Jingyi Chen

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Research Interest: As a passionate educator, I aim to design inquiry-based, authentic, and fun mathematical learning experiences for K-12 learners. I am interested in integrating mathematical learning with art, technology, other disciplines in STEM, cultural practices, and social justice.

Education

Master of Education, Learning and Design **2022-2023**
Vanderbilt University Nashville, Tennessee
Relevant Coursework: 'Design for Context', 'Mathematics Literacies', 'Computers, Teaching and Math Visualization', 'Inquiry into Context'
Capstone Project: How can geometry and collective learning support the development of algebraic reasoning in 5th grade Classroom?

Summer Course, Nature/Needs-Gifted Students **May, 2021**
Teachers College, Columbia University New York City, New York

Bachelor of Science, Pure Mathematics **2017-2019**
University of Wisconsin, Madison Madison, Wisconsin

Bachelor of Art, Mathematics (transferred to UW-Madison to finish) **2015-2017**
Agnes Scott College Decatur, Georgia
Honors: Received France Walters Winship Scholarship for academic merit
International Student Exchange Program at University of Oulu, Finland

Research Experience

Research Associate **June 2023 - Present**
ITEST Project, Peabody College, Vanderbilt University *Nashville, Tennessee*
- Conduct archival research and build collaboration with local communities to establish a database for the fall pilot and summer camp on the ITEST Project
- Co-develop curriculum on a five-week eco-justice and digital storytelling unit with lab partners and teachers, and take the lead on designing and enacting a historical investigation lesson
- Assist PI with writing grant proposals, preparing IRB documents, and developing research protocols for data collection and interview
- Facilitate pilot lessons and collect data through video/audio and field note
- Handle the purchase and organization of research equipment and pedagogical materials and train lab members on research equipment

Graduate Research Assistant **August 2022- May 2023**
Dr. Carlone's Lab, Peabody College, Vanderbilt University *Nashville, Tennessee*
- Co-designed "Tree Canopy Coverage: A Critical Place-based Science Unit" with the research team and teachers from a STEM outreach program

- Analyzed the best practices in lesson planning, research design, survey development, and data analysis in collaboration with the team
- Collected data, facilitated lesson plans, and conducted individual interviews and focused group interviews with students
- Organized data, including pictures, audio, field notes, student work, and transcripts from a group of nineteen students
- Analyzed data, presented key findings at research meetings, and wrote for publications

Peer-reviewed Publication and Conference Presentations

- **Chen, J.**, Carlone, H., Ziegler, H., Conley, Z., Janumyan, Y., Zhang, L., Jen, T., & Tanner, Q. (2024, April). Middle Schoolers as Critical Inquirers and Advocates in an Urban Forestry Unit: Possibilities and Uncertainties. Paper presented at the annual meeting of the American Education Research Association (AERA). Philadelphia, PA.
- Smith, B., Carlone, H., Ziegler, H., **Chen, J.**, Janumyan, Y., Conley, Z., & Jen, T. (2024, April). Youths' Investigations of Local Urban Tree Canopy through Multimodal Storytelling. Paper presented at the annual meeting of the American Education Research Association (AERA). Philadelphia, PA.
- Carlone, H., Janumyan, Y., Conley, Z., Ziegler, H., Jen, T., Zhang, L., & **Chen, J**. (Accepted). Ecology in Urban Spaces: How do Trees Contribute to Ecological and Community Health? *Science Scope.*
- Smith, B., Carlone, H., Ziegler, H., Janumyan, Y., Conley, Z.,**Chen, J.**, & Jen, T. (Under Review). Youths' Investigations of Critical Urban Forestry through Multimodal Sensemaking.

Work Experience

High School Geometry Teacher **Aug 2021- June 2022**
New Heights Academy Charter School *New York City, New York*

- Taught high school geometry to 85 students, including students with IEP and selected 10th graders in an accelerated program
- Researched students' needs and incorporated students' interests in lesson planning
- Created thoughtful class packets and designed various performance tasks and weekly geometry projects that support students' learning
- Developed, administrated, and graded quizzes, unit assessments, and End-of-Quarter assessments
- Ran parent-teacher conferences and ongoing communication with families

Online K-2 Math Teacher **July 2021- July 2022**
Wukong Education *New York City, New York*

- Delivered interactive online math classes to Chinese immigrant children across three different classes and expanded the class size from an average of ten students to thirty students
- Diversified teaching techniques, utilized teaching aids, and designed simple experiments to help children develop number sense, logical reasoning skills, and spatial reasoning skills
- Fostered a positive, welcoming, and encouraging classroom culture
- Provided weekly feedback and suggestions to the Department of Curriculum based on students' learning outcome

Math Special Education Specialist **October 2019-August 2021**

Uncommon Schools *Brooklyn, New York*

- Analyzed curriculum and student needs to differentiate math instructions for thirty students with IEPs in small groups
- Collaborated with fellow educators for lesson planning and post-assessment data analysis
- Observed and evaluated students' academic and social-emotional growth, completed teacher reports, and presented at annual IEP meetings
- Supported advisory, field trips, morning circle, and other school activities as a home advisor

University Housing Tutor **September 2018-May 2019**

University Housing @ UW-Madison Madison *Madison, Wisconsin*

- Dedicated five hours per week to offer drop-in math tutoring services for courses at and below Multivariable Calculus
- Worked closely with students on weekly assignments, quiz preparation, and exam reviews
- Conducted interviews during the tutor hiring process at University Housing

Peer Advisor **March 2016-December 2016**

Summit Program @ Agnes Scott College *Decatur, Georgia*

- Participated in a series of leadership training sessions in preparation for mentoring and supporting fellow students
- Took the lead on planning and holding bi-weekly workshops to support 18 freshman students with academic performances and mental health
- Fostered strong and meaningful connections with advisees through regular communications

PROGRAMMING & SKILLS

Computer and programming

- MS Office
- Markdown, LaTex
- InqScribe
- Canva
- Python
- SPSS, R
- html, css, JavaScript

Educational technology

- Geogebra
- Netsblox
- NetLogo
- Nearpod
- Delta Math

Research skills

- Community-based Collaboration
- Ethnographic Research
- Domain analysis
- Video analysis
- Design-based Research