

THEODORE P. CHAO

CURRICULUM VITAE

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PROFESSIONAL APPOINTMENTS

2022 to 2023, VISITING ASSOCIATE RESEARCHER, Department of Education, Center X,
University of California, Los Angeles

2020 to Current, ASSOCIATE PROFESSOR, Department of Teaching and Learning, College of
Education and Human Ecology, The Ohio State University

2014 to 2020, ASSISTANT PROFESSOR, Department of Teaching and Learning, College of
Education and Human Ecology, The Ohio State University

2012 to 2014, POSTDOCTORAL RESEARCH FELLOW, Graduate School of Education, Harvard
University; Advisor: Jon R. Star

EDUCATION

PH.D. MATHEMATICS EDUCATION, The University of Texas at Austin, 2012

M.S. EDUCATION, St. John's University, 2004

B.S. COMPUTER SCIENCE ENGINEERING, Johns Hopkins University, 2000
Concentration: Mathematics (25 Credit Hours)

B.A. FILM & MEDIA STUDIES, Johns Hopkins University, 2000

RESEARCH FOCUS

CRITICAL MATHEMATICS TEACHING AND TEACHER EDUCATION

Digital Mathematics Storytelling and Photovoice as Decolonizing Praxis
Mathematics Teachers of Color: Identity and Education
Critical Early Childhood and Elementary Mathematics

RESEARCH

PUBLICATIONS

★ manuscripts written with doctoral student, postdocs, untenured colleagues, or teachers

PEER-REVIEWED JOURNAL ARTICLES

Maldonado Rodríguez, L. A., Jessup, N., Myers, M., Louie, N., & **Chao, T.** (2022). A Critical Lens on Cognitively Guided Instruction: Perspectives from Mathematics Teacher Educators of Color. *Mathematics Teacher Educator*.

★ Oliwe, R. & **Chao, T.** (2022). Teaching mathematics through comic storytelling: A bridge to students' worlds. *Australian Primary Mathematics Classroom*, 27(1), 22-27.

★ Beard, K. S., Vakil, J. B., **Chao, T.**, & Hilty, C. D. (2021). Time for Change: Understanding Teacher Social-Emotional Learning Supports for Anti-Racism and Student Well-Being During COVID-19, and Beyond. *Education and Urban Society*, 1-19. <https://doi.org/10.1177/00131245211062527>

Kokka, K. & **Chao, T.** (2020). 'How I show up for Brown and Black students': Investigating Asian American Male Mathematics Teacher Identity. *Race, Ethnicity, and Education*, 23(3), 432-453.

Yeh, C. & **Chao, T.** (2019). Celebrating the mathematical brilliance of all children. *Teaching Children Mathematics*, 25(7).

★ **Chao, T.**, & Marlowe, M. (2019). Elementary Mathematics and #BlackLivesMatter. *Bank Street Occasional Paper Series*. <https://educate.bankstreet.edu/occasional-paper-series/vol2019/iss41/1>

★ Smith, M. & **Chao, T.** (2018). Critical Science and Mathematics Early Childhood Education: Theorizing Reggio, Play, and Critical Pedagogy into an Actionable Cycle. *Education Sciences*, 8(4), 162-178. doi.org/10.3390/educsci8040162

★ Ahmed, I., & **Chao, T.** (2018). Assistive learning technologies for students with visual impairments: A critical rehumanizing review. *Investigations in Mathematics Learning*, 10(3), 173–185. doi.org/10.1080/19477503.2018.1463005

Murray, E., Durkin, K., **Chao, T.**, Vig, R., Star, J.R. (2018). Exploring Connections Between Content Knowledge, Pedagogical Content Knowledge, and the Opportunities to Learn Mathematics: Findings from the TEDS-M Dataset. *Mathematics Teacher Education and Development*, 20(1), 4-22. <https://mtd.merga.net.au/index.php/mtd/article/view/310>

Chao, T. (2017). Snack Sharing. *Teaching Children Mathematics*, 23(6).

- Farland-Smith, D. & **Chao, T.** (2017). What are my children watching? Analyzing the scientific & mathematical questions of preschool television shows using process skills. *Creative Education*, 8(6), 847-857. doi.org/10.4236/ce.2017.86061
- Chao, T.**, Chen, J. A., Star, J. R., & Dede, Chris. (2016). Using digital resources for motivation and engagement in learning mathematics: Reflections from teachers and students. *Digital Experiences in Mathematics Education*, 2(3), 253-277. <https://link.springer.com/article/10.1007/s40751-016-0024-6>
- Chao, T.**, & Jones, D. (2016) That's Not Fair and Why: Developing Social Justice Mathematics Activists in Pre-K. *Teaching for Excellence and Equity in Mathematics*, 7(1), 15-21. https://www.todos-math.org/assets/documents/TEEM/teem7_final1.pdf
- Chao, T.** (2016). That's My Number. *Teaching Children Mathematics*, 22(9).
- Chao, T.**, Murray, E., Star, J. R. (2016). Helping Mathematics Teachers Develop Noticing Skills: Utilizing Smartphone Technology for One-on-One Teacher/Student Interviews. *Contemporary Issues in Technology and Teacher Education*, 16(1), 22-37. <https://www.citejournal.org/volume-16/issue-1-16/mathematics/helping-mathematics-teachers-develop-noticing-skills-utilizing-smartphone-technology-for-one-on-one-teacherstudent-interviews>
- Star, J. R., Chen, J. A., Taylor, M. W., Durkin, K., Dede, C., & **Chao, T.** (2014). Studying technology-based strategies for enhancing motivation in mathematics. *International Journal of STEM Education*, 1(7), 1-19. doi.org/10.1186/2196-7822-1-7

BOOKS & BOOK CHAPTERS

- Wong, K., **Chao, T.**, Joffe, J., & Wang, A. M. (Forthcoming). *Radical Cram School: A Kids' Guide to Asian American Revolution*. Minneapolis, MN: Beaming Books
- Chao, T.** (2021). Finding my voice: Developing a critical writing and APIDA identity in a Newspaper course. In Ellis, A. L., Hartlep, N. D., Ladson-Billings, G. J., & Stovall, D. O. (Eds.), *Teacher Educators as Critical Storytellers: Towards a Conceptualization of Effective Teachers as "Windows" and "Mirrors"*. New York, NY: Teachers College Press.
- Chao, T.**, Maldonado, L., Kalinec-Craig, C., & Celedón-Pattichis, S. (2019). Preparing prospective elementary mathematics teachers to critically engage in elementary mathematics methods. In T. G. Bartell, C. Drake, A. Roth McDuffie, J. M. Aguirre, E. E. Turner, & M. Q. Foote (Eds.), *Transforming Mathematics Teacher Education: An Equity-Based Approach*. Switzerland: Springer.
- Kalinec-Craig, C., **Chao, T.**, Maldonado, L., & Celedón-Pattichis, S. (2019). Reflecting back to move forward: Using the mathematics autobiography to open humanizing learning

