

DR. ISABELLA STARLING ALVES

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Education

- 2021 **Ph.D. in Educational Psychology**
Human Development Area, Minor: Mind, Brain, and Education
University of Wisconsin Madison, USA.
Thesis: Getting Past the Doorman: Longitudinal Investigations of the Predictors and Consequences of Fraction Skills
Advisor: Dr. Edward M. Hubbard
- 2017 **M.S. in Neurosciences**
Universidade Federal de Minas Gerais, Brazil.
Dissertation: Nonsymbolic and symbolic magnitude processing in children with mathematical difficulties
Advisors: Dr. Vitor Geraldi Haase & Dr. Renato Bortoloti
- 2014 **B.A. in Psychology with Clinical Psychology License**
Minor: Human Development and Psychological Assessment
Universidade Federal de Minas Gerais, Brazil.
- 2013 **Exchange Student**
University of Wisconsin Madison, USA.

Professional Experience*Research*

- 2023 – Current **Postdoctoral Scholar**
The Number Lab
Vanderbilt University, USA
PI: Dr. Eric D. Wilkey
- 2022 – Current **Behavioral Sciences Consultant**
Familia+, Bernard Van Leer Foundation/Espaço Àra, Brazil.
- 2021 – 2022 **Research & Practice Coordinator**
Instituto Alfa e Beto (nonprofit educational organization), Brazil.
- 2017 – 2021 **Project Assistant**
Educational Neuroscience Lab
University of Wisconsin Madison, USA.
PI: Dr. Edward M. Hubbard
- 2009 – 2017 **Project Assistant**
Developmental Neuropsychology Lab
Universidade Federal de Minas Gerais, Brazil.
PI: Dr. Vitor G. Haase
- 2010 **Research Assistant**
Individual Differences Assessment Lab
Universidade Federal de Minas Gerais, Brazil.
PI: Dr. Elizabeth do Nascimento

Teaching

- 2024 **Guest Lecturer - Human Development**
Course (under graduate level): PSY-PC 2250 Cognitive Aspects of Human Development
Vanderbilt University, USA.
- 2022 – 2023 **Instructor – Educational Neurosciences**
Course (graduate level): Emotion and Cognition in the Human Brain
Pontifical Catholic University of Minas Gerais, Brazil.
- 2021 – 2022 **Instructor – Psychology**
Courses (undergraduate level): 1. Experimental Psychology, 2. Psychological Assessment Practice, 3. Neuropsychology, 4. Motivation, Emotion, Intelligence, and Creativity, 5. Neuropsychology Supervision
Doctum College, Brazil.
- 2019 – 2020 **Teaching Assistant – Educational Psychology**
Courses (graduate level): 1. EdPsych 326: Mind, Brain, and Education, 2. EdPsych 320: Human Development in Infancy and Childhood
University of Wisconsin Madison, USA.
- 2016 –2017 **Teaching Assistant – Psychology**
Course (graduate level): Neuroscience for teachers of children with special needs
Universidade Federal de Minas Gerais, Brazil.
- Spring 2014 **Teaching Assistant – Psychology**
Course (undergraduate level): Clinical practice
Universidade Federal de Minas Gerais, Brazil.
- Spring 2011 **Teaching Assistant – Psychology**
Course (undergraduate level): Cognitive psychology
Universidade Federal de Minas Gerais, Brazil.
- Spring 2010 **Teaching Assistant – Psychology**
Course (undergraduate level): Quantitative methods
Universidade Federal de Minas Gerais, Brazil.

Clinical Psychology

- 2016 –2017 **Clinical Neuropsychologist**
Oficina da Imaginação, Belo Horizonte, MG, Brazil.
Neuropsychological assessment, CBT, Parent Training
- 2015 – 2017 **Clinical Neuropsychologist**
NUMERO, UFMG, Belo Horizonte, MG, Brazil.
Neuropsychological assessment, diagnosis, cognitive training

