

PDEs with Critical Nonlinearities and Non-Compactness Phenomena



Date: 2026 March 11 (Wed.) 13:25 – March 13 (Fri.) 12:20

Venue: J617, Graduate School of Engineering Science Building, The University of Osaka
1-3, Machikaneyama, Toyonaka, Osaka, 560-8531, Japan

Program

March 11 (Wed.)

13:25 – 13:30 Opening

13:30 – 14:30 Olimpio Hiroshi Miyagaki (The Federal University of São Carlos)
Multiple nodal solutions of planar stein–weiss equations

14:45 – 15:45 Federica Sani (The University of Modena and Reggio Emilia)
Symmetry breaking for elliptic equations with exponential nonlinearities in
higher dimensions

16:00 – 17:00 Kihyun Kim (Seoul National University)
Rigidity results in multi-bubble dynamics for non-radial energy-critical heat
equation

17:00 – discussion

March 12 (Thu.)

10:00 – 11:00 Federico Bernini (The University of Milano-Bicocca)

Nonlinear Schrödinger-Poisson systems in dimension two: the zero mass case

11:15 – 12:15 Futoshi Takahashi (Osaka Metropolitan University)

Some quasilinear minimization problems involving Hardy potentials

Lunch Time

14:00 – 15:00 Takeshi Suguro (Kumamoto University)

Deficit estimates for an entropic form of Gagliardo-Nirenberg inequalities via nonlinear diffusion equations

15:15 – 16:15 Norisuke Ioku (Tohoku University)

Multiplicity of singular solutions for semilinear elliptic equations with super-linear source terms

16:15 – discussion

March 13 (Fri.)

10:00 – 11:00 Jinyeop Lee (Kyung Hee University)

Microscopic derivation of a Schrödinger equation in dimension one with a nonlinear point interaction

11:15 – 12:15 Shun Tshuhara (The University of Osaka)

Local-in-time solution to the Schrödinger equation with a nonlinear boundary term

12:15 – 12:20 Closing

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