ECCOMAS Thematic Conference

II. International Conference on Computational Contact Mechanics
ICCCM 2011
15-17 June 2011, Hannover, Germany

Detailed program

Tuesday 14 June 2011 – early registration from 5 – 7 pm – at conference reception desk

Wednesday 15 June 2011			
08.00	Registration		
09.00	Opening		
09.20	Keynote lecture # 1: T. A. Laursen, Contact mechanics on embedded and enriched interfaces		
09.50	**Session #1**		
	09.50-10.10	R. Sauer	Locally enriched contact FE formulations for improved peeling and sliding computations
	10.10-10.30	L. de Lorenzis	An augmented lagrangian approach to isogeometric analysis of 3D large deformation contact problems
	10.30-10.50	G. Stavroulakis	Unilateral modelling and related identification in masonry structures
10.50	Coffee break		
11.10	**Session #2**		
	11.10-11.30	A. Kudawoo	Two frictional contact algorithms based on stabilized lagrangian formulation, and application
	11.30-11.50	Ch. Weißenfels	Numerical simulation of soil structure interaction using projected friction law
	11.50-12.10	A. Lang	Theory and experimental validation of rubber friction on rough, self-affine surfaces
	12.10-12.30	J.-H. Dobberstein	Simulation of the friction behavior of rubber compounds on real road surfaces
12.30	Lunch		
13.30	Keynote lecture # 2: Ílker Temizer, Multiphysics homogenization techniques: Thermoelasticity and lubrication		
14.00	**Session #3**		
	14.00-14.20	P.-A. Guidault	A micro-macro mixed domain decomposition method for modeling crack with frictional contact
	14.20-14.40	J.-F. Molinari	Surface roughness evolution during sliding contact at the atomic scale
	14.40-15.00	L. Champaney	An efficient strategy for accelerating optimization procedures for assemblies of structures with contact and friction
	15.00-15.20	K. Fietz	An efficient finite element formulation for modelling hip joint contact
	15.20-15.40	Y. Ansari	Application of large deformation finite element analysis to piezocone penetration and dissipation problems
15.40	Coffee break		
16.00	**Session #4**		
	16.00-16.20	G. Rauchs	Sensitivity analysis of electro-mechanical contact between rough surfaces using the direct differentiation method
	16.20-16.40	G. Mazzucco	Multiscale coupled modeling of electrical interconnects
	16.40-17.00	Z. Zhang	Material flow rules on contact interface and heat generations in friction stir welding
	17.00-17.20	E. Ramkumar	Effect of sliding in thermo elastic instability of disc brakes
	17.20-17.40	M. Kirchner	Multi-scale investigation of external loaded systems with variable collision velocity
17.40	End of working day		
18.15	Guided tour at Herrenhäuser Gardens of Hannover		
19.30	Welcome reception in the restaurant “Schloßküche”		

