

Workshop program of “Recent advances in fluid dynamics:
singularity, regularity and mixing”

All talks take place at Duke Kunshan University, **Room: Innovation Building 1047.**

Zoom ID: 949 0753 6641 Passcode: 202312

Dec 11 (Monday)	
	Registration
18:30-20:30	Dinner

Dec 12 (Tuesday)

Morning chair: Zhennan Zhou; Afternoon chair: Yao Yao

Time	Speaker	Title
9:15–9:30	Jian-Guo Liu (Duke University)	Opening remarks
9:30–10:30	Franck Sueur (University of Bordeaux)	Recent advances in the controllability of fluid dynamics
10:30–11:00	Photo session and coffee break	
11:00–12:00	Chunjing Xie (Shanghai Jiao Tong University)	The rigidity of steady solutions of high dimensional Navier-Stokes system and its applications
12:00–14:00	Lunch	
14:00–15:00	Matias Delgadino (University of Texas at Austin)	Entropy maximization in the two-dimensional Euler equations
15:00–16:00	Kyudong Choi (Ulsan National Institute of Science & Technology)	Stability of Hill's vortex and its filamentation
16:00–16:30	Coffee break	
16:30–17:30	Milton C. Lopes Filho (Universidade Federal do Rio de Janeiro)	Vanishing viscosity in the presence of boundaries
17:30–20:00	Workshop banquet	

Dec 13 (Wednesday)		Morning chair: Yu Feng
Time	Speaker	Title
8:30–9:30	Alexey Cheskidov (Westlake University)	Dissipation anomaly for long time averages
9:30–10:30	Christopher Henderson (University of Arizona)	Speed-up of invasion by chemotaxis
10:30–11:00	Coffee break	
11:00–12:00	Zhiwen Zhang (University of Hong Kong)	A Novel Stochastic Interacting Particle-Field Algorithm for 3D Parabolic-Parabolic Keller-Segel Chemotaxis System
12:00–14:00	Lunch	
14:00–18:00	Free afternoon	
18:00–20:00	Dinner	

Dec 14 (Thursday)		Morning chair: De Huang; Afternoon chair: Jiajun Tong
Time	Speaker	Title
9:30–10:30	Mimi Dai (University of Illinois at Chicago)	Pathological solutions for active scalar equations
10:30–11:00	Coffee break	
11:00–12:00	Kazuo Yamazaki (University of Nebraska-Lincoln)	Recent developments on singular stochastic PDEs in fluid mechanics and convex integration
12:00–14:00	Lunch	
14:00–15:00	Fei Wang (Shanghai Jiao Tong University)	Stability threshold of nearly-Couette shear flows with Navier boundary conditions in 2D
15:00–16:00	Francisco Gancedo (University of Seville)	Global-in-time dynamics for one-phase Muskat and two-phase Stokes gravity waves
16:00–17:30	Coffee break & free discussion	
17:30–20:00	Dinner	

Dec 15 (Friday)

Morning chair: Xiaoqian Xu

Time	Speaker	Title
9:30–10:30	Taoufik Hmidi (NYU Abu Dhabi)	Leapfrogging in fluid dynamics
10:30–11:00	Coffee break	
11:00–12:00	Liqun Zhang (Chinese Academy of Sciences)	On the regularity of weak solutions for ultra-parabolic equations in divergent form
12:00–14:00	Closing & Lunch	