Technical Program Changes

(as of July 26, 2024)

Session 1

MS	Time	Change
M0203	9:45	**Changed Session Chair:** Timothy Truster (*was Poh Leong Hien*)
M0203	10:45	**Removed:** A fully coupled thermos-mechanical localizing gradient damage model with a modified Mazars strain, HanWei Huang*
M0401	9:45	**Changed Session Chair:** Zakaria Chafia (*was Julien Yvonnet*)
M0504	10:45	**Removed:** Shape optimization of a geometrically-adaptable heart-valved conduit for pediatric applications, Chuan Luo*
M0504	10:45	**Moved:** Data-driven FSI simulation of ventricle and aorta integrating in-vivo and in-silico data, Martino Andrea Scarpolini* (*was MS 0504 TS 2 14:20*)
M0603	10:45	**Changed Presenting Author:** Emergent network morphology in soft materials: from biological to robotic swarms, Joe Spagarella* (*was Christian Peco**)
M0711	10:25	**Removed:** Improved phase-field-based lattice Boltzmann model for droplet evaporation and its parallel acceleration strategy, Xiaoyu Wu*
M0802	10:05	**Removed:** Energy absorption design and working mechanism for solid/liquid hybrid composite, Guoxin Cao*
M0821	10:25	**Removed:** Strongly stable dual-pairing upwind summation-by-parts finite difference schemes for the vector invariant shallow water equations, Justin Kin Jun Hew*
M1304	10:25	**Removed:** Analysis on nonlinear wheel-holding contact on nose landing gear dynamics characteristics during new towing-out mode of aircraft, Xiaoyun Li*
M1304	10:45	**Moved:** Minimization of vibrations in aeronautical wing spars under flutter situation, Larissa Santos* (*was MS 1304 TS 2 14:00*)
M1402	11:25	**Moved:** A computational fluid dynamics approach for metal hydride hydrogen storage, Mohammad S. Islam* (*was MS 0410 TS 12 17:30*)
M1809	10:45	**Removed:** A new elastodynamic homogenization theory of finite-size aperiodic media and its machine learning-based implementation, Jeong-He Lee*
M1821	10:45	**Changed Presenting Author:** Sequential design of plate-lattices, Paul Philipp Meyer* (*was Thomas Tancogne-Dejean*)

Session 2

MS	Time	Change
M0303	15:40	**Removed:** Stabilized virtual element method for the nonlinear convection-diffusion-reaction problem, Natarajan E*
M0401	14:00	**Removed:** A generalised deep learning model for homogenisation of multiphysics properties of composite materials, Sathiskumar Anasuya Ponnusami*
M0417	14:20	**Removed:** Curvature-controlled band alignment transition in 1D van der Waals heterostructures, Wenbin Li*
M0418	15:20	**Removed:** Quantitative numerical studies of lithium electroplating: viscoplastic infiltration and cracking in a solid electrolyte, Chen Lin*
M0504	14:00	**Changed Time:** Data-driven wall shear stress prediction from concentration using a surface transport model, Mahmoud Elhadidy* (*was MS 0504 TS 2 14:40*)
M0504	14:20	**Changed Time:** AI-enabled rapid image-based hemodynamic modeling and simulation, Yongqi Li* (*was MS 0504 TS 2 14:00*)
M0504	14:40	**Moved:** Neural network based surrogate modeling of cardiac function encoding geometric variability, Elena Martinez* (*was MS 0504 TS 5 14:20*)
M0504	15:00	**Changed Presenting Author/Time:** Data-driven wall shear stress prediction from concentration using a surface transport model, Amirhossein Arzani* (*was Mahmoud Elhadidy, MS 0504 TS 2 14:40*)
M0704	14:00	**Changed Session Chair**: Nobuyuki Oshima (*was Nakoto Yamamoto*)
M0816	15:20	**Removed:** Reduced-order modeling with and without linearized adjoints, Samuel Otto*
M0817	14:00	**Removed:** State space based mixed finite element method for laminated structures, Jiaqing Jiang*
M0817	14:20	**Removed:** A fast parallel solving method for thermal conduction-poisson equations based on Fast Fourier Transform, Jiang Zichao*
M0817	15:20	**Removed:** Summation-by-parts finite-difference operators for singular coordinate systems, Jonatan Werpers*
M0823	14:00	**Removed:** A machine learning framework for model calibration of mercury target simulation, Hoang Tran*
M0905	15:00	**Removed:** Probabilistic entropy and distance in homogenization of random multi-component composites, Marcin Kaminski*

