IV. International Conference on Computational Contact Mechanics

27-29 May 2015, Hannover, Germany

ICCCM15 final program

Tuesday 26 May 2015 – early registration from 5 – 7 pm – at conference reception desk

Wednesday 27 May 2015						
08.00	Registratio	Registration				
09.00	Opening	Opening				
09.20	Keynote le	Keynote lecture: Jean-Francois Molinari: Contact Across Scales				
09.50	Session #1	Session #1				
	09.50-10.10	M. Paggi	An anisotropic large displacement cohesive zone model for fibrillary and crazing interfaces			
	10.10-10.30	A.B. Harish	Abrasive wear: Towards a multiscale approach			
	10.30-10.50	I. Páczelt	Analysis of steady wear processes for periodic sliding and loading			
10.50	Coffee break					
11.10	Session #2					
	11.10-11.30	A. Al-Qudsi	Effect of finite deformations on the computation of rubber friction			
	11.30-11.50	P. Wagner	Thermomechanical multiscale FEM approach for sliding elastomers on rough surfaces			
	11.50-12.10	G. A. Drosopoulos	A multi-scale approach involving delamination, unilateral contact and the XFEM method for the study of heterogeneous materials			
	12.10-12.30	G. E. Stavroulakis	A note on convergence in multi-scale analysis with unilateral contact in the microscale			
12.30	Lunch		·			
13.30	Keynote le	Keynote lecture: İlker Temizer: Hierarchical NURBS in Frictionless Contact				
14.00	Session #3	Session #3				
	14.00-14.20	M. Dittmann	Isogeometric analysis and hierarchical refinement for thermomechanical contact problems			
	14.20-14.40	L. De Lorenzis	Isogeometric collocation for large deformation contact			
	14.40-15.00	M. E. Matzen	Isogeometric modelling and discretization of contact problems			
	15.00-15.20	R. Dimitri	T-spline-based isogeometric treatment of mixed-mode debonding			
	15.20-15.40	J. Kopačka	Contact-impact treatment based on the bipenalty technique in explicit transient dynamis using isogeometric analysis with NURBS			
15.40	Coffee brea	Coffee break				
16.00	Session #4					
	16.00-16.20	N. Nguyen-Thanh	Isogeometric contact analysis using a third medium			
	16.20-16.40	A. Schwarz	Remarks and applications for contact simulations using a third medium			
	16.40-17.00	R. Buchmann	Precise contact resolution for asynchronous variational integration			
	17.00-17.20	K. Inagaki	An interior point method for large deformation contact problems			
18.30	Boot tour on river Ihme starting from pier "Glocksee"					

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Thursday 28 May 2015						
8.30	Keynote le	Keynote lecture: Peter Eberhard: Smoothed Particle Hydrodynamics with Adaptive Discretization				
9.00	Session #5	Session #5				
	09.00-09.20	S. Stühler	A contact algorithm for deformable tetrahedra			
	09.20-09.40	F. Gholami	A fast implementation of the box friction model for multi rigid body dynamics			
	09.40-10.00	S. Tschigg	Evaluation of local deformation and stresses in impact simulations using reduced			
			elastic multibody systems			
10.00	Coffee brea	ak				
10.30	Session #6					
	10.30-10.50	K. Krabbenhoft	A formulation linking non-smooth contact dynamics and the discrete element			
			method			
	10.50-11.10	L. Pospíšil	Active-set based quadratic programming algorithm for solving optimization			
			problems arising in granular dynamics simulations			
	11.10-11.30	M. Santasusana	Combined DE/FE method for the simulation of particle-solid contact using a			
			Cluster-DEM approach			
	11.30-11.50	V. Magnanimo	A contact model for sticking of adhesive mesoscopic particles			
	11.50-12.10	J. Rojek	Viscoelastic cohesive contact formulation for discrete element model of powder			
	12 10 12 20	A Eulitz	Sincering Discrete alament modelling of context intensity in drag finishing processes using			
	12.10-12.50	A. Eulitz	spherical media			
12.30	Lunch					
13.30	Keynote le	Keynote lecture: Alexander Popp: Mortar Finite Element Methods for Computational Contact Mechanics				
14.00	Session #7	Session #7				
	14.00-14.20	M. Bischoff	Alternative cell partition for mortar-based contact with applications to solids and solid shells			
	14.20-14.40	M. Hiermeier	A robust augmented Lagrangian mortar-type formulation for finite deformation contact problems			
	14.40-15.00	M. Franke	Coupled finite deformation phase-field approach to fracture with mortar contact analysis			
	15.00-15.20	T.X. Duong	An unbiased mortar method for contact computations			
	15.20-15.40	J.M. Navarro-Jiménez	A stabilized method to solve contact problems using Cartesian grids			
15.40	Coffee brea	ak				
16.00	Session #8					
	16.00-16.20	R.A. Sauer	Contact algorithms for liquid droplets			
	16.20-16.40	V. H. Nguyen	Abrasion function for tire tread wear			
	16.40-17.00	R. Beyer	Homogenized rough contact interaction of thermo-visco-elastic solids			
	17.00-17.20	V.A. Yastrebov	Leakage through the contact interface between elastic solids with random rough surfaces			
	17.20-17.40	E. Sacco	Computational homogenization of composites subjected to damage, fracture and unilateral contact			
	17.40-18.00	A.P.C. Dias	Computational analysis of contact mechanics applying a high-order mortar-based element			
20.00	Banquet at	restaurant "Hannover Yachtclub'	at western bank of lake Maschsee			

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Friday 29 May 2015						
8.30	Keynote le	Keynote lecture: Zdeněk Dostál: Scalable Massively Parallel Algorithms for Contact Problems				
9.00	Session #9	n #9				
	09.00-09.20	A. Rademacher	Model adaptivity for frictional contact problems			
	09.20-9.40	M. Walloth	Adaptive finite element discretization methods for the numerical simulation of static and dynamic contact problems			
	9.40-10.00	B. Blockmans	Efficient solution of dynamic gear contact problems using a novel parametric model order reduction technique			
	10.00-10.20	S. Pozzi	A new reduced basis approach for parametrized contact problems in elasticity			
10.20	Coffee break					
10.40	Session #1	on #10				
	10.40-11.00	P. Otto	Time integration schemes for normal impact with smoothing			
	11.00-11.20	A. Chernov	Uncertainty quantification with the Multilevel Monte-Carlo method			
	11.20-11.40	R. L. Gates	Investigation of stochastic multi-scale Monte-Carlo Methods for the contact of tire tread rubber with rough road surfaces			
	11.40-12.00	D. Comingio	Contact mechanics of layered rough solids			
	12.00-12.20	M. L. Raffa	Normal and tangential stiffness of rough surfaces in contact via an interface model			
	12.20-12.40	P. Dziewiecki	Verification of a contact layer element for soil-structure interactions within Abaqus software environment			
12.40	Lunch	Lunch				
13.30	Session #1	Session #11				
	13.30-13.50	A. Konyukhov	Efficient contact formulations in covariant form			
	13.50-14.10	P. Wriggers	Contact between beams using a surface-to-surface formulation			
	14.10-14.30	C. Meier	A finite element approach for contact interaction of thin beams with arbitrary orientation			
	14.30-14.50	C. Gürbüz	Offshore drilling simulation using a beam to surface contact formulation			
	14.50-15.10	A. Callejo	Finite element and finite segment methods with contact: an approach to directional drilling simulation			
	15.10-15.15	Closure				
15.15	End of conference					