



**Stevanovich Center  
for Financial Mathematics**  
at the University Of Chicago

5727 South University Avenue  
Chicago, IL 60637  
773-834-8563

**October 5-7, 2023**

**Big Data and Machine Learning in  
Econometrics, Finance, and Statistics**

**Venue: Eckhardt Research Center (ERC), Room 161, 5640 S Ellis  
Ave, Chicago**

**Program**

## Thursday, October 5

8:30 AM Coffee/Pastry

### 9:00-10:40AM Session 1

9:00 AM	Chao Gao	U Chicago	Computational lower bounds for graphon estimation via low-degree polynomials
9:40 AM	Song Mei	UC Berkeley	Revisiting neural network approximation theory in the age of generative AI

10:20 – 10:40 AM Coffee Break

### 10:40AM-1:30PM Session 2

10:40 AM	Snigdha Panigrahi	U Michigan	Selective inference with randomized group LASSO estimators
11:20 AM	Elynn Chen	NYU Stern	Reinforcement learning in latent heterogeneous environment

12:00 – 1:30 PM Lunch Break

### 1:30-3:20PM Session 3

1:30 PM	Feng Ruan	Northwestern U	Kernel learning “automatically” delivers exactly low rank solutions
2:10 PM	Pragya Sur	Harvard U	Spectrum-aware adjustment: a new debiasing paradigm with applications to principal component regression

2:50 – 3:20 PM Coffee Break

### 3:20-4:40PM Session 4

3:20 PM	Linjun Zhang	Rutgers U	Fair conformal prediction and risk control
4:00 PM	Heather Battey	Imperial College	Inducement of population sparsity

4:40 PM End of Program (Thursday)

## Friday, October 6

8:30 AM Coffee/Pastry

### 9:00AM-1:00PM Session 5

9:00 AM	Marc Hallin	ULB	Forecasting value-at-risk and expected shortfall in large portfolios: a general dynamic factor model approach
9:40 AM	Nour Meddahi	Toulouse Sch	Non-linear time series models and machine learning
10:20 AM	Torben Andersen	Northwestern U	The factor structure of systematic jump risk

11:30 – 1:00 PM Lunch Break

### 1:00PM-3:30PM Session 6 [in the Stevanovich Center for Financial Mathematics]

1:00 PM	Whitney Newey	MIT	Welfare analysis in high dimensional dynamic models
1:40 PM	Yacine Ait-Sahalia	Princeton U	So many jumps, so few news
2:30 PM	Per Mykland / Lan Zhang	U Chicago U Illinois	Nonparametric standard errors for high frequency data: the continuous time observed asymptotic variance (C-AVAR)

3:00 – 3:30 PM Coffee Break

### 3:30-4:50PM Session 7 [in the Stevanovich Center for Financial Mathematics]

3:30 PM	Jiashun Jin	CMU	The statistics triangle
4:10 PM	Dacheng Xiu	U Chicago	Can machines learn weak signals?

4:50 PM End of Program (Friday)

## Saturday, October 7

8:30 AM Coffee/Pastry

9:00-10:40AM **Session 8**

9:00 AM	Wei Biao Wu	U Chicago	Asymptotics for constant step size stochastic gradient descent
9:40 AM	Simon Du	U Washington	How over-parameterization slows down convergence of gradient descent

10:20 – 10:40 AM Coffee Break

10:40AM-1:30PM **Session 9**

10:40 AM	Cong Ma	U Chicago	The power of preconditioning in overparameterized low-rank matrix sensing
11:20 AM	Jason Lee	Princeton U	Feature learning with gradient descent and smoothing

12:00 – 1:30 PM Lunch Break

1:30-2:50PM **Session 10**

1:30 PM	Yuqi Gu	Columbia	Identifiable deep generative models with discrete latent layers
2:10 PM	Hongseok Namkoong	Columbia	Adaptive experimentation at scale

2:50 PM End of Conference