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Advanced Materials

276. Nonlinear Variational Bounds based on Extended Hashin-Shtrikman Principles
Dr. Petr P. Prochazka
277. Roller Compacted Concrete Properties using High Percentage Fly Ash and High Silicafume
278. Numerical Investigation of Progressive Damage of 2D Triaxially Braided Composite in Tensile Test
Mr. Xuetao Li ; Dr. Wieslaw K. Binienda
279. Characterization of Particulate Reinforced Aluminum Reinforced Metal Matrix Composite
Mr. Chandra Seakher, M. Kasibhatla, Sr., Mr. R. Kali Prasad S. Krovvidi, Sr., Mr. Babu D. Puppala, Sr., Mr. Sudhakar I, M.S. ;Mr. Ravi Shankar P, B.S.
280. Fabrication and Validation of Corrugated Wire Mesh Laminate Model for Cancellous Bone
Mr. Jeongho Choi ; Dr. Krishna Shankar
281. Assessing Service Induced Mechanical Deterioration of Aircraft Composite Materials Using Deterioration-Induced Wave Propagation
Mr. Arnab Gupta ; Dr. John C. Duke, Jr.
282. The Drilling Induced Failure Modes in T800/924C Composite-Epoxy Laminate
Dr. Zaffar Mohammad, PhD.
283. Prediction of Environmental Degradation of Fibre Reinforced Plastics
Dr. Ratnam Paskaramoorthy, Mr. Etienne Ngoy ; Mr. Robert Reid
284. Shape optimization of composites for constrained minimum Lagrangian using homogenization
Dr. Petr P. Prochazka, Dr. Vladimir Dolezel ; Dr. Kamila Weiglova
285. A Local Thermodynamic Equilibrium Model of a Laser-Sustained Plasma in a Forced Argon Flow
Mr. Abdalla R. Nassar, Dr. Ravindra Akarapu, Dr. Judith A. Todd ; Dr. Stephen M. Copley
286. Processing and Manipulation of the Lunar Soils for Outpost Use
Dr. Akhter B. Hossain ; Dr. Mohammad S. Alam
287. Retrofitting Reinforced concrete Columns Using Advanced Composite Materials To Resist Earthquakes
Mr. Mohamed O. Hassan, M.A.
288. Prediction of Carbon Fiber Properties using Artificial Neural Networks
Mr. Varun Devaraj

Advances in Computational Fluid Dynamics

289. Comparison of Different Approaches to Specify Inlet Boundary Conditions for CFD Modeling in a CFB Riser
Mr. Botao Peng, Dr. Chao Zhang ; Dr. Jingxu Zhu

Advances in Health Monitoring and System Identification

290. Finite Element Updating: Alternative Solutions and Their Probabilities
Mr. Boris A. Zarate ; Dr. Juan M. Calcedo
291. Influence of Riverbed Protection on Characteristic of Bored Piles Built in Deep Water
Mr. Song Chen, PhD., Mr. Zhijian Chen, Mr. Yong Tang, PhD. ; Miss Qing Chen, M.S.
292. A Wavelet-Based Framework for System Identification of Tall Buildings Under Transient Wind Events
Ms. Audrey Bentz ; Dr. Tracy Kijewski-Correa, PhD.