Awards, Honors, and Sponsorships

Sponsorships

- 2017 – 2022 Full Ph.D. scholarship from CAPES (Brazilian Ministry of Education Coordination for the Improvement of Higher Education Personnel).
- 2015 – 2017 Full M.S. scholarship from CAPES.
- 2014 – 2015 Research Funding from FAPEMIG.
Research assistant in the project “Neurodevelopment and genetics”.
Developmental Neuropsychology Lab
Universidade Federal de Minas Gerais, Brazil.
- 2013 – 2013 Scholarship from the Science without Borders Program – CAPES
Visiting International Student
University of Wisconsin Madison, USA.
- 2012 – 2012 Research Funding from CNPq.
Research assistant in the project “Neuropsychological intervention and parent training for children with math learning disabilities”.
Developmental Neuropsychology Lab
Universidade Federal de Minas Gerais, Brazil.
- 2011 – 2012 Research Funding from CNPq.
Research assistant in the project “Developmental dyscalculia in school-age children: population screening and cognitive profile and molecular-genetics”.
Developmental Neuropsychology Lab
Universidade Federal de Minas Gerais, Brazil.
- 2011 – 2011 Research Funding from PBEXT.
Project Assistant in the project “Developmental neuropsychology: intervention for humor disorders and learning disabilities”.
Developmental Neuropsychology Lab
Universidade Federal de Minas Gerais, Brazil.

Awards and Honors

- 2024 Research Pilot Funding for the Beyond Integers Project (\$1,980.00)
VICTR award in StarBRITE
Vanderbilt University
Nashville, TN, USA.
- 2021 Best poster/presentation honor
“Numeracy and COVID-19”
IBNEC, Brazil.
- 2020 2020 AERA-NSF Institute on Statistical Analysis
California, USA.
- 2019 Conference Travel Award: 2019 MCLS (Canada)
Wisconsin Scholarship Hub (WiSH), University of Wisconsin Madison, WI, USA.

- 2015 2nd Advanced Studies in Neurosciences
Universidade Federal do Rio Grande do Sul, Brazil.
- 2015 Best poster honor “Mothers’ educational attainment is related to math anxiety in children”
III Encontro Mineiro de Neuropsicologia, Belo Horizonte, Minas Gerais, Brazil.
- 2014 XIV Summer Course – Psychobiology
Universidade Federal de São Paulo, Brazil.
- 2014 Best poster honor “Numerosity in Williams Syndrome”
XXIII Semana de Iniciação Científica da UFMG, Belo Horizonte, Brazil.
- 2013 Best poster honor “Neuropsychology Assessment in Williams Syndrome: From research to support group”
XVI Encontro de Extensão da UFMG, Belo Horizonte, Brazil.
- 2012 Best poster honor “Cognitive Training for numeracy in Turner’s syndrome – a case study”
I Congresso Mineiro de Neuropsicologia da SBNp, Belo Horizonte, Brazil.
- 2012 Best research report for the Humanities Department “Different ANS measures contribute independently to arithmetic achievement”.
Universidade Federal de Minas Gerais, Brazil.
- 2011 Best poster honor “Different ANS measures contribute independently to arithmetic achievement”
XX Semana de Iniciação Científica da UFMG, Belo Horizonte, Brazil.
- 2011 Best poster honor “Association between Val158met COMT gene and cognitive functions: pilot study”.
XX Semana de Iniciação Científica da UFMG, Belo Horizonte, Brazil.

Publications and Presentations

Peer-reviewed Publications

*Indicates undergraduate research assistant

18. **Starling-Alves, I.**, Peters, L., & Wilkey, E. D. (in press). Beyond the sum of their parts: a multi-dimensional approach to dyscalculia-dyslexia comorbidity integrating studies of the brain, behavior, and genetics. *Developmental Cognitive Neuroscience*.
17. **Starling-Alves, I.**, Gomides, M.R.A., Ribeiro, D., Haase, V.G., & Hubbard, E.M. (in press). From one half to 12th: fraction writing in children and adult education students. *Journal of Numerical Cognition*.
16. **Starling-Alves, I.**, Russell-Lasalandra, L. L.*, Lau, N. T. T., Paiva, G. M., Haase, V.G., & Wilkey, E. D. (2024). Number and domain both affect the relation between executive function and mathematics achievement: A study of children’s executive function with and without numbers. *Developmental Psychology*. <https://doi.org/10.1037/dev0001814>
15. **Starling-Alves, I.**, Hirata, G., & Oliveira, J. B. A. (2023). Covid-19 school closures negatively impacted Elementary-school students’ reading comprehension and reading fluency skills.

