Euromech 600 technical program

Tuesday 12.03.2019	
13:00 – 14:00	Small lunch and welcome
14:00 – 16:00 Chair: *S. Reese*	*Joris Remmers* Multi-dimensional wavelet reduction of periodic micro-structural models
	Frank Naets, Wim Desmet An a-priori reduced order modeling approach for nonlinear finite element models in structural dynamics
	Sridhar Chellappa, Lihong Feng, Peter Benner Adaptive parameter sampling using surrogate error model
	Thanos Antoulas The Loewner framework: a new approach to data-driven modeling and reduction
16:00 – 16:30	Coffee break
16:30 – 18:00 Chair: *T.-P. Fries*	*Asghar Zajkani, Rahele Vadi Zadeh* Nonlinear finite element analysis of glassy polymers by homotopy perturbation return mapping for rate-dependent softening and hardening viscoplastic constitutive model
	Andrey Nasedkin About some features of finite element modelling of piezoelectric composites at micro-level
	A. K. Jha, C. S. Upadhyay Solving exotic engineering problems – brute force versus elegant modelling and analysis
18:15 – 20:00	Reception

Wednesday 13.03.2019	
09:00 – 10:30 Chair: *J. Remmers*	*Sven Klinkel, Rainer Reichel* A polygonal element formulation based on the scaled boundary method for the analysis of nonlinear problems in solid mechanics
	Hoang-Giang Bui, Günther Meschke, Dominik Schillinger Efficient cut-cell quadrature based on moment fitting for materially nonlinear analysis
	Fadi Aldakheel, Blaž Hudobivnik, Peter Wriggers Virtual element formulation for phase-field modeling of brittle and ductile fracture
10:30 – 11:00	Coffee break
11:00 – 12:30 Chair: *A. Huerta*	*Kerstin Weinberg, Carola Bilgen, Christian Wieners* Phase-field simulations of cracks growth in different materials
	Oliver Barfusz, Tim Brepols, Stefanie Reese Gradient-extended damage modeling with reduced integration-based continuum elements
	Thomas-Peter Fries, Daniel Schöllhammer Classical shell analysis based on tangential differential calculus
12:30 – 14:00	Lunch
14:00 – 15:30 Chair: *D. Reddy*	*Matteo Giacomini, Ruben Sevilla, Antonio Huerta* From low to high-order hybridizable discontinuous Galerkin approximations in computational mechanics
	Ludovic Noels Damage to crack transition for ductile materials using a cohesive-band / discontinuous Galerkin framework
	Franz Chouly Nitsche's method for contact and friction
15:30 – 16:00	Coffee break
16:00 – 17:30 Chair: *P. Hansbo*	*Pedro Diez* Algebraic tools for parametric problems: supplementing finite elements with the parametric dimension
	Johannes Riesselmann, Jonas Ketteler, Mira Schedensack, Daniel Balzani A C0-continuous finite element formulation for finite gradient elasticity
	Christian Wieners, Kerstin Weinberg A discontinuous Galerkin method for the elastic wave equation and the application to the phase-field approximation of interfaces
17:30 – 19:00	Discussion – free time
19:00 – …….	Conference dinner (Rathauskeller)

Thursday 14.03.2019	
09:00 – 10:30 Chair: *L. Noels*	*Ramon Codina, Ino Castañar, Joan Baiges* Approximation of incompressible elastic materials at large strains using stabilized finite element methods
	Peter Hansbo Augmented Lagrangian methods for nonlinear problems
	Beverley Grieshaber, Faraniaina Rasolofoson, Daya Reddy Convergent approximations for near-incompressible and near-inextensible transversely isotropic elasticity
10:30 – 11:00	Coffee break
11:00 – 12:30 Chair: *D. Balzani*	*Gianluigi Rozza* Reduced order methods for PDEs: state of the art and perspectives with applications in computational mechanics
	Mauricio Fernández, Felix Fritzen On hybrid approaches combining reduced order modeling and artificial neural networks for multiscale mechanical simulations
	Hamid Reza Bayat, Hans-Philipp Schreyer, Shahed Rezaei, Stefanie Reese Interface failure modeling applying cohesive discontinuous Galerkin method
12:30 – 14:00	Small lunch
14:00 – 17:00	Excursion