

# YUCHEN FANG

Committee on Computational and Applied Mathematics, The University of Chicago  
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## EDUCATION

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### The University of Chicago

M.S. in Computational and Applied Mathematics, *GPA: 3.9/4.0*

Chicago, Illinois, US

*Sep. 2021 - Dec. 2022*

Thesis: Fully Stochastic Trust-Region Sequential Quadratic Programming for Equality-Constrained Optimization

- *Advised by Prof. Mladen Kolar and Prof. Mihai Anitescu*

### Xiamen University

B.S. in Statistics, *GPA: 3.9/4.0*

Xiamen, Fujian, CN

*Sep. 2017 - Jun. 2021*

Thesis: A Multi-Class Classification Algorithm with Feature Augmentation and Variable Selection

- *Advised by Prof. Yingxing Li, Outstanding Undergraduate Thesis*

## RESEARCH INTERESTS

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- stochastic nonlinear optimization
- numerical linear algebra
- high-dimensional statistics
- statistical learning

## PREPRINTS

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### Trust-Region Sequential Quadratic Programming for Equality-Constrained Stochastic Optimization with Random Models: Second-Order Stationarity

Yuchen Fang, Sen Na, Mladen Kolar and Michael Mahoney

### Trust-Region Sequential Quadratic Programming for Equality-Constrained Stochastic Optimization with Random Models: First-Order Stationarity

Yuchen Fang, Sen Na, Mladen Kolar and Michael Mahoney

### Fully Stochastic Trust-Region Sequential Quadratic Programming for Equality-Constrained Optimization Problems

Yuchen Fang, Sen Na and Mladen Kolar

## WORKSHOP PAPERS

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### Trust-Region Sequential Quadratic Programming for Equality-Constrained Stochastic Optimization with Random Models: First-Order Stationarity (workshop version) [Link]

Yuchen Fang, Sen Na and Mladen Kolar

*Higher-Order Optimization in Machine Learning (HOOML) 2022, NeurIPS Workshop*

### Fully Stochastic Trust-Region Sequential Quadratic Programming for Equality-Constrained Optimization Problems (workshop version) [Link]

Yuchen Fang, Sen Na and Mladen Kolar

*Higher-Order Optimization in Machine Learning (HOOML) 2022, NeurIPS Workshop*

## POSTERS

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### Trust-Region Sequential Quadratic Programming for Equality-Constrained Stochastic Optimization with Random Models: First-Order Stationarity

Higher-Order Optimization in Machine Learning (HOOML) 2022, NeurIPS

Dec. 2022

### Fully Stochastic Trust-Region Sequential Quadratic Programming for Equality-Constrained Optimization Problems

Higher-Order Optimization in Machine Learning (HOOML) 2022, NeurIPS

Dec. 2022

### Trust-Region Stochastic Sequential Quadratic Programming for Equality-Constrained Optimization

ACMNTW Workshop on Optimization and Machine Learning 2022, Northwestern University [Link]

May. 2022

## PROFESSIONAL SERVICE

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**Conference Reviewer:** International Conference on Artificial Intelligence and Statistics (AISTATS) 2023

**Grader:** STAT 37710 Machine Learning, The University of Chicago, Autumn 2022

## SELECTED HONORS AND AWARDS

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Outstanding Graduate, Xiamen University	2021
Liangwen Scholarship (top 1%), Xiamen University	2020
Guang-Sheng-Tang Scholarship (top 2%), Xiamen University	2020
Yu Xuying Scholarship (top 1%), Xiamen University	2019
Second Prize in Contemporary Undergraduate Mathematical Contest in Modeling	2019
Third Prize in National English Contest for College Students (top 5%)	2019
First Prize in Mathematics Competition of Chinese College Students (top 2%)	2018

## SKILLS

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**Programming Languages:** R, Python, MATLAB, Julia, C,  $\text{\LaTeX}$

**Languages:** Native in Mandarin, fluent in English (TOEFL 114, Speaking 27, Writing 29)