International Journal of Educational Development, 102753.
<https://doi.org/10.1016/j.ijedudev.2023.102753>

14. Mielicki, M. K., Wilkey, E. D., Scheibe, D. A., Fitzsimmons, C. J., Sidney, P. G., Bellon, E., Ribner, A. D., Soltanlou, M., **Starling-Alves, I.**, Coolen, I., Ansari, D., & Thompson, C. A. (2023). Task features change the relation between math anxiety and number line estimation performance with rational numbers: Two large-scale online studies. *Journal of Experimental Psychology: General*, 152(7), 2094–2117. <https://doi.org/10.1037/xge0001382>
13. Araujo, J. B. O. & **Starling-Alves, I.** (2022). A relação entre fluência em leitura e compreensão de sentença – evidências para falantes do Português Brasileiro. *Cadernos de Linguística*, 3 (1), e631. <https://doi.org/10.25189/2675-4916.2022.V3.N1.ID631>
12. **Starling-Alves, I.**, Wronski, M. R.*, & Hubbard, E. M. (2022). Math anxiety differentially impairs symbolic, but not nonsymbolic, fraction skills across development. *Annals of the New York Academy of Sciences*, 1509(1), 113-129. <https://doi.org/10.1111/nyas.14715>
11. Lau, N. T., Wilkey, E. D., Soltanlou, M., Lagacé Cusiak, R., Peters, L., Tremblay, P., ... & Ansari, D. (2022). Numeracy and COVID-19: examining interrelationships between numeracy, health numeracy and behaviour. *Royal Society open science*, 9(3), 201303. <https://doi.org/10.1098/rsos.201303>
10. **Starling-Alves, I.**, Júlio-Costa, A., Moura, R. J. D., & Haase, V. G. (2021). Nonsymbolic and symbolic numerical magnitude processing in the Brazilian children with mathematics difficulties. *Dementia & Neuropsychologia*, 15, 524-532. <https://doi.org/10.1590/1980-57642021dn15-040013>
09. Gomides, M. R. A., **Starling-Alves, I.**, Paiva, G.M., Caldeira, L.S., Aichinger, A.L.P.N., Carvalho, M.R. S., Bahnmüller, J., Moeller, K., Lopes-Silva, J.B., & Haase, V.G. (2021). The quandary of diagnosing mathematical difficulties in a generally low performing population. *Dementia & Neuropsychologia*, 15, 267-274. <https://doi.org/10.1590/1980-57642021dn15-020015>
08. Gomides, M. R. A., Martins, G. A., **Starling-Alves, I.**, Júlio-Costa, A., Jaeger, A., & Haase, V. G. (2018). Heterogeneity of math difficulties and its implications for interventions in multiplication skills. *Dementia & Neuropsychologia*, 12, 256-263. <https://doi.org/10.1590/1980-57642018dn12-030006>
07. Haase, V. G. & **Starling-Alves, I.** (2017). In search of the moral-psychological and neuroevolutionary basis of political partisanship. *Dementia & Neuropsychologia*, 11, 15-17. <https://doi.org/10.1590/1980-57642016dn11-010004>
06. Júlio-Costa, A., **Starling-Alves, I.**, Lopes-Silva, J. B., Wood, G., & Haase, V. G. (2015). Stable measures of number sense accuracy in math learning disability: Is it time to proceed from basic science to clinical application?. *PsyCh journal*, 4(4), 218-225. <https://doi.org/10.1002/pchj.114>
05. Haase, V. G., Júlio-Costa, A., Lopes-Silva, J. B., **Starling-Alves, I.**, Antunes, A. M., Pinheiro-Chagas, P., & Wood, G. (2014). Contributions from specific and general factors to unique deficits: two cases of mathematics learning difficulties. *Frontiers in Psychology*, 5, 102. <https://doi.org/10.3389/fpsyg.2014.00102>
04. Pinheiro-Chagas, P., Wood, G., Knops, A., Krinzinger, H., Lonnemann, J., **Starling-Alves, I.**, Willmes, K., & Haase, V. G. (2014). In how many ways is the approximate number system associated with exact calculation?. *PLoS one*, 9, e111155. <https://doi.org/10.1371/journal.pone.0111155>
03. Antunes, A. M., Costa, A. J., **Starling-Alves, I.**, Paiva, G. M., & Haase, V. G. (2013). Reabilitação neuropsicológica do transtorno de aprendizagem da matemática na síndrome de Turner: um estudo de caso. *Neuropsicologia Latinoamericana*, 66-75.