M1009	15:00	**Removed:** An optimal implicit single-step single parameter time integration method for structural dynamics, Jie Zhang*
M1802	14:40	**Removed:** Deep machine learning for computer modelling of polymer degradation, Mingxuan Xia*

Session 3

M0203	16:30	**Removed:** Uncertainty quantification of the lifetime of self-healing thermal barrier coatings, Sergio Turteltaub*
M0203	16:50	**Removed:** Failure simulation of brittle materials under dynamic loads based on scaled boundary finite element method, Chengbin Du*
M0203	16:50	**Moved:** Analysis of the damage by thermal loading in a heterogeneous integration package, Dong-Kil Shin* (*was MS 0202 TS 11 14:40*)
M0203	17:30	**Removed:** Multiscale tip solution of hydraulic fracture within heterogeneous domain, Quan Wang*
M0704	16:30	**Changed Session Chair**: Takahiro Tsukahara (*was Mamoru Tanahashi*)
M0704	17:30	**Removed:** Heat transfer analysis of vortex-ring collisions with a vertical constant-temperature wall based on DNS, Bohua Huang*
M1009	15:50	**Removed:** Spline-based parameterization techniques for plane graphs, Jochen Hinz*
M1101	17:50	**Changed Time:** Efficient and accurate thermomechanical modeling of fused filament fabrication process, Satyajit Mojumder* (*was MS 1101 TS 7 10:45*)
M1102	17:10	**Removed:** Variational multiscale method for void evolution and transport in process modeling of polymer materials, Shoaib Gorata*
M1303	16:30	**Removed:** OpenQuad: A semi-automatic and scalable untrimming pipeline for trimmed NURBS, Xiaodong Wei*
M1303	16:30	**Changed Time:** Generalized parametric modeling and Isogeometric analysis of stented medical devices, Emily Johnson* (*was MS 1303 TS 3 17:50*)
M1604	17:10	**Removed:** Weakly enforced Dirichlet boundary condition in hemodynamic simulations, Xuanming Huang*
M1821	17:30	**Moved:** Micromechanical properties prediction of multiphase FRP composites using CNN approach, Ganapathi A. Sengodan* (*was MS 1821 TS 4 11:05*)
M1821	17:50	**Moved:** Data-driven-multiscale modeling of anisotropic damage from RVE fracture simulations, Julien Yvonnet* (*was MS 1821 TS 4 9:45*)
M1821	17:50	**Changed Presenting Author:** Data-driven-multiscale modeling of anisotropic damage from RVE fracture simulations, Souhail Chaouch* (*was Julien Yvonnet*)
M1823	17:50	**Moved:** A surrogate model for rapid solution of acoustic wave equation based on the boundary element method and Fourier neural operators, Wenjing Ye* (*was MS 1814 TS 13 10:05*)

Session 4

M0203	9:45	**Changed Session Chair:** Poh Leong Hien (*was Timothy Truster*)
M0401	10:25	**Removed:** Improved relocalization using regularization in computational homogenization of composite structure, Ali Ketata*
M0502	11:05	**Removed:** A numerical approach to model the role of mechanical strain in tumor growth, Mariana Carvalho*
M0816	11:05	**Removed:** Emulating ocean models to quantify uncertain responses to climate change, Hannah Lu*
M0827	9:45	**Session Added**
M0827	9:45	**Added:** Constrained parametric global optimization of a vibration problem with non-linear interfaces, Luc Laurent*
M0827	10:05	**Added:** Shape identification of scatterers using peridynamics and spline parameterization, Sehyeon Kang*
M0827	10:25	**Added:** Inverses design of seismic metamaterials based on machine learning, Wenzhi Xu*
M0838	10:45	**Removed:** Phase-field simulation of morphological change and stabilization of foam structure, Takuya Uehara*
M0910	11:05	**Moved:** Data-driven uncertainty quantification and prediction for models with high-dimensional dependent parameters, Xiaoshu Zeng* (*was MS 0903 TS 12 17:30*)
M1403	11:05	**Removed:** A stabilized framework for nonlinear topology optimization based on time-series moving morphable components method, Xueyan Hu*
M1601	10:05	**Removed:** How does friction affect sliding contact mechanics?, Nicola Menga*
M1604	11:05	**Moved:** Accurate and robust mapping algorithms for general multi-physics coupling, David Brown* (*was MS 1604 TS 6 16:50*)
M1705	9:45	**Removed Session Chair:** Jidong Zhao
M1807	9:45	**Removed:** Prediction of pressure field of incompressible flow using CNN, Masato Masuda*
M1813	9:45	**Removed:** Hybrid bi-level filtering methods for inverse problem and data assimilation in geophysical applications, Juntao Yang*

