Neuropsychology Conference: Advances in Pediatric Neuropsychology: From Toddlers to School-Age Children. San Diego, CA, March 25, 2010

Invited Speaker: *Mathematical Learning Disabilities: Evaluation, Identification, and Service Delivery*. Special Session of the Learning Disabilities Association, Preconference Summit on Specific Learning Disabilities Evaluation, Identification, and Service Delivery. Baltimore, MD, February 16.

2009 Invited Speaker: *Parts and Holes: Gaps in children's mathematical learning*. Stern Center. Montpelier, VT., October 15, 2009

Invited Speaker: *Mathematical Learning Disabilities in Children with or without Neurodevelopmental Disorders*. 19th Annual Nelson Butters' West Coast Neuropsychology Conference: Advances in Neuropsychological Assessment and Treatment of School-Age Children with Cognitive Deficits. San Diego, CA: April 4, 2009

Invited Speaker: *Why Is Math So Hard for Some Children?* Central and Eastern European Schools Association, Bucharest, Romania, March 20 and 21, 2009

2008 Invited Speaker: *Why Is Math So Hard for Some Children?* Central and Eastern European Schools Association, Istanbul, Turkey, March 14 and 15, 2008

2007 Invited Instructor: *Characteristics of Children with Mathematical Learning Disabilities*, Optimal Match Network Institute, Poland, October 11 – 13, 2007

- 2006 Invited speaker, *Specific Learning Disabilities in Turner Syndrome*, Turner Syndrome Wellness Meeting, NICHD, Bethesda, MD. April 7, 2006
- Invited speaker, *The School-Age Years – School related issues: Academic and psychological function in girls with Turner syndrome*
Turner Syndrome Patient and Family Day meeting. University of Maryland at Baltimore, Baltimore, MD. March 11, 2006
- 2005 Visiting Professor, *Math Disorders in Fragile X and Turner Syndromes* Vivian Smith Summer Annual Institute of the International Neuropsychological Society, Xylocastro, Greece
- Invited speaker, *Current Research Findings on Math Learning Disability*, 39th Annual meeting of the Association for Advancement of International Education, Boston, MA. February 18, 2005
- 2004 Invited speaker, *Mathematical Learning Disabilities: Current Findings and Future Directions*. 41st Annual Conference of the Learning Disabilities Association, Atlanta, GA. March 19, 2004
- Invited speaker, *Mathematics Learning Disability and its Manifestation in Girls with Fragile X syndrome*. National Fragile X Foundation 9th International Conference, Washington, D.C., June 25, 2004
- Invited speaker, *Mathematical Learning Disabilities: Research-based Approaches to Diagnosis and Remediation*. Stern Center for Language and Learning, Burlington, VT. September 24, 2004
- 2003 Invited speaker, *Mathematics Ability and Disability in Grades K–3*, 30th Annual Conference on Dyslexia & Related Learning Disabilities, New York, NY. March 21, 2003
- Invited speaker, *Cognitive and Psychological Function in Females with Fragile X Syndrome*, Congresso della Sindroma X Fragile, Troina, Sicily, Italy. April 13, 2003
- 2002 Invited speaker, *Educational Strategies in Math*, National Fragile X Foundation 8th International Conference Chicago, Illinois, July 19, 2002
- Invited speaker, *Math Skills Development Project for Children with NF-1*
Neurofibromatosis, Inc. Mid-Atlantic Annual Meeting, Silver Spring, MD. September 22, 2002
- Invited speaker, *Math Ability and Disability in the Early School Age Years; and Getting the Most of Your Student's Psychological Assessment Report*, Association for American

Schools in South America (AASSA) Annual Educators' Conference, Quito, Ecuador.
October 4 - 5, 2002

Invited speaker, *Math Ability and Disability: Theory and Research*, 53rd Annual meeting of the International Dyslexia Association, Atlanta, GA. November 15, 2002

Invited Discussant, *Parent Workshop: Social, Educational and Nutritional Issues of Barth Boys*. Barth Syndrome International Family and Scientific Conference, Baltimore, MD, October 20, 2002

- 2001 Invited speaker, *Math Learning Disability Subtypes: Evidence From Studies of Genetic Disorders*, University of Pittsburgh, Departments of Psychology and Psychiatry, Pittsburgh, PA, March 30, 2001

Invited speaker, *Preliminary Findings from Cognitive Study of NF-1 Neurofibromatosis*, Inc. Mid-Atlantic Annual Meeting, Silver Spring, MD, June 3, 2001

- 2000 Invited speaker, *Models of Learning Disability Derived from the Study of Neurogenetic Disorders*, Learning Disabilities Association of America International Conference, Pre-Conference Medical Symposium, Reno, NV. February 16, 2000

Invited speaker, *Mathematics Development and Disorders: Genetics, Cognition, and Relationships with Reading Disabilities and Disorders of Attention*; Learning Disabilities Association of America International Conference NICHD symposium, Reno, NV. February 18, 2000

Invited speaker, *How girls with Turner syndrome learn*, 13th Annual Pediatric Endocrinology Nurses Society Meeting, Norfolk, VA, April 14, 2000

Invited speaker, *Math LD Subtypes: Evidence from Studies of Turner Syndrome, Fragile X Syndrome, and Neurofibromatosis Type 1*, Ongwanada Research and Resource Centre, Kingston, Ontario, Canada, June 2, 2000

Invited speaker, *Cognitive and Academic Performance in Females with Fragile X Syndrome* 3rd Canadian Fragile X Conference, Queen's University, Kingston, Ontario, Canada, June 3, 2000

Invited plenary speaker, *Understanding Psychological Testing*, National Fragile X Foundation 7th International Conference, Los Angeles, CA. July 19, 2000