<http://dx.doi.org/10.5579/rnl.2013.0140>

02. Haase, V.G., Costa, A. J., Antunes, A.M., & **Starling-Alves, I.** (2012). Heterogeneidade cognitiva nas dificuldades de aprendizagem da matemática: uma revisão bibliográfica. *Psicologia em Pesquisa*, 139-150. <http://dx.doi.org/10.5327/Z1982-12472012000200007>
01. Rivero, T. S., Querino, E. H. G., & **Starling-Alves, I.** (2012). Videogame: seu impacto na atenção, percepção e funções executivas. *Neuropsicologia Latinoamericana*, 4(3), 38-52.

Edited Books

01. Júlio-Costa, A., **Starling-Alves, I.**, & Antunes, A. M. (Org., 2023). *Mild for whom? Level 1 Autism Spectrum Disorder (ASD) (Publication in Portuguese - Level para quem? Transtorno do Espectro Autista (ASD) Nível 1 de Suporte)*. Belo Horizonte: Editora Ampla.

Chapters in Edited Books

09. **Starling-Alves, I.**, Júlio-Costa, A., & Antunes, A.M. (2023). Transtorno do Espectro Autista nível 1 e disfunção executiva. In: Júlio-Costa, A., Starling-Alves, I., & Antunes, A. M. (Org.). *Leve para quem? Transtorno do Espectro Autista nível 1 de suporte*. Belo Horizonte: Editora Ampla
08. **Starling-Alves, I.**, Júlio-Costa, A., & Antunes, A.M. (2020). O aprendizado da matemática. In: Miranda, D. M. & Malloy-Diniz, M. (Org.). *Desenvolvimento ao longo do ciclo da vida: O escolar*. São Paulo: Hogrefe.
07. Júlio-Costa, A., **Starling-Alves, I.**, & Antunes, A.M. (2018) O desenvolvimento numérico na primeira e na segunda infância. In: Miranda, D. M & Malloy-Diniz, M. (Org.). *Desenvolvimento ao longo do ciclo da vida: O pré-escolar*, p.1-400. São Paulo: Hoegrefe.
06. Lopes-Silva, J. B., **Starling-Alves, I.**, Moura, R. J., & Haase, V.G. (2017). Fluência de desenhos: Teste dos cinco pontos. In: Júlio-Costa, A., Moura, R.J., & Haase, V.G. (Org.). *Compêndio de testes neuropsicológicos: atenção, funções executivas e memória*, p. 73-85. São Paulo: Hogrefe.
05. Lopes-Silva, J. B., **Starling-Alves, I.**, Moura, R. J., & Haase, V.G. (2017). Teste Stroop Victoria. In: Júlio-Costa, A., Moura, R.J., & Haase, V.G. (Org.). *Compêndio de testes neuropsicológicos: atenção, funções executivas e memória*, p. 163-174. São Paulo: Hogrefe.
04. Oliveira, L.F.S., **Starling-Alves, I.**, & Haase, V.G. (2017). Teste dos Nove Pinos. In: Júlio-Costa, A., Moura, R.J., & Haase, V.G. (Org.). *Compêndio de testes neuropsicológicos: atenção, funções executivas e memória*, p. 47-57. São Paulo: Hogrefe.
03. Oliveira, L.F.S., **Starling-Alves, I.**, & Haase, V.G. (2017). Teste de aprendizagem auditivo-verbal de Rey. In: Júlio-Costa, A., Moura, R.J., & Haase, V.G. (Org.). *Compêndio de testes neuropsicológicos: atenção, funções executivas e memória*, p. 87-98. São Paulo: Hogrefe.
02. Salvador, L. S., Antunes, A. M., **Starling-Alves, I.**, Martins, G.A., Paiva, G.M., Prado, A.C.A., Almeida, F.N., Barbosa, D.C.B.P., Pessoa, M.G., & Haase, V.G. (2013). O status nosológico do transtorno não-verbal de aprendizagem e suas conexões com os transtornos do espectro do autismo. In: Camargos Jr., W. (Org.). *Síndrome de Asperger e outros transtornos do espectro do autismo de alto funcionamento: da avaliação ao tratamento*, p. 249-263. Belo Horizonte: Artesã.
01. Haase, V.G., Lopes-Silva, J.B., **Starling-Alves, I.**, Antunes, A.M., Costa, A.J., Oliveira, L.F.S., Pinheiro- Chagas, P., Moura, R.J., & Wood, G. (2013). Com quantos bytes se reduz a ansiedade matemática? A inclusão digital como uma possível ferramenta na promoção do capital mental (How many bytes are needed to reduce math anxiety? Digital inclusion as a tool to promoting mental capital). In: Valle, L.E.R., Mattos, M.J.V.M., & Costa, J.W. (Org.). *Inclusão Digital: a*

tecnologia a favor da inclusão, p. 188-202. Porto Alegre: Penso.