M1821	9:45	**Moved:** Combining PENN, equation discovery, and novel plasticity frameworks, Knut Andreas Meyer* (*was MS 1821 TS 3 17:30*)
M1821	11:05	**Moved:** Viscoelastic constitutive artificial neural networks (vCANNs) – a framework for data-driven anisotropic nonlinear finite viscoelasticity, Kian P. Abdolazizi* (*was Ms 1821 TS 3 17:50*)
M1829	11:05	**Removed:** A two-dimensional shock wave pattern recognition based on cluster analysis, Siyuan Chang*

Session 5

M0204	14:00	**Extended Time:** 14:00-14:40 (*was 14:00-14:20*)
M0209	14:00	**Removed:** Variational phase-field fracture with controlled nucleation, Christopher Larsen*
M0302	14:40	**Moved:** Development of a scalable high-performance particle solver with multi-resolution background cells preconditioning in GPU, Mitsuteru Asai* (*was MS 0835 TS 12 17:50*)
M0302	15:00	**Removed:** Application of solid shell material point method in extreme deformation of thin structures, Jiasheng Li*
M0401	15:20	**Removed:** Characterizing and modeling the wide strain rate range behavior of air-filled open-cell polymetric foam, Xinghao Wang*
M0404	14:20	**Removed:** Preconditioning the incompressible Stokes problem with variable viscosity, Chiara Giraudo*
M0404	15:20	**Removed:** Cahn-Hilliard-type diffusion coupled with elasticity, Shiva Reddy Kondakindi*
M0413	14:40	**Removed:** Modeling additively manufactured metallic microstructures for dynamic response, John Mitchell*
M0513	14:00	**Removed:** Analyzing the long term biomechanical response of orthokeratology by considering the anisotropic viscoelastic behavior of the cornea, Yifeng Li*
M0605	15:20	**Removed:** Exploring in-plane elastic properties and energy absorption of the bio-inspired glass sponge structures, Hassan Beigi Rizi*
M0704	15:00	**Removed:** Multiscale simulation of slot die coating using Darcy-Brinkman-Biot approach, Samuel Fagbemi*
M0816	14:00	**Changed Session Chair:** Matthew Zahr (*was Thomas Beckers*)
M0816	14:20	**Removed:** Dynamic mode decomposition of nonequilibrium Green's function for quantum many-body systems, Jia Yin*
M1201	14:00	**Removed:** A peridynamics model for the fracture in graphene sheets, Xiaoqiao He*
M1201	15:00	**Removed:** Atomistic simulations of diffusion process in materials subject to extreme conditions, Namsson Eom*
M1201	15:20	**Removed:** Assessing the impact on the glass transition temperature of bituminous binder from ultra-thin diamond nanothread, Yingying Pang*
M1405	14:40	**Removed**: Optimization of the specimen geometry for one-shot discovery of material models, Saeid Ghouli*
M1604	3:20	**Moved:** A sequential fluid structure interaction analysis of gas slam closure of flapper safety valves, Shengjun Yin* (*was MS 1604 TS 6 17:10*)
M1604	3:40	**Moved:** Accelerating fluid-structure interaction simulations with multi-time-step coupling of implicit-explicit scalar auxiliary variable time integration schemes, Sun-Beom Kwon* (*was MS 1604 TS 6 17:30*)
M1705	14:00	**Removed:** GeoTaichi: a Taichi-powered high-performance numerical package for modeling multiscale and multified problems in geotechnics, Ning Guo*
M1705	14:00	**Added:** A MPM Langrangian-Eulerian hydrocode for simulating buried explosions in transversely isotropic geomaterials, Mian Xiao*

