



Curriculum Vitae Professor Dr. Stefan Müller

Name: Stefan Müller
Born: 15 March 1962



Academic and Professional Career

since 2008 Full Professor (C4), Bonn, Germany
1996 - 2008 Director, MPI Mathematics in the Sciences, Leipzig, Germany
1995 Full Professor, Swiss Federal Institute of Technology Zurich, Schweiz
1994 Full Professor, Freiburg University, Germany
1989 Ph.D., Heriot-Watt University, Edinburgh, UK
1987 Diploma in Mathematics, Bonn, Germany

Project coordination, Membership in collaborative research projects (Selection)

since 2013 DFG SFB 1060: The Mathematics of Emergent Effects (Co-ordinator)
since 2007 German Research Foundation (DFG) FOR 797: Microplast – Analysis and computation
of microstructure in finite plasticity

Functions in Scientific Societies and Committees (Selection)

- since 2009 Associate Director of the Hausdorff Research Institute for Mathematics (HIM), Bonn, Germany
- since 2008 Member of the Selection Committee for the Alexander von Humboldt Professorship, Germany
- since 2007 Member of the Scientific Advisory Board of the Interdisciplinary Center for Advanced Materials Simulation (ICAMS), Bochum, Germany
- since 2006 Chair of the Scientific Advisory Board of the Mathematical Research Institute of Oberwolfach, Germany

Honours and Awarded Memberships (Selection)

- 2002 Member of the German Academy of Sciences Leopoldina
- 2000 Leibniz prize
- 1999 Collatz prize of CICIAM
- 1999 Member of the Academy of Berlin-Brandenburg, Germany
- 1993 Max Planck Research Prize (jointly with V. Sverák)
- 1992 Prize of the European Mathematical Society

Major Scientific Interests

My goal is to develop mathematical methods to describe and understand multiscale problems and the formation, evolution and macroscopic effects of microstructure, in particular in advanced materials. Results include a qualitatively new homogenization formula for nonlinear elastic materials, the first rigorous understanding of dimension reduction in nonlinear elasticity and rigorous scaling laws for branching near austenite / martensite interfaces. Ideas discovered in elasticity led to striking counterexamples to Hilbert's 19th problem in PDE. Recently I have begun to study the relation between atomistic and continuum theories through statistical mechanics and rigorous renormalization.