

Pre-nominated Session SM1

Computational solid mechanics

Co-Chair(s): **T. Belytschko (USA)**
 P. Wriggers (Germany)

Paper ID	Title	Authors
SM1S_10270	Elastic - Plastic Large Deformation Analysis of 2D Frame Structure	Chung - Yue Wang, Ren - Zuo Wang, Long - Chyuan Kang, Edward C. Ting
SM1S_10274	Multiscale Analysis of Scattered Elastic Waves Based on the Lippmann - Schwinger Equation	Terumi Touhei
SM1L_10423	Model Updating a Multicriteria Optimization Process in Mechanics	Hans H. Muller-Slany
SM1L_10559	Experiment and Quasicontinuum Simulation of Nanoindentation of Single Crystal Copper	Yuan Lin, Shan Debin, Guo Bin
SM1L_10665	A BEM Solution to Transverse Shear Loading of Beams	Evangelos J. Sapountzakis, Vasilios G. Mokos
SM1L_10728	Mechanical Features of Piano Hammer Felt	Anatoli Stulov
SM1S_10829	A Dual Particle Computational Method for Continua	L.D. Libersky, P.W. Randles
SM1L_11154	Mesh Optimization for the Quasicontinuum Method: A Generalization of VALE	J. Knap, J. Marian, M. Ortiz
SM1S_11193	Derivation of the Higher - Order Stiffness Matrix of a Space Frame Element for Geometric Nonlinear Analysis of Structures	Jiann - Tsair Chang, I-Dang Huang
SM1S_11202	The Method of Solving of Non - Stationary Coupled Problems of the Theory Thermal - Plasticity for the Rotation Shells	Pavlo A. Steblyanko
SM1L_11211	A New Approach for the FE Modelling of Cohesive Cracks	Julia Mergheim, Ellen Kuhl, Paul Steinmann
SM1S_11291	Effective Solution for Finite Element Problems with Nonlinear Constraints	Stanislaw A. Lukasiewicz, Hassan M. Hojjati

SM1L_11298	Lingopti Project: Semi - Continuous Casting Process of Copper - Nickel Alloys	Etienne Pecquet, Ralf Volles, Jacqueline Lecomte - Beckers, Anne Marie Habraken
SM1S_11334	Two Scale Finite Element Method	George Mejak
SM1S_11389	Problems of Application of Hierarchical Modelling, Displacement FEM and a Posteriori Residual Error Estimation to Static and Dynamic Adaptive Analysis of Complex Structures	Grzegorz Zboinski, Maciej Jasinski
SM1S_11482	Statics And Kinematics of Symmetric Swelling Viruses	Florian Kovacs, Tibor Tarnai, Simon D. Guest, Patrick W. Fowler
SM1S_11580	A Numerical Approach for Large - Scale Computation CEM	Jixin Yang, Cheng Wang, Chengwu Shen
SM1L_11720	Some Investigations on FM Bem in Solid Mechanics	Zhenhan Yao, Haitao Wang, Pengbo Wang
SM1L_11769	Radial - Type Approximation Technique for a Space - Time Multiscale Computational Strategy	Anthony Nouy, Pierre Ladeveze
SM1L_11797	An Energy Conserving Scheme for Time Dependent Problems Using the Extended Finite Element Method	J. Rethore, A. Gravouil, A. Combescure
SM1L_11817	Development of a Novel 'Crack' Finite Element for Propagation Simulation	Young-Sam Cho, Sukky Jun, Seyoung Im
SM1L_12054	Modelling of Static and Dynamic Processes of Nanoparticles Interaction	Alexander V. Vakhrouchev
SM1L_12101	Singularities of the Four - Sided Antiprism Ring	Andras Lengyel
SM1L_12115	Analysis of Evolving Deformation Microstructures in Instable Inelastic Solids Based on Energy Relaxation Methods	Ercan Guerses, Christian Miehe
SM1L_12131	Microstructural Behaviour of Solder Joints	Rene L. J. M. Ubachs, Piet J. G. Schreurs, Marc G. D. Geers

SM1L_12167	Molecular Mechanics Simulations of Carbon Nanostructures Using Multi-Scale Boundary Conditions	Sergey N. Medyanik, Eduard G. Karpov, Wing Kam Liu
SM1L_12177	Multiscale Buckling Analyses of Corrugated Fiberboard	Hirohisa Noguchi, Nobutada Ohno, Dai Okumura
SM1L_12237	Modified Error in Constitutive Relation and Its Application to Dynamic Tests with Corrupted Boundary Conditions	Pierre Feissel, Olivier Allix
SM1L_12310	Geometry Based Rational Enrichment Functions for Triangular Plane Elasticity Element	Juha Makipelto
SM1S_12340	Solving of Indirect Problems Using Trefftz Method	Marek S. Karas
SM1S_12351	Tensor Invariants and Mechanisms of Transition to Chaos in Nonholonomic Dynamical Systems	Alexey V. Borisov, Ivan S. Mamaev
SM1S_12359	Analysis of a Structural Detail Using a Two - Scale Approach	M. Cloirec, N. Moes, P. Cartraud
SM1L_12441	Adaptive Discontinuous Galerkin Method for Elastodynamics on Unstructured Spacetime Grids	Reza Abedi, Shuo-Heng Chung, Yong Fan, Shripad Thite, Jeff Erickson, Robert B. Haber
SM1L_12455	Continuum Mechanics and Carbon Nanotubes	Marino Arroyo
SM1L_12458	Toward Convergence in Initially Rigid Cohesive Fracture Models	Chin-Hang Sam, Katerina Papoulia, Pritam Ganguly
SM1L_12534	Computational Homogenisation of Microheterogeneous Materials Including Decohesion at Finite Strains	Stefan Loehnert, Peter Wriggers
SM1L_12562	The Load Cases in Numerical Model of Pelvic Bone with Artificial Acetabulum	A. John, P. Orantek, J. J. Telega
SM1S_12579	Shakedown Safety Criterion in Reliability Analysis	Andrzej Siemaszko
SM1S_12584	A New Finite Element Formulation Based on the Theory of a Cosserat Point	E. F. I. Boerner, S. Loehnert, M. B. Rubin, P. Wriggers
SM1S_12607	Arc - Length Method for Explicit Dynamic Relaxation	Ilson P. Pasqualino

SM1L_12723	Modelling of Non - Uniform Deformation of Metals with Dislocation Cell Structure	E. M. Viatkina, W. A. M. Brekelmans, M. G. D. Geers
SM1S_12727	The Numerical Homogenization of the Concrete Behavior	Frederic Grondin, Helene Dumontet, Abdelwahed Ben Hamida, Ghassan Mounajed, Hocine Boussa
SM1L_12737	Discrete Dislocation Calculations of the Stored Energy of Cold Work	A. A. Benzerga, Yves Brechet, Alan Needleman, Erik van der Giessen
SM1S_12844	Deformation Analysis of Inflated Cylindrical Membrane of Composite Material with Rubber Matrix Reinforced by Cords	Tran Huu Nam, Bohdana Marvalova
SM1L_12845	Dynamic Analysis of Gradient Elastic Solids by BEM	Demosthenes Polyzos, Katerina G. Tsepoura, Dimitri E. Beskos
SM1L_12901	Variable - Order Singular Boundary Element for Calculation of Three - Dimensional Stress Intensity Factors	Kian - Meng Lim, Wei Zhou, Andrew A. O. Tay
SM1L_12924	Application of the Material Force Method to Structural Optimization	Swantje Bargmann, Ellen Kuhl, Harm Askes, Paul Steinmann