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293. Mode Shape Identification with High Spatial Resolution using Mobile Sensors
Mr. Johannio Marulanda ; Dr. Juan M. Caicedo
294. A Time-Domain Covariance-Based Parameter Estimation Method for Torsional Shear Buildings:
Application to IASCASCE Benchmark Studies
Mrs. Roshanak Omrani, Dr. Ralph E. Hudson ; Dr. Ertugrul Taciroglu
295. Assessing Service Induced Mechanical Deterioration of Aircraft Composite Materials Using Distributed
Optical Fiber Strain Sensing
Mr. Douglas A. Harold ; Dr. John C. Duke, Jr.
296. An enhanced algorithm for stochastic system identification of long span bridges
Ms. Ah Lum Hong ; Dr. Raimondo Betti
297. Sensitivity Study of Vibration-Based Damage Detection in Beam Structures
Mr. Keming Wang, M.S.
298. Structural Damage Diagnosis Using Harmonic Forced Vibration and Transfer Functions Response
Mr. Akbar Esfandiari, M.S., Dr. Masoud Sanayei, PhD., Dr. Firooz Bakhtiari-Nejad, PhD. ; Dr. Alireza Rahai, PhD.
299. Structural Finite Element Model Updating Using Transfer Function Data
Mr. Akbar Esfandiari, M.S., Dr. Masoud Sanayei, PhD., Dr. Firooz Bakhtiari-Nejad, PhD. ; Dr. Alireza Rahai, PhD.
300. Detection of Degraded Stiffness from Multiple Cracks in Plate Structures with Unknown Moving Force
Information
Mr. Myung-Hyun Noh, PhD., Dr. Taehyo Park ; Dr. George Z. Voyiadjis
301. A study on the Performance evaluation of lightweight unit panel using Honeycomb Structure
Mr. Gun Lee, M.S., Mr. Do-Heom Song, B.S., Mr. Hyun-Chul Lee, M.S. ; Dr. Seong-SeokGo, PhD.
302. Wavelet-based Secondorder Blind Identification of Structures
Mr. Budhaditya Hazra ; Dr. Sriram Narasimhan, PhD.
303. Inverse Analysis of Static Data from a Real- World Type II AASHTO Girder to Identify Flexural Stiffness
and Effective Prestressing Force
Mr. Randall D. Martin, Dr. Jin-Song Pei, Dr. Thomas Kang ; Mr. Colby J. Sandburg
304. A Multi-Level Damage Localization Strategy for Effectively Using the Sources in Wireless Sensor
Network
Dr. Guirong Yan, Mr. Zachary Feinstein, Mr. Gregory Hackmann, Dr. Shirley J. Dyke ; Dr. Chenyang Lu
305. NDE of Concrete Bridge Deck Delamination using Enhanced Acoustic Method
Mr. Gang Zhang, Dr. Ronald S. Harichandran ; Dr. Pradeep Ramuhalli
306. Damage Detection on a Three-Story Structure using Signal-Based Pattern Recognition
Mr. Long Qiao, PhD., Dr. Asad Esmaeily, PhD. ; Dr. Hani G. Melhem, PhD.
307. Uncertainty Quantification in Model- Based Damage Diagnosis
Mr. Shankar Sankararaman ; Dr. Sankaran Mahadevan
308. Damage Prognosis Using Nonlinear System Identification
Mr. Giancarlo G. Bordonaro, Dr. Muhammad R. Hajj, Dr. Ali H. Nayfeh ; Dr. John C. Duke

Advances in the Treatment of Interface Problems in Mechanics

309. Phase Field Theory and Model of Dislocation Dynamics and Networks
Dr. Dong-Wook Lee ; Dr. Marisol Koslowski

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310. A primal interface formulation for the coupling of nonconforming meshes in the presence of large deformations
Ms. Ghadir Haikal ; Dr. Keith Hjelmstad

Biodynamics

311. Brain Tumor Simulation using a Hybrid Compartment- Continuum-Discrete Model
M.L. Tanaka, W. Debinski, I.K. Puri
312. An Integrated Procedure for Computer Simulation of Dynamics of Molecular Structures
Shanzhong (Shawn) Duan
313. Implementaion of an Efficient Algorithm for Virtual Prototyping of Dynamics of Molecular Conformation
Shanzhong (Shawn) Duan and Andrew Ries
314. Finite Time Blow-Up and the Phenomena
Xi Li, Su-Xiang Shang

Biological and Biologically Inspired Materials

315. Structure Prediction and Nanomechanical Properties of Human Vimentin Intermediate Filaments
Dr. Markus J. Buehler ; Mr. Zhao Qin
316. Ductile sliding between mineral crystals followed by rupture of collagen crosslinks: experimentally supported micromechanical explanation of bone strength
Dr. Christian Hellmich, PhD., Dr. Andreas Fritsch, PhD. ; Dr. Luc Dormieux, PhD.
317. Micromechanics of bone tissue-engineering scaffolds, based on resolution error-cleared computer tomography
Dr. Christian Hellmich, PhD., Dr. Stefan Scheiner, PhD., Dr. Bernhard Pichler, PhD., Dr. Raffaele Sinibaldi, PhD., Dr. Vladimir Komlev, PhD., Dr. Franco Rustichelli, PhD., Dr. Chiara Renghini, PhD. ; Dr. Chiara Vitale, PhD.
318. Bioinspired Design of Dental Structures
Dr. Wole Soboyejo ; Dr. Nima Rahbar
319. Characterization of bone morphology and effective properties based on the spectral measure of viscoelastic operator
Mr. Carlos Bonifasi-Lista ; Dr. Elena Cherkaev
320. Mechanics Modeling of Bone at Nanostructural Level
Ms. Elham Hamed ; Dr. Iwona Jasiuk

