Physics Colloquium
Michigan Technological University

December 9 (Thursday) 4:00 to 5:00 pm
Room 139, Fisher Hall

Following G.I. Taylor: Simple experiments with interesting theory

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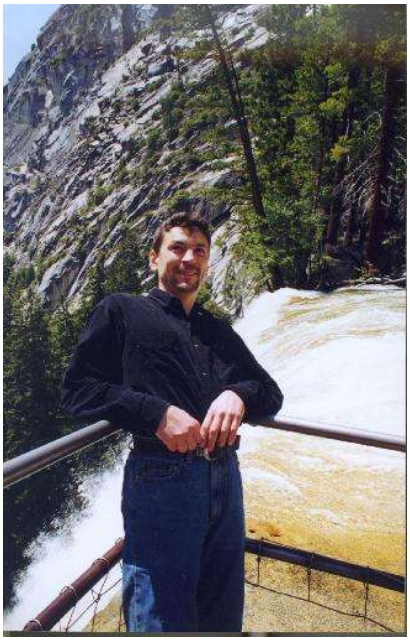
Abstract

In this talk, four simple fluid mechanics experiments will be demonstrated:
(1) the flow of the viscous oil down a fishing line,
(2) chain of bubbles in polymer solution,
(3) lifting Hele-Shaw flow, and
(4) slow rupture of a polymer film.

Simplicity of the experiments allows one to show interesting physical phenomena, such as interfacial instabilities, non-linear dynamics, and pattern formation. Simplistic evolution equations describing the flows play an important role in modern applied mathematics.



Biography

Dr. Igor L. Kliakhandler is an Associate Professor in the Department of Mathematical Sciences at the Michigan Technological University Prof. Kliakhandler received his Ph.D. in Applied Mathematics in 1998 from the Tel-Aviv University. His current research interests are fluid mechanics and finance.