

# YAN-HAN CHEN

✉ yanhanc@iastate.edu    🌐 yanhanchen.github.io

## EDUCATION

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### Iowa State University

*Ph.D., Statistics, jointly advised by Arka Ghosh, Ruoyu Wu and Hailiang Liu*

Ames, Iowa

2020-2026(*Expected*)

### National Chiao Tung University

*M.S., Statistics, advised by Hui-Nien Hung*

Hinschu, Taiwan

2014-2016

### National Chiao Tung University

*B.S., Applied Mathematics*

Hinschu, Taiwan

2010-2014

## PUBLICATIONS & PREPRINTS

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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 Logging Thresholds for the World's Disturbed Forests using Mixed Rarefaction Extrapolation Framework. 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

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### 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

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**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

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**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

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**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

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**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.