

Jing Tian

1701 N 13th St., Weiss Hall 850, Philadelphia, PA 19122

✉ jing.tian@temple.edu | 🏠 Google Scholar: <https://bit.ly/3HvIUeA>

Education

Carnegie Mellon University

Pittsburgh, PA USA

PH.D. PSYCHOLOGY

2013-2018

- Committee: Robert S. Siegler (chair), John Anderson, and Sharon Carver
- Dissertation: *Understanding Percentages*

Peking University

Beijing, China

B.S. PSYCHOLOGY & CHEMISTRY

2009-2013

Research Positions

Visiting Assistant Professor, Bryn Mawr College

Bryn Mawr, PA

Aug. 2022 - Present

Post-Doctoral Researcher, Dept of Psychology and Neuroscience, Temple University

Philadelphia, PA

ADVISOR: ELIZABETH A. GUNDERSON

Aug. 2019 - Present

Post-Doctoral Researcher, Teachers College, Columbia University

New York, NY

ADVISOR: ROBERT S. SIEGLER

2018-2019

Publications

PUBLISHED MANUSCRIPTS

Mentee Roles: † Post-bac, * Undergraduate student ★ Junior graduate student

1. **Tian, J.**, Ren, K., Newcombe, N., Weinraub, M., Vandell, D., & Gunderson, E. A. (2022). Tracing the origins of the STEM gender gap: Childhood spatial skills contribute to women's underrepresentation in STEM majors. *Developmental Science*, e13302.
2. Siegler, R. S. & **Tian, J.** (2022). Why do we need three rational number notations? The importance of percentages. *Advances in Child Development and Behavior*.
3. **Tian, J.**, †Leib, E. R., †Griger, C., ★Oppenzato, C. O., & Siegler R. S. (2022). Biased problem distributions in assignments parallel those in textbooks: Evidence from fraction and decimal arithmetic. *Journal of Numerical Cognition*, 8(1), 73-88.
4. **Tian, J.**, *Dam, S., & Gunderson, E. A. (2022). Spatial skills, but not spatial anxiety, mediate gender differences in number line estimation. *Developmental Psychology*, 58(1), 138-151.
5. **Tian, J.**, †Bartek, V., *Rahman, M. Z., & Gunderson, E. A. (2021). Learning improper fractions with the number lines and the area models. *Journal of Cognition and Development*, 22(2), 305-327.
6. Siegler, R. S. , Im, S., Schiller, L., **Tian, J.**, & Braithwaite, D. W. (2020). The sleep of reason produces monsters: How and when biased input shapes mathematics learning. *Annual Review of*

Developmental Psychology, 2, 413-435.

7. **Tian, J.**, Braithwaite, D. W., & Siegler R. S. (2020). Distributions of textbook problems predict student learning: Data from decimal arithmetic. *Journal of Educational Psychology*, 113(3), 516-529.
8. **Tian, J.**, Gunderson, E. A. (2020). Teaching fractions to young children. *YC Young Children*, 75(4), 62 - 67.
9. **Tian, J.**, Braithwaite, D. W., & Siegler R. S. (2020). How do people choose among rational number notations? *Cognitive Psychology*, 123, 101333.
10. **Tian, J.**, & Siegler, R. S. (2018). Which type of rational numbers should students learn first? *Educational Psychology Review*, 30, 351-372.
11. Wang, C. & **Tian, J.** (2018). Reminders of mortality alter pain-evoked potentials in a Chinese sample. *Frontiers in Psychology*, 9, 1667.
12. Braithwaite, D. W., **Tian, J.**, & Siegler, R. S. (2018). Do children understand fraction addition? *Developmental Science*, 21(4), e12601.
13. **Tian, J.**, & Siegler, R. S. (2017). Fractions learning in children with mathematics difficulties. *Journal of Learning Disabilities*, 50(6), 614-620.
14. **Tian, J.** (2017). Difficulty in understanding rational numbers and potential solutions. In P. Lemaire (Eds.), *Cognitive Development from a Strategy Perspective: A Festschrift for Robert Siegler* (pp. 233 - 262). London, UK: Routledge.
15. Zhou, Y., Qin, S., & **Tian, J.** (2016). Risk perception of air pollution: An exploration of self-relevancy. *Human and Ecological Risk Assessment: An International Journal*, 22(7), 1506-1518.
16. Lortie-Forgues, H., **Tian, J.**, & Siegler, R. S. (2015). Why is learning fraction and decimal arithmetic so difficult? *Developmental Review*, 38, 201-221.

UNDER REVIEW

Tian, J., Ren, K., & Gunderson, E. A. Verbal labels influence children's processing of decimal magnitudes.

IN PREP

Tian, J., Bennet-Pierre, G., Tavassolie, N., Newcombe, N., Weinraub, M., Hindman, H. A., Newton, K. J., & Gunderson, E. A. A growth mindset message leads parents to choose more challenging informal learning activities.

Conference Presentations

Tian, J., Tavassolie, N., Bennett-Pierre, G., Newcombe, N.S., Weinraub, M., Hindman, A., Newton, K., & Gunderson, E. A. (2022, June). *Growth mindset message influences parents' choices of games*. Poster to be presented at the Mathematical Cognition and Learning Society Conference 2022, Belgium.

Tavassolie, N., **Tian, J.**, Bennett-Pierre, G., Newcombe, N.S., Weinraub, M., Hindman, A., Newton, K., & Gunderson, E. A. (2022, June). *Measuring the spatial home learning environment: Initial test of the Spatial Toys and Activities Checklist (STAC)* Poster to be presented at the Mathematical Cognition and Learning Society Conference 2022, Belgium.

