

ICAIF'24

5th ACM International Conference on AI in Finance

Conference Program

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Online Event

ICAIF'21 will be held as an online digital event. Registrants will be contacted by email for instructions on how to login and participate.

Keynote Speakers

[Manuela Veloso](https://www.cs.cmu.edu/~mmv/) (<https://www.cs.cmu.edu/~mmv/>) – JP Morgan AI Research & Carnegie Mellon University, USA

[Stephen Roberts](https://www.robots.ox.ac.uk/~sjrob/) (<https://www.robots.ox.ac.uk/~sjrob/>) – University of Oxford

[Charles-Albert Lehalle](https://lehalle.net) (<https://lehalle.net>) – Imperial College London & Abu Dhabi Investment Authority

[Robert Axtell](https://science.gmu.edu/directory/robert-axtell) (<https://science.gmu.edu/directory/robert-axtell>) – George Mason University, USA

[Thaleia Zariphopoulou](https://web.ma.utexas.edu/users/zariphop/) (<https://web.ma.utexas.edu/users/zariphop/>) – The University of Texas at Austin

Workshops: Wednesday November 3rd

ICAIF'21 workshops are described in detail [here](https://aifin2020.wordpress.com/icaif-2021-workshop-and-tutorials/). (<https://aifin2020.wordpress.com/icaif-2021-workshop-and-tutorials/>).

Technical Program: Thursday-Friday November 4th-5th

A detailed schedule can be downloaded here:

ICAIF'21 SCHEDULE ([HTTPS://AI-FINANCE.ORG/WP-CONTENT/UPLOADS/2021/11/SCHEDULE-04112021-2.PDF](https://ai-finance.org/wp-content/uploads/2021/11/SCHEDULE-04112021-2.PDF))

Plenary Talks

AI in Finance: Challenges and Solutions

by Manuela Veloso, JP Morgan AI Research & Carnegie Mellon University

Veloso will delve into the challenges and solutions of combining the fields of AI and Finance. She will address issues related to data, learning from experience, business impact, and values, such as fairness and explainability of AI. She will also share details of specific research and development projects carried out by her AI Research team at JPMorgan Chase.

The Brave New World of Too Much Data: Using Firm-Level Micro-Data to Model the Overall Economy

by Robert Axtell, George Mason University and the Santa Fe Institute

Axtell will first describe dozens of gross regularities and patterns in economic and finance data sets that make explaining the data difficult. Then he will offer a new approach to analyzing large swaths of the data using large-scale multi-agent systems. Axtell's resulting computational model of all firms in the

U.S. private sector is a starting point for understanding the economy as a whole, even though significant quantities of data yet fall outside the model.

Biases of Learning Machines in Finance: Some Examples

by Charles-Albert Lehalle, Imperial College London and Abu Dhabi Investment Authority

Lehalle will examine the role that biases play in machine learning algorithms as applied to applications in finance. He will list different ways AI experts compensate for such biases, inspired by recent research on the “ethics of AI”. He will conclude by surveying the scope of stochastic control: e.g. what kind of biases are learned controllers submitted to?

Strength in Depth? Deep Learning for Finance

by Stephen Roberts, University of Oxford

Roberts will look at some of the concepts underpinning advances in deep learning and highlight his recent work using Deep Learning for limit order books, momentum trading, portfolios and execution strategies, amongst other things.

Robo-advising: modeling and methodological challenges

by Thaleia Zarihopoulou, The University of Texas at Austin

Zarihopoulou will discuss recent progress on robo-advisors, which are automated platforms for personal investment management. These platforms are quickly becoming an indispensable component in personal finance, especially among younger users. However, there are many issues and interesting problems to solve for their design, operation, and performance. *Zarihopoulou* will focus on modeling and methodological challenges related to, among others, elicitation and quantification of client’s goals and risk preferences, construction of communication schedules between the client and the machine, and performance metrics for the robo-advisor versus the traditional one.

[A WordPress.com Website.](https://ai-finance.org/conference-program/)