

Editorial: The 2024 François Naftali Frenkiel Award for Fluid Mechanics

The recipients of the 41st François Naftali Frenkiel Award for Fluid Mechanics are **Callum Cuttle**, **Liam C. Morrow**, and **Christopher W. MacMinn** for their paper “Compression-driven viscous fingering in a radial Hele-Shaw cell” which was published in [Physical Review Fluids 8, 113904 \(2023\)](#). They were presented with this award on November 26, 2024 at the annual meeting of the APS Division of Fluid Dynamics in Salt Lake City, Utah. Each author received a check for \$500 plus a scroll acknowledging the award. The Frenkiel Award citation reads that their paper “provides an elegant and rigorous demonstration by experiment, linear stability analysis, and simulation of the role of gas compressibility in a Hele-Shaw flow when gas displaces liquid.”

The purpose of this Award, which is named after Dr. F. N. Frenkiel, is to recognize significant contributions in fluid mechanics by early career researchers. The Award is sponsored by the APS Division of Fluid Dynamics and, beginning with the 2017 award, has been given annually to an early career author of a paper that has been published in *Physical Review Fluids* during the calendar year preceding the presentation. “Early career” is defined as having had not more than twelve years of full-time employment after the most advanced academic degree was awarded prior to the year of the paper’s publication. More than one author may be involved, and one author may be a thesis advisor sharing the Award if the advisor also meets the same twelve year requirement. The winner of this Award is selected by a committee appointed by the Chair of the APS Division of Fluid Dynamics.

François Naftali Frenkiel (1910–1986) was the founder and longtime editor of *Physics of Fluids*, from which *Physical Review Fluids* (founded in 2016) evolved. He was born in Warsaw, Poland and received a Ph.D. in Physics from the University of Lille in France, where he studied under the direction of Kampé de Fériet. Dr. Frenkiel came to the U.S. in 1947 and was associated successively with several American academic and Naval research centers until his retirement in 1981. He published extensively in the field of turbulent flows and pioneered the application of high-speed digital computing methods to the measurement of turbulence and the mathematical modeling of urban pollution.

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Callum Cuttle is a postdoctoral researcher in the Department of Engineering Science at the University of Oxford. He joined the Poromechanics Lab in 2020 in order to study flow in deformable porous media. Recently, he has been conducting microfluidic experiments and continuum modeling of the flow of complex fluids through soil models for the EPSRC-funded PoPFS project. His work combines precise benchtop experiments with reduced-order mathematical modelling and numerical methods. Callum earned his Ph.D. in physics from the University of Manchester in 2020.



Liam Morrow is a research fellow at the Australian National University (ANU), where he develops computational models for inverse problems and data assimilation related to groundwater flow. Before joining ANU, Liam was a postdoctoral researcher in the Poromechanics Lab at the University of Oxford from 2020 to 2024. While at Oxford, Liam was responsible for developing continuum models and computational tools to better understand the development of patterns in multiphase frictional flows. Liam's research interests include developing novel mathematical models of multiphase flows, particularly focusing on interfacial instabilities in Hele-Shaw cells as well as interactions between fluids and deformable granular materials. He obtained his Ph.D. from Queensland University of Technology in 2019, following from a Bachelor of Mathematics from the same institute in 2015.



Chris MacMinn is a Professor of Engineering Science at the University of Oxford. He is an engineer and applied scientist with an interest in physical mathematics, fluid and solid mechanics, and interfacial phenomena. His research group – the Poromechanics Lab – is an interdisciplinary team of engineers, physicists, mathematicians, and geoscientists who use modelling, simulation, and multiscale experiments to study flow, transport, and deformation in porous media and other multiphase systems. Their work has applications in subsurface science and engineering, soft materials, and biology and medicine. Prior to joining Oxford, Chris earned his Ph.D. in Mechanical Engineering from MIT and was then a Postdoctoral Fellow in Geology & Geophysics at Yale University.

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