Curriculum Vitae

Ming Min

University of California, Santa Barbara
Department of Statistics & Applied Probability
South Hall, 5431A
Santa Barbara, CA 93106-3100

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Research Interests

Deep Learning, Applied Probability, Reinforcement Learning, Stochastic Control, Mean Field Games, Rough Paths and Signature

Education

University of California, Santa Barbara, Santa Barbara, California, United States

Ph.D. Candidate in **Statistics and Applied Probability** (expected June 2023)

- Advisor: Tomoyuki Ichiba
- GPA: 3.96/4.0, Qualify exams are all passed in September, 2019

Worcester Polytechnic Institute, Worcester, Massachusetts, USA

M.S. in **Financial Mathematics**, May 2018

- Advisor: Stephan Sturm
- Master Thesis: Numerical Methods for European Option Pricing with BSDEs
- GPA: 3.90/4.0

Beijing University of Posts & Telecommunications, Beijing, P.R. China

B.S. in **Business Administration**, June 2016

- GPA: 87/100

Research

Preprints

"Sample-Efficient Reinforcement Learning with loglog(T) Switching Cost" (with Dan Qiao, Ming Yin and Yuxiang Wang)

"Smoothness of Directed Chain Stochastic Differential Equations" (with Tomoyuki Ichiba)

Published Papers

"Signatured Deep Fictitious Play for Mean Field Games with Common Noise" (with Ruimeng Hu)
International Conference on Machine Learning (ICML) 2021, accepted

"Convolutional Signature for Sequential Data" (with Tomoyuki Ichiba)
to appear in **Digital Finance, 2021**

Ongoing Projects

"Neural Mckean-Vlasov Stochastic Differential Equations", with Ruimeng Hu

Experience

Research Assistant: Stochastic Filtering in Directed Chains and Random Graphs

Teaching Assistant (UCSB):

- Undergraduate level: Probability and Statistics (PSTAT 120A, Fall '18, Fall '20), Risk Theory (PSTAT 173, Winter '19), Statistics (PSTAT 5A, Spring '19), SAS Base Programming (PSTAT 130, Summer '19, '20, '21), Applied Stochastic Processes (PSTAT 160A, Fall '19, Winter '20, Spring '20), Introduction to Mathematical Finance (PSTAT 170, Winter '21).
- Graduate level: Introduction to Probability Theory and Stochastic Processes (PSTAT 213 A& B & C , PhD qualify course, Winter & Spring '20, Fall '21, Winter '22), Advanced Mathematical Finance (PSTAT 176/276, Spring '21)

Teaching Assistant (WPI):

- Undergraduate level: Probability (MA 2631, Fall '17), Calculus II (MA 1022, Fall '17).
- Graduate level: Financial Mathematics I (MA 571, Fall '17), Financial Mathematics II (MA572, Spring '18), Computational Methods for Financial Mathematics (MA573, Spring '18).

Invited Talks and Presentations

ICML Virtue, July 2021

ICERM *"Signatured Deep Fictitious Play for Mean Field Games with Common Noise"*, Brown University, July 2021

AI TIME Tsinghua University, September 2021

DataSig Seminar Series, *"Smoothness of Directed Chain SDEs and Applications"* University of Oxford, November 2021

Relevant Skills

Programming: C/C++, Python, Java, R, SAS, LaTeX

Tools & Platforms: TensorFlow/Keras, Pytorch, Git, Linux

Languages: Chinese (Native), English

Others: CFA level I

Academic Service

Reviewer

Digital Finance, 2021

Last updated: February 7, 2022