Conference on Financial Mathematics and Engineering

July 15–18, 2025 | Hyatt Regency Miami • Miami, Florida, U.S.

Online Program and Mobile App

Attendees are encouraged to view the Online Program Schedule:

https://www.siam.org/conferences-events/siam-conferences/fm25/program/program-abstracts/

The Mobile App and Online Program Schedule contain the most up-to-date information.
A searchable abstract document is also posted.

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Monday, July 14

4:00 p.m. – 6:00 p.m.
Registration
Upper Promenade

Tuesday, July 15

7:30 a.m. – 4:30 p.m.
Registration
Upper Promenade

8:30 a.m. – 10:30 a.m.
Concurrent Sessions
MS1 Decentralized Finance and Market Microstructure - Part I of II
Orchid C
MS2 Functional Data Analysis in Finance
Brickell North
MS3 Interacting Particle Systems and Mean Field Games - Part I of II
Tuttle South
MS4 Memory in Quantitative Finance - Part I of III
Orchid AB
MS5 Modeling, Prediction, and Trading in Energy Markets - Part I of II
Orchid D
MS6 Recent Advances in Optimal Transport and Applications to Finance
Tuttle Center
MS7 Recent Trends in High Dimensional Portfolio Selection
Brickell Center
MS8 Reinforcement Learning and its Applications in Finance - Part I of II
Jasmine
MS9 Risk Measures and Optimization
Brickell South
MS10 Strategic Sustainability: Stochastic Games for Environmental Challenges
Tuttle North

9:30 a.m. – 4:30 p.m.
Exhibit Hours
Pre-Function

10:30 a.m. – 11:00 a.m.
Coffee Break
Pre-Function/Promenade

11:00 a.m. – 11:10 a.m.
Welcome Remarks
Flagler/Monroe

11:10 a.m. – 11:55 a.m.
IP1 Volatility and Order Flow: A Tale of Two Fractional Brownian Motions
Mathieu Rosenbaum, École Polytechnique, France
Flagler/Monroe

Tuesday, July 15

11:55 a.m. – 1:30 p.m.
Lunch Break

1:30 p.m. – 3:30 p.m.
Concurrent Sessions
MT1 Optimal Transport in Finance
Orchid C
MS11 Interacting Particle Systems and Mean Field Games - Part II of II
Tuttle South
MS12 Jump Models and their Applications in Finance and Control
Tuttle Center
MS13 Memory in Quantitative Finance - Part II of III
Orchid AB
MS14 Minisymposium on Data-Driven Methods in Finance and Stochastic Control - Part I of II
Brickell North
MS15 Modeling, Prediction, and Trading in Energy Markets - Part II of II
Orchid D
MS16 Numerical Methods and Algorithms in Portfolio
Brickell Center
MS17 CANCELLED: Optimal Control and Game Theory in Finance and Insurance - Part I of II
Tuttle North
MS18 Reinforcement Learning and its Applications in Finance - Part II of II
Jasmine
MS19 Systemic Risk and Risk Management in Finance
Brickell South

3:30 p.m. - 4:00 p.m.
Coffee Break
Pre-Function/Promenade

4:00 PM - 4:15 PM
SIAG/FME Early Career Prize Ceremony
Flagler/Monroe

4:15 p.m. – 5:00 p.m.
IP2 Machine Learning for Stochastic Control and Games: From Foundations to Multi-Agent Intelligence
Ruimeng Hu, University of California, Santa Barbara, U.S.
Flagler/Monroe

5:00 p.m. – 7:00 p.m.
PP1 Welcome Reception and Poster Session
Promenade/Riverwalk

Wednesday, July 16

8:00 a.m. – 4:30 p.m.
Registration
Upper Promenade

8:30 a.m. – 10:30 a.m.
Concurrent Sessions
MS20 Decentralized Finance and Market Microstructure - Part II of II
Orchid C
MS21 Generative AI in Finance - Part I of II
Jasmine
MS22 Memory in Quantitative Finance - Part III of III
Orchid AB
MS23 Minisymposium on Data-Driven Methods in Finance and Stochastic Control - Part II of II
Brickell North
MS24 Non-standard Interactions in Finance: Equilibrium Aspects and Singular Behaviour - Part I of II
Brickell South
MS25 Numerical Solution of P(I)DEs for Derivative Valuation Under Lévy Processes
Brickell Center
MS26 Optimal Control and Game Theory in Finance and Insurance - Part II of II
Tuttle North
MS27 Recent Advances in Principal-Agent Problems and Contract Theory
Tuttle South
MS28 Recent Advances in Stochastic Control with Multiple Players, Incentives, and Financial Economics - Part I of III
Tuttle Center
MS29 Theory and Applications of Stochastic Control and Game models in Energy Markets and Climate Control
Orchid D

