Einladung zum

Würzburger Mathematischen Kolloquium

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

Prof. Dr. Remi Abgrall

Mathematisches Institut, Universität Zürich

On the approximation of hyperbolic problems, the example of fluid mechanics

Mittwoch, 1. Juni 2016 ● 16:15 Uhr

Raum SE 40, Mathematik Ost, Emil-Fischer-Str. 40, Campus Hubland-Nord

Inhaltsangabe

In this talk, my goal is to show, on one example, how the relations between Physics and Mathematics can be translated to describe some numerical methods, and exploited for their analysis. I want also to show what can be the impact of (applied) Computer Science in this.

I will first explain from physical arguments where the system of partial differential equations that describes fluid flows comes from. In particular, I will explain and recall what are the connections between thermodynamical considerations and deep mathematical properties of the system. Then, I will describe some ways to approximate this system, what are the issues and how they can be corrected again by copying the physics (or the mathematics at a continuous level). I will also show how the structure of computer have had a deep impact on the field, from the very beginning up to recent research. I will finish by some recent developments in the field.

www.mathematik.uni-wuerzburg.de/kolloquium.html

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

Die Dozentinnen und Dozenten der Mathematik