- spaces for prospective mathematics teachers. In T. G. Bartell, C. Drake, A. Roth McDuffie, J. M. Aguirre, E. E. Turner, & M. Q. Foote (Eds.), *Transforming Mathematics Teacher Education: An Equity-Based Approach*. Switzerland: Springer.
- ★ **Chao, T., & Jones, D.** (2017). “What Color Are Our Feet?”: Empowering Prekindergarteners’ Statistical Reasoning through Opportunities to Create, Discuss, and Own Visual Representations. In S. Celedón-Pattichis, D. Y. White, & M. Civil (Eds.), *Access and Equity: Promoting high quality mathematics in grades K-2*. Reston, VA: National Council of Teachers of Mathematics.
- Chao, T., Hale, J. J., & Cross, S. B.** (2017). Experiences using clinical interviews in mathematics methods courses to empower pre-service teachers: A conversation among three critical mathematics educators. In S. Kastberg, A. M. Tyminski, A. Lischka, & W. Sanchez (Eds.), *Building Support for Scholarly Practices in Mathematics Methods*. Charlotte, NC: Information Age Publishing.
- Marshall, A. M., & **Chao, T.** (2017). Using Mathematics Autobiography Stories to Support Emerging Elementary Mathematics Teacher Sociopolitical Consciousness and Identity. In S. Kastberg, A. M. Tyminski, A. Lischka, & W. Sanchez (Eds.), *Building Support for Scholarly Practices in Mathematics Methods*. Charlotte, NC: Information Age Publishing.
- McCloskey, A., Lawler, B., & **Chao, T.** (2017). The “Mirror Test:” A tool for reflection on our sociopolitical identities as mathematics teacher educators. In S. Kastberg, A. M. Tyminski, A. Lischka, & W. Sanchez (Eds.), *Building Support for Scholarly Practices in Mathematics Methods*. Charlotte, NC: Information Age Publishing.
- Star, J. R., Chen, J. A., Taylor, M. W., Durkin, K., Dede, C., & **Chao, T.** (2015). Evaluating Game-Based Learning Environments for Enhancing Motivation in Mathematics. In J. Torbeys, E. Lehtinen, & J. Elen (Eds.), *Describing and Studying Domain-Specific Serious Games*. New York, NY: Springer.
- Chao, T.** (2014). Photo-Elicitation/Photovoice interviews to study mathematics teacher identity. In J. J. Lo, K. Leatham, & L. Van Zoest (Eds.), *Research Trends in Mathematics Teacher Education*. Switzerland: Springer International Publishing.
- Chao, T.** (2013) Tips for Critical Math Teaching, In A. Miglietta, L. Smith, & D. Stovall (Eds.), *Chicago Grassroots Curriculum Taskforce Toolkit*. Chicago, IL: Chicago Grassroots Curriculum Taskforce.
- Chao, T., Empson, S. B., & Shechtman, N.** (2013). A principal components model of SimCalc Mathworlds. In R. Lesh, P. L. Galbraith, C. R. Haines, & A. Hurford (Eds.), *Modeling Students’ Mathematical Modeling Competencies* (pp. 555-560). New York, NY: Springer.

- Chao, T.** (2022). A review of Classroom Research on Mathematics and Language: Seeing Learners and Teachers Differently. *Teachers College Record*.
- Jong, C., Kalinec-Craig, C., Bowers, D., & **Chao, T.** (2019). *PME-NA Equity Statement*. North American Chapter of the International Group for the Psychology of Mathematics Education.
https://pmena.org/documents/PMENA_Equity_Statement.pdf
- Crespo, S., Bieda, K., Martínez, J. M., Dubbs, C., Bezuk, N., Thanheiser, E., Groth, R., Barlow, A.T., **Chao, T.**, González, G., Taylor, E., & Yow, J. (2018). What Makes Us Different Makes Us Stronger: A Statement by the MTE Editorial Board. *Mathematics Teacher Educator*, 6(2), 3.
- Chao, T.**, Murray, E. C., & Gutiérrez, R. (2014). *NCTM Equity Pedagogy Research Brief: What Are Classroom Practices That Support Equity-Based Mathematics Teaching?* Reston, VA: National Council of Teachers of Mathematics.
- Brown, L., Hull, S., & **Chao, T.** (2010). *NCSM Position Paper: Improving student achievement in mathematics by promoting positive self-beliefs*. Aurora, CO: National Council of Supervisors of Mathematics.

CONFERENCES

PEER-REVIEWED CONFERENCE PROCEEDINGS

- ★ **Chao, T.**, Adams Corral, M., Ozturk, A., Lin, H., Hidayat, A. (2022). Eliciting youth mathematics stories: The impact of a digital mathematics storytelling summer camp experience. In Lischka, A. E., Dyer, E. B., Jones, R. S., Lovett, J., Strayer, J., & Drown, S. (2022). *Proceedings of the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Middle Tennessee State University.
- ★ **Chao, T.**, Adams Corral, M., Ozturk, A., Lin, H., Li, Y. (2021). Community Math Stories: Informal Adult Educators Exploring Mathematics Identity through Digital Mathematics Storytelling. In Olanoff, D., Spitzer, S. & Johnson, K. (Eds.), *Productive Struggle: Persevering Through Challenges: Proceedings of the 43rd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Philadelphia, PA: Widener University, Towson University, and West Chester University
- Marshall, A., McCloskey, A., Lawler, B., **Chao, T.**, & The MathEd Collective. (2020) Critically analyzing and supporting difficult situations (cards): A tool to support equity commitments. In Sacristán, A.I., Cortés-Zavala, J.C. & Ruiz-Arias, P.M. (Eds.), *Mathematics Education Across Cultures: Proceedings of the 42nd Meeting of*

the North American Chapter of the International Group for the Psychology of Mathematics Education. Mazatlán, Mexico: Cinvestav/AMIUTEM.
<https://doi.org/10.51272/pmna.42.2020>

- ★ Vakil, J., & **Chao, T.** (2019). Mathematics teacher education in the age of twitter: A critical tool in elementary math methods. In S. Otten, A. G. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.), *Proceedings of the 41st annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. St. Louis, Missouri: University of Missouri.

- ★ Adams Corral, M., Jones, D., & **Chao, T.** (2019). Critical Early Childhood Mathematics For Children of Color. In J. Subramanian (Ed.), *Proceedings of the Tenth International Mathematics Education and Society Conference*. Hyderabad, India: MES10.

- The MathEdCollective. (2019). The MathEdCollective: Collaborative Action in an Era of Cyberbullying and Hate. In J. Subramanian (Ed.), *Proceedings of the Tenth International Mathematics Education and Society Conference*. Hyderabad, India: MES10.

- ★ **Chao, T.**, & Adams Corral, M. (2018). Critical Mathematics Teacher Noticing: Using Online Technology to Explore How Pre-service Teachers of Color Confront their Peers' Racial Positionings of Children. In T. Hodges, G. Roy, & A. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Greenville, SC: Clemson University and University of South Carolina.

- ★ Dennett, E. & **Chao, T.** (2018). Using tablet technology to promote parent/child mathematical dialogue. In T. Hodges, G. Roy, & A. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Greenville, SC: Clemson University and University of South Carolina.

- ★ Lin, Hochieh, **Chao, T.**, Auble, D., & Tan, Chengzhi. (2018). Seeking mathematics help in physical and virtual spaces. In T. Hodges, G. Roy, & A. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Greenville, SC: Clemson University and University of South Carolina.

- ★ Lewis, S.T., **Chao, T.**, & Battista, M. (2017). MathVision: A mobile video application for math teacher noticing of learning progressions. In E. Galindo & J. Newton (Eds.), *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Indianapolis, IN: Indiana University.

