



16th GAMM-Seminar on Microstructures

Program

Friday, January 20, 2017, 9:00-18:30

8:30- 9:00		registration
9:00- 9:15		opening
9:15- 9:55	Gilles Francfort	A criticism of finite elasto-plasticity
9:55-10:15	Andre Keip	A Phase-Field Approach to Micro-Magneto-Mechanics at Finite Deformations
10:15-10:35	Stephan Teichtmeister	Variational framework of phase field modeling of ductile fracture in isotropic and anisotropic porous solids at finite strains
10:35-11:05		coffee break
11:05-11:45	Bernd Schmidt	On a quantitative piecewise rigidity result and Griffith-Euler-Bernoulli functionals for thin brittle beams
11:45-12:05	Carolin Kreisbeck	Asymptotic rigidity and homogenization of layered materials with stiff components
12:05-12:25	Thilo Simon	Rigidity of Shape Memory Alloys undergoing cubic-to-tetragonal transformations
12:25-14:00		lunch break Canteen of the TU Dortmund

14:00-14:40	Marc Geers	Upscaling microfluctuation fields towards emergent phenomena in the mechanics of microstructures
14:40-15:00	Marco Morandotti	Formulas for relaxed disarrangement densities
15:00-15:20	Mathias Schäffner	Quantitative homogenization in nonlinear elasticity
15:20-15:40	Matti Schneider	An FFT-based fast gradient method for elastic and inelastic unit cell homogenization problems

15:40-16:10	coffee break	
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16:10-16:30	Pedro Ponte	Second-order homogenization estimates for the macroscopic behavior and field fluctuations in viscoplastic composites and comparisons with full-field simulations
16:30-16:50	Swantje Bargmann	Computational modeling of hierarchical composites
16:50-17:10	Konrad Schneider	Fully periodic RVEs of matrix inclusion composites in practical multiscaling: not worth the effort
17:10-17:30	Matthias Labusch	Application of a magnetostrictive 3D Preisach model for the simulation of magneto-electric composites

17:30-18:30	GAMM activity group meeting	
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19:00	Conference dinner	
	<i>View</i> , Leonie-Reygers-Terrasse , 44137 Dortmund	

Saturday, January 21, 2017, 9:00 - 15:40

9:00- 9:40	Grégoire Allaire	Optimization of dispersive coefficients in the homogenization of the wave equation in periodic structures
9:40-10:00	Takayuki Yamada	High Order Homogenization for Elastic Wave Problems Using the Asymptotic Expansion Method
10:00-10:20	Wolf-Patrick Düll	Analysis of the embedded cell method for the numerical homogenization of metal-ceramic composite materials
10:20-10:40	Hans Knüpper	Magnetic Domains in Thin Ferromagnetic Films with Strong Perpendicular Anisotropy
10:40-11:00	coffee break	
11:00-11:20	Jan Nagel	A relaxation approach to the modeling of the stochastic behavior of elastic materials
11:20-11:40	Claudia Raithel	A Large-Scale Regularity Theory for Random Elliptic Operators on the Half- Space
11:40-12:00	Sergiy Nesenenko	Stochastic homogenization of rate-dependent systems of monotone type
12:00-12:20	Marco Veneroni	Stochastic homogenization of a maximal monotone relation
12:20-13:40	lunch break kostBar, Emil-Figge Straße 40	
13:40-14:20	Augusto Visintin	Analogical Models and Homogenization Disagree
14:20-14:40	Stephan Wulfinghoff	Conditions for phenomenological anisotropic damage models derived from micro- mechanics
14:40-15:00	Elvira Zappale	Optimal design of fractured media with prescribed macroscopic strain
15:00-15:20	Philipp Junker	An evolution equation based approach to topology optimization
15:20-15:40	Anja Schlömerkemper	About an evolutionary model for magnetoelasticity in Eulerian description