Session 6

M0204	16:30	**Changed Session Chair:** Adrian Loghin (*was Ayhan Ince*)
M0204	17:50	**Removed:** A phase-field fracture model for brittle materials subjected to thermal shocks, Bo Zeng*
M0209	17:10	**Removed:** Rate-dependent phase-field cohesive theory: A unified model for dynamic crack branching via Eshelby energy-flux integral, WenLong Xu*
M0605	16:40	**Moved:** Prestressed nanoarchitected materials, Lucas Meza* (*was MS 0605 TS 6 17:10*)
M0605	17:10	**Changed Title:** Rethinking toughness: Using nanostructure to enhance the durability of additively manufactured materials, Lucas Mezas* (*was Prestressed nanoarchitected materials*)
M0605	17:30	**Removed:** Predicting the domain of linear elasticity of architected materials – focus on symmetries, Christelle Combescure*
M0710	16:50	**Removed:** An integrated Computational Fluid Dynamics (CFD) – Image Analysis (CFD-IA) to study the fluid flow regimes inside the human meniscal tissue, Daniel Bell*
M0710	18:10	**Changed Time:** Bubble-stabilised polytopal scheme for flows in fractured media with frictional contact, Jerome Droniou* (*was MS 1603 TS 12 16:30*)
M0807	16:50	**Removed:** Efficient approximation of nonlocal Allen-Cahn equations with the double-obstacle potential, Olena Burkovska*

M0816	16:30	**Moved:** Physics-constrained Gaussian process variational autoencoder, Thomas Beckers* (*was MS 0816 TS 7 9:45*)
M0816	17:10	**Moved:** Thermodynamics-informed latent space dynamics identification (tLaSD) for reduced-order modeling of dynamical systems, Jun Sur Park* (*was MS 0816 TS 7 10:25*)
M0816	17:30	**Removed:** WLaSDI: Weak-form Latent Space Dynamics Identification, April Tran*
M0909	15:20	**Removed:** Enabling probabilistic microweather predictions through deep generative modeling and operator learning, James Warner*
M1104	17:30	**Removed:** Research of the simulation accuracy of the ring radial rolling process, Andrzej Gontarz*
M1604	16:30	**Removed:** Towards robust immersed interface fluid-structure interaction algorithms for complex geometries, Ebrahim Kolahdouz*
M1604	16:30	**Session Eliminated**
M1813	17:30	**Moved:** Early forecasting of tsunami waveform with Bayesian scenario-superposition, Saneiki Fujita* (*was MS 1810 TS 14 15:00*)
M1819	16:50	**Changed Presenting Author:** Solving distributionally robust shape design problems by learning shape derivatives, Nicolas R, Gauger (*was Long Chen*)
M2001	17:10	**Removed:** Topology optimization design under stiffness, strength, and temperature constraints over a wide range of temperatures, Qingxuan Meng*