- ★ Lin, H., & Chao, T. (2017). Can I measure that with my phone?: Mobile measurement apps for long lengths. In E. Gali(Chao, Hale, & Cross, 2017; Chao, Maldonado, Kalinec-Craig, & Celedón-Pattichis, 2019; Kalinec-Craig, Chao, Maldonado, & Celedón-Pattichis, 2019; Marshall & Chao, 2017; McCloskey, Lawler, & Chao, 2017)ndo & J. Newton (Eds.), *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Indianapolis, IN: Indiana University.
- Chao, T., & Murray, E. C. (2015). Empowering Pre-Service Teachers to Enact Equity Pedagogy. In T. G. Bartell, K. N. Bieda, R.T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. East Lansing, MI: Michigan State University.
- Chao, T., & Murray, E. C. (2015). Mathematics Teaching as Lean Thinking: A Software Development Metaphor Where Teachers Listen and Notice. In T. G. Bartell, K. N. Bieda, R.T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. East Lansing, MI: Michigan State University.
- ★ Lewis, S. T., Winer, M. L., Kellert, H., & Chao, T. (2015). Elementary Students' Spatial Reasoning in a Minecraft Environment. In T. G. Bartell, K. N. Bieda, R.T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. East Lansing, MI: Michigan State University.
- Chao, T., & Murray, E. C. (2013). Teacher asynchronous noticing to foster students' mathematical thinking. In A. C. Superfine, M. Martinez, G. Larnell, T. Stoelinga, & D. B. Martin (Eds.), *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago: University of Illinois at Chicago.
- Chao, T., & Schiller, L. (2013). Teacher tension: When sharing student strategies conflicts with the learning trajectory. In A. C. Superfine, M. Martinez, G. Larnell, T. Stoelinga, & D. B. Martin (Eds.), *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago: University of Illinois at Chicago.
- Chao, T. (2012). Photo-Elicitation/Photovoice Interviews to Study Mathematics Teacher Identity. In L. R. Van Zoest, J. J. Lo, & J. L. Kratky (Eds). *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Kalamazoo, MI: Western Michigan University.
- Chao, T., & Empson, S. (2011). Unveiling mathematics teachers' professional and personal identities using photo-elicitation interviews. In L. Wiest & T. Lamberg (Eds.),

Proceedings of the 33rd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (p. 1269-1277). Reno, NV: University of Nevada, Reno.

Chao, T., & Petrick, C. (2010). Measuring beliefs about conceptual progression among pre-service special education teachers. In P. Brosnan, D. B. Erchick, & L. Flevares (Eds.), *Proceedings of the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 926-933). Columbus, OH: The Ohio State University.

Chao, T., Empson, S. B., & Shechtman, N. (2007). A principal components analysis of rate and proportionality using SimCalc MathWorlds. In T. Lamberg & L. Wiest (Eds.), *Proceedings of the 29th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 145-147). Stateline (Lake Tahoe), NV: University of Nevada, Reno.

CONFERENCE PRESENTATIONS

Yeh, C., Kokka, K., Louie, N. L., Jong, C., **Chao, T.**, & Wolfe, J. A. (2023). *Not Your Model Minority: Interrogating the Phrase "Asian American" in Mathematics Education*. Paper session presented at the Association of Mathematics Teacher Educators annual meeting, New Orleans, LA.

★ **Chao, T.**, Adams Corral, M., Lin, H., Ozturk, A. Hidayat, A., & Oliwe, R. (2022). Presented at the Research Conference of the National Council of Teachers of Mathematics annual meeting, Los Angeles, CA.

Chao, T., Wong, K., Joffe, J., & Wang, A. M. (2022). *Radical Cram School*. Special session on the Performing and Media Arts at the 12th International Conference on Education and Justice.

★ Lin, H., Ozturk, A., Adams Corral, M., Li, Y., **Chao, T.** (2021) *Community-based Digital Mathematics Storytelling for Exploring Mathematics Identity*. Concurrent presentation session at the Association for Educational Communications and Technology Convention, Chicago, IL.

★ **Chao, T.**, Adams Corral M., Deiri, Y., Vakil, J. (2021) *Critical mathematics teacher noticing: Exploring pre-service teacher's power and identity using online video*. Paper session at the 14th International Congress on Mathematical Education, Shanghai, China.

Chao, T., Wong, K., Joffe, J., Wang, A. M. (2021). *Asian American Identity and Activism*. A Free Young Minds online session for young activist at the Free Minds, Free People conference.

- ★ Deiri, Y., Vakil, J. B. & **Chao, T.** (2020). *Decolonizing Our Imaginations: Community Gardens, Living Mathematx, and Dialogic Spirals in an Elementary Mathematics Methods Course* [Poster Session]. AERA Annual Meeting San Francisco, CA. <http://tinyurl.com/tbt35fq> (Conference Canceled)
- Marshall, A., McCloskey, A., **Chao, T.** (2020). Facilitating critical conversations among mathematics teachers with rehearsals and scenario cards. Paper session presented at the Association of Mathematics Teacher Educators annual meeting, Phoenix, AZ.
- ★ **Chao, T.** & Deiri, Y. (2019). *A framework for critical teacher noticing*. Presented at the Cognitively Guided Instruction 10th Biennial Conference, Minneapolis, MN.
- Jessup, N., Maldonado, L., & **Chao, T.** (2019). *Considering CGI and equity: Beyond the blue book*. Presented at the Cognitively Guided Instruction 10th Biennial Conference, Minneapolis, MN.
- ★ **Chao, T.**, Adams Corral, M., & Deiri, Y. (2019). *Critical teacher noticing using online video tools*. Presented at the Cognitively Guided Instruction 10th Biennial Conference, Minneapolis, MN.
- ★ Lin, H., & **Chao, T.** (2019). *Beat math anxiety: Creating a safe virtual space in mathematics class*. Presented at the OSU Innovate X Conference, Columbus, OH.
- Yeh, C., Louie, N. L., Kokka, K., Jong, C., Eli, J. A., **Chao, T.**, & Adiredja, A. P. (2019). *Growing Against the Grain: Counterstories of Asian American Mathematics Education Scholars*. Roundtable Session presented at the American Educational Research Association annual meeting, Toronto, Canada.
- ★ **Chao, T.**, Vakil, J., Dennett, E., Lin, Hochieh, & Ozturk, A. (2019) *Mathematics Teacher Education in the Age of Twitter: A Critical Tool in Elementary Math Methods*. Paper session presented at the Association of Mathematics Teacher Educators annual meeting, Orlando, FL.
- Marshall, A. M., McCloskey, A., Lawler, B., & **Chao, T.** (2019) “*Math is racist now? You don’t believe that, do you?*”: *Supporting Courageous Conversations*. Paper session presented at the Association of Mathematics Teacher Educators annual meeting, Orlando, FL.
- Chao, T.**, Eli, J. A., Kokka, K., & Yeh, C. (2018). *Critical Issues in Working with Asian American Students*. Panel session presented at the National Council of Supervisors of Mathematics Annual Conference, Washington, DC.
- Berry III, R. Q., **Chao, T.**, Gholson, M., Goffney, I. M., Hoover, M., Khalil, D., & Willis, A. (2018). *Exploring Equity in the Context of Mathematics Teacher Education Practice*. Research Symposium presented at the National Council of Teachers of Mathematics Research Conference, Washington, DC.

- Crespo, S., **Chao, T.**, & Yow, J. (2018). *Could I publish this in MTE? Advice from published manuscripts in the Mathematics Teacher Educator journal*. Invited Session presented at the National Council of Teachers of Mathematics Research Conference, Washington, DC.
- Chao, T.** (2018). *“Not that different from where I’m from”*: Community mathematics explorations in a low-income, white community. Paper presented at the annual meeting of AERA as part of the symposium, “Community Mathematics Explorations 2.0: Expanding on the Work of TEACH Math,” New York, NY.
- Berry III, R. Q., **Chao, T.**, Gholson, M., Goffney, I. M., Hoover, M., Khalil, D., & Willis, A. (2018). *Exploring Equity in the Context of Mathematics Teacher Education Practice: A Town Hall Discussion*. Symposium presented at the American Educational Research Association annual meeting, New York, NY.
- Kokka, K., & **Chao, T.** (2018). *Asian American Male Math Teachers, the Model Minority Myth, and Internalized Racism*. Invited Speaker Session presented at the American Educational Research Association annual meeting, New York, NY.
- ★ Yeh, C., Stoehr, K. J., **Chao, T.**, Ozturk, A., & Lin, H. (2018). *Attending to the social, historical, and institutional contexts of education in mathematics methods courses*. Extended session presented at the Association of Mathematics Teacher Educators annual meeting, Houston, TX.
- Chao, T.** (2017). *Instructional Practices*. Presented at the Innov8 Bar at the NCTM Innov8 Conference, Las Vegas, NV.
- Chao, T.** (2017). *Twitter/Blog Talk*. Presented at the Innov8 Bar at the NCTM Innov8 Conference, Las Vegas, NV.
- Chao, T.** (2017). *Article Talk: “That’s Not Fair and Why: Developing Social Justice Mathematics Activists in Pre-K”*. Presented at the Innovation Lounge at the NCTM Innov8 Conference, Las Vegas, NV.
- ★ **Chao, T.** & Lewis, S.T. (2017). *The MathVision App: Helping Teachers Listen and Reflect Together*. Presented at the Cognitively Guided Instruction 9th Biennial Conference, Seattle, WA.
- Chao, T.** & Kokka, K. (2017). *Asian American Pacific Islander Male Mathematics Teacher Identity and the Myth of the Model Minority*. Paper presented at the annual meeting of AERA as part of the symposium, “Beyond Black, Brown, and White: A Critical Symposium of Asian American Teacher Identity”, San Antonio, TX.

