

**Engineering Mechanics Institute Conference
and Probabilistic Mechanics & Reliability Conference**

May 25-28, 2021

MS 100: [General Submission](#)
Ioannis Kougoumtzoglou, Haim Waisman, Shiho Kawashima, Waiching Sun

EMI Minisymposia

MS 200: [The Link Between Composition, Structure, and Physical Properties of Materials](#)
Mohammad Javad Abdolhosseini Qomi, Konrad Krakowiak, Kemal Celik, Mathieu Bauchy, Enrico Masoero

MS 201: CANCELLED: Recent Advances in Uplifting Structures and Rocking Isolation
Mehrddad Aghagholizadeh, Nicos Makris

MS 202: [Advances in Experimental, Theoretical and Computational Fracture Mechanics](#)
Ange-therese Akono, Haim Waisman, Arghavan Loughalam, Arturo Montoya

MS 203: [Understanding Chemo-mechanics of Cementitious Materials at Lower Scales](#)
Mohammed Alnaggar, Emanuela Del Gado, Luca Sorelli, Gianluca Cusatis

MS 204: [Upscaling of Particle Scale Mechanics to Continuum Macroscale Phenomenology](#)
Kane Bennett, Duan Zhang, Anil Misra

MS 205: [Petroleum Geomechanics Problems](#)
Shengli Chen, Amin Mehrabian, Yanhui Han, Chao Liu, Younane Abousleiman

MS 206: [Computational Geomechanics – in Honor of the 90th Birthday of Professor Frank L. DiMaggio](#)
Jinhyun Choo, José Andrade, Ronaldo Borja, Qiushi Chen, Hoe Ling, Majid Manzari, SeonHong Na, Richard Regueiro, WaiChing Sun

MS 207: [Durable Infrastructure Materials Through Experimental and Computational Material Design](#)
Qingli Dai, Hao Wang

MS 208: [Microstructure and Mechanics of Low Calcium Cements](#)
Emanuela Del Gado, Roland J.-M. Pellenq, Jean Baptiste d’Espinose

MS 209: [3D Printing Technology for Construction: Controlling Microstructural Buildup and Rheology in Cementitious Binders](#)
Emanuela Del Gado, Shiho Kawashima, Scott Jones

MS 210: [Integration of Physics-based Models with Data for Identification, Monitoring, Estimation, and Uncertainty Quantification](#)
Hamed Ebrahimiyan, Hae Young Noh, Babak Moaveni, Yang Wang

MS 211: [Recent Advances in Fluid-Particle Coupling](#)
Usama El Shamy

- MS 212: [EMI's Objective Resilience Manual of Practice \(OR-MOP\)](#)
Mohammed Ettouney
- MS 213: [Machine Learning-based Computational Modeling for Civil Engineering Applications](#)
Alessandro Fascetti, Caglar Oskay
- MS 214: [Origami/Kirigami Inspired Structures and Metamaterials](#)
Evgueni Filipov, Sigrid Adriaenssens, John Brigham, Martin Walker
- MS 215: [Architected Materials](#)
Stavros Gaitanaros, Alireza Asadpoure, James Guest, Mazdak Tootkaboni, Lorenzo Valdevit, Pablo Zavattieri, Evgueni Filipov
- MS 216: [Robustness of Infrastructures](#)
Simos Gerasimidis, George Deodatis
- MS 217: [Characterization of Materials for Elevated Temperature Applications](#)
Thomas Gernay, Elie Hantouche
- MS 218: [Composites Manufacturing and 3D Printing: Advances in Modeling, Design, Fabrication, and Applications](#)
Elyas Goli
- MS 219: [Analysis and Prediction of Wind Effects on the Built Environment](#)
Catherine Gorle, Teng Wu, Marco Giometto
- MS 220: [Advances in Terramechanics](#)
James Hambleton, Dan Negrut, Daniel Goldman
- MS 221: [Mechanics and Physics of Granular Materials](#)
Mahdia Hattab, Payam Poorsolhjoui, Anil Misra, Jidong Zhao, Mourad Zeghal, Ryan Hurley, Anthony Rosato
- MS 222: [Meshfree, Peridynamic, and Particle Methods: Contemporary Methods and Applications](#)
Mike Hillman, J. S. Chen, John Foster, Sheng-Wei Chi, Pablo Seleson
- MS 223: [Advances in Computer Vision and Visualization for Structural Health Monitoring](#)
Mohammad Jahanshahi, David Lattanzi, Fernando Moreu
- MS 224: CANCELLED: Multi-functional Materials for Smart Cities**
Sung-hwan Jang, Seung-Hee Park, Sang-Hyeok Nam, Huiming Yin
- MS 225: [Inverse Problems – Theory and Applications](#)
Loukas Kallivokas, Ertugrul Taciroglu, Bojan Guzina
- MS 226: [Soil Dynamics and Wave Propagation in Geostructures](#)
Loukas Kallivokas, Ertugrul Taciroglu, Bojan Guzina

