GAMM2025

Tuesday 8 April 2025

S04: Structural mechanics: S04.01 - Room 1 (08:30 - 10:30)

-Conveners: Roger Sauer; Josef Kiendl

time	[id] title	presenter
08:30	[59] Sliding contact of two flexible rods: the role of configurational forces	VETYUKOV, Yury
09:10	[60] A Finite Swelling Beam Model with Axial and Radial Diffusion	ALZATE COBO, Juan C.
09:30	[61] Twisted Wire Strands under Coupled Bending and Torsion	HAWWASH, Muhannad
09:50	[62] Finite element modal analysis of moving bandsaw blades using incremental rod theory with consideration of the pre-stress distribution in the cross section	SCHEIDL, Jakob
10:10	[63] The effect of boundary rotations and kinematic imperfections on clamped column buckling	HEDVARD, Michelle

S04: Structural mechanics: S04.02 - Room 1 (16:30 - 18:30)

-Conveners: Roger Sauer; Josef Kiendl

time	[id] title	presenter
16:30	[64] A novel mixed-hybrid, higher-order accurate formulation for Kirchhoff–Love shells	NEUMEYER, Jonas
16:50	[65] Material reconstruction of heterogeneous isogeometric Kirchhoff-Love shells under various load conditions	ŁAZORCZYK, Bartłomiej
17:10	[66] Be negative: topology optimization of an existing FE-Model by subtracting the thickness of a shell	BERENDES, Philipp
17:30	[67] A polygonal Reissner-Mindlin plate formulation based on the scaled boundary finite element method considering locking effects	HELLERS, Anna
17:50	[68] The role of fiber orientation in the analysis and simulation of toroidal hoses under internal pressure	HOESCH, Quirin
18:10	[69] An efficient geometrically-exact nonlinear shell formulation based on Rodrigues parameters	SOUSA, Cinthia

Wednesday 9 April 2025

S04: Structural mechanics: S04.03 - Room 1 (08:30 - 10:10)

-Conveners: Roger Sauer; Bartłomiej Łazorczyk

time	[id] title	presenter
08:30	[70] Technical fabrics mechanical properties change as a reason of textile roofs failures	KŁOSOWSKI, Paweł
09:10	[71] Experimental Determination of a Load Approach FE-Method for Reducing the Formwork Support Time of Reinforced Concrete Ceilings	MÜLLNER, Herbert W.
09:30	[72] Experimental and Numerical Analysis of the Impact of Perforation bands in the Facing on the Behavior of Sandwich Plates	CHUDA-KOWALSKA, Monika
09:50	[73] Numerical and Experimental Analysis of Lightweight Bar-Membrane Joints	ZMUDA TRZEBIATOWSKI, Marcin Adam

S04: Structural mechanics: S04.04 - Room 1 (16:30 - 18:30)

-Conveners: Roger Sauer; Josef Kiendl

time	[id] title	presenter
16:30	[74] An efficient Ritz-Method for post-buckling analysis of composite plates with bending-twisting coupling	DILLEN, Sebastian Dominik
16:50	[75] A stationary predictor corrector method for the simulation of elastic-plastic bending of axially moving plates with non-material finite elements	RAMSAUER, Stefan
17:10	[76] A variationally consistent membrane wrinkling model based on spectral decomposition of the strain tensor	KIENDL, Josef
17:30	[77] Approximate stability analysis of omega-stringer stiffened composite panels	EL YAAKOUBI-MESBAH, Cherine
17:50	[78] Deformation and Damage in Three-Layered Plates with Auxetic Core at Static and Impact Loading	BRESLAVSKY, Dmytro
18:10	[79] Statistical evaluation of the influence of geometric and technological variables on the strength parameters of sandwich panels	POZORSKA, Jolanta

Thursday 10 April 2025

S04: Structural mechanics: S04.05 - Room 1 (08:30 - 10:30)

-Conveners: Josef Kiendl; Jakob Scheidl

time	[id] title	presenter
08:30	[80] Dimension reduction in elasticity	KIENZLER, Reinhold
09:10	[81] Asymptotically exact theory of functionally graded elastic beams	CHAU LE, Khanh
09:30	[82] Numerical and analytical study of elastic parameters in linearized micropolar elasticity	SCHEK, Lucca
09:50	[83] The catenary line: numerical aspects and solutions for special boundary conditions	BEITELSCHMIDT, Michael
10:10	[84] Development of space-fractional finite element for scale-sensitive truss structures	STEMPIN, Paulina

S04: Structural mechanics: S04.06 - Room 1 (14:00 - 16:00)

-Conveners: Yury Vetyukov; Josef Kiendl

time	[id] title	presenter
14:00	[85] Experimental investigations on mechanics based additively manufactured stayed lattice structures	OU, Yating
14:20	[87] Modeling the Influence of Temperature for Extrusion-Based 3D Concrete Printing – from Material to Structural Stability	ROBENS-RADERMACHER, Annika
14:40	[88] Numerical Investigation of Laser Path on Residual Stresses in the Laser Powder Bed Fusion Process	PUTHOOR, Alfred Jose
15:00	[89] Structural detailing of material extrusion additively manufactured 2D metamaterials with rigid inclusions	DÖNITZ, Antonia
15:20	[90] Numerical modelling of thin-walled plate-based lattices and TPMS structures for lightweight engineering applications	MILENKOVSKI, Nikola
15:40	[91] Numerical Modelling of Additive Manufacturing in Construction	HÜRKAMP, André