- ★ **Chao, T.** & Lewis, S.T., (2017) *So That's What a Math Discussion Feels Like: Piloting Technology for Orchestrating Mathematics Discussions*. Paper session presented at the Association of Mathematics Teacher Educators annual meeting, Orlando, FL.
- ★ **Chao, T.** & Lewis, S.T., (2016) *Developing Mobile/Tablet Technology For Teachers To Orchestrate Mathematical Discussion*. Oral presentation session at the 13th International Congress on Mathematical Education, Hamburg, Germany.
- Soto, M., **Chao, T.**, Yeh, C., Henry, V., Guarino, J. (2016) *Technology-based ways to Develop Pre-Service Teacher Noticing in Three Elementary Methods' Courses*. Paper session presented at the Association of Mathematics Teacher Educators annual meeting, Irvine, CA.
- ★ **Chao, T.**, Jones, D., Marlowe M., Jaede, M. (2016) *That's Not Fair and Why: Activist Mathematical Activities for Children*. Presented at the Creating Balance in an Unjust World conference, San Francisco, CA.
- Chao, T.** (2015). *Resources for Equity and Social Justice*. Presented at the Ohio Council of Teachers of Mathematics Conference, Cincinnati.
- Murray, E., **Chao, T.**, & Star, J. R. (2015). *Exploring Connections Between Content Knowledge, Pedagogical Content Knowledge, and Mathematics*. Paper presented at the European Association for Research in Learning and Instruction biennial conference as part of the symposium, "Transition from initial teacher education into teaching profession", Limassol, Cyprus
- Chao, T.** (2015). *Teacher professional development and higher education*. Symposium chaired at the European Association for Research in Learning and Instruction biennial conference, Limassol, Cyprus
- ★ **Chao, T.**, Jones, D., Marlowe, Smith, M., Jaede, M. (2015). *That's Not Fair and Why: Activist Mathematical Activities for Children*. Presented at the Free Minds, Free People, Oakland, CA.
- Chao, T.** & Murray, E. C. (2015). *Using your phone to facilitate problem solving interviews*. Presented at the Cognitively Guided Instruction 8th Biennial Conference, Los Angeles, CA.
- Chao, T.** & Murray, E. C. (2015). *An Asynchronous Noticing App to Build Preservice Teachers' Noticing: Technology in the Mathematics Methods Course*. Paper session presented at the Association of Mathematics Teacher Educators annual meeting, Orlando, FL.
- Chao, T.** & Kokka, K. (2014). *It ends with me: A profile of Asian American mathematics teachers combating the myth of the model minority*. Roundtable session presented at the American Educational Research Association annual meeting, Philadelphia, PA.

- Chao, T.** & Murray, E. C. (2014). *Teacher asynchronous noticing to foster students' mathematical thinking*. Paper session presented at the American Educational Research Association annual meeting, Philadelphia, PA.
- Chao, T.** & Murray, E. C. (2014). *Fostering mathematics teacher asynchronous noticing through mobile video*. Individual session at the Association of Mathematics Teacher Educators annual meeting, Irvine, CA.
- Chao, T.** (2013). *Mathematics teacher anxiety: Creating and sharing personal visual narratives with students*. Roundtable session at the European Association for Research in Learning and Instruction biennial conference, Munich, Germany.
- Chen, J., Durkin, K., Star, J., **Chao, T.**, & Dede, C. (2013). *Comparing the effects of technology activities on mathematics achievement and motivation*. Paper session at the European Association for Research in Learning and Instruction biennial conference, Munich, Germany.
- Chen, J., Dede, C., Star, J., **Chao, T.**, Durkin, K., & Taylor, M. (2013). *Profiles of engagement among students participating in technology-based activities*. Poster session at American Psychological Association annual convention, Honolulu, HI.
- Chao, T.**, Hunt, J. & Schiller, L. (2013). *Special education: Mathematics, social justice, and students with special needs*. Presented at the Creating Balance in an Unjust World conference, San Francisco, CA.
- Chao, T.** (2012). *Using photo-elicitation interviews to study mathematics teacher identity*. Presented at the Research Pre-Session of the National Council of Teachers of Mathematics annual meeting, Philadelphia, PA.
- Chao, T.** (2012). *Exploring secondary mathematics teachers' identities with photo-elicitation interviews*. Roundtable session presented at the American Educational Research Association annual meeting, Vancouver, British Columbia, Canada.
- Chao, T.** & Moreland, A. (2012). *Exploring identities of mid-career math and science teachers through creative and visual interviews*. Paper session presented at the American Educational Research Association annual meeting, Vancouver, British Columbia, Canada.
- Chao, T.** (2011). *Windows into teachers' worlds: Exploring mathematics teacher identity with photo-elicitation interviews*. Roundtable session presented at the American Educational Research Association annual meeting, New Orleans, LA.
- Bush-Richards, A., Schneider, C. L., Leach, L. F., Harvey, K., Fong, C. J., & **Chao, T.** (2011). *Intelligence, persistence, and problem solving: Assessing change in student*

- beliefs over an academic youth development program.* Paper session presented at the American Educational Research Association annual meeting, New Orleans, LA.
- Chao, T.** (2011). *Framing mathematics teachers' identities with photo-elicitation interview.* Roundtable session presented at the Consortium for Research on Teacher Education 4th Annual Teacher Education Symposium, Austin, TX.
- Chao, T.** (2011). *Framing mathematics teacher identity using photo-elicitation interviews: Research in Progress.* Presented at the 34th annual conference of the Southwest Educational Research Association, San Antonio, TX.
- Chao, T.** (2010). *Getting Deep: Using photo-elicitation to uncover how cultural, ethnic, and professional identities empower math teaching.* Presented at the Creating Balance in an Unjust World Conference, Brooklyn, NY.
- Chao, T.** (2010). *Growing wrinkles in the brain: Belief change in the AYD transition to Algebra I.* Poster session presented at the American Educational Research Association annual meeting, Denver, CO.
- Schneider, C. L., **Chao, T.**, Leach, L. F., & Fong, C. J. (2010). *Effect of the Academic Youth Development Program on student beliefs.* Paper session presented at the The 33th annual conference of the Southwest Educational Research Association, New Orleans, LA.
- Chao, T.**, & Walkington, C. (2008). *Mathematics education for social justice: A brief review of the research and its relation to the Algebra Project.* Presented at the Algebra Project 25th Anniversary National Conference, "Raising the Floor: Quality Education as a Constitutional Right," Jackson, MS.
- Chao, T.**, Empson, S. B., Greenstein, S., & Maldonado, L. (2008). *Introducing content maps as a tool to analyze connections made within a mathematics classroom: What does learning look like?* Presented at the Algebra Project 25th Anniversary National Conference, "Raising the Floor: Quality Education as a Constitutional Right," Jackson, MS.
- Empson, S. B., Greenstein, S., Maldonado, L., & **Chao, T.** (2008). *A discourse-analytic perspective on relationships between students' opportunities to engage with mathematics and achievement gains.* Paper presented at the annual meeting of AERA as part of the symposium, "Enhancing Mathematics Learning with Technology: Civic, Teacher, Student, and Content Perspectives on Scaling Up SimCalc", New York, NY.
- Chao, T.**, Soto, S., & Stroup, W. (2007). *A multicultural implementation of Schelling's segregation model.* Presented at the 13th International Conference on the Teaching of Mathematical Modeling and Applications, Bloomington, IN.