Biological Fluid Mechanics

321. Study of Passive Rotational Motion Induced by Wing Flexibility in Dipteran Flapping Flight: Nonlinear FEM Dynamic Similarity Fluid Structure Interaction Analysis
Dr. Daisuke Ishihara, Dr. T. Horie ; Dr. Mitsunori (Mitch) Denda, PhD.
322. Modeling targeted delivery of nanoparticles under vascular flow
Dr. Yaling Liu ; Mr. Samar Shah

Biomaterials

323. Fibrin networks in blood clots sustain large extensions due to protein unfolding

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Dr. Prashant K. Purohit, PhD.

324. The molecular structure of wood primary cell wall
Miss Ying Wang ; Dr. Youping Chen
325. Cell-biomaterial interactions under physiological flow conditions
Dr. Sameer R. Jadhav, PhD. ; Mr. Rahul Bhardwaj

Biomechanics

326. Random Fiber Networks Are Stochastic Fractal Objects
Mr. Hamed Hatami-Marbini ; Dr. Catalin Picu
327. A Mechanism for Atherosclerotic Plaque Rupture by Particle/Matrix Interfacial Decohesion
Mr. Chien M. Nguyen ; Dr. Alan J. Levy
328. A New Indentation-Based Creep Test for Multi-scale Mechanical Characterization of Biological Membranes
Dr. Kuo-Kang Liu, Dr. Mark Ahrearn ; Dr. Kai-Tak Wan
329. Structural Changes in Ligaments and Tendons during Hysteresis, Creep, and Relaxation
Miss Ratchada Sopakayang, M.S. ; Dr. Raffaella De Vita, PhD.
330. Hyperelastic Contact Models for the Indentation of Cells and Extracellular Matrix
Dr. David C. Lin, Dr. Emiliios K. Dimitriadis, Dr. David I. Shreiber ; Dr. Ferenc Horkay
331. Biomechanical Analysis of the Accommodation Process of Human Eyes
Dr. James D. Lee, Mr. James Chen ; Dr. Olivia L. Lee
332. Bio rheology of Red Blood Cells via Dissipative Particle Dynamics
Dr. Igor V. Pivkin, Mr. David J. Quinn, Dr. Ming Dao, Dr. George E. Karniadakis ; Dr. Subra Suresh
333. Matrix Rigidity Mediates Growth Factor Response During 3D Endothelial Cell Sprouting
Mr. Amir Shamloo ; Dr. Sarah C. Heilshorn
334. Dynamic mechanical response of kidney tissue under compression: Strain-rate effect
Dr. Weinong W. Chen, PhD. ; Mrs. Farhana Pervin, PhD.
335. 3D In-vivo Geometric Characterization of the Ovine Pulmonary Trunk
Ms. Bahar Fata, M.S.
336. Unfolding of DNA and proteins under axial loading: an interface propagation approach
Mr. Ritwik Raj ; Dr. Prashant K. Purohit
337. Guiding Principles of Nanoparticle Uptake by Biological Cells
Dr. sulin Zhang, Mr. Hongyan Yuan, Dr. Ju Li, Dr. George Lykotrafitis, Dr. Gang Bao ; Dr. Subra Suresh
338. A Constitutive Law Characterizing the Material Response of Insect Tracheae
Ms. Frances M. Davis, Dr. Raffaella De Vita ; Dr. Jake Socha

Coastal Hydrodynamics

339. Interaction of Storm Surge and Hurricane Waves: Modeling and Measurements
Dr. Kelin Hu, PhD., Dr. Qin Chen, PhD. ; Dr. Andrew Kennedy, PhD.

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340. Modeling Sediment Resuspension and Transport induced by Storm Wind in Apalachicola Bay
Mr. Xiaohai Liu
341. Effect of turbulence models on numerical simulation of wave breaking and run-up on a mild slope
Mr. Hong Xiao
342. Interaction of a Solitary Wave with a Floating Body
Dr. K. H. Wang, Miss Xing Lu ; Mr. Ted Chu
343. A Parametric Study of Meteorological Forcing in Storm Surge Modeling: A Case Study in Coastal Mississippi
Dr. Himangshu S. Das

Computational Modeling and Remodeling of Biological Tissues in Physiological and Pathophysiological Conditions

344. Elucidating Soft Tissue Remodeling Utilizing a Structural Constitutive Model - Application to the urinary bladder wall
Ms. Silvia Wognum ; Dr. Michael S. Sacks
345. A Method to Determine the Shear Elastic Modulus in a Linearly Elastic and Incompressible Solid
Mr. Adair R. Aguiar, PhD. ; Mr. Edmar T. Prado, M.S.