9:30 a.m. – 4:30 p.m.
Exhibit Hours
Pre-Function

10:30 a.m. – 11:00 a.m.
Coffee Break
Pre-Function/Promenade

11:00 a.m. – 11:45 p.m.
IP3 Model Risk Hedging Through Distributionally Robust Sensitivity
Nizar Touzi, New York University, U.S.
Flagler/Monroe

11:45 p.m. – 1:30 p.m.
Lunch Break

Wednesday, July 16

1:30 p.m. – 2:15 p.m.
IP4 Arbitraging on Decentralized Exchanges
Xuedong He, Chinese University of Hong Kong, Hong Kong
Flagler/Monroe

2:15 p.m. – 2:45 p.m.
Coffee Break
Pre-Function/Promenade

2:45 p.m. – 4:45 p.m.
Concurrent Sessions
CP1 Volatility
Jasmine
CP2 AI I
Tuttle North
CP3 Statistics
Tuttle Center
CP4 Stochastic Control and Applications
Tuttle South
CP5 Optimal Execution/Algo Trading
Brickell North
CP6 Energy/Climate
Brickell Center
CP7 Calibration/Numerical Methods
Brickell South
CP8 Risk I
Orchid D
CP9 Portfolios I
Orchid C
CP10 Portfolios II
Orchid AB

4:45 p.m. – 5:00 p.m.
Intermission

5:00 p.m. – 6:00 p.m.
SIAG/FME Business Meeting
Flagler/Monroe

Thursday, July 17

8:00 a.m. – 4:30 p.m.
Registration
Upper Promenade

8:30 a.m. – 10:30 a.m.
Concurrent Sessions
MS30 Algorithmic Trading and Stochastic Games - Part I of III
Tuttle North
MS31 Generative AI in Finance - Part II of II
Jasmine
MS32 Non-standard Interactions in Finance: Equilibrium Aspects and Singular Behaviour - Part II of II
Brickell South
MS33 Information Asymmetry and Related Topics in Financial Mathematics
Orchid D
MS34 Quantitative Modeling of Digital Economies
Orchid C
MS35 Path-dependent and Signature-based Financial Modeling - Part I of III
Orchid AB
MS36 Recent Advances in Option Modeling - Part I of II
Brickell Center
MS37 Rough Volatility and Data - Part I of II
Brickell North
MS38 Optimal Stopping Problems and their Applications
Tuttle South
MS39 Recent Advances in Stochastic Control with Multiple Players, Incentives, and Financial Economics - Part II of III
Tuttle Center

9:30 a.m. – 4:30 p.m.
Exhibit Hours
Pre-Function

10:30 a.m. – 11:00 a.m.
Coffee Break
Pre-Function/Promenade

11:00 a.m. – 11:45 a.m.
IP5 A Stochastic Gordon-Loeb Model for Optimal Cybersecurity Investment Under Clustered Attacks
Giorgia Callegaro, Università degli Studi di Padova, Italy
Flagler/Monroe

11:45 a.m. – 1:15 p.m.
Lunch Break

1:15 p.m. – 2:00 p.m.
IP6 Data-Driven Dynamic Factor Modeling via Manifold Learning
Agostino Capponi, Columbia University, U.S.
Flagler/Monroe

2:00 p.m. – 2:30 p.m.
Coffee Break
Pre-Function/Promenade

2:30 p.m. – 4:30 p.m.
Concurrent Sessions
MT2 Applied Reinforcement Learning in Finance
Brickell South
MS40 Advances in BSDE Applications: From Control Problems to Game-Theoretic Models
Tuttle North
MS41 Mean Field Models
Tuttle South
MS42 Recent Advances in Stochastic Control with Multiple players, Incentives, and Financial Economics - Part III of III
Tuttle Center
MS43 Path-dependent and Signature-based Financial Modeling - Part II of III
Orchid AB
MS44 Actuarial Science and Decentralized Finance
Orchid C
MS45 Information Acquisition and Optimal Control Under Model Uncertainty
Orchid D
MS46 Rough Volatility and Data - Part II of II
Brickell North
MS47 Recent Advances in Option Modeling - Part II of II
Brickell Center
MS48 Advances and Applications of Large Language Models (LLMs) in Finance - Part I of II
Jasmine

