

YAN-HAN CHEN

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EDUCATION

Iowa State University	Ames, Iowa
<i>Ph.D., Statistics, jointly advised by Arka Ghosh, Ruoyu Wu and Hailiang Liu</i>	<i>2020-2026(Expected)</i>
National Chiao Tung University	Hinschu, Taiwan
<i>M.S., Statistics, advised by Hui-Nien Hung</i>	<i>2014-2016</i>
National Chiao Tung University	Hinschu, Taiwan
<i>B.S., Applied Mathematics</i>	<i>2010-2014</i>

RESEARCH INTERESTS

Stochastic Processes, Optimal Transport, Machine Learning, Mean-field Systems

PUBLICATIONS & PREPRINTS

Neural solver for Wasserstein geodesics and optimal transport dynamics. With Hailiang Liu. Submitted to *SIAM Journal on Scientific Computing*

Limit theorems for heterogeneous graphon JSQ(d) model. With Arka Ghosh and Ruoyu Wu. Near completion (draft available upon request)

Estimating retention benchmarks for salvage logging to protect biodiversity. With Simon Thorn, Anne Chao et al. *Nature communications* (2020)

Rare species, functional groups, and evolutionary lineages drive successional trajectories in disturbed forests. With Simon Thorn, Anne Chao et al. *Ecology* (2020)

Salvage logging changes the taxonomic, phylogenetic and functional successional trajectories of forest bird communities. With Kostadin Georgiev, Anne Chao et al. *Journal of Applied Ecology* (2020)

PRESENTATIONS

Neural Solver for Wasserstein Geodesics and Optimal Transport Dynamics

- SIAM Central States Section Annual Meeting (Oct 2025), Fayetteville, AR — Contributed Talk
- Great Lakes Section of SIAM (Sep 2025), Chicago, IL — Mini-session Talk

Limit Theorems for Heterogeneous Graphon JSQ(d) Model

- INFORMS Annual Meeting (Oct 2024), Seattle, WA — Invited Talk
- Analysis and Probability Seminar (Oct 2024), Iowa State University — Seminar Talk

RESEARCH EXPERIENCE

Student Contractor, Corteva Agriscience, supervised by Dr. Carl Walker

Aug 2022 – Aug 2025

- Adaptive experiments using Bayesian optimization with Gaussian process regression.
- Reinforcement learning to control water valves in a two-tank system.

Research Assistant, National Tsing Hua University, supervised by Dr. Anne Chao

Aug 2017 – Jun 2020

- Statistical ecology with nonparametric models, including diversity estimation, diversity decomposition/dissimilarity, and extensions to hierarchical structures.

TEACHING & OUTREACH

Instructor, Department of Statistics, Iowa State University

- STAT 5280: Visual Business Analytics (Fall 2025)
- STAT 226: Introduction to Business Statistics I (Spring 2022)

Lab Assistant / Grader, Department of Statistics, Iowa State University

- STAT 326: Introduction to Business Statistics II (Spring 2022)
- STAT 330: Probability and Statistics for Computer Science (Summer 2022)
- STAT 305: Engineering Statistics (Summer 2021)

Volunteer Tutor, CyMath, Iowa State University

Jan 2024 – Dec 2024

- Volunteer tutor in ISU CyMath, a math tutoring program for students in grades 3–12.

Substitute Military Service (Education Service), Taiwan

Aug 2016 – Jul 2017

- Tutored and mentored underprivileged junior high school students in mathematics.

AWARDS & HONORS

Travel Award

October 2025

SIAM Central States Section Annual Meeting

Fayetteville, AR

Government Fellowship for Studying Abroad

2020 — 2023

Ministry of Education, Taiwan

- Full fellowship covering tuition and living expenses for the first three years of Ph.D. study (total support up to \$150,000 USD).

Funded Summer School Student

July 2014

Institute of Mathematics, Academia Sinica

Taipei, Taiwan

- Financial support for the Summer School on Mathematical Finance

Funded Summer School Student

July 2013

Mathematics Division, National Center for Theoretical Sciences

Hsinchu, Taiwan

- Financial support for the Summer School on Probability

PROFESSIONAL ACTIVITIES

Analysis and Probability Reading Group

Fall 2024 – Present

- Weekly meeting to study topics including weak convergence of probability measures, large deviations, and interacting particle systems.