Computational Methods for Modeling and Quantification of Structural Flaws

346. Fatigue Failures of Welded Piping Joints: Experiments and Simulations
Dr. Pei-Yuan Cheng ; Dr. Tasnim Hassan
347. Numerical Solution of Combined Boundary-Initial Value Problems For CDM-Based Creep Analysis of Engineering Structures Using Parallel Computing
Mr. Behnam Salimi ; Dr. David R. Hayhurst, PhD.
348. Detection and Quantification of Flaws in Structures by the Extended Finite Element Method and Genetic Algorithms
Dr. Haim Waisman, Ms. Eleni Chatzi ; Dr. Andrew W. Smyth
349. An optimally convergent discontinuous-Galerkin-based extended finite element method for fracture mechanics
Mr. Yongxing Shen, PhD. ; Mr. Adrian J. Lew, PhD.
350. Regarding SDOF Systems with Piecewise Nonlinear Restoring Force as Differential-Algebraic Equations
Mr. Joseph Wright ; Dr. Jin-Song Pei
351. Interactions of multiple inhomogeneous inclusions in a half space: method and application
Dr. Kun Zhou, Dr. Leon M. Keer ; Dr. Q. Jane Wang
352. Topology optimization of continuum structures considering fabrication flaws
Mr. Alireza Asadpoure, Dr. James K. Guest ; Dr. Takeru Igusa

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Dynamical Systems

353. On controllability of structures with closely spaced natural frequencies based on perturbation analysis
Mr. faxiang XIE ; Dr. Limin SUN, PhD.
354. Polynomial Chaos Expansions for Stochastic Optimal Control of Duffing Oscillators
Mr. yongbo peng, Dr. Roger Ghanem ; Dr. Jie Li
355. Development of a Real-time Hybrid Testing System
Mr. Xiuyu Gao, Dr. Shirley J. Dyke, Mr. Terry Tidwell, Mr. Huang-Ming Huang, Dr. Chenyang Lu ; Dr. Christopher D. Gill
356. A Multibody Dynamics Approach for Modal and Vibration Analysis of Wind Turbine
Dr. Shanzhong (Shawn) Duan
357. Decentralized Control of Large-Scale Web Winding Systems
Dr. Wankun zhou, PhD.
358. Dynamic Soil Structure Interaction for Elastic Foundations in Coupled Translational and Rocking motion
Mr. Shahin Nayyeri, PhD. ; Mr. Khosrow Ebrahimi, PhD.
359. A numerical method for integrating stochastic differential equations with Poisson and Levy white noise
Dr. Mircea Grigoriu
360. Modeling of Eddy Current Damping due to a Permanent Magnet considering the Induced Magnetic Flux
Dr. Jae-Sung Bae, PhD., Dr. Jai-Hyuk Hwang, PhD. ; Mr. Jung-Sam Park

Dynamics

361. External force configuration effects on sound radiation of thick infinite plate
Dr. Seyyed Mohammad Hasheminejad ; Mr. Mohsen Mohammadali, M.A.
362. Vibration and Snap-Through of Bent Elastica Strips Subjected to End Rotations
Dr. Lawrence N. Virgin ; Dr. Raymond H. Plaut
363. An Unconditionally Stable Explicit Integration Algorithm with Controllable Numerical Damping
Dr. Cheng Chen ; Dr. James Ricles
364. Optimal design of structural vibration based on stochastic finite element
Mr. Mo Wenhui Mo Wenhui
365. Optimal design of a simple supported one-way RC slab against blast loads based on the energy approach
Mr. Wenbin Sun, PhD.
366. Response of Reinforced Concrete Simple Supported members to Blast Loads
Mr. Wenbin Sun, PhD.
367. Analytical Solutions to the Strain Rates in Reinforced Concrete Simply Supported Flexural Members to Blast Loads
Mr. Wenbin Sun, PhD.