Tian, J., Ren, K., Newcombe, N.S., Weinraub, M., Vandell, D. L., & Gunderson, E. A. (2022, April). *Tracing the origins of the STEM gender gap: Childhood spatial skills contribute to women's underrepresentation in STEM college majors* Poster to

be presented at the 2022 Biennial Meeting of the Cognitive Development Society, Madison, WI.

- Tian, J., Rahman, M. Z., & Gunderson, E. A.** (2021, April). *Children's inconsistent use of fraction magnitude knowledge*. Talk presented at the 2021 Biennial Meeting of the Society for Research in Child Development.
- Tian, J., Ren, K., Newcombe, N., Weinraub, M., Vandell, D., & Gunderson, E. A.** (2021, February). *Early predictors of STEM major choice*. Invited talk in the STEM Teaching and Learning Lab at University of California, Riverside.
- Tian, J., Rahman, M., Bartek, V., & Gunderson, E. A.** (2020, June). *Intervention on improper fractions with number lines versus area models*. Talk presented at the Third Conference of the Mathematical Cognition and Learning Society, Dublin, Ireland.
- Tian, J.** (2019, March). *Linguistic facilitation of understanding of percentages*. Talk presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, Maryland.
- Tian, J., & Siegler, R. S.** (2019, March). *An analysis of textbook problems on percentages*. Poster presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, Maryland.
- Tian, J., & Siegler, R. S.** (2019, January). *Predicting students' knowledge by textbook input: The case of percentages*. Poster presented at the 2019 IES-PI Meeting, Washington, DC.
- Tian, J., Braithwaite, D. W., & Siegler, R. S.** (2018, April). *Do children understand fraction addition?* Talk presented at the First Conference of the Mathematical Cognition and Learning Society, Oxford, UK.
- Tian, J., & Siegler, R. S.** (2017, October). *Better conceptual understanding of rational number multiplication with "of" expression*. Poster presented at the 2017 Biennial Meeting of the Cognitive Development Society, Portland, Oregon.
- Tian, J., & Siegler, R. S.** (2017, April). *Influence of number of digits on rational number magnitude understanding*. Poster presented at the 2017 Biennial Meeting of the Society for Research in Child Development, Austin, Texas.
- Tian, J.** (2016, June). *Understanding of rational numbers: Difficulties and prospective solutions*. Talk presented at Cognitive Development: Hommage to Robert S. Siegler, Aix-en-Provence, France.
- Tian, J., & Siegler, R. S.** (2015, October). *Use of magnitude in addition estimation*. Poster presented at the 2015 Biennial Meeting of the Cognitive Development Society, Columbus, Ohio.
- Tian, J., & Siegler, R. S.** (2015, March). *Spontaneous Focusing on Numerosity (SFON) in early math development*. Poster presented at the 2015 Biennial Meeting of the Society for Research in Child Development, Philadelphia, Pennsylvania.

Mentoring Experience

- 2022- **Katie Probst**, Temple University
- 2021- **Joel Camarote**, Temple University
- 2021- **Ashley Bontempo**, Temple University
- 2021-2022 **Khushi Sibal**, Temple University | currently graduate student at Pepperdine University and Stanford University
- 2020-2021 **Paula Daniela Ueki**, Temple University | currently project coordinator at DePaul University
- 2020-2021 **Kimberly Bohl**, Temple University
- 2019-2020 **Maya Rahman**, Temple University
- 2019-2020 **Su Dam**, Temple University
- 2018-2019 **Colleen Oppenzato**, Teachers College, Columbia University
- 2018-2019 **Reem Alattas**, Teachers College, Columbia University | currently consultant at Emkan Education, Saudi Arabia
- 2016-2018 **Elena Leib**, Carnegie Mellon University | currently PhD student at the University of California, Berkeley
- 2014-2018 **Cassandra Griger**, Carnegie Mellon University | currently PhD student at the University of Iowa

Teaching Experience

- Fall 2022 **Research Methods and Statistics**, Bryn Mawr College | Instructor
Spring 2016 **Research Methods in Dev. Psych.**, Carnegie Mellon University | Teaching Assistant
Fall 2015 **Introduction to Psychology**, Carnegie Mellon University | Section Instructor
Spring 2015 **Principles of Child Development**, Carnegie Mellon University | Teaching Assistant

Service

UNIVERSITY SERVICE

- 2016-2018 **Teaching Assistant Representative**, Carnegie Mellon University
2015-2016 **Developmental Discussion Group Coordinator**, Carnegie Mellon University
2014-2016 **Graduation Celebration Coordinator**, Carnegie Mellon University

AD-HOC REVIEWER

British Journal of Educational Psychology	Frontiers in Psychology
Child Development	Infant and Child Development
Child Development Perspectives	Journal of Educational Psychology
Cognitive Development	Journal of Experimental Child Psychology
Cognitive Science	Journal of Learning Disabilities
Developmental Psychology	Mind, Brain, and Education
Developmental Science	Quarterly Journal of Experimental Psychology
Early Education and Development	

Reference

Robert S. Siegler, Ph.D.
Schiff Foundations Professor of Psychology
Teachers College, Columbia University
New York, NY 10027
212-678-3121
rss2169@tc.columbia.edu

Elizabeth A. Gunderson, Ph.D.
Associate Professor
Temple University
Philadelphia, PA 19122
215-204-1258
liz.gunderson@temple.edu

Nora S. Newcombe, Ph.D.
Laura H. Carnell Professor of Psychology
Temple University
Philadelphia, PA 19122
215-204-6944
newcombe@temple.edu