Einladung zum

Würzburger Mathematischen Kolloquium

Julius-Maximilians-Universität Würzburg • Fakultät für Mathematik und Informatik

Prof. Dr. Enrique Zuazua

Ikerbasque and BCAM, Bilbao, Spain; Humboldt Prize, Erlangen

Numerical flow control

Mittwoch, den 5. Nov. 2014 • 16:15 Uhr
Raum SE 40, Mathematik Ost, Emil-Fischer-Str. 40, Campus Hubland-Nord

Inhaltsangabe

In this talk we address a classical inverse design problem, aiming to identify the initial source leading to a desired final configuration for and inviscid flows. We do it from the point of view of optimal control.

The problem under consideration is motivated by the issue of sonic-boom minimization in aeronautics but it is ubiquitous in the context of time-irreversible problems.

First, in the one-dimensional case, we show the relevance of employing numerical schemes that mimic in long time intervals the asymptotic dynamics of the PDE under consideration. We then explain the difficulties generated by the presence of shocks.

We also address the multi-dimensional case and point towards perspectives of future development.

Zu diesem Vortrag laden wir Sie herzlich ein.
Im Anschluss an die Vorträge Kaffee und Tee im Foyer vor dem SE 40.

Die Dozentinnen und Dozenten der Mathematik