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Thursday 16 June 2011			
8.30	Keynote lecture # 3: P. Alart, Substructuring strategies for granular systems		
9.00	**Session #5**		
	09.00-09.20	V. Visseq	Influence of domain decomposition method on the solution of a simple granular test via the N.S.C.D.
	09.20-09.40	J. Rojek	Contact analysis in the discrete element method – modelling and computational aspects
	09.40-10.00	B. Avci	Numerical simulation of fluid-particle interaction problems
10.00	Coffee break		
10.30	**Session #6**		
	10.30-10.50	Ch. Wager	Contact modelling for a hybrid multi-body simulation of a mechanical press cutting high-strength steels
	10.50-11.10	M. Paggi	Effective elastic properties of heterogeneous materials with imperfect finite thickness interfaces
	11.10-11.30	J. M. Urquiza	The penalty method for ideal contact boundary conditions
	11.30-11.50	M. Hammer	Numerical experiments on averaged normal fields
	11.50-12.10	T. Doca	Contact patch test applied to non-linear materials
	12.10-12.30	D. Kammer	Numerical aspects of rate-and-state friction laws
12.30	Lunch		
13.30	Keynote lecture # 4: B.Wohlmuth, Stable space and time discretizations for contact problems		
14.00	**Session #7**		
	14.00-14.20	M. Gitterle	Dual mortar and semi-smooth newton approaches for finite deformation frictional and thermo-mechanical contact problems
	14.20-14.40	A. Popp	Mortar methods with dual lagrange multipliers for 3D finite deformation contact and multiphysics simulations
	14.40-15.00	Th. Cichosz	Algorithmic aspects of dual mortar contact formulations in dynamics
	15.00-15.20	F. Kheris	A node to node remeshing technique for enhanced contact analysis
	15.20-15.40	S. Fujino	Preconditioned linear solvers for nonsymmetric matrix which stems from earthquake response analysis of dam
15.40	Coffee break		
16.00	**Session #8**		
	16.00-16.20	M. Kardani	Application of h-adaptive FE method for analysis of contact problems in geomechanics
	16.20-16.40	H. Kleemann	Coal-oriented error control for multibody contact problems
	16.40-17.00	A. Rademacher	A space-time adaptive finite element method for dynamic contact problems
	17.00-17.20	C. Klapproth	Adaptive numerical integration of dynamical contact problems
	17.20-17.40	A. Suwannachit	Stabilized numerical solution for transient dynamic impact of inelastic solids with rough surfaces: application with rolling contact analysis
	17.40-18.00	D. T. Nguyen	Effect of differentiability of surface representations used in two-dimensional contact elements
18.00	End of working day		
20.00	Banquet at restaurant “Gartensaal” in the Hannover city hall		

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Friday 17 June 2011			
8.30	Keynote lecture # 5: J. Korelc, Automation of finite element formulations for contact problems		
9.00	**Session #9**		
	09.00-09.20	F. Maceri	Unilateral behavior of tensegrity structures: an algorithm for rigidity and pre-stressability evaluation
	09.20-09.40	S.S. Gautam	Numerical study of temporal integration schemes for dynamic adhesion problems
	09.40-10.00	A. Bandeira	Numerical simulation of impact problems under large 3D elastoplastic deformation
	10.00-10.20	N. Aouni	On the effect of negative poisson's ratio on the contact properties
10.20	Coffee break		
10.40	**Session #10**		
	10.40-11.00	A. Konyukhov	Contact between curves and rigid surfaces. Theory and verification
	11.00-11.20	A. Metzger	Finite-element-implementation for the Euler-Eytelwein-Problem and further use in FE-simulation of common nautical knots
	11.20-11.40	D. Durville	Modelling of contact and self-contact interactions in fibre assemblies: application to the tightening of knots
	11.40-12.00	P. Litewka	Enhanced beam-to-beam contact element for almost parallel beams
	12.00-12.20	J. Lengiewicz	Continuum formulation and finite element modelling of finite wear
	12.20-12.40	A. Tkachuk	Buckling under contact constraints as a source of scatter in car crash simulations
12.40	Lunch		
13.30	**Session #11**		
	13.30-13.50	K. Willner	A fully plastic halfspace formulation for the contact of rough surfaces
	13.50-14.10	M. Franke	Energy momentum scheme for three-dimensional large deformation contact using the NTS-method
	14.10-14.30	R. Izi	Covariant description for contact problems with large load-steps
	14.30-14.50	V. Janovsky	Continuation of the static contact problem with coulomb friction
	14.50-15.10	Z. Chen	Numerical investigation of nanoindentation of viscoelastic polymer layers with a rigid spherical indenter
	15.10-15.30	R. Escribano	Roughness modeling and texture transfer on skin pass process
	15.30-15.50	A. Sanz	Modelling of contact stresses in tapered roller bearings
	15.50-16.00	Closure	
16.00	End of conference		

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