Invited speaker, *Math Ability and Disability in the Primary School-age Years*, 51st International Dyslexia Association Annual Meeting, Washington, D.C. November 10, 2000

Invited colloquium speaker, *Math Learning Disability Subtypes: Evidence from Studies of Genetic Disorders* University of Delaware, Department of Education, Newark, DE, November 16, 2000

- Invited speaker & workshop coordinator, *Workshop for Females*, 3rd Canadian Fragile X Conference, Queen's University, Kingston, Ontario, Canada June 4, 2000
- 1999 Invited keynote speaker, *Cognitive Development in Turner Syndrome*, presented at the 12th Annual Turner Syndrome Society Conference, Washington, D.C. September 25, 1999
- 1998 Invited speaker, *Research Progress in Understanding Learning Disabilities: Math Disability*, 35th Annual Meeting of the Learning Disabilities Association of America, Symposium on NICHD Research Program in Learning Disabilities, Washington, D.C., March 13, 1998
- Invited speaker, *Psychological Development among Girls with Turner Syndrome*. Kabi International Growth Study (KIGS) Southeast Regional Meeting, Atlanta, GA. June 6, 1998
- Invited speaker, *Understanding Cognitive Profiles*, National Fragile X Foundation 6th International Conference Asheville, NC. July 27, 1998
- Invited speaker, *Psychological Profiles of Girls with Turner Syndrome* 4th Annual Magic Foundation Conference, Chicago, IL. July 24, 1998
- 1996 Invited speaker & moderator, *Socio-emotional Development and Neuropsychological Profiles of Girls with Fragile X Syndrome*; Invited speaker, *Psychological Testing - A Workshop for Parents*; Invited Co-moderator and presenter, *Screening for the Fragile X Mutation in Selected Clinical Populations*; National Fragile X Foundation 5th International Conference Portland, OR. August 6, 7, and 9, 1996
- 1995 Invited speaker, *Autistic Behavior among Children with Fragile X Syndrome*, 4th Consensus Meeting on Biological Basis and Clinical Perspectives on Autism, Troina, Sicily, Italy. October 6, 1995
- 1994 Invited Visiting Scholar, speaker: *An Update on the Psychological Phenotype of Females with Fragile X*, Queen's University Department of Psychiatry Research Development Day Kingston, Ontario, Canada. November 7, 1994
- 1993 Invited speaker, *Neuropsychological Deficits and Learning Strategies for Fragile X Females*, 1st Canadian Fragile X Conference, Kingston, Ontario, Canada. August 13-17, 1993
- 1992 Invited speaker and moderator, *Neuropsychological Deficits and Learning Strategies for Girls*, presented at the National Fragile X Foundation's 3rd International Conference, Aspen, CO. June 18, 1992

Training awards/scholarships

- 1992 Developmental Neurobiology Research Group postdoctoral small grant award, University of Colorado Health Sciences Center, Denver, CO
- 1990 Young Investigator Award, Society for Inherited Metabolic Diseases
- 1984-86 Graduate Academic Scholarships, Arizona State University, Tempe, AZ
- 1981-83 Graduate Academic Scholarships, Arizona State University, Tempe, AZ
- 1981 Graduated Summa Cum Laude, Arizona State University, Tempe, AZ
- 1978-81 Regents undergraduate Academic Scholarships, Arizona State University, Tempe, AZ

Consulting and Community Service**Select Consultations and Committee Participation since 2010**

- 2017 Advisory Committee Member for NSF Grantee Joon Park, University of Amherst
- 2015-16 Chair, Early Childhood Indicators of Progress (ECIPS) Math Revision Committee, Minnesota Department of Education
- 2014-2017 Member, Advisory Panel, NSF funded project "Language Structure and Number Word Learning" (David Barner, P.I.)
- 2012-2017 Member, Conference Steering Committee, Math Cognition Conference Series
- 2012 Product Consultant to Pearson for math assessment product development.
- 2011-13 Product Consultant to Psychological Assessment Resources, Inc. for math assessment product development
- 2012 Research Consultant to Center for Research and Reform in Education, Johns Hopkins University
- 2012- 2016 Consultant for NICHD grantee Carol Conner
Project Title: The Florida Learning Disabilities Research Center
- 2010 Consultant to Project Director Karin Hess, Center for Assessment, for *Learning Progressions Frameworks Designed for use with the Common Core State Standards in Mathematics K-12*
- 2009-2012 Consultant for NIH grantee Stephen Petrill
Project Title: *Genetics of mathematical cognition and disabilities*
- 2003-2010 Consultant for NICHD grantee Tony Simon
Project Title: *Numerical Deficits across Multiple Genetic Disorders*

Volunteer activities

- 2014 Member of the STEM Advisory Board for the Minnesota Children's Museum
- 2013 Invited participant for the National Governor's Association Early Math Expert Roundtable meeting, November 20, 2013, Washington, D.C.
- 2012-present Member of the Scientific Advisory Committee to the Minnesota Children's Museum
- 2002- present Member of the Advisory Committee to the United States Department of State, Office of Overseas School (A/OS), which provides support for families and teachers of school age children with special needs
- 1994-present Evaluator for Science Service, Inc., Annual *Intel Science Competition* applications (formerly the *Westinghouse Science Competition*).

- 1999-00, '06 Evaluator for Science Service, Inc., Discovery Young Scientist Challenge (a middle and junior high school science competition)
- 2005-2008 Volunteer Docent, Library of Congress, Washington, D.C.
- 1999 National Council of Teachers of Mathematics, *Standards 2000 Discussion Group on Special Education Needs*, Arlington, VA.
- 1992 - 1993 Volunteer Storyteller, Children's Library Read Aloud Program, Denver, CO.
- 1988 Educational support in child development, Successful Teen Parent Program, Florence Crittendon Services, Phoenix, AZ.