Session 7

M0202	10:45	**Removed:** A hierarchical quadrature element method for fracture parameters calculation and crack propagation simulation, Bo Liu*
M0204	9:45	**Extended Time:** 9:45-10:25 (*was 9:45-10:05*)
M0301	10:25	**Moved:** A comparative study of assumed-strain locking treatments for NURBS-based discretizations, Hugo Casquero* (*was MS 0301 TS 8 14:00*)
M0301	10:45	**Removed:** Assessing performance in shell analysis: a comparative study of Isogeometric and spectral element methods, Nima Azizi*
M0301	10:45	**Moved:** Mixed Isogeometric methods for Hodge-Laplace problems induced by second-order Hilbert complexes, Jeremias Arf* (*was MS 0301 TS 8 14:20*)
M0301	11:05	**Removed:** Fast space-time Isogeometric solvers for thermo-mechanical problems, Thomas Elguedj*
M0301	11:05	**Moved:** Isogeometric shape sensitivity analysis considering tangential divergence of non-smooth boundary in boundary approach, Keun-Hyeong Ko* (*was MS 0301 TS 8 14:40*)
M0403	9:45	**Removed:** Parameterized hyperelastic material modeling and multiscale topology optimization with physics-augmented neural network, Oliver Weeger*
M0403	9:45	**Moved:** Microstructure-informed data-driven modeling of mechanical behavior of cold-sprayed additively manufactured metal-ceramic composites, Saman Sayahlatifi* (*was MS 0403 TS 8 14:20*)
M0403	10:45	**Removed:** A new paradigm for multiphysics and non-linear mechanics modeling: integrated finite element neural networks (I-FENN), Mostafa Mobasher*
M0403	10:45	**Moved:** Microstructure-based finite element modeling of the strain-rate-dependent mechanical behavior of additively manufactured alumina ceramics: towards coupling multiscale modeling and data-driven approaches, Zahra Zaiemyekeh* (*was MS 0403 TS 8 14:00*)
M0403	11:05	**Moved:** Statistical-Physics-Informed Neural Netwroks (Stat-PINNs): coarse-graining dissipative evolution from particle dynamics, Shenglin Huang* (*was Ms 0403 TS 8 14:40*)
M0503	10:45	**Added Affiliation:** INSIGNEO Institute for in silico Medicine
M0816	10:25	**Moved:** Calibration of stochastic agent based models with Gaussian process surrogates and Stein variational inference, Connor Robertson* (*was MS 0816 TS 8 14:00*)
M0816	10:45	**Moved:** Physics-based manifold representation using diffusion model for computational multiscale structural problems, Hyejin Kim* (*was MS 0816 TS 8 14:20*)
M0816	11:05	**Moved:** Efficient derivative-free optimization of structures operating in coupled fluid-solid environments, Aditya Narkhede* (*was MS 0816 TS 8 14:40*)
M0816	11:25	**Moved:** On an efficient parametric PGD solver for damped elastodynamics optimization, Clément Vella* (*was MS 0816 TS 8 15:00*)
M0834	11:05	**Added:** Multiphysics-informed neural networks for non-destructive structural health monitoring in thermomechanical systems, Hong-Kyun Noh*
M0839	11:05	**Removed:** Characterizing cyclic inelastic behavior of angle members: a modified hysteretic model, Yiwen Li*
M1705	10:25	**Removed:** Stabilized unfitted finite element method for hydro-mechanical coupling with weak discontinuity, Zhijun Liu*
M1705	10:45	**Removed:** Seismic damage analysis of underground frame structures with Peridynamics, Wei Sun*

Session 8

M0204	14:00	**Session Added**

M0204	14:00	**Moved:** A fast method for computing arbitrary-order Stress Intensity Factor derivatives of 3D Finite Element simulations using Hypercomplex Automatic Differentiation, Harry Millwater* (*was MS 0204 TS 7 10:45*)
M0204	14:20	**Moved:** On elastic anisotropy of 3D printed acrylonitrile butadiene styrene, Joseph Marae Djouda* (*was MS 0204 TS 7 11:05*)
M0204	14:40	**Moved:** How to use statistical fractography and computational fracture mechanics to understand and model simply and efficiently in-service failures, Wassim Taleb* (*was MS 0204 TS 7 11:25*)
M0301	14:00	**Session Eliminated**
M0403	14:00	**Session Eliminated**
M0415	15:00	**Removed:** Assessment of flow-induced stresses in spiral weld pipes with bends, Shahab Ahmadizade*
M0503	14:00	**Added Session Chair**: Annchristin Andres
M0816	14:00	**Session Eliminated**
M0839	14:40	**Removed:** A feasible numerical model for an analysis of a pipe-lay on a rough seafloor, Pavel Trapper*
M0913	14:20	**Corrected Spelling:** Xun Huan (*was Xuan Huan*)
M0913	15:00	**Removed:** Sample efficient estimation of rare-event probabilities with Gaussian processes and normalizing flows, Ashwin Renganathan*
M1107	14:00	**Author Removed:** Anurag Bhattacharyya
M1107	15:20	**Author Added:** Jian Cao
M1310	14:40	**Removed:** Development of an extended chemical reactor neural network for modeling reactors with time-varying temperature, Tatsurou Yashiki*
M1608	14:40	**Removed:** An Updated Lagrangian particle Hydrodynamics (ULPH) – Non-ordinary State-based Peridynamics coupling approach for modeling fluid-structure interaction problems, Xin Lai*
M1608	15:20	**Removed:** Research on convergence and optimal parameters of intertial relaxed LBM for fluid and solid simulations, Guangcai Gong*
M1825	15:20	**Removed:** Real-time optimization of composites forming process, Siyuan Chen*
M1828	14:40	**Changed Title:** The physics-informed deep compositional operator, Hadi Meidani* (*was The physics-informed kernel operator*)

