

*2022 Shanks Workshop on Mathematical Aspects of Fluid Dynamics
Vanderbilt University
February 19-20, 2022*

Contributed Talks

Stevenson Center 1431

- 2:00-2:10 **Ovidiu-Neculai Avadanei:** Well-posedness for the dispersive Hunter-Saxton equation
- 2:15-2:25 **Federico Pasqualotto:** Gradient blow-up for dispersive and dissipative perturbations of the Burgers equation
- 2:30-2:40 **Calum Rickard:** Global expanding solutions of compressible Euler equations
- 2:45-2:55 **Catherine Drysdale:** Using amplitude equations to explore non-normality in fluid mechanics
- 3:00-3:10 **Patrick Flynn:** The scattering problem for Vlasov-Poisson
- 3:15-3:25 **José Henrique Rodrigues:** Long-term dynamics for a semilinear wave equation subject to boundary dissipation
- 3:30-3:40 **Quinn Le:** On quantitative uniqueness for parabolic equations

Stevenson Center 1432

- 2:00-2:10 **Lingyun Ding:** Enhanced dispersion by tilting the pipe: the role of diffusion-driven flow in micro-fluidic transport
- 2:15-2:25 **Jeffrey Kuan:** A stochastic fluid-structure interaction problem describing Stokes flow interacting with a membrane
- 2:30-2:40 **Krutika Tawri:** On stochastic partial differential equations with a Ladyzenskaya-Smagorinsky type nonlinearity
- 2:45-2:55 **Collin Victor:** Dynamic observer patterns for continuous data assimilation - the Bleeps, the Sweeps, and the Creeps
- 3:00-3:10 **Widodo Samyono:** Using HPPC to solve Driven Cavity Problem
- 3:15-3:25 **Rasika Mahawattege:** Fluid-structure interaction with Kelvin-Voight damping: analyticity, spectral analysis, exponential decay
- 3:30-3:45 **Ellie Gurvich:** Analysis of Poroelastic Systems Describing Biological Tissues