

Conferencia

SANTALÓ 2012

La *Facultad de Ciencias Matemáticas* y la *Revista Matemática Complutense* patrocinan la conferencia anual Santaló, impartida cada año por un profesor de reconocido prestigio. Esta conferencia marca el inicio de la actividad docente e investigadora de la Facultad en cada año académico. El conferenciante de este año es:

Eduard Feireisl

Institute of Mathematics
Academy of Sciences of the Czech Republic

Mathematics of Fluids in Motion

We survey recent trends in mathematics of fluids in motion. After a brief excursion in the history, the most challenging problems and their possible solution will be discussed. We mostly focus on problems arising in the framework of classical continuum mechanics that are formulated in terms of partial differential equations and systems although other approaches will be also mentioned. As the underlying equations are generally non-linear, the strive for their solution lead to the development of modern mathematical analysis, in particular the theory of generalized derivatives, abstract function spaces, and various new concepts of generalized solutions to partial differential equations. However, despite an enormous effort of generations of excellent mathematicians, the genuinely basic questions concerning, for instance, the existence of global-in-time solutions is still largely open. We delineate the recent development of the theory, in particular, for the so-called energetically closed system and conclude with a short review of challenging open problems.

JUEVES, 18 DE OCTUBRE DE 2012

13:00 HORAS

AULA S-118 "MIGUEL DE GUZMÁN"

FACULTAD CC. MATEMÁTICAS

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