Session 10

M0201	10:05	**Moved:** Exploring plastic deformation behavior in nanotwinned metals under high quasi-hydrostatic pressure: a molecule dynamics insight, Ruoqi Dang* (*was MS 0201 TS 12 17:10*)
M0201	10:25	**Removed:** Convergence analysis and error estimation for mixed finite element method modeling flexoelectricity, Feng Deng*
M0201	10:25	**Moved:** Multiscale modeling strategy for accurately predicting fatigue life of steels, Kazuki Shibanuma* (*was MS 0201 TS 12 17:50*)
M0201	10:45	**Removed:** Constitutive modeling of the Mullins effect in filled rubber-like materials, Shawn Chester*
M0202	11:05	**Removed:** Spatial and temporal constraints of the cohesive modeling: a unified criterion for fluid-driven fracture, Hao Yu*
M0205	9:45	**Remove:** A stepwise physics-informed neural network for solving large deformation problems of hypoelastic materials, Lei Wang*
M0205	11:05	**Remove:** On irradiation-induced multi-scale deformation behaviors of accident tolerance multi-level composite fuels, Jing Zhang*
M0211	10:25	**Changed Time:** 3D multi-physics simulation of high temperature induced thermos-hygral fracture of concrete, Elia Nicolin* (*was MS 0211 TS 10 10:05*)
M0211	10:25	**Removed:** Numerical modeling of the dynamic failure in fiber-reinforced concrete, Rena C. Yu*
M0213	10:45	**Removed:** Phase-field modeling of fatigue based on micromechanics approach, Mina Sarem*
M0507	11:05	**Removed:** An integrated approach of embedding vasculature for analyzing in-vivo testing of the human brain, Yashasvi Verma*
M0702	10:25	**Changed Title:** A predictor-corrector second-order time-stepping scheme for modeling water flow and solute transport in unsaturated porous media, Nour-eddine Toutlini* (*was A predictor-corrector second-order time-stepping schemes for solving water flow and solute transport in unsaturated porous media*)
M0809	11:05	**Moved:** Enhancing low-order discontinuous Galerkin methods with neural ordinary differential equations, Shinhoo Kang* (*was MS 0819 TS 12 17:10*)
M0809	11:25	**Moved:** High-fidelity simulations of low frequency sound in real 3D applications, Ken Mattsson* (*was MS 0819 TS 12 17:30*)
M0830	9:45	**Removed:** Superposition-based concurrent multiscale approaches for porodynamics, Wei Sun*
M0830	10:25	**Changed Title:** On nonlocal continuum mechanics of finite strain bond-based Peridynamics, Xuan Hu* (*was Modeling material fracture using a novel peridynamic correspondence formulation based on non-spherical influence functions*)
M0835	10:25	**Removed:** Research on SPH model for predicting deposition efficiency of cold spray, Zhen Dai*
M1407	11:25	**Added:** A machine learning approach for topology optimization of self-supporting structures using graph neural networks, Alireza Tabarraei*
M1607	11:05	**Removed:** Coupling of an enriched beam model with a compressible flow model for fluid-structure interaction in pipelines, Mahshid Sharifi*

M1607	11:25	**Added:** Multiphysics model of hypervelocity impact induced plasma: simulation and experiment, Shafquat Isalm*

