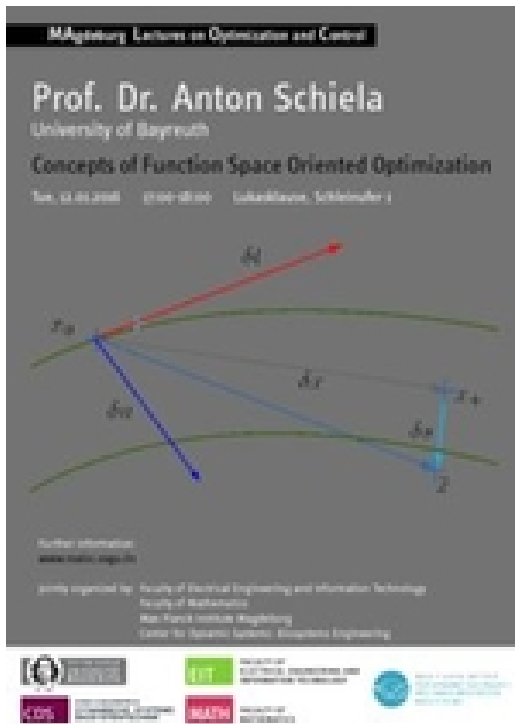


MAGDEBURG LECTURES ON OPTIMIZATION AND CONTROL

Anton Schiela



Concepts of Function Space Oriented Optimization

Prof. Dr. Anton Schiela
University of Bayreuth

Time & Place

The presentation on January 12, 2016 will be given at the Lukasklausur, Schleiufer 1, Magdeburg and starts at 5.00 p.m.

Abstract

Many large scale nonlinear optimization problems are discretizations of optimization problems in function space and thus, we expect that additional functional analytic structure should be present. The goal of function space oriented optimization is to exploit this structure. This may comprise the efficient computation of steps by iterative solvers, problem

suites, globalization strategies, or the use of adaptive mesh refinement inside an optimization method.

In this talk we will give an overview of a couple of ideas, and explain at concrete examples how they can be implemented.

Short CV

Anton Schiela is a professor for applied mathematics at the University of Bayreuth.

His fields of research are optimization with PDEs, in particular the development of algorithms for the solution of optimization problems in function space.

Before moving to Bayreuth in 2014, he was an associate professor at Technische Universität Hamburg-Harburg (2013-2014) and Matheon junior research group leader at TU Berlin (2012-2013). He got his PhD in 2007 at Zuse Institute Berlin, where he worked as a research assistant (2002-2012).