



## Mathematisches Kolloquium

Am Freitag, dem 19. Januar 2018 spricht um 14 Uhr c. t. im Hörsaal IV  
der Fachrichtung Mathematik (Gebäude E2 4)

**Dr. Heiko Hoffmann**  
**Universität Siegen**

über das Thema:

### **An Abstract Framework for the Analysis of the Inverse Problem of THz Tomography**

*Abstract:* We address an approach in THz tomography that is based on solving a parameter identification problem for an inhomogeneous Helmholtz-type equation on a bounded domain with Robin boundary condition. The well-definedness of the corresponding forward operator, its Fréchet-differentiability, and the quality of its approximation by its linearisation are important objectives in the underlying mathematical analysis and are essential to apply regularization methods. In this talk, I will present an abstract functional analytic framework that is suited to analyse a more general class of parameter identification problems (including the above-mentioned inverse problem of THz tomography) within a Banach space setting, where form methods constitute the core part of this approach.

This talk is based on joint work with Dr. Anne Wald.

Der Gast wird von Prof. Dr. Thomas Schuster betreut.

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee und Tee ab 13.45 Uhr im Konferenzraum der Mathematik (Erdgeschoss, Raum 103)

**Die Dozenten der Mathematik**