Manuscripts Under Review

03. **Starling-Alves, I.**, Bonilla, D. A. S.*, Bandler, S.*, & Wilkey, E. D. (submitted for publication). Beyond Integers: A Systematic Review of Rational Number Processing in The Brain.
02. **Starling-Alves, I.**, Liao, X., Huang, Q., Bolt, D. M., Hubbard, E. M., & Matthews, P. G. (submitted for publication). [Fraction Knowledge Assessment: a tool for investigating fraction knowledge development](#).
01. **Starling-Alves, I.**, Shanley, L., Cook, M.A., Sabb, F. W., Smith, J., Clarke, B. & Wilkey, E. D. submitted for publication). Resting state functional connectivity profiles in 1st graders identified for math support in the classroom.

Manuscripts in Preparation

02. **Starling-Alves, I.**, Matthews, P. M., & Hubbard, E. M. (in preparation). The links between nonsymbolic ratio and fraction magnitude processing longitudinally predict fraction knowledge.
01. **Starling-Alves, I.**, Lopes-Silva, J. B., Freitas, P. M., Wood, G. M. O., Haase, V. G., & Moura, R. J. (in preparation). Number writing in adults with low schooling.

E-books and other publications

- Starling-Alves, I.**, Gomides, M., & Santos, F. H., (2023). Preface: Brain and Maths in Ibero-America. *Progress in Brain Research*, 282, ix-xiii.
- Santos, F. H., & **Starling-Alves, I.** (2023). Preface: The science of game-based learning in education and health. *Progress in Brain Research*, 276, xiii-xviii.
- Starling-Alves, I.**, Araujo, J. B., da Costa, O. M., & da Silva Neto, W. D. (2023). Como é a educação em Sobral. Instituto Alfa e Beto. Uberlândia: MG. Available [here](#).
- Starling-Alves, I.** (2022). Ansiedade Matemática. Instituto Alfa e Beto. Uberlândia: MG. Available [here](#).

Presentations and Posters

- Starling Alves, I.**, Shanley, L., Sabb, F., Clarke, B., Cook, M., & Wilkey, E. D. (2024). Resting state functional connectivity in 1 st graders identified for math support in the classroom. Poster. 6th Mathematical Cognition and Learning Society Conference, Washington DC.
- Starling Alves, I.**, Shanley, L., Sabb, F., Clarke, B., Cook, M., & Wilkey, E. D. (2023). Functional Connectivity Profiles in 1st Graders Identified for Math Support in the Classroom. Poster. Flux, Santa Rosa, CA.
- Starling Alves, I.**, & Wilkey, E. D. (2023). Understanding the relations between magnitude processing, executive functions, and mathematics achievement. Flash talk. Numerical Cognition Meets Executive Functions Symposium, Surrey, UK.
- Starling Alves, I.**, & Wilkey, E. D. (2023). Beyond integers: Understanding the cognitive mechanism and neural bases of rational number development. Open Submission Talk. 6th Mathematical Cognition and Learning Society Conference, Loughborough, UK.

