JOURNEY OF YOUNG PDEST
(PDE SEMINAR)

On the hydrodynamic limit via modulated energy method

구도완 (Yonsei University)

In this talk, I will introduce the notion of hydrodynamic limit. Simply put, it is a limit from the kinetic formulation, e.g. Vlasov-Poisson to macroscopic equation e.g. Euler-Poisson. I will rigorously address these notions and discuss how to obtain these convergence analysis by modulated energy (also known as relative entropy) method. I will display this asymptotic analysis through BGK-Vlasov-Poisson equation, based on my recent joint work with Young-Pil Choi and Sihyun Song.

2024. 4. 8. (월) 14:00 - 16:00
과학관 262호

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2024 Journey of Young PDEst

▶ **Time and Location**: Mondays, 14:00–16:00, Room 262

▶ **Organizers**: Yoonjung Lee & Jaeyong Shin & Dowan Koo

▶ **Schedule**

▷ 4/8: Kinetic PDEs (Dowan Koo)

▷ 4/15: Kinetic PDEs (Sihyun Song)

▷ 4/29: Kinetic PDEs (Yeongseok Yoo)

▷ 5/13: Dispersive PDEs (Yoonjung Lee)

▷ 5/20: Fluid PDEs (Jaeyong Shin)

▷ 5/27: Fluid PDEs (Chanhong Min)

▷ 6/3: Fluid PDEs (Youseung Cho & Hyunjin In)

▷ 6/10: Elliptic PDEs (Dong-ha Kim)