S04: Structural mechanics: S04.07 - Room 7 (14:00 - 16:00)

-Conveners: Roger Sauer; Bartłomiej Łazorczyk

time	[id] title	presenter
14:00	[92] Advancing the Simulation of Non-Linear Elastodynamics with Lattice Boltzmann Methods	MÜLLER, Henning
14:20	[93] Reduced integration-based stabilization for virtual elements	PACOLLI, Njomza
14:40	[94] A comparative study of polygonal element formulations for linear elasticity	PASUPULETI, Ajay Kumar
15:00	[95] Comparison of Particle finite element method and Finite element method for nonlinear material behaviour in simple test cases	KADAM, Paras
15:20	[96] Reissner-Mindlin plate theory by the equilibrium-based FEM	ŚWIĄTKIEWICZ, Paulina
15:40	[97] Estimation of Discrete Model Parameters for Float Glass Panels Using the Rigid Finite Element Method	ABRAMOWICZ, Małgorzata

S04: Structural mechanics: S04.08 - Room 1 (16:30 - 18:30)

-Conveners: Josef Kiendl; Yury Vetyukov

time	[id] title	presenter
16:30	[98] Geometrically exact planar beam dynamics: Port-Hamiltonian modeling and structure-preserving discretization	KINON, Philipp L.
16:50	[99] A novel approach for mass lumping leveraging the spectral decomposition theorem	BÄTHGE, Fabian
17:10	[100] The Petrov-Galerkin Finite Element Method in the Context of Elastodynamic Problems	ZÄHRINGER, Felix
17:30	[101] Determining Shock Responses with Experimental Impulse-Based Substructuring	ZOBEL, Oliver Maximilian
17:50	[102] Comparison of the dynamics of a scaled trailer model and its real-size counterpart	VOLLTRAUER, Jan
18:10	[103] Filtering and Regularization techniques to mitigate noise in experimental Frequency Based Substructuring and Transfer Path Analysis	TRAINOTTI, Francesco

S04: Structural mechanics: S04.09 - Room 7 (16:30 - 18:30)

-Conveners: Roger Sauer; Paweł Kłosowski

time	[id] title	presenter
16:30	[104] Prestressing of concrete with iron-based shape memory alloy (Fe-SMA) short fibers: Experimental and numerical analysis	TABRIZIKAHOU, Alireza
16:50	[105] Modelling of Failure Mechanisms of CFS Members Restrained with bonded CFRP Textile	RZESZUT, Katarzyna
17:10	[106] Application of the Finite Difference Method (FDM) in bending, dynamic and stability calculations of variable cross-section beams	RAKOWSKI, Jerzy

Friday 11 April 2025

S04: Structural mechanics: S04.10 - Room 1 (08:30 - 10:30)

-Conveners: Christian Weißenfels; Josef Kiendl

time	[id] title	presenter
08:30	[108] From local interactions to global dynamics: a network-based view on structural vibrations	GEIER, Charlotte
08:50	[109] Graph-Based Truss Modeling of Corrugated Boards for Stress Analysis During Compression	FITAS, Ricardo
09:10	[110] Structural Optimization of Endoprosthetic Structures: Fatigue and Crack Propagation Testing for AI-Driven Design of Diatom-Based Lightweight Materials	EISENTRÄGER, Johanna
09:30	[111] A Convolutional Autoencoder Approach to Predict Shear Angle Deformations During Forming of Fiber-Reinforced Thermoplastics	MIDDELHOFF, Jan
09:50	[112] Automatic Model Identification and Calibration of Hyperelastic Materials based on Digital Image Correlation and Bayessian Regression	NGUYEN, Duc Hoang
10:10	[788] Remarks on stochastic analysis of space-fractional truss model	JABBAR, Noman

S04: Structural mechanics: S04.11 - Room 7 (08:30 - 10:30)

-Conveners: Marcin Adam Zmuda Trzebiatowski; Roger Sauer

time	[id] title	presenter
08:30	[113] How can the master-slave elimination for multi-point constraints be drastically accelerated?	BOUNGARD, Jonas
08:50	[114] Cantilever with electromagnetic actuator for time-periodic modal energy transfer	GORBACH, Tobias
09:10	[115] Using Transfer Path Analysis for Condition Monitoring of Magnetic Bearings	KREUTZ, Michael
09:30	[116] Real-Time Hybrid Substructuring for Testing Lower Limb Prostheses	KIST, Arian
09:50	[117] Equilibration-based a-posteriori error estimates for solid mechnics	BRODBECK, Maximilian
10:10	[118] Building Digital Twins for Engineering Applications (Material testing)	BUDIHALA, Gajendra Babu