

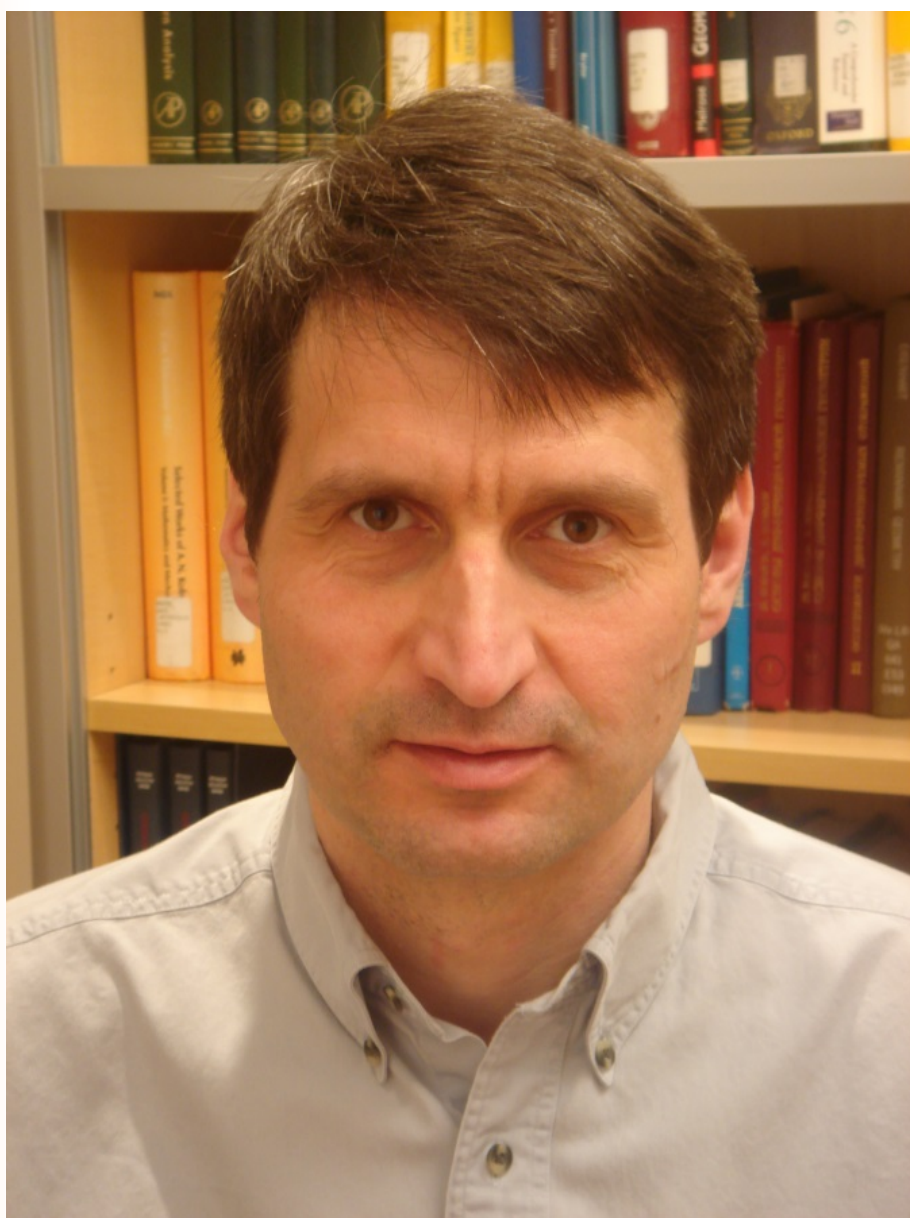
# Partial Differential Equations and Mathematical Physics

**Mini Conference on  
“Topics in Euler’s equation for incompressible fluids”**

**May 14 – 16, 2014  
127 Hayes-Healy Hall  
University of Notre Dame**

Register at: <https://centerformath.nd.edu/scientific-events-and-programs/pdemp-lecture-series/>

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**Vladimir Sverak**  
University of Minnesota

The classical equation of Euler for incompressible inviscid fluids can be viewed from many angles: Hamiltonian mechanics, Infinite-dimensional Riemannian geometry, Dynamical systems, Harmonic Analysis, classical PDE methods, etc. In the lectures we will recall some of these viewpoints and review some recent developments, mostly from the “classical PDEs” angle. Among other topics, we will discuss the long-time behavior of solutions in dimension two, a new proposal for the study of possible singularity formation by Hou-Luo, and the behavior of solutions of certain model equations. Comparisons with the Navier-Stokes equations, describing viscous fluids, will also be made. The lectures will be aimed at graduate students. Some basic knowledge at the level of introductory graduate level PDE should be sufficient for following the mini-course.



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