

Duke UNIVERSITY

Department of Statistical Science



Graduation

Sunday, May 10, 2020

Durham, NC

## A MESSAGE FROM THE CHAIR

As chair of the Department of Statistical Science at Duke, and on behalf of all of our faculty and staff, I want to congratulate you--our Ph.D. students, master's students, and undergraduate majors and minors in the class of 2020--on your graduation.

We are so proud of your accomplishments, and we are so thankful for the opportunities to teach, mentor, work with, and learn from you during your studies at Duke.

We are excited that you are now part of the growing community of Duke Statistical Science alumni, a community full of talented and amazing people just like you, and a community that you can turn to for advice and advancement, as well as to stay connected to Statistical Science at Duke. I wish you all the best in all your future endeavors!

Jerome P. Reiter  
Professor of Statistical Science  
and Department Chair



Awarded by the Department of Statistical Science, the BEST Award was established by the BEST Foundation to promote and recognize student research in Bayesian statistical modeling related to time series and other methods in financial applications. The Award recognizes the importance and impact of Bayesian methodology in modern finance and investment management, as well as that of active applied research experiences in under-graduate and graduate student education. The prize is generously funded annually, and awarded to a student or group of students on the basis of submitted project proposals to partially support summer research projects each year.

## **2019-2020 Winners**

Chiwan Kim - Undergraduate

Haohan Chen - Master's

Evan Poworoznek - Master's  
Honorable Mention

Xu Chen - PhD

Heather Mathews - PhD  
Honorable Mention

## TEACHING ASSISTANT AWARDS

The Department of Statistical Science at Duke University is grateful for all the teaching assistants and their hard work helping us achieve our educational mission. The department recognizes one outstanding teaching assistant at each level of study (undergraduate, master's, and doctoral) based on faculty nomination and outstanding student evaluations. The doctoral teaching award winner receives discretionary funds to be used towards travel or professional development, while the undergraduate and master's award winners receive cash prizes.

**Matty Pahren - Undergraduate**

**Michael Valancius - Master's**

**Henry Kirveslahti - PhD**

**DUKE ALUMNI ASSOCIATION  
FOREVER DUKE STUDENT  
LEADERSHIP AWARDS**

The Alumni Association Forever Duke Student Leadership Award recognizes graduating students who embody the “Forever Duke” spirit in their service to the university. They are strong advocates for the Duke community who embody Duke’s guiding principle of “knowledge in the service of society” and are leaving Duke a better place than they found it. We are delighted that two of our graduating seniors received this award.

**Morgan Avery Bird**

**Rose Kimberly Graves**

**BACHELOR'S DEGREE**

**Ben Alexander**

**Ana Belac**

**Morgan Avery Bird**

**Trenton Bricken \*\* Program II**  
**“Minds and Machines: Biological and Artificial Intelligence”**

**Jie Cai Interdepartmental Major**  
**Computer Science & Statistical Science**

**Michael Cai**

**Sara Tess Chandler**

**August Jordan Eckmann**

**Bassim Faizal Eledath**

**Jacob Alec Epstein**

**Yutao Gong**

**\*\* Highest Distinction**

BACHELOR'S DEGREE

Rose Kimberly Graves \*\*  
“Corrupted Data and the Illicit Arms Trade”

Shrey Gupta

Ethan Holland

Shamikh Shafkat Hossain

Man-Lin Hsiao

Diane Hu

Shijia Hu

Austin Li Jia

Yufeng Melody Jiang \*  
“Estimating Cell Probabilities for High-Dimensional & Sparse  
Multinomial Data Using Proper Scoring Rules”

Lingrong Jin

\* High Distinction

\*\* Highest Distinction

**BACHELOR'S DEGREE**

**Chiwan Kim \*\***

**“A Black-Scholes-Integrated Gaussian Process Model  
For American Option Pricing”**

**Sophia Tianqi Liu**

**Calvin M. Ma**

**Audreya Erminia Metz**

**Michael William Model \***

**“Hitting Around the Shift: Evaluating Batted-Ball  
Trends for Major League Baseball”**

**Jessica Needleman**

**Sahil Sanjay Patel**

**Jose San Martin**

**Peyton Anne Schafer**

**Rahul G. Sengottuvelu**

**\* High Distinction**

**\*\* Highest Distinction**



**BACHELOR'S DEGREE**

**Daniel Jay Spottiswood \***

**“Algorithmic Trading of an Alternative Cryptocurrency  
Using Sentiment and Volume Based Predictors”**

**Christopher Suh**

**Jasmine Oon Mei Tan**

**Michael Tan \***

**“Investigating Underpricing in Venture-Backed IPOs  
Using Statistical Techniques”**

**Zuzu Tang**

**Revogatus Apolinary Tesha**

**Miles Andrew Turpin Interdepartmental Major  
Computer Science & Statistical Science**

**Yifan Wang**

**Claire Bei Xiao**

**Zhixiao Yang**

**Faraz Yashar**

**Qiufeng Zhang**

**\* High Distinction**

EN-ROUTE MASTER'S DEGREE

The Statistical Science Department congratulates the following students who have received their Master's degree en-route to the PhD degree in Statistical Science.