Session 11

M0205	14:20	**Removed:** Ordinary state-based peridynamic hygro-mechanical coupled model for moisture diffusion and curling analysis in soil desiccation, Xin Gu*
M0205	14:40	**Removed:** Modeling on the multi-field coupling delayed hydride cracking behavior of irradiated zirconium alloys, Guochen Ding*
M0307	15:40	**Removed:** Applications of mesh adaptivity and transfers for modeling fracture and failure, Michael Veilleux*
M0703	14:00	**Added Session Chair:** Chenfeng Li
M0703	14:40	**Removed:** Pore-scale study of multiphase flow patterns in layered porous media with fractures, Bo Li*
M0836	14:20	**Removed:** Multiscale modeling of defect kinetics in irradiated Zr-Sn-Nb alloys, Changqui Ji*
M1106	15:20	**Moved:** Melt pool temperature prediction using visible light camera and machine learning techniques in metal additive manufacturing, Mostafa Rahmani Dehaghani*
M1106	15:40	**Moved:** Modelling of solute trapping and non-equilibrium microstructure during rapid solidification of additive manufacturing, Chinnapat Panwisawas*
M1810	15:20	**Removed:** A distributed computing framework for model-free data-driven methods, Wei Yan*
M1812	15:00	**Removed:** Physics informed neural networks for predicting soft solid deformation, Bharat Tripathi*
M1822	14:00	**Changed Time:** Interference of Fokker-Planck equations for the dynamics of populations, Krishna Garikipati
M1822	14:20	**Changed Time:** FP-IRL: Fokker-Planck-based inverse reinforcement learning – a physics-constrained approach to Markov decision processes, Chengyang Huang*
M1822	15:00	**Removed:** Graph Calculus Neural Network for representation of physical systems, Siddhartha Srivastava*

Session 12

M0201	16:30	**Session Eliminated**
M0201	16:30	**Removed:** First-principles study on the structural and electronic properties of advanced two-dimensional materials, Yujia Tian*
M0201	16:50	**Removed:** Fracture study of single crystal silicon using atomistic simulations, Woo Kyun Kim*
M0201	17:30	**Removed:** A grand-potential based multi-phase-field model for simulating the evolution of intermetallic phases in Cr-coated Zry-4 alloys, Menghui Wang*
M0201	18:10	**Removed:** Temperature and composition dependent critical resolved shear stress of basal slip in Mg-Y alloy from large-scale molecular dynamics, Huicong Chen*
M0406	17:30	**Changed Presenting Author:** Parametric analysis and design for impact protection based on finite locally resonant metamaterial arrays, Willoughby Cheney* (*was Weidi Wang*)
M0420	16:30	**Removed:** Bi-directional fiber orientation design for manufacturing in fiber-reinforced composites, Chuan Luo*
M0703	16:30	**Added Session Chair:** Frederic Dias
M0819	16:30	**Session Eliminated**
M0819	16:30	**Removed:** High-order methods for hyperbolic systems with local evolution, Thomas Hagstrom*
M0835	17:10	**Removed:** Analysis of SPH algorithm for elastic-plastic deformation, Jiayi Wang*
M0835	17:30	**Moved:** Smoothed Particle Hydrodynamics simulation of landslides with discontinuities, Daniel Shigueo Morikawa* (*was MS 0302 TS 5 14:40*)
M0903	16:30	**Changed Presenting Author:** A physics-constrained polynomial chaos framework for data-driven modeling and uncertainty quantification, Michael Shields* (*was Himanshu Sharma*)
M0903	16:30	**Removed:** A physics-constrained polynomial chaos framework for data-driven modeling and uncertainty quantification, Himanshu Sharma*
M0903	17:50	**Removed:** A novel, consistency-based metric for probabilistic remaining useful life model selection, Pranav Karve*
M1106	16:30	**Session Eliminated**
M1106	16:50	**Removed:** Combining synchrotron x-ray diffraction and mechanistic modeling for studying melt pool dynamics during ceramics LPBF, Zhilang Zhang*
M1401	16:30	**Removed:** Topology optimization of trusses and frames accounting for stability and initial post-buckling response, Frederico Ferrari*
M1702	17:10	**Removed:** Transport of microcapsule in fractured media using coupled CFD-DEM methods, Pania Newell*
M1702	17:50	**Removed:** On the viability of salt caverns for massive storage of hydrogen by using numerical simulation, Jose Paris*