- MS 227: [Elastic Metamaterials, Phononic Crystals, Waves, and their Interactions](#)
Loukas Kallivokas, Bojan Guzina, Heedong Goh
- MS 228: [19th Symposium on Biological and Biologically Inspired Materials and Structures](#)
Dinesh Katti, Christian Hellmich
- MS 229: [Sixth Symposium on Molecular Scale Modeling and Experimentation](#)
Dinesh Katti, Sinan Keten, Nima Rahbar, Rouzbeh Shahsavari, Kalpana Katti, Wenjie Xia, Steve Cranford
- MS 230: [5th Mini-Symposium on 4M \(Modeling of Multiphysics-Multiscale-Multifunctional\) Engineering Materials and Structures](#)
Yong-rak Kim, Chung Song, Huiming Yin, Qiming Wang, Xiaoyu Song
- MS 231: [Advances in Functional Structural/Construction Materials and Materials for Energy Efficiency](#)
Jan Kosny, Jianqiang Wei
- MS 232: [Advances in the Mechanics of Superconducting Materials and Structures](#)
Sergey Kuznetsov, Konstantin Redkin, Alexey Radovitsnky
- MS 233: [Machine Learning and Big Data-based Structural Health Monitoring](#)
Jian Li, Hui Li, Billie F. Spencer, Jr., Yuequan Bao
- MS 234: [Modeling Mechanics of Subsurface Fractured Media](#)
Fushen Liu, Dakshina Valiveti, Peter Gordon, Martin-D Lacasse
- MS 235: CANCELLED: Metal Plasticity in Multiaxial Loading**
Li-wei Liu, Heidi Feigenbaum
- MS 236: [Mechanics of Wood and Wood Based Materials](#)
Markus Lukacevic, Peggi Clouston, Josef Fussl, Sanjay Arwade
- MS 237: [Advanced Engineering Concepts, Designs, and Technologies for Aerospace and Extraterrestrial Applications \(Sponsored by ASCE Aerospace Division\)](#)
Ramesh Malla, Robert Mueller, Kris Zacny, Hongyu (Nick) Zhou
- MS 238: [Advances and Applications of Elasticity within Applied Mechanics](#)
Euclides Mesquita, Sonia Mogilevskaya, John Brigham, Ney Dumont, Evgueni Filipov, Anil Wijeyewickrema
- MS 239: [Assessing Human-Infrastructure Interactions and their Performance](#)
Fernando Moreu, Haeyoung Noh, Ken Loh
- MS 240: [Safety Assessment of Aging Infrastructure: From Data to Decision](#)
Suparno Mukhopadhyay, Simos Gerasimidis, Adrian Brugger, Raimondo Betti
- MS 241: [Analysis of Heritage Structures: Tools and Methods for Assessing Unknowns in Historic Monuments and Structures](#)
Rebecca Napolitano, Linda Seymour, Branko Glisic, Admir Masic

