

Annual Summer School on Mathematical Aspects of Data Science

Mini-Courses

(22–26 Jun 2026)



ORGANIZING COMMITTEE

Daniel Bartl

National University of Singapore

Shahar Mendelson

Texas A&M University

Jonathan Scarlett

National University of Singapore

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University of California, Irvine



Venue

IMS Executive Seminar Room

Bock S17, Level 3

10 Lower Kent Ridge Rd Singapore 119076

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Monday, 22 June 2026		
Time	Title	Speaker
0840–0900	Registration	
0900–1020	Foundations of Online Learning with Application to Digital Markets (Part I)	Nicolò Cesa-Bianchi <i>University of Milan, Italy</i>
1020–1040	<i>Coffee Break</i>	
1040–1200	Mathematical Frameworks for Generalization in Learning Theory (Part I)	Shay Moran <i>Technion, Israel</i>
1200–1400	<i>Lunch Break</i>	
1400–1520	Gradient-free Stochastic Optimization (Part I)	Alexandre Tsybakov <i>CREST-ENSAE Paris, France</i>
1520–1540	<i>Coffee Break</i>	
1540–1700	Statistical Physics of Random Computational Problems (Part I)	Shuangping Li <i>Yale University, USA</i>
Tuesday, 23 June 2026		
Time	Title	Speaker
0845–0900	Registration	
0900–1020	Optimal Mean Estimation and Robust Statistics (Part I)	Roberto Imbuzeiro Oliveira <i>IMPA, Brazil</i>
1020–1040	<i>Coffee Break</i>	
1040–1200	Moment and Deviation Inequalities for Random Matrices and their Applications (Part I)	Stanislav Minsker <i>University of Southern California, USA</i>
1200–1400	<i>Lunch Break</i>	
1400–1520	Dynamical Systems, Graphical Models, and Language Models (Part I)	Ankur Moitra <i>MIT, USA</i>
1520–1540	<i>Coffee Break</i>	
1540–1700	Foundations of Online Learning with Application to Digital Markets (Part II)	Nicolò Cesa-Bianchi <i>University of Milan, Italy</i>

Wednesday, 24 June 2026		
Time	Title	Speaker
0845–0900	Registration	
0900–1020	Mathematical Frameworks for Generalization in Learning Theory (Part II)	Shay Moran <i>Technion, Israel</i>
1020–1040	<i>Coffee Break</i>	
1040–1200	Gradient-free Stochastic Optimization (Part II)	Alexandre Tsybakov <i>CREST-ENSAE Paris, France</i>
Thursday, 25 June 2026		
Time	Title	Speaker
0845–0900	Registration	
0900–1020	Statistical Physics of Random Computational Problems (Part II)	Shuangping Li <i>Yale University, USA</i>
1020–1040	<i>Coffee Break</i>	
1040–1200	Optimal Mean Estimation and Robust Statistics (Part II)	Roberto Imbuzeiro Oliveira <i>IMPA, Brazil</i>
1200–1400	<i>Lunch Break</i>	
1400–1520	Moment and Deviation Inequalities for Random Matrices and their Applications (Part II)	Stanislav Minsker <i>University of Southern California, USA</i>
1520–1540	<i>Coffee Break</i>	
1540–1700	Dynamical Systems, Graphical Models, and Language Models (Part II)	Ankur Moitra <i>MIT, USA</i>
Friday, 26 June 2026		
Time	Title	Speaker
0845–0900		
0900–0940	Foundations of Online Learning with Application to Digital Markets (Part III)	Nicolò Cesa-Bianchi <i>University of Milan, Italy</i>
0940–1020	Mathematical Frameworks for Generalization in Learning Theory (Part III)	Shay Moran <i>Technion, Israel</i>
1020–1040	<i>Coffee Break</i>	
1040–1120	Gradient-free Stochastic Optimization (Part III)	Alexandre Tsybakov <i>CREST-ENSAE Paris, France</i>
1120–1200	Statistical Physics of Random Computational Problems (Part III)	Shuangping Li <i>Yale University, USA</i>
1200–1400	<i>Lunch Break</i>	

Friday, 26 June 2026		
Time	Title	Speaker
1400–1440	Optimal Mean Estimation and Robust Statistics (Part III)	Roberto Imbuzeiro Oliveira <i>IMPA, Brazil</i>
1440–1520	Moment and Deviation Inequalities for Random Matrices and their Applications (Part III)	Stanislav Minsker <i>University of Southern California, USA</i>
1520–1540	<i>Coffee Break</i>	
1540–1620	Dynamical Systems, Graphical Models, and Language Models (Part III)	Ankur Moitra <i>MIT, USA</i>
1620–1645	Student Spotlights	

This schedule is accurate as of 08 Jun 2026 and is subjected to changes.