CREATIVE WORKS

Wong, K., Joffe, J., Wang, A. M., & **Chao, T.** (2020). *Radical Cram School Season 2*. Produced and created a follow up to the successful online web series for children, parents, and educators. Focused on issues of immigration, gun control, feminism, and Asian Pacific Islander Desi American (APIDA) role models.

<https://youtube.com/playlist?list=PLPW9Ncg5SLWTKCleNRUVqI-sv9zXu57Fe>

Wong, K., Joffe, J., Wang, A. M., & **Chao, T.** (2018). *Radical Cram School*. Produced and created online web series for children, parents, and educators for engaging in conversations around misogyny, racism, and oppression for Asian Pacific Islander Desi American (APIDA) children. Featured my work using equal sharing to represent (dis)proportionality in women's wages by race and ethnicity.

<https://youtube.com/playlist?list=PLPW9Ncg5SLWTKCleNRUVqI-sv9zXu57Fe>

★ **Chao, T.**, Lewis, S., Battista, M., Hecht, J., Pan, W. & Chaudry, A. (2017). *MathVision*. Developed a prototype website application for elementary mathematics teachers to upload, comment, and reflect on video from their classrooms. Designed to be used in elementary grade-team meetings for professional development situated around children's mathematical thinking. Funded through an OSU EHE SEED grant with Michael Battista. <https://mathvision.org> (website currently deactivated)

Chao, T. (2015). *Pre-K Mathematics Teaching and Learning – iTunes/Coursera Online Course*. Built an online, a 13-week self-directed course specifically for teachers to learn about research-based practices for PreK through 3rd grade mathematics utilizing only free and openly available resources. Course has been taken 310 students.

<https://itunesu.itunes.apple.com/audit/COHGSYEAPUKPIT2G>.

INVITED TALKS

Youth Digital Math Storytelling: Learning Technology as voice. (2022). Keynote Speaker at The Online Conference of Education Research International (OCERI), Bengkulu, Indonesia.

The Use of Technology to Address Identity Issues in Primary School Mathematics. (2021). Invited Speaker at Bianka Creation Talks, LPDP, Indonesia.

Can research care about people?: Research roles and methods for community building. (2021) Co-Keynote Speaker with Dr. Melissa Adams Corral at the NCTM Research Conference.

Listening to Our Communities: Narrative, Community, and Digital Storytelling. (2021). Keynote Speaker at the Ohio Valley Educational Service Center Annual Leadership Day, Cambridge, Ohio.

The Power of Play and Stories to Revitalize STEM Education. (2021). Invited Webinar with Chris Orban, Ohio Mathematics and Science Coalition, Ohio.

- All Kids are Math People.* (2021). Invited Online Talk to the Iowa Association of Mathematics Teacher Educators, Iowa.
- Addressing Issues of Diversity and Inclusion.* (2019). Invited Talk to the Department of Mathematics Advisory Board. Ohio State University, Columbus, Ohio.
- Issues of Power and Privilege in Learning Mathematics Learning.* (2019). Invited Talk to the Mathematics Department Teaching Assistant Orientation. Ohio State University, Columbus, Ohio.
- Equity, Diversity, and Inclusion in Mathematics: Supportive Practices.* (2018). Keynote Presentation at the Appalachian Ohio Mathematics and Science Teaching Research Symposium: Ninth Annual Meeting, Ohio University, Athens, Ohio.
- Diversity and Inclusion in Mathematics: Classroom Practices that Support Equity.* (2018). Invited Talk to the Mathematics Department, Ohio State University, Columbus, Ohio.
- Teaching in the Age of Twitter: Utilizing Social Media Technology as a Tool for Democratizing Mathematics Teacher Education.* (2018). Invited Talk presented at the Maseeh Series, Portland State University, Portland, Oregon.
- Teaching Mathematics for Equity, Agency, and Empowerment.* (2017). Invited Talk at the Bowling Green Council of Teachers of Mathematics (BGCTM), Bowling Green State University, Bowling Green, Ohio.
- A Lens on the World: Science and Math in the Reggio Inspired Classroom.* (2017). Keynote Presentation with Mandy Smith at the Ohio Voices for Learning, Inspired Teachers Institute, The Works, Newark, Ohio.
- Teaching mathematics so all students love it: Using equity, listening, and creative insubordination in your classroom.* (2017). Invited for the Mathematics Education Research and Doctoral Studies (MERDS) Early Career Lecture, University of Missouri, Columbia, Missouri.
- Connecting Early Childhood Math with Fairness and Social Justice Using Video Apps.* (2017). Invited Talk at the Lunch and Learn Colloquia, Crane Center for Early Childhood Research and Policy, The Ohio State University, Columbus, Ohio
- That's not Fair: Here's Why: Using Mathematics in the Classroom to Recognize and Confront Injustice.* (2016). Invited Talk for the Office of Diversity and Inclusion, The Ohio State University, Columbus, Ohio.
- Your slice is bigger than mine: A Pi Day dialogue on teaching mathematics through social justice.* (2015). Invited Talk at The STEAM Factory, The Ohio State University, Columbus, Ohio.

MEDIA APPEARANCES

- Not Your Model Minority: Asian Students Speak Out.* (2021, April 21). In *The Ohio State University Inspire Podcast*. Retrieved from <https://www.podbean.com/ew/pb-nfah9-1014596>
- All Kids Are Math People.* (2021, April 6). In The Ohio State University College of Education and Human Ecology Teacher Talk. https://youtu.be/BL_trEpK8KM
- When Disciplines Collide.* (2020, December 3). In *Columbus Science Pub*. Retrieved from <https://fb.me/e/39fHUnTlx>
- Jacala.* (2020, November 18). In *Stories from Ohio State's STEAM Factory*. Retrieved from <https://vimeo.com/489971951>
- Embedding STEAM in Digital Storytelling.* (2020, November). In *Digital From Day 1*. Retrieved from <https://podcasts.apple.com/us/podcast/dr-theodore-chao-embedding-steam-in-digital-storytelling>
- Throwing the shackles off mathematics.* (2020, September 16). In *The Ohio State University Inspire Podcast*. Retrieved from <https://www.podbean.com/eu/pb-5xr7d-eba233>
- Technology, Twitter, and balance in teaching math teachers.* (2020, July 29). In *Teaching Math Teaching*. Retrieved from <https://www.teachingmathteachingpodcast.com/20>
- How COVID-19 is reshaping the K-12 educational landscape. (2020, May 14). OSU Alumni Association Webinar. Retrieved from <https://www.osu.edu/alumni/activities-and-events/events/2020/how-covid-19-is-reshaping-the-k-12-educational-landscape.html>
- Social Justice Cram School for Kids – Kristina Wong & Teddy Chao.* (2019, March 25). In *Parenting Forward with Cindy Wang Brandt*. Retrieved from <https://cindywangbrandt.com/podcast/episode-38-social-justice-cram-school-for-kids-kristina-wong-teddy-chao>
- Coding in Classrooms* [Radio]. (2017, December 22). In *All Sides with Ann Fisher*. Retrieved from <https://radio.wosu.org/post/coding-classrooms>
- 44 Pages And 71 Years of Highlights Magazine* [Radio]. (2017, August 29). In *All Sides with Ann Fisher*. Retrieved from <https://radio.wosu.org/post/44-pages-and-71-years-highlights-magazine>

GRANT RESEARCH FUNDING

ACQUIRED

2022, PRINCIPAL INVESTIGATOR, The Ohio State University, Funded: Fulbright Scholars Program

Digital Mathematics Storytelling in Southeast Asia.

