Singularities in Fluids and General Relativity
Tutorial Sessions

(23, 26 & 27 December 2024)

ORGANIZING COMMITTEE

Co-chairs

Xinliang An
National University of Singapore

Mihalis Dafermos
University of Cambridge and Princeton University

Juhi Jang
University of South California

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Venue

IMS Executive Seminar Room
Bock S17, Level 3
10 Lower Kent Ridge Rd Singapore 119076

For more information: https://ims.nus.edu.sg/events/singularities-in-fluids-and-general-relativity/

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Monday, 23 December 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
0930–1110	*Tutorial 1 and 2* Desingularization and vortex confinement for incompressible Euler equations	In-Jee Jeong *Seoul National University, S. Korea*
1110–1140	Tea Break	
1140–1230	*Tutorial 1* Introduction to Mathematical General Relativity: Physical Heuristics	Xinliang An *National University of Singapore, Singapore*
1230–1400	Lunch Break	
1400–1450	*Tutorial 1* Stability, Oscillations, and Damping in Galactic Dynamics	Mahir Hadzic *University College London, UK*
1450–1540	*Tutorial 3* Desingularization and vortex confinement for incompressible Euler equations	In-Jee Jeong *Seoul National University, S. Korea*
1540–1610	Tea Break	
1610–1700	*Short talks by Junior Researchers*	
	Suppression of Chemotactic Singularity by Navier-Stokes Flow with Large Buoyancy	Zhongtian Hu *Duke University, USA*
	Finite-time Blowup for Keller-Segel-Navier-Stokes System in Three Dimensions	Tao Zhou *National University of Singapore, Singapore*

Thursday, 26 December 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
0930–1110	*Tutorial 2 and 3* Stability, Oscillations, and Damping in Galactic Dynamics	Mahir Hadzic *University College London, UK*
1110–1140	Tea Break	
1140–1230	*Tutorial 1* Local Well-posedness of Einstein Vacuum Equations	Taoran He *National University of Singapore, Singapore*
1230–1400	Lunch Break	

Thursday, 26 December 2024		
Time	**Title**	**Speaker**
1400–1450	*Tutorial 2* Spacetime Decomposition and Double Null Formalism	Taoran He *National University of Singapore, Singapore*
1450–1520	Tea Break	
1520–1610	*Tutorial 1* Stability of Minkowski Spacetime	Dawei Shen *Columbia University, USA*

Friday, 27 December 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
0930–1020	*Tutorial 2* Stability of Kerr Black Holes	Dawei Shen *Columbia University, USA*
1020–1110	*Tutorial 2* Trapped Surface Formation	Xinliang An *National University of Singapore, Singapore*
1110–1140	Lunch Break	
1140–1230	*Short talks by Junior Researchers*	
	Shock-type Singularity of the Hyperbolic-parabolic Chemotaxis System	Woojae Lee *Yonsei University, S. Korea*
	Shock Formation for Compressible Euler Equations and Related Systems via Self-similar Approach	Wenze Su *National University of Singapore, Singapore*

This schedule is accurate as of 13 Dec 2024 and is subjected to changes.