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368. New finite elements for vibration analysis of cracked members
369. A New Formulation for Rotational Dynamics
Dr. Firdaus Udwadia ; Dr. Aaron D. Schutte
370. Large-eddy simulations of sedimentation process and particle dynamics in a longitudinal sedimentation basin of a water treatment plant
Mr. Mustafa Al-Sammaraee, Dr. Andrew Chan, Mr. Salim Mohamed Salim ; Dr. Phei Li Lau
371. Simulation of Non-Stationary Random Processes with Time and Frequency Modulation for Seismic Ground Motion Applications
Mr. Michael D. Shields ; Dr. George Deodatis
372. Probabilistic Framework for Condition Assessment
Dr. byounghoan choi
373. Dynamic Compaction of Porous Materials produced by a Shock Wave
Mr. Weimin Nian ; Mr. Kolluru V. Subramaniam
374. Hybrid modeling of hysteretic nonlinear system based on neural network
Dr. Xie Shilin ; Dr. Zhang Xinong
375. Shape control of thin shell under thermal stress using laminated piezoelectric actuators
Mr. Yu Yang, M.S., Dr. Zhang Xinong ; Dr. Xie Shilin
376. Mixed Perfectly-Matched-Layers for Direct Transient Analysis
Mr. Sezgin Kucukcoban ; Dr. Loukas F. Kallivokas
377. Numerical Study of Energy Absorption Properties of Composite Sandwich Panels under Blast Loading
Miss HONG SU ; Dr. Jennifer Righman McConnell
378. Transfer Matrix Method for Dynamic Analysis of Rotor Systems with Coupled Support Stiffnesses
Mr. Keming Wang, M.S.
379. Dynamic performance of long-span bridge under different traffic conditions
Ms. Jun Wu ; Dr. Suren Chen
380. Multibody Computational Model for Force and Motion Analysis of Shoulder-Upper Arm Complex
Dr. Shanzhong (Shawn) Duan
381. On the reconstruction of the soil's shear wave velocity profile
Mr. Jun Won Kang, Dr. Loukas Kallivokas, PhD., Mr. Kwang-Soo Park ; Dr. Kenneth H. Stokoe
382. Prediction of Dynamic Response of Stiffened Rectangular Plates using Hybrid Formulation
Mr. Shahin Nayyeri, PhD. ; Dr. Asad Esmaeily, PhD.
383. Stresses in Thin, Multi-Layer Pipes in large Radial Vibrations
Mr. Shahin Nayyeri, PhD. ; Dr. Asad Esmaeily, PhD.
384. Seismic Analysis and design of Elevated Water Tanks

Environmental Fluid Mechanics

385. Velocity Measurements in the Meander Bend of a River
Mr. John E. Petrie, Dr. Panayiotis Diplas, Dr. Marte Gutierrez ; Mr. Soonkie Nam
386. Simulation of small scale river morphodynamics using Discrete Particle Models

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Mr. Manousos Valyrakis, Dr. Panos Diplas, Dr. Clinton Dancey ; Mr. Ahmet O. Celik

Experimental Methods in Fluid Mechanics

387. Investigation of turbulent structures in open channel flow using proper orthogonal decomposition (POD)
Mrs. Vesselina Roussinova, M.S. ; Dr. Ram Balachandar, PhD.
388. Turbulent structures in turbulent round jet: effect of the Reynolds number
Dr. Ram Balachandar, PhD.; Mrs. Vesselina Roussinova, M.S.
389. Swirling strength based identification of vortices in shallow wake
Mr. Arindam Singha ; Dr. Ram Balachandar, PhD.
390. Mechanical and Optimization Analyses for Novel Wound Composite Axial Impeller
Mr. Jifeng Wang, PhD., Dr. Norbert Mueller, Mr. Qubo Li, PhD. ; Mr. Lindberg Bruce, M.S.

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391. Wave Propagation and Induced Steady Streaming in Viscous Fluid Contained in a Prestressed Viscoelastic Tube
Mr. Ye Ma ; Dr. Chiu-On Ng
392. Modeling and simulation of fluid flow in investment casting
Mr. Muhammad Musaddique Ali Rafique, Ms. Fariha Javaid, Mr. Zeeshan Javaid ; Dr. Hans Wittich
393. Solution of Pipe Network with Conjugate Gradient Method
Mr. Engin Mendi, M.S.
394. Numerical Study of Erosion-proof of Loose Sand in an Overtopped Plunging Scour Process
Dr. Ge Wang
395. Vortex Breakdown in Axial Swirled Flow through a Vertical Tube
Dr. Mohammed H. Said Aly, PhD.
396. PIV Measurements and Physical Factors of Dual Synthetic Jets Interactions
Dr. zhen-bing luo, Dr. zh-xun xia ; Mr. lin wang
397. Flow of non-homogenous incompressible fluids
Dr. Suman K. Hajra ; Dr. Mehrdad Massoudi
398. Coherent structures in flow through emergent vegetation using boroscopic particle image velocimetry
Dr. Scott A. Socolofsky, PhD., Ms. Kerri A. Whilden, Mr. Duncan B. Bryant, Mr. John Bandas ; Ms. Autumn Kidwell
399. Laboratory Generation of Solitary Waves
Mr. Siamak Malek-Mohammadi, M.S. ; Dr. Firat Y. Testik, PhD.
400. Experimental Analysis of Similarity in Velocity Profile of Salt Solution Density Current
Mr. Esmaeil Safaei, PhD., Mr. vahid hatamipour, M.S. ; Dr. Bahar Firoozabadi

