UNIVERSITÄT DES SAARLANDES
Naturwissenschaftlich-Technische Fakultät I
Fachrichtung 6.1 Mathematik

Mathematisches Kolloquium

Am Freitag, dem 11. Juli 2014 spricht um 14.00 Uhr ct im Hörsaal IV
der Fachrichtung Mathematik (Gebäude E2 4)

Prof. Dr. Herbert Egger
Technische Universität Darmstadt

über das Thema:

An inverse problem in nonlinear heat conduction: From analysis to numerics

Abstract: We consider the identification of nonlinear heat conduction laws in stationary and instationary heat transfer problems. Only one single measurement of the temperature on a curve on the boundary is required to determine the unknown heat conductivity on the range of observed temperatures. We first present a new proof of Cannon's uniqueness result for the stationary case, which allows us to derive a corresponding stability estimate, and to extend our argument to instationary problems which are close to steady state. The analytical results allow us to design a proper experimental setup and a numerical discretization scheme, such that the heat conduction law can be identified with any desired precision.

Der Gast wird von Prof. Thomas Schuster betreut.

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee und Tee ab 13.45 Uhr im Konferenzraum der Mathematik   (Erdgeschoss, Raum 1.03)

Die Dozenten der Mathematik