- Starling-Alves, I.,** Hirata, G., & Oliveira, J. B. A. (2022). Efeitos da pandemia no desempenho dos alunos em compreensão e fluência de leitura. Talk. V Encontro da Rede CPE, Rio de Janeiro, Brazil.
- Starling-Alves, I.** (2022). From one half to 12th: acquisition of fraction writing in adult education program students and children. Virtual MCLS.
- Starling-Alves, I.,** Matthews, P.G., & Hubbard, E.M. (2021). Individual differences in nonsymbolic ratio processing longitudinally predict algebraic reasoning in children. Short talk. 2021 Society for Research in Child Development Biennial Meeting (virtual).
- Starling-Alves, I.,** Park, Y., Kalra, P.B., Binzak, J.V., Matthews, P.G., & Hubbard, E.M. (2020). Experiências educacionais conectam frações simbólicas a sistemas parietofrontais de processamento de razões não-simbólicas. Talk. II Encontro Mineiro de Neuropsicologia Escolar: Cognição Numérica (virtual).
- Starling-Alves, I.,** Park, Y., Kalra, P.B., Binzak, J.V., Matthews, P.G., & Hubbard, E.M. (2020). Educational experiences connect symbolic fractions to parietofrontal nonsymbolic ratio processing system. Poster. 2020 Virtual CNS.
- Starling-Alves, I.,** & Hubbard, E. (2019). The ratio processing system supports non-symbolic ratio arithmetic: evidence from college students and low literacy adults. Poster. 2nd Mathematical Cognition and Learning Society Conference, Ottawa, Canadá.
- Starling-Alves, I.,** & Hubbard, E. (2018). Evidence for non-symbolic ratio arithmetic in adults in children. Poster. IMBES Conference, Los Angeles, USA.
- Starling-Alves, I.,** Gomides, M.R.A., Amorim, L., & Haase, V. G. (2018). Associations between number processing and single-digit arithmetic: Effects of age, intelligence, operation mastery and SES?. Poster. 1st Mathematical Cognition and Learning Society Conference, Oxford, UK.
- Starling-Alves, I.,** Bortoloti, R., & Haase, V.G. (2017). Core deficit or access hypothesis: which one rules in mathematical difficulties?. Talk. World Congress on Brain, Behavior, and Emotions, Porto Alegre, Brazil.
- Starling-Alves, I.,** Costa, A.J., Lopes-Silva, J.B., Pinheiro-Chagas, P., & Haase, V.G. (2012). Symbolic number processing in typical and atypical arithmetic achievement. Poster. II Semana Internacional de Neurociências da UFMG - VI Simpósio de Neurociências da UFMG, Revista Médica de Minas Gerais, p. S1-S136.
- Starling-Alves, I.,** Antunes, A.M., Salvador, L.S., Lopes-Silva, J. B., Costa, A. J., & Haase, V.G. (2012). Turning 700013 to 7013: Rehabilitation program in numerical transcoding and place value understanding. Poster. Congresso Mineiro de Neuropsicologia, Belo Horizonte, Brazil.
- Starling-Alves, I.,** Pinheiro-Chagas, P., & Haase, V. G. (2011). Senso numérico e desempenho aritmético: Há relação?. Talk. III Simpósio de Natal de Neuropsicologia, Belo Horizonte, Brazil.

Event Organization

- 2023 17th Annual Vanderbilt Postdoctoral Association Symposium.
- 2020 Mathematical Cognition and Learning Society Conference.
- 2014 I Congresso Brasileiro da SBNp Jovem e II Fórum de Jovens Pesquisadores. Belo Horizonte, Minas Gerais, Brazil.

- 2014 II World Dyslexia Forum. Belo Horizonte, Minas Gerais, Brazil.
- 2012 II Semana Internacional de Neurociências - VI Simpósio Internacional de Neurociências da UFMG: Percepção. Belo Horizonte, Minas Gerais, Brazil.
- 2011 Curso Fenótipos Cognitivos: do Genótipo à Inclusão. Belo Horizonte, Minas Gerais, Brazil.
- 2010 II Jornada de Neuropsicologia do LND: Conhecimentos das Neurociências em Prol da Educação. Belo Horizonte, Minas Gerais, Brazil.