- MS 242: [Coupled Processes in Porous Materials: Characterization and Modeling](#)
Pania Newell, D Nicolas Espinoza, Manolis Veveakis, Giuseppe Buscarnera, Jean-Michel Pereira
- MS 243: [Structural Health Monitoring of Dynamical Systems: Conventional and Contemporary Approaches](#)
Vikram Pakrashi, Basuraj Bhowmik
- MS 244: [Structural Identification and Damage Detection](#)
Costas Papadimitriou, Eleni Chatzi, Babak Moaveni
- MS 245: [Cementitious Materials: Experiments and Modeling Across the Scales](#)
Bernhard Pichler, Christian Hellmich, Gilles Pijaudier-Cabot, Günther-Meschke, Franz-Josef Ulm
- MS 246: [Innovative Experimental Analysis: A Symposium Commemorating Prof. Dr. Asadollah Esmaeily \(1958-2018\)](#)
Bernhard Pichler, Mija Hubler, Ali Ghahremaninezhad
- MS 247: [Multiscale Behavior of Damage and Failure Mechanics](#)
Leong Hien Poh, Lizhi Sun, Jiann-Wen Woody Ju, George Z. Voyiadjis, Glaucio H. Paulino
- MS 248: [Modeling and Characterization of Brittle and Quasibrittle Fracture](#)
Marco Salviato, Jialiang Le, Ravindra Duddu
- MS 249: [Multi-Physics Modeling of Dissipative Materials](#)
Maryam Shakiba
- MS 250: [Computational Structural Performance Assessment against Natural Hazards](#)
Petros Sideris, Mija Hubler, Maria Koliou, Andre Barbosa, Abbie Liel
- MS 251: [Computational Methods and Applications for Solid and Structural Mechanics](#)
Soheil Soghrati, Ravindra Duddu, Timothy Truster, Ertugul Taciroglu, Guglielmo Scovazzi, Xiang Zhang
- MS 252: [Recent Advances in Real-time Hybrid Simulation](#)
Wei Song, Richard Christenson
- MS 253: [Recent Advances in Unsaturated Poromechanics](#)
Xiaoyu Song, Ronaldo Borja, Marte Gutierrez, Ning Lu, Eduardo Alonso
- MS 254: CANCELLED: Machine Learning and Data Analytics for Infrastructure Integrity Assessment**
Hao Sun, Oral Buyukozturk, Ruiyang Zhang
- MS 255: [Physics Informed Machine Learning for Data-driven Modeling and Discovery of Complex Systems](#)
Hao Sun, Yang Liu, Jian-xun Wang
- MS 256: [Complex Dynamics and Vibration Control of Infrastructures Exposed to Single/Multiple Hazards](#)
Chao Sun, Mariantonieta Gutierrez Soto, Lin Chen, Sriram Narasimhan

- MS 257: CANCELLED:** Adaptive and Controllable Structures
Ann Sychterz, Landolf Rhode-Barbarigos
- MS 258: [Topology Optimization: from Algorithmic Developments to Applications](#)
Mazdak Tootkaboni, Alireza Asadpoure, James Guest
- MS 259: [Physics-Driven Learning in Structural Health Monitoring](#)
Filippo Ubertini, Simon Laflamme
- MS 260: [Mechanics of Multi-Functional Pavement Material and Structure](#)
Hao Wang, Jiaqi Chen
- MS 261: [Modeling Time-dependent Behavior and Deterioration of Concrete](#)
Roman Wan-Wendner, Mohammed Alnaggar, Jan Vorel, Giovanni Di Luzio, Gianluca Cusatis
- MS 262: [Innovations and Advances in Durability of Infrastructural Materials](#)
Jianqiang Wei
- MS 263: [Innovations and Advances in Passive, Active, and Semi-active Structural Control](#)
Nicholas Wierschem, P. Scott Harvey
- MS 264: [Emerging Advances in Wind Hazard Assessment and Mitigation](#)
Teng Wu, Yanlin Guo
- MS 265: [Integrated Computational Materials Engineering \(ICME\) Minisymposium](#)
Mohammadreza Yaghoobi, George Voyiadjis
- MS 266: [Structural Instabilities: From Failure to Function](#)
Stylios Yiatros, M. Ahmer Wadee, Rainer Groh, C.W. Lim
- MS 267: CANCELLED:** New Challenges in Instabilities of Shell Structures
Hamid Zahrouni, Frederic Bumbieler, Ali Limam
- MS 268: [Performance Assessment and Damage Modeling of Coastal Structures Subjected to Hazards](#)
Wei Zhang, Landolf Rhode-Barbarigos
- MS 269: [Cable Vibration, Mitigation and Monitoring](#)
Michael Haijun Zhou, Limin Sun, Shaohong Cheng
- MS 270: [Advances in Simulation of Stochastic Fields](#)
Michael Haijun Zhou, Haifeng Wang, Teng Wu, Michael Shields, George Deodatis
- MS 271: [Nonlinear Vibrations and Dynamics](#)
Marco Amabili
- MS 272: [Structural Deterioration Modeling and its Uncertainties](#)
Zhanhao Zhang, Yi Zhang, Yongtao Bai, You Dong, Kong Fah Tee
- MS 273: [Lightweight Materials for Sustainable and Resilient Infrastructures](#)
Fariborz Tehrani, Mohammad Ali Dastan Diznab, Mojtaba Ansari