**Federico Ferrari**

**Yi Guo**

**Becky Tang**

**Graham Tierney**

MASTER'S IN STATISTICAL SCIENCE DEGREE

**Haohan Chen** MSS Portfolio

Advisor: Mike West

**Andrew Cooper** MSS Portfolio

Advisor: Merlise Clyde

**Eduardo Coronado-Sroka** MSS Portfolio

Advisor: Sayan Mukherjee

**Brian Cozzi**

“Bayesian Dynamic Network Modeling  
with Censored Flow Data”

Advisor: Mike West

**Jiayi “Janice” Ding** MSS Portfolio

Advisor: Ed Iversen

**Xinyue “Miranda” Ding** MSS Portfolio

Advisor: Peter Hoff

**Siqi Fu** MSS Portfolio

Advisor: Sayan Mukherjee

**Yiwei Gong** MSS Portfolio

Advisor: David Dunson

**Bin Han** MSS Portfolio

Advisor: Peter Hoff

**Xiaoyu “Billy” Jiang** MSS Portfolio

Advisor: Jerry Reiter

**Min Chul “Peter” Kim** MSS Portfolio

Advisor: Sayan Mukherjee

**Jonathan Klus** MSS Portfolio

Advisor: Peter Hoff

**Didong Li** MSS Portfolio

Advisor: Peter Hoff

**Yizi Lin** MSS Portfolio

Advisor: David Dunson

**Evan Poworoznek**

“Easy and Efficient Bayesian Infinite Factor Analysis”

Advisor: David Dunson

**Yangfan Ren**

“Missing Data Imputation for Voter Turnout Using  
Auxiliary Margins”

Advisor: Jerry Reiter

**Lingyun “Steve” Shao**

“Anomaly Detection and Predictive Modeling for  
Autonomous Vehicles and Painting Cost”

Advisor: Jerry Reiter

**Zhen Han “Ricky” Si MSS Portfolio**

Advisor: Merlise Clyde

**Lingxi Song MSS Portfolio**

Advisor: David Dunson

**Eric Su**

“Exploring Amazon CD Reviews with Machine Learning Methods”

Advisor: David Banks

**Michael Valancius MSS Portfolio**

Advisor: Mike West

**Sam Voisin**

“An Application of Graph Diffusion for  
Gesture Classification”

Advisor: Sayan Mukherjee

**Zixi Wang MSS Portfolio**

Advisor: Jerry Reiter

**Jennifer Wilson MSS Portfolio**

Advisor: Surya Tokdar

**Byun Yoon Woo MSS Portfolio**

Advisor: Peter Hoff

**Yuwei “Emma” Xu**

**“Construction of Objective Bayesian Prior from  
Bertrand’s Paradox & the Principle of Indifference”**

Advisor: Sayan Mukherjee

**Zheng Yuan MSS Portfolio**

Advisor: Merlise Clyde

**Jingyi Zhang MSS Portfolio**

Advisor: Li Ma

**Kuazhuo “Elaine” Zhang MSS Portfolio**

Advisor: Scott Schmidler

**Mingje “Mia” Zhao MSS Portfolio**

Advisor: Peter Hoff

**Chudi Zhong**

**“Generalized Optimal Sparse Decision Tree”**

Advisor: Sayan Mukherjee

**Yuren “Henry” Zhou MSS Portfolio**

Advisor: Mike West

**Ziwei “Sophia” Zhu MSS Portfolio**

Advisor: Merlise Clyde

PH.D. DEGREE

**Kyle Burris**

**“Advances in Survey Methodology  
and Sports Science”**

*Advisor: Peter Hoff*

**Shai Gorsky**

**“Nonparametric Methods for Analysis and  
Modeling of Complex Multivariate Distributions”**

*Advisor: Li Ma*

**Michael Jauch**

**“Random Orthogonal Matrices with  
Applications in Statistics”**

*Advisor: Peter Hoff*

PH. D. DEGREE

**Isaac Lavine**

**“Bayesian Computation for Variable Selection and  
Multivariate Forecasting in Dynamic Models”**

*Advisor: Mike West*

**Kelly Moran**

**“Advances in Bayesian Factor Modeling and  
Scalable Gaussian Process Regression”**

*Advisor: Amy Herring*

**Sayan Patra**

**“Constrained Bayesian Inference Through  
Posterior Projection with Applications ”**

*Advisor: David Dunson*

**The Faculty of the  
Department of Statistical Science**

**Congratulates**

**All Graduating Students**