Multi-country exploratory research project with *Ho Chi Minh City University of Education* in Vietnam and *Universitas Mataram* in Indonesia to explore the use of Digital Mathematics Storytelling with teachers and students in Southeast Asian contexts over 6 months.

2020-2025, PRINCIPAL INVESTIGATOR, The Ohio State University, Funded: National Science Foundation, **\$817,220.00**

CAREER: Digital Mathematics Storytelling: Fraction Stories from Urban Emergent Communities

An NSF CAREER research grant to understand how to document, share, and connect mathematics narratives involving fractions and other rational numbers told in communities of color to formal school mathematics. Research focuses on creating and evaluating a technology-based, storytelling mechanism for 3rd-5th-grade children of color.

2016 to 2017, PRINCIPAL INVESTIGATOR, The Ohio State University, Funded: Zirkle Innovation Grant, **\$14,268.75**

Establishing Innovation in Pre-K - 3rd-Grade Teacher Preparation Using Mobile Technology

Collaboration with Tami Augustine and Cory Tressler to develop and research the use of iPads in EDUTL 5108 Teaching and Learning Mathematics in Grades Pre-K – 3, developing an internal iTunes U course for pre-service teachers to engage in learning to teach mathematics.

2016 to 2017, PRINCIPAL INVESTIGATOR, The Ohio State University, Funded: OSU College of Education and Human Ecology Office of Research SEED Grant. **\$47,809**

Developing and pilot testing of an electronic environment for helping elementary teachers attend to and understand their students' mathematical thinking

Collaboration with Michael Battista to develop and research technology for teachers to virtually assess, interpret, and instructionally guide the development of their students' mathematical reasoning using Cognition Based Assessment Learning Progressions.

2015 to 2017, PRINCIPAL INVESTIGATOR, Sokikom / The Ohio State University, Funded: Institute of Education Sciences SBIR. **\$150,000**

Fourth-grade teachers using student data to orchestrate mathematics discussion

Developed and piloted tablet/Chromebook technology that allows an elementary teacher to instantly view the individual strategies each student uses as well as the varying levels of sophistication for each strategy during a mathematics problem solving discussion.

2014 to 2016, PRINCIPAL INVESTIGATOR, Sokikom / The Ohio State University, Funded: Institute of Education Sciences SBIR. **\$1,050,000**

S3, a game-based mathematics 3rd-grade mathematics curriculum

Designed and implemented 2-year evaluation study of teacher-centered mathematics curriculum focusing on orchestrating discussion and listening to student mathematical thinking

UNFUNDED

- 2021, NSF AISL PROPOSAL. (CO-PI). *SAPLINGS: STEM Advocacy Partnerships for Learning through Informal Neighborhood Garden Storytelling*. (PI: Mandy Smith, Co-PIs: David Delaine & Theodore Chao).
- 2021, NSF DRK-12 Proposal. (CO-PI). *The Produce Basket: The Impact of Community-Oriented Metaphors When Teaching Fractions in Marginalized Communities*. (PI: Terri Bucci, Co-PIs: Theodore Chao, Bradford Findell, Lee McEwan, & Debe Adams)
- 2020, Spencer Small Grant. (Co-PI). *The Produce Basket: The Impact of Community-Oriented Metaphors When Teaching Fractions in Marginalized Communities*. (PI: Terri Bucci, Co-PIs: Theodore Chao, Bradford Findell, Lee McEwan, & Debe Adams).
- 2019, NSF ITEST Proposal. (PI). *Digital STEM Storytelling: Exploring Narratives of Marginalized Community Voice through Technology*. (Co-PIs: David Delaine, Mandy Smith).
- 2018, NSF CAREER Proposal. (PI). *Digital Mathematics Storytelling: Sharing Elementary Children of Color's Family & Community Fraction Stories*.
- 2017, NSF DRK-12 Conference Proposal. (PI). *Mathematics Teachers' Circles: Statewide Teacher-Led Mathematics Professional Development*.
- 2017, Spencer Small Grant. (PI). *Mathematics Teachers' Circles: Exploring Grassroots Mathematics Professional Development*.
- 2017, NSF CAREER Proposal. (PI). *Mobile Technology for Elementary Children of Color, Families, and Teachers to Connect Out-of-School Math with School Math*.

PENDING

- 2023, NSF Racial Equity in STEM Education. (Co-PI). *Finding Mathematics in Our Communities: Building Ethnomathematics and Funds of Knowledge through Elementary Teacher Learning Communities*. (PI: Teresa Cummings, Co-PIs: Diana Ceja, Melanie Janzen)

TEACHING

COURSE & CURRICULUM DEVELOPMENT

Introduction to STEM Assessment.

Required course for the secondary STEM Education teacher licensure program for undergraduate and Master's level pre-service teachers. Revised with co-instructor Sarah Redick to critique and analyze how traditional STEM assessment measures can shut out specific populations (i.e., women and children of color). Revised all class readings, activities, and projects to focus on exploring culturally sustaining and humanizing assessment practices in STEM, developed for The Ohio State University.

Learning and Mobile Technology in STEM Education.

Doctoral course in which students explored historical issues and theoretical frameworks in research in STEM Education learning technology, then researched and developed their own mobile learning technologies app in partnership with a student developer. Course culminated with a pitch of the app to local STEM Education and Technology leaders, developed for The Ohio State University.

A Critical History of STEM Curriculum.

Doctoral course exploring and critiquing the unique histories of Mathematics, Science, Technology (Industrial), Engineering, and Computer Science Education from Pre-colonization to Post-Common Core Eras in the United States, developed for The Ohio State University.

Teaching and Learning Mathematics for Pre-K to 5th-grade Teachers Online.

Required course for the Early Childhood and Elementary teacher licensure program for undergraduate and Master's level pre-service teachers. Revised the course to operate in online, hybrid, and in-person formats, incorporating current culturally sustaining and humanizing research in Elementary Mathematics Teacher Education, developed for The Ohio State University.

TEACHING EXPERIENCE

UNIVERSITY TEACHING

Autumn 2021, INSTRUCTOR, **EDUTL 5745 Introduction to STEM Assessment**, The Ohio State University

An introduction to STEM Education practices focusing on analysis and critique of the ways traditional STEM Assessment segregates society and practical application of culturally sustaining and humanizing STEM assessment practices.

Spring 2020, INSTRUCTOR, **EDUTL 8731 Teaching and Teacher Education in STEM**, The Ohio State University

4.8/5.0 Overall Rating, Introduction to research surrounding STEM Teaching and Teacher Education, specifically analyzing the intersection of research, teacher licensure, and educational

policy as connected to Mathematics, Science, and Computer Science Education globally in PreK-16.

Autumn 2018, INSTRUCTOR, **EDUTL 8711 Current Issues and Trends in STEM Education**, The Ohio State University

5.0/5.0 Overall Rating, Introductory seminar for new Doctoral and Master of Arts Students in STEM Education to become becoming familiar with the research, policy trends, and ongoing issues and discussion within STEM education subfields.

Autumn 2017, INSTRUCTOR, **EDUTL 7194 Learning and Mobile Technology in STEM Education**, The Ohio State University

5.0/5.0 Overall Rating, A hands-on course in which students learn the history of STEM learning technology and design-based research, then build their own mobile STEM Education app with a partner from the Department of Engineering, Doctoral Seminar.

Spring 2017, INSTRUCTOR, **EDUTL 8741/8742/8743 History of Curriculum in STEM Education**, The Ohio State University

4.8/5.0 Overall Rating, A critical analysis of the histories of Mathematics, Science, Technology, and Computer Science Education in the United States from Pre-colonization to Post-Common Core Eras, Doctoral Seminar.

