Einladung zum
Würzburger Mathematischen Kolloquium
Julius-Maximilians-Universität Würzburg • Fakultät für Mathematik und Informatik

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Hamiltonian Systems on Infinite-Dimensional Spaces

Mittwoch, den 15. Jan. 2014 • 16:15 Uhr
Mathematik Ost (Emil-Fischer-Straße 40), Seminarraum SE 40 (Raum 00.001)

Inhaltsangabe
The field of infinite-dimensional systems theory has become a well-established field within mathematics and systems theory. Here we shall focus on the PDE approach to infinite-dimensional linear systems theory. Two examples of such dynamical systems are temperature distribution of metal slabs or plates, and the vibration of aircraft wings. Considering control and the interconnection of two or more of such systems one is led to the class of so-called port-Hamiltonian systems. The norm of such a system is given by the energy (Hamiltonian) of the system. This fact enables us to show the existence and stability of solutions. Further, it is possible to determine which boundary variables are suitable as inputs and outputs, and how the system can be stabilized via the boundary.