WORKSHOP ON

NONLINEAR PDE AND ELLIPTIC REGULARITY

Classical Problems and New Perspectives in the Age of AI

NOVEMBER 17–19, 2026

Room N202, South Building, AMSS

SCIENTIFIC PROGRAM

All times are Beijing Time (UTC+8)

Elliptic regularity • Singularities • Geometric analysis • Kinetic equations

NOVEMBER 17 — TUESDAY

14:00 Registration

Doanh Pham — 15:00–15:50
Peking University

A Logarithmic Sobolev Inequality for Closed Submanifolds

Huyuan Chen — 15:50–16:40
SIMIS, Shanghai

Maximal Hypersurfaces with Singularities in Lorentz–Minkowski Space

NOVEMBER 18 — WEDNESDAY

Marie-Françoise Bidaut-Véron — 09:00–09:50
Institut Denis Poisson, Université de Tours

An Elliptic Equation Involving Exponential and Gradient Source Terms

09:50–10:10 Tea break

Bin Deng — 10:10–11:00
Wuhan University

Global Minimality and Rigidity of the Constraint Map Vortex: A Problem of Fanghua Lin

Yimei Li — 11:00–11:50
Beijing Jiaotong University

A Liouville Theorem for Monotone Solutions of the Lane–Emden System in a Half-Space

11:50–14:00 Lunch at Wuke Hotel Restaurant

Laurent Véron — 14:00–14:50
Institut Denis Poisson, Université de Tours

Nonlinear Conservative Elliptic Equations in an Infinite Cylinder

14:50–15:10 Tea break

Jingang Xiong — 15:10–16:00
Beijing Normal University

The Critical Semilinear Elliptic Equation with Isolated Boundary Singularities

Yuzhe Zhu — 16:00–16:50
The Chinese University of Hong Kong, Shenzhen

Aleksandrov Estimates for Hypoelliptic Kinetic Equations

17:30–20:00 Conference dinner at Wuke Hotel Restaurant

NOVEMBER 19 — THURSDAY

09:50–10:30 Tea before the talk

Xinan Ma — 10:30–11:20
University of Science and Technology of China

The Dirichlet problem for quaternionic Monge–Ampère equations on flat quaternionic quotients

From 11:20 Lunch at Wuke Hotel Restaurant

DISCUSSION FOCUS

Longstanding open problems, new connections across PDE and geometry, and the understanding, verification, and attribution of AI-assisted mathematical arguments.

ORGANIZERS

Quoc-Hung Nguyen, Guohuan Qiu, and Zhilong Xue

Meals: Wuke Hotel Restaurant.