

# 2023 POSTECH

포스코 국제관 106호

POSCO INTERNATIONAL CENTER #106

2023.9.22 (FRI)

# International Conference on Mathematical Machine Learning and AI

포스텍 컨퍼런스 수리 기계학습 및 인공지능 국제 학술대회

## ABOUT CM2LA

The primary objective of the Center for Mathematical Machine Learning and its Applications (CM2LA) is to address fundamental challenges within the realm of machine learning. Our specific focus revolves around the mathematical mission of quantifying approximation errors inherent in neural networks and machine learning algorithms.

Mathematics forms the bedrock of AI research, as it provides the theoretical framework to elucidate diverse facets of this field. The neural network models we work with are often underpinned by mathematical concepts and principles. At the core of many mathematical disciplines lies the exploration of infinity, limits, and asymptotic properties. These central inquiries are crucial in our pursuit of addressing key questions.

Through in-depth research into practical learning algorithms, which have gained substantial traction in real-world applications, as well as the exploration of simpler models for theoretical understanding, we are driven to catalyze groundbreaking advancements in both scientific and technological domains. Furthermore, we are dedicated to pioneering research that transcends disciplinary boundaries, enriching a multitude of fields.

Beyond the academic scope, CM2LA aspires to enhance national competitiveness by nurturing researchers in mathematics and by applying our expertise to solve practical problems in industry and society.

## SCHEDULE

10:00AM - 11:00AM **Shi Jin (Plenary Speaker)**\_Shanghai Jiao Tong University  
**Quantum Computation of partial differential equations and linear algebra problems**

11:10AM - 12:00AM **YoungJoon Hong**\_KAIST  
**Toward bridging a connection between machine learning and applied mathematics**

13:30PM-14:20PM **Jinwoo Shin**\_KAIST  
**Deep Learning for Videos: Representation and Generation**

14:30PM - 15:20P **Sangdoon Yun**\_NAVER CLOUD AI Lab (Research Director)  
**Towards Strong and Robust Vision Models: Insights from Data and Supervision**

16:00PM-17:00PM **Alessio Figalli (Plenary Speaker)**\_ETH Zurich  
**Optimal transport: math and beyond (ZOOM)**

17:10PM-18:10PM **Young-Heon Kim (Plenary Speaker)**\_UBC  
**A few directions in optimal transport**

## INFORMATION

| 신청기간 | ~2023.09.15(FRI)  
| 모집인원 | Within 100 (First Come, First Served)  
| 사전등록 | QR Code  
| 사전문의 | CM2LA 054-279-8034

