Kolloquium Angewandte Mathematik
Prof. Thomas Apel (BauV1)
Prof. Matthias Gerdts (LRT1)
Prof. Joachim Gwinner (LRT1)
Prof. Markus Klein (LRT1)

der Bundeswehr
Universität **München**

Vortragsankündigung

Am **Mittwoch, dem 03.04.2013,** hält **um 17.00 Uhr**

Herr **Dr. Stephan Schmidt**
(Imperial College London)

einen Vortrag über das Thema

Shape Optimization based on Shape Calculus

Der Vortrag findet im **Raum 1116** in **Gebäude 150** statt.

Abstract

The talk will focus on shape optimization as a sub-class of optimization problems governed by PDEs. Special attention is given to approaches based on shape calculus, which can be used to differentiate a PDE constrained optimization problem with respect to the underlying domain. The resulting boundary expressions for the shape gradient are very efficient to compute and thus allow very large scale shape optimization problems to be solved efficiently.
Furthermore, some of the specialities of these boundary expressions will be discussed, such as higher derivatives and loss of regularity. Due to the geometric nature of shape optimization there will be links to many other research areas, such as PDEs on surfaces, high performance computing and discrete differential geometry. The talk will feature applications in acoustics, CFD and electromagnetism.

Alle Interessierten sind dazu herzlich eingeladen.