4:30 p.m. – 5:00 p.m.
Intermission

5:00 p.m. – 6:00 p.m.
PD1 Panel TBD
Flagler/Monroe

6:00 p.m. – 8:00 p.m.
SIFIN Editorial Board Dinner
Japengo (Lobby Level)

Friday, July 18

8:00 a.m. – 3:30 p.m.
Registration
Upper Promenade

8:30 a.m. – 10:30 a.m.
Concurrent Sessions
MS49 Algorithmic Trading and Stochastic Games - Part II of III
Tuttle North
MS50 Advances in Stochastic Control with Financial Applications - Part I of II
Tuttle Center
MS51 Theory and Learning in Complex Stochastic System - Part I of II
Tuttle South
MS52 Topological Data Analysis in Finance - Part I of II
Brickell North
MS53 Numerical Methods, Neural Networks, for Stochastic Control and BSDE Problems - Part I of II
Brickell Center

Friday, July 18

MS54 Recent Advances in Quantitative Finance and FinTech
Orchid C
MS55 Advances and Applications of Large Language Models (LLMs) in Finance - Part II of II
Jasmine
CP11 AI II
Brickell South
CP12 Risk II
Orchid D
CP13 Portfolios III
Orchid AB

9:30 a.m. – 3:00 p.m.
Exhibit Hours
Upper/Lower Promenade

10:30 a.m. – 11:00 a.m.
Coffee Break
Pre-Function/Promenade

11:00 a.m. – 11:45 a.m.
IP7 Path-Dependent Volatility
Julien Guyon, École des Ponts ParisTech, France
Flagler/Monroe

11:45 a.m. – 1:15 p.m.
SIAG/FME Conference Paper Prize Session

1:15 p.m. – 2:00 p.m.
IP8 Mean Field Games and Control
Mete Soner, Princeton University, U.S.
Flagler/Monroe

2:05 p.m. – 2:35 p.m.
Coffee Break
Pre-Function/Promenade

Friday, July 18

2:35 p.m. – 4:35 p.m.
Concurrent Sessions
MS56 Advances in Stochastic Control with Financial Applications - Part II of II
Tuttle Center
MS57 Algorithmic Trading and Stochastic Games - Part III of III
Tuttle North
MS58 Numerical Methods, Neural Networks, for Stochastic Control and BSDE
Problems – Part II of II
Brickell Center
MS59 Decentralized Financial (DeFi) Systems
Orchid C
MS60 Path-dependent and Signature-based Financial Modeling - Part III of III
Orchid AB
MS61 Recent Advancements in Financial AI
Jasmine
MS62 Theory and Learning in Complex Stochastic System - Part II of II
Tuttle South
MS63 Topological Data Analysis in Finance - Part II of II
Brickell North

Abbreviation Key

CP = Contributed Presentation Session
IP = Invited Plenary Speaker
MS = Minisymposium
MT = Minitutorial
PD = Panel Discussion
PP = Poster Session

Visit the Exhibitors!

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SIAM and the Organizing Committee wish to extend their thanks and appreciation to the U.S. National Science Foundation for their support of this conference.

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Society for Industrial and Applied Mathematics

A great way to get involved!

Collaborate and interact with mathematical scientists, statisticians, computer scientists, computational scientists, and researchers and practitioners in finance and economics, to foster the use of mathematical and computational tools in quantitative finance in the public and private sector.

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- Biennial conference
- Special sessions at SIAM meetings
- SIAG/FME Conference Paper Prize
- SIAG/FME Early Career Prize
- SIAG/FME Student Programming Competition

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- Participation in the selection of SIAG/FME officers

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- Must be a current SIAM member

COST

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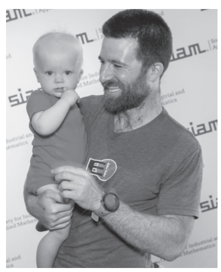
- Participate in Gene Golub SIAM Summer School (G2S3)



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— Jed Brown, SIAM Member, University of Colorado

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