

Einladung

Im Rahmen des Schwerpunktskolloquiums „Analysis und Numerik“ hält

Herr Professor Dr. Volker Schulz
(Universität Trier)

am **Dienstag, dem 14. November 2017**, einen Vortrag zum Thema:

New Results on Optimization in Shape Manifolds

Der Vortrag findet um **17:00 Uhr** in Raum **K 503** statt.

Andrea Barjasic

Beauftragte für das Kolloquium

Abstract:

Manifolds as such are often envisioned as curvy shapes itself. However, in this talk, we discuss manifolds of shapes. That means that each point on this manifold is itself a shape. Although this might seem, at the first glance, as an almost too sophisticated abstraction, we will see that this point of view provides a very convenient framework for shape optimization and is able to resolve puzzles which have been severe obstacles for the development of efficient numerical algorithms in this field of research. The concept of shape manifolds has been introduced in differential geometry without a focus on shape optimization and thus in a setting which requires far too much smoothness for PDE constrained shape optimization, where one has to live with Sobolev spaces. In this talk, novel results on the interplay of shape manifolds and shape optimization are presented as well as their consequences for efficient and robust shape optimization algorithms in the context of system models defined by partial differential equations.