Session 13

M0206	10:25	**Removed:** An operator learning approach for britle fracture analysis, Somdatta Goswami*
M0206	10:25	**Moved:** Development, verification and validation of 3D FEA-based surrogate models for damage tolerance applications, Adrian Loghin* (*was MS 0206 TS 13 11:25*)
M0206	11:25	**Moved:** Progressive fracture pattern prediction fiber-reinforced composites using graph neural network, Zeping Chen*
M0309	11:05	**Removed:** An implicit-explicit time integration for dam-foundation interaction based on octree mesh using scaled boundary finite element method, Junqi Zhang*
M0501	10:05	**Removed:** Mechanics model and injury mechanism of blast-induced Traumatic Brain Injury, Zhibo Du*
M0604	9:45	**Removed:** Application of symplectic method in forced vibration of acoustic black hole beam, plate and cylindrical shell structures, Yongbin Ma*
M0707	9:45	**Changed Session Chair:** Zhiwei Peng (*was Xikai Jiang and Zhuang Sun*)
M0801	9:45	**Removed:** A general contact model for rough surfaces based on the incremental concept, Xuan-Ming Liang*
M0801	10:25	**Removed:** Elastoplastic impact of sphere on large plate, Qing Peng*
M0906	10:05	**Removed:** Uncertainty analysis in the presence of model-form errors, Ralph Smith*
M1011	9:45	**Changed Session Chair:** Alberto Luiz Serpa (*was Ricardo Tomás Ferreyra*)
M1011	10:25	**Removed:** Impact craters of the moon without signs of the matter melting and the matter emissions, Michael Shpekin*
M1011	10:45	**Removed:** Evolving dynamics for the analysis of complex craters, Ricardo Tomas Ferreyra*
M1011	10:45	**Moved:** Application of the Harmonic Balance Method to predict wave propagation in one-dimensional nonlinear metamaterial excited harmonically, Rangel Moura Barbosa* (*was MS 0602 TS 3 16:50*)
M1011	11:05	**Removed:** Coupled twin conical funnels or conical hoses: an internal process of dynamic flow distribution, Ricardo Tomas Ferreyra*
M1502	10:45	**Added**: HPC considerations for global km-scale earth system models, Karthik Kashinath*
M1814	9:45	**Removed:** Multi-physics field-driven inverse design and manufacturing framework for mechanical metamaterials accelerated by neural operators, Ziming Yan*
M1814	9:45	**Session Eliminated**
M1814	10:05	**Changed Presenting Author:** A surrogate model for rapid solution of acoustic wave equation based on the boundary element method and Fourier neural, Wenjing Ye* (*was Ruoyan Li*)

Session 14

M0206	14:00	**Removed:** Nonlinear multilevel and domain decomposition methods for phase-field fracture simulation, Alena Kopanicakova*
M0206	14:00	**Removed:** Adaptive alarm system for predictive maintenance of electric motors, Zhengyu Zhang*
M0206	14:20	**Moved:** Multiscale mesh-based graph neural networks with adaptive mesh refinement for phase field fracture problems, Roberto Perera* (*was MS 0206 TS 13 11:05*)
M0206	14:40	**Removed:** Research on fiber fracture damage pattern recognition of CMCs based on deep features of acoustic emission signal, Xuejiao Chen*
M0206	14:20	**Changed Time:** Progressive fracture pattern prediction in fiber-reinforced composites using graph neural network, Zeping Chen* (*was MS 0206 TS 14 15:00*)
M0304	14:20	**Removed:** Discontinuous finite cell method for problems in solid mechanics, Jamshid Parvizian*
M0808	14:00	**Removed:** Universal contact stiffness of axisymmetric indentations considering the effect of membrane tension on the surface, Weike Yuan*
M1810	15:20	**Removed:** Study on gas adsorption behavior in shale nanopores based on molecular kinetic theory and machine learning method, Mengcheng Huang*
M1815	14:20	**Removed:** Revealing microscopic dynamics: in-situ liquid-phase TEM for live observations of soft materials and quantitative analysis via deep learning, Xiaohui Song*
M1815	15:00	**Moved:** A data-driven method for mechanical properties prediction of material built by metal additive manufacturing, Fei Yu* (*was MS 1814 TS 13 10:25*)
M1815	15:30	**Removed:** Towards co-solving forward and inverse boundary value problems in solid mechanics using concurrent PINNs, Mostafa Sharifan*