PMC Minisymposia

- MS 300: [Recent Advances in Performance-Based Engineering for Single and Multiple Hazards](#)
Michele Barbato, Joel P. Conte
- MS 301: [Practical Applications and Value of Advanced Computational and Probabilistic Modelling in the Life-cycle of Structures](#)
Paolo Bocchini, Helder Sousa, Alfred Strauss
- MS 302: [Modeling Deterioration of Structures and Infrastructure](#)
Gaofeng Jia, Paolo Gardoni
- MS 303: [Characterizing Uncertainties in Response of Structures and Communities to Fire Hazard](#)
Negar Elhami Khorasani, Jenny Sideri, Hamed Ebrahimian
- MS 304: [Advances in Probabilistic Assessment to Evaluate Robustness and Resiliency of Civil Infrastructure](#)
Sara Khoshnevisan, Lei Wang
- MS 305: [Quantitative Resilience and Sustainability](#)
Arghavan Louhghalam, Mohammad Javad Abdolhosseini Qomi, Hadi Meidani, Mazdak Tootkaboni, Roger Ghanem, Franz-Josef Ulm
- MS 306: [Structural Health Monitoring and Uncertainty Quantification for Infrastructure Resilience and Sustainability](#)
Khalid Mosalam, Selim Gunay, Umberto Alibrandi
- MS 307: [Computational Decision Making under Uncertainty](#)
Kostas Papakonstantinou, Daniel Straub, Matteo Pozzi, Charalampos Andriotis
- MS 308: [Advances in Artificial Intelligence for Stochastic Analysis, Control and Optimization of Structures and Infrastructure Systems](#)
Kostas Papakonstantinou, Hadi Meidani, Arash Noshadravan, Vahid Keshavarzzadeh, Jamie Padgett
- MS 309: [Recent Advances in Stochastic Dynamics and Signal Processing Techniques](#)
Apostolos Psaros, Ioannis Kougioumtzoglou, Antonina Pirrotta, Athanasios Pantelous
- MS 310: [Surrogate Modeling for Uncertainty Quantification, Optimization, and Statistical Inference in Engineering Applications](#)
Abdollah Shafieezadeh, Gaofeng Jia
- MS 311: [Advances in Computational Methods for Uncertainty Quantification and Robust/Performance-based Design of Structures and Systems Exposed to Natural and Man-made Hazards](#)
Seymour Spence, Alexandros Taflanidis, Michael Shields
- MS 312: [Multiscale Analysis and Design of Random Heterogeneous Media](#)
George Stefanou, Sei-ichiro Sakata, Seyed Hamid Reza Sanei
- MS 313: [Advanced Analysis for Earthquake Engineering](#)
Kevin Wong, Ting Lin, Steven McCabe