Apr 21  Phil Isett, MIT

Recent progress towards Onsager’s Conjecture

Motivated by the theory of hydrodynamic turbulence, L. Onsager conjectured in 1949 that solutions to the incompressible Euler equations with Holder regularity less than 1/3 may fail to conserve energy. C. DeLellis and L. Székelyhidi, Jr. have pioneered an approach to constructing such irregular flows based on an iteration scheme known as convex integration. This approach involves correcting ”approximate solutions” by adding rapid oscillations which are designed to reduce the error term in solving the equation. In this talk, I will discuss an improved convex integration framework, which yields solutions with Holder regularity as much as 1/5−.