(Co)Mentoring Undergraduate Students

- 2023 Danielle A. Bonilla (Vanderbilt University) – Independent Research Project: “Beyond Integers: Uncovering the Neural Correlates of Rational Number Processing.”
- 2021 Jack Siepmann (UW-Madison) – Independent Research Project: “The Neural Underpinnings of Math Anxiety and Fraction Knowledge in the Brain.”
- 2020 Molly G. Pistono (UW-Madison) – Independent Research Project: “Investigating the Neural and Behavioral Differences of Ratio Processing in Males and Females.”
- 2020 Peyton J. Nystrom (UW-Madison) – Independent Research Project: “The Relationship Between Ratio Processing and Fraction Ability in Children.”
- 2020 Elijah G. Hovan Karian (UW-Madison) – Project: “The Ratio-Processing System and its Ability to Predict Fraction Knowledge Against Nonverbal Reasoning.”
- 2020 Jacob T. Lundquist (UW-Madison) – Independent Research Project: “Nonsymbolic ratio addition and subtraction.”
- 2019 Matthews R. Wronski (UW-Madison) – Independent Research Project: “Math anxiety impacts on fraction knowledge.”
- 2019 Haley M. Annes (UW-Madison) – Independent Research Project: “Brain Scans and Lesson Plans: An fMRI Study on the Development of Fraction Abilities.”
- 2015 – 2017 Amanda Guimarães (Universidade Federal de Minas Gerais) – Undergraduate RA. Project: “Endophenotypes of Mathematics Difficulties.”
- 2015 – 2017 Drielle Barbosa (Universidade Federal de Minas Gerais) – Undergraduate RA. Project: “Endophenotypes of Mathematics Difficulties.”
- 2015 – 2017 Barbra R. Lima (Universidade Federal de Minas Gerais) – Undergraduate RA. Project: “Endophenotypes of Mathematics Difficulties.”
- 2015 – 2017 Fernanda Rocha (Universidade Federal de Minas Gerais) – Undergraduate RA. Project: “Endophenotypes of Mathematics Difficulties.”

Committees

Member of Honor Thesis Committee: Jiahe Wang. (2024). Thesis: Examining the Effect of Self-explanation and Visual Cues in Mathematics Learning. Vanderbilt University, Nashville, TN, USA.

Member of PhD Dissertation Committee: Angélica Polvani Trassi. (2023). Dissertation: The influence of family and school environment on numerical cognition and math anxiety. Universidade Estadual Paulista Júlio de Mesquita Filho, São Paulo, Brazil.

Member of Master's Thesis Committee: Bernardo Schotgues. (2023). Thesis: A meta-analytical approach to cross-cultural differences in the relationship between number sense and mathematics. Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.

Member of Master's Thesis Committee: Andre Henrique Barbosa de Carvalho. (2023). Thesis: Impacts of MAOA and MAOB genes in phenotypes associated with school achievement. Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.

Member of Master's Thesis Committee: Luana Teixeira Batista. (2021). Thesis: Influence of phonological processing on Arabic numerals writing in school-age children.

Guest Editor

Progress in Brain Research Special Issue (n. 282) - "Brain and Maths in Ibero-America"

Ad-Hoc Reviewer

Journal of Experimental Child Psychology.

Annals of the New York Academy of Sciences.

Progress in Brain Research.

Developmental Psychology.

Frontiers in Public Health.

Frontiers in Education.

Dementia & Neuropsychologia.

Debates em Psiquiatria.

Flux 2024 Conference.

Cognitive Science Society 2023 Conference.

Service

Vanderbilt Psychology and Human Development EDI committee, 2023.

Secretary - MCLS Training Board, 2020 – 2022.

Chair of Students Affairs - Educational Psychology Students Association, 2018 – 2020.

Membership

Mathematical Cognition and Learning Society (MCLS).

Cognitive Neuroscience Society (CNS).

Flux Society.

International Mind, Brain, and Education Society (IMBES).

Professional Development

- 2024 Latest Trends in fMRI Analysis with FSL and Machine Learning – Vanderbilt University.
- 2021 Introduction to Python – UW–Madison.
- 2021 Writing Workshop – Mathematical Cognition and Learning Society.
- 2021 Dissertation Writing Camp – UW-Madison Writing Center.
- 2020 Institute on Statistical Analysis: Development of Mathematics Competencies in Early Childhood, AERA-NSF Statistical Institute.
- 2020 UW-Madison DELTA Program (teaching-as-research, inclusive teaching, and mentoring).
- 2020 Introduction to Bayesian Statistics - Mathematical Cognition and Learning Society.
- 2020 Open Science – Mathematical Cognition and Learning Society.
- 2019 Writing Workshop – Mathematical Cognition and Learning Society.

Language Knowledge

Portuguese (fluent), English (fluent), Spanish (basic), French (basic).

Selected Media Coverage

[Valor Econômico](#) (Brazilian largest financial newspaper)

[Jornal Hoje](#) (Brazilian tv news)

References

Dr. Eric D. Wilkey
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Dr. Edward M. Hubbard
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