Spring 2016/Autumn 2020, INSTRUCTOR, **EDUTL 5005 Equity and Diversity in Teacher Education**, The Ohio State University

4.8/5.0 Overall Rating, An introductory capstone course for all pre-service teachers on issues of equity and diversity in education. Uses a Critical Race Theory/Intersectionality lens to explore the role of education in societal oppression and how to incorporate a culturally sustaining and decolonizing lens in one's praxis.

Fall 2014 to Current, INSTRUCTOR, **EDUTL 5108 Teaching and Learning Mathematics for Grades Pre-K to 5th**, The Ohio State University

4.9/5.0 Overall Rating, Early Childhood Master's and Undergraduate Methods course, emphasis on culturally sustaining pedagogy, using technology for orchestrating mathematical discussion, and exploring one's mathematics teacher identity.

Fall 2009 to Spring 2012, ASSISTANT INSTRUCTOR, **Elementary Mathematical Methods for Teaching**, The University of Texas at Austin, Instructor of Record

4.7/5.0 Instructor Rating. Instructed 8 times; special education cohort 3 times.

Spring 2010 to Fall 2010, TEACHING ASSISTANT, **Project Based Instruction**, UTeach/The University of Texas at Austin, Instructor: Anthony J. Petrosino

4.8/5.0 TA rating. Assisted UTeach STEM teacher preparation course 3 times.

K-12 TEACHING

2002 to June, MATHEMATICS TEACHER, Intermediate School 318

7th and 8th-grade math teacher in a culturally diverse Brooklyn middle school; 100% passing rate for 9th-grade Algebra I exam; Forged community partnerships for annual Pi Day celebration; Mentored new teachers through department induction program

2005, TEACHER, Japan Fulbright Memorial Fund Program

Three-week exchange program to collaborate with mathematics teachers in Japan

2003, RESEARCH EXPERIENCE FOR TEACHERS, Cornell University

Material science research professional development; 1 of 5 NY teachers selected

2005, PERMANENT CERTIFICATE TO TEACH MATHEMATICS FOR GRADES 7-12, New York State Public Schools

ADVISING

DOCTORAL STUDENTS

CHAIR

Ruth Oliwe (Started Autumn 2022)

Angga Hidayat (Started Autumn 2021)

Mary Beth Smith (Graduated Summer 2022)

Melissa Adams Corral (Graduated Summer 2021)

Ho-Chieh Lin (Started Autumn 2016)

Christopher Bolognese (Started Autumn 2015, Withdrew Autumn 2017)

CO-CHAIR

Amanda O'Mara (Co-Chair with Ashlyn Pierson, Started Autumn 2021)

Joseph Spurlock (Co-Chair with Michiko Hikida, Started Autumn 2020)

Sarah Redick (Co-Chair with Ashlyn Pierson, Started Autumn 2019)

Stephen Lewis (Co-Chair with Azita Manouchehri, Graduated Summer 2018)

COMMITTEE

Virginia Alonso (Candidacy Committee)

Mutia Syifa (Candidacy Committee)

Tylesha Dayton (Candidacy Committee)

Meg West (Candidacy Committee)

Anthony Myers (Candidacy Committee)

Nicole Tucker-Whitaker (Candidacy/Dissertation Committee)

Ayse Ozturk (Dissertation Committee)

Emily Dennett (Candidacy/Dissertation Committee)

Courtney Irwin (Candidacy Committee)

Joanne Vakil (Dissertation Committee)

Ishtiaq Ahmed (Candidacy/Dissertation Committee)

Marla Goins (Candidacy/Dissertation Committee)

Julie Maynard (Candidacy Committee)

Marguerethe Jaede (Candidacy Committee)

Jane Mburu (Dissertation Committee)
Kimberly Groshong (Dissertation Committee)
Leah Frazee (Candidacy/Dissertation Committee)
Heather Kellert (Candidacy/Dissertation Committee)
Dinglei Huang (Dissertation Committee)
Candace Joswick (Dissertation Committee)
Michael Winer (Candidacy/Dissertation Committee)
Christopher Landauer (Dissertation Committee)

MASTER'S STUDENTS THESIS ADVISOR

Kelsey Marlow, 2015-17
Alayna Stastny, 2016-20

POSTDOCTORAL FELLOWS

Youmna Deiri, 2018-2020

VISITING SCHOLARS

Yuxin Yin, East China Normal University, 2016-17
Jie Ma, East China Normal University, 2017

SERVICE

SERVICE TO PROFESSION

JOURNAL EDITORSHIP/EDITORIAL BOARD

Editorial Board, *Journal of Research in Mathematics Education*, 2021-2024
 Associate Editor, *Theory Into Practice*, 2019-2023
 Editorial Board, *Mathematics Teacher Educator*, 2017-2020
 Section Editor, *Teaching Children Mathematics*, 2015-2019

JOURNAL REVIEWER

Teaching and Teacher Education, 2018-Current
 Journal of the Learning Sciences, 2018-Current
 Journal of Mathematics Teacher Education, 2018-Current
 Educational Studies, 2017-Current
 Journal of Teacher Education, 2016-Current
 School Science and Mathematics, 2016-Current
 Journal of Research on Technology in Education, 2016-Current
 Equity and Excellence in Education, 2016-Current
 Journal of Research in Mathematics Education, 2013-Current
 ZDM Mathematics Education, 2014-Current
 Mathematics Teacher Educator, 2012-Current
 Teaching Children Mathematics, 2012-2019
 Elementary School Journal, 2012-Current
 Journal of Urban Mathematics Education, 2008-Current

CONFERENCE LEADERSHIP/ORGANIZATION

TODOS, Publications & Marketing Conference Committee Chair, 2022-2023
 North American Chapter of the International Group for the Psychology of Mathematics
 Education (PME-NA), Steering Committee, 2017-20
 Free Minds, Free People (FMFP) Workshops Committee Chair, 2016-2019
 Free Minds, Free People (FMFP), Organizer, 2008-2019
 Ohio National Council of Mathematics Teachers, Programs Committee, 2016-17

CONFERENCE PROPOSAL REVIEWER

American Educational Research Association (AERA)
 Psychology of Mathematics Education North America (PME-NA)
 National Council of Teachers of Mathematics Research Conference (NCTM)
 International Congress on Mathematics Education (ICME)

GRANT REVIEWER

National Science Foundation (NSF) Discovery Research K-12 Review Panel
 National Science Foundation (NSF) EHR Core Research Review Panel
 National Science Foundation (NSF) Discovery Research K-12 CAREER Review Panel
 Spencer Foundation Large Research Grants Review Panel

AWARDS COMMITTEE

Huberman Lifetime Achievement Award Chair, AERA Lives of Teachers SIG, 2016-17

SELECTED PARTICIPANT

Scholarship Inquiry and Practice (SIP) Conference, NSF, November 2015
 iTunes U Teacher Education Colloquium, Apple, Cupertino, CA, April 2015
 TEACH MATH Curriculum Dissemination Conference, NSF, November 2014

MATHEMATICS EDUCATION SERVICE

TODOS, Director, 2022-Current
 Ohio Council of Teachers of Mathematics, Board Member, 2019-Current
 Ohio Mathematics Education Leadership Council (OMELC), Treasurer, 2016-22
 Central Ohio Council of Mathematics Teachers (COCTM), Vice President, 2016-18
 TODOS/NCSM Social Justice Task Force, 2016-17

