

Center for Applied Mathematical Sciences Distinguished Lecturer, Fall 2019



Terence Tao

The James and Carol Collins Chair in Mathematics at UCLA

The Global Regularity Problem for Navier-Stokes

Abstract:

We survey some recent developments towards the infamous global regularity problem for the Navier-Stokes equations for incompressible viscous fluids.

Monday, September 16, 2019

Irani Hall

**Reception: 3:00 p.m.
Irani Hall Foyer**

**Lecture: 3:30 p.m.
Irani Hall 101**

**Wine & Cheese: 4:30 p.m.
KAP 410**

CAMS Director:
Susan Friedlander
susanfri@usc.edu

In a book review, the mathematician Timothy Gowers remarked on Tao's accomplishments:

Tao's mathematical knowledge has an extraordinary combination of breadth and depth: he can write confidently and authoritatively on topics as diverse as partial differential equations, analytic number theory, the geometry of 3-manifolds, nonstandard analysis, group theory, model theory, quantum mechanics, probability, ergodic theory, combinatorics, harmonic analysis, image processing, functional analysis, and many others. Some of these are areas to which he has made fundamental contributions. Others are areas that he appears to understand at the deep intuitive level of an expert despite officially not working in those areas. How he does all this, as well as writing papers and books at a prodigious rate, is a complete mystery. It has been said that David Hilbert was the last person to know all of mathematics, but it is not easy to find gaps in Tao's knowledge, and if you do then you may well find that the gaps have been filled a year later.

Tao has won numerous honours and awards over the years. Here is a brief selection:

He is a Fellow of the Royal Society, the Australian Academy of Science (Corresponding Member), the National Academy of Sciences (Foreign member), the American Academy of Arts and Sciences, and the American Mathematical Society. In 2006 he received the Fields Medal "for his contributions to partial differential equations, combinatorics, harmonic analysis and additive number theory", and was also awarded the MacArthur Fellowship.