SERVICE TO THE OHIO STATE UNIVERSITY

INSTITUTIONAL COMMITTEE SERVICE AT OSU

Department of Teaching & Learning Ph.D. Revision Ad Hoc Committee, Co-Chair, 2021-22
 Board Member, STEAM Factory, 2021-Current
 Search Committee for Teaching & Learning Chair, 2019-20
 Search Committee for Early Childhood Education Faculty, 2018-19
 Search Committee for College of Education and Human Ecology Dean, 2017-18
 College of Education and Human Ecology Curriculum Committee, 2017-18
 Department of Teaching & Learning Undergraduate Studies Committee, 2016-18
 Department of Teaching & Learning Diversity and Equity Committee, 2015-17, 2018-20 (Chair)
 Search Committee for Learning Technology Center Faculty/Chair, 2015-16
 Search Committee for Science Education Faculty, 2015-16
 EdTPA Committee for Early Childhood/Elementary Education, 2015-16
 STEM Education Curriculum Committee, 2015-16

STUDENT GROUP ADVISING

InSTEAMERs, STEM Education focused graduate student group, 2015-Current
 OH/IO High School Hackathon Judge, 2021
 DECo Students, social justice and critical pre-service teacher education group, 2016-2018

GRADUATE FACULTY REPRESENTATIVE

Hoda Hatoum, Fluid Mechanics of Transcatheter Aortic Valve Replacement, Mechanical Engineering

RELATED PROFESSIONAL EXPERIENCE

PROFESSIONAL DEVELOPMENT

2022, COGNITIVELY GUIDED INSTRUCTION AND LESSON LAB FACILITATOR, UCLA MATHEMATICS PROJECT

Facilitated year-long CGI and equity-centered professional development sessions and rehearsal teaching-based lesson lab days with TK-6 grade teachers in Montebello, Rowland, and Los Angeles Unified School District.

2021, DIGITAL MATHEMATICS STORYTELLING IN MATHEMATICS EDUCATION, WESTERVILLE CITY SCHOOLS

Provided two professional development sessions for K-12 mathematics teachers on incorporating digital mathematics storytelling into their practice.

2018 TO 2020, ELEMENTARY COGNITIVELY GUIDED INSTRUCTION CONVERSATIONS FOCUSED ON CHILDREN'S MATHEMATICAL THINKING, COLUMBUS CITY SCHOOLS

Monthly professional development for PreK-5 teachers on utilizing the Cognitively Guided Instruction framework in their mathematics teaching at Weinland Park and Highland Elementary Schools.

2015 TO 2016, DIGITAL PORTFOLIO, COLUMBUS CITY SCHOOLS

Provided monthly professional development for K-12 teachers on how to use iPads to create digital portfolios of their student's mathematical thinking.

2015 TO 2017, APPRENTICESHIP FOR LEARNING PROFESSIONAL DEVELOPMENT, WEINLAND PARK ELEMENTARY SCHOOL, COLUMBUS CITY SCHOOLS

Collaborated with teachers through monthly professional development for K-5 teachers on using technology, mathematics education research, culturally sustaining pedagogy, and co-planning/co-teaching in their instruction.

CONSULTATION

2022 TO CURRENT. MATHEMATICS EQUITY RESEARCH CONSULTANT, RIVERSIDE COUNTY OFFICE OF EDUCATION AND SAN BERNADINO COUNTY OFFICE OF EDUCATION

Mathematics and grant-writing consultation around equity and ethnomathematics-based research for county-level mathematics initiatives in the Inland Empire, Southern California.

2021-22. DIVERSITY COMMITTEE, DUBLIN CITY SCHOOLS

Selective parent-based committee to evaluate district-level diversity initiatives and policies.

2020. MATHEMATICS CURRICULUM CONSULTANT, REVEAL MATH, MCGRAW HILL.

Mathematics education consultant on 2nd-grade curriculum material.

2018 TO 2019. MATHEMATICS LEARNING TECHNOLOGY CONSULTANT, ACT Recommends, ACT.

Mathematics leaning technology consultant, helped develop a rubric for ACT Recommends, a curated web collection of learning technology that connects to research-based practices.

2017 TO 2020. MATHEMATICS AND COMPUTER SCIENCE CONSULTANT, *The Cat in The Hat Knows a Lot About That!*TM Book Series, Penguin-Random House.

Early Childhood mathematics consultant on mathematics titles in *The Cat in The Hat Knows a Lot About That!*TM Book Series, such as *Happy Pi Day to You* and *I Can Code! Can You?*

2013 TO 2018, MATH CONTENT AND PEDAGOGY EXPERT, Sokikom

Designed elementary-level mathematics games based on mathematics education research; Created tutorial animations; Aligned curriculum to Common Core Standards

2010, TEST WRITER, Educational Testing Service

Wrote multiple-choice mathematics questions for TExES 111, a generalist 4th-8th grade teacher-licensing exam for the state of Texas

2006 to 2008, EDUCATIONAL CONSULTANT, SureScore

Advised on middle-school curricula for use in high-immigrant student schools; Served on task force for curricula alignment with Texas college-readiness standards

FACILITATION

2020, DIGITAL STORYTELLING ONLINE CERTIFICATE, StoryCenter

Ten-week course on the core principles, curricula, and teaching approaches used by StoryCenter to focus on the art and practice of facilitating and enacting the Digital Story.

ENTERPRISE BUILDING

2012 to 2014, FOUNDER, Thought Bubble

Non-profit venture supported by Harvard's Innovation Lab; Mobile app allowing any child to connect with an experienced math teacher using videos of their own mathematical thinking; Finalists in Mass Challenge, HBS New Venture, HGSE BRIDGE, and Rock Center for Entrepreneurship competitions

AWARDS AND HONORS

2019, CENTER FOR INQUIRY AND EQUITY IN MATHEMATICS FELLOW, Educational Development Center (EDC)

2018, EQUITY AND DIVERSITY WORKSHOP, Park City Mathematics Institute (PCMI)/Institute for Advanced Study (IAS).

2017, THE MATHEMATICS EDUCATION RESEARCH AND DOCTORAL STUDIES (MERDS) EARLY CAREER LECTURE, University of Missouri

2015, SERVICE, TEACHING, AND RESEARCH IN MATHEMATICS EDUCATION (STAR) FELLOW, Association of Mathematics Teacher Educators

2011, GRADUATE CONTINUING FELLOWSHIP, The University of Texas at Austin, \$18,000

2011, JEWEL POPHAM RASCHKE PRESIDENTIAL SCHOLARSHIP, The University of Texas at Austin, \$6,500

2010, SCIENCE AND MATH EDUCATION GRADUATE SCHOLARSHIP, The University of Texas at Austin, \$5,500

2008, JEWEL POPHAM RASCHKE PRESIDENTIAL SCHOLARSHIP, The University of Texas at Austin, \$6,500

2008, CONTINUING BRUTON FELLOWSHIP, The University of Texas at Austin, \$1,000

2007, JEWEL POPHAM RASCHKE PRESIDENTIAL SCHOLARSHIP, The University of Texas at Austin, \$6,500

2005, PRE-EMPTIVE FELLOWSHIP, The University of Texas at Austin, \$13,000

PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

EDUCATIONAL RESEARCH

American Educational Research Association (AERA), 2006-Current

European Association for Research in Learning and Instruction (EARLI), 2012-2014

Psychology of Mathematics Education North America (PME-NA), 2007-Current

MATHEMATICS EDUCATION: NATIONAL AND INTERNATIONAL

Association of Mathematics Teacher Educators (AMTE), 2013-Current

National Council of Teachers of Mathematics (NCTM), 2002-Current

National Council of Supervisors of Mathematics (NCSM), 2009-2011, 2017-18

TODOS: Mathematics for All, 2017-Current

Mathematics Education and Society (MES), 2018-Current

MATHEMATICS EDUCATION: LOCAL

Ohio Mathematics Education Leadership Council (OMELC), 2016-Current

Ohio Council of Teachers of Mathematics (OCTM), 2015-Current

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SOCIAL JUSTICE EDUCATION

Education for Liberation (EdLib), 2009-Current
The Chicago Grassroots Curriculum Taskforce (CGCT), 2013-2015

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