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401. Topological chaos in wide lid-driven cavities and wide microchannels
Dr. Jie Chen, PhD. ; Dr. Mark A. Stremler, PhD.
402. An Efficient Model and Algorithm for Physiological Fluid Dynamics
Mr. Omer San ; Dr. Anne E. Staples
403. Experimental investigation of junction flow around a cylinder using PIV measurements
Mr. Nikolaos Apsilidis, Mr. Samuel G. Raben, Dr. Panayiotis Diplas, Dr. Clinton L. Dancey ; Dr. Pavlos Vlachos
404. Threshold of sediment movement under turbulent flow conditions
Mr. Ahmet O. Celik, Dr. Panos Diplas, Dr. Clint Dancey ; Mr. Manos Valyrakis
405. On Vortex Equilibria in Bounded Circular Domain
Dr. George Chamoun ; Dr. Mark Stremler
406. A mathematical model of the 2P mode vortex wake
Mr. Alireza Salmanzadeh Dozdabi ; Dr. Mark A. Stremler
407. Mixing Viscous Fluids Using n-Rod Systems
Mr. Mohsen Gheisarieha ; Dr. Mark A. Stremler
408. Pressure drop of Fractal-Shaped Orifices in Turbulent pipe Flows
Dr. Ahmed M. Abou El-Azm Aly ; Dr. Frank Nicolleau
409. Study on Effect of Seepage on Rough Open Channel Flow through Proper Orthogonal Decomposition (POD)
Mr. Abdullah Faruque, M.S., Mr. Arindam Singha, M.S., Mr. Tian Jiahao, B.S. ; Dr. Ram Balachandar, PhD.
410. Purging of Negatively Buoyant Tracer from Rectangular Cavities in Oscillating Grid Turbulence
411. A Library of Turbulence Closure Schemes
Dr. Gaurav Savant
412. Wave Propagation Prediction in Homogeneous Materials Using Hybrid Lattice Particle Modeling
Mr. Ge Wang, Dr. A. Al-Ostaz, Dr. A.H.-D. Cheng ; Dr. P. R. Mantena
413. (WITHDRAWN) A Numerical study of a two blade Savonius Wind Turbine with the help of Computational Fluid Dynamics.
Mr. Joy Pathak
414. Gust Effects on Flow and Pressure Distribution over a Cylinder
Mr. Mehdi Ghommem, Dr. Imran Akhtar, Dr. Muhammad R. Hajj ; Dr. Ishwar K. Puri
415. Linear Stability Analysis of Modified Taylor-Couette Flow
Mr. Yasser Aboelkassem, M.S. ; Dr. Anne E. Staples, PhD.
416. Aerodynamic Performance of Stepped Airfoil
Dr. Masoud Boroomand ; Mr. Shirzad Hosseinverdi

Fluid-Structure Interaction

417. The parallelized finite element method for nearly incompressible and impermeable porous media
Mr. Moonho Tak, PhD., Dr. Taehyo Park ; Dr. George Z. Voyiadjis
418. Slamming impact of rigid and sandwich composite hulls
Mr. Kaushik Das ; Dr. Romesh C. Batra

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419. Finite Element Analysis of Pulse Wave Velocity in Stented Arteries
Mr. Daniel B. Cooper ; Dr. Pavlos P. Vlachos

Geomechanics and Elasticity

420. Finite Element Analysis of Soil Under Explosive Loading
Mr. Garrett H. Sutley ; Dr. Richard Regueiro
421. Study of the Soil-Structure-Pore Water Interaction of the Breached Levee System at the 17th Street Canal of New Orleans
Dr. Jay Wang ; Mr. Mark Castay
422. Shakedown of Pavements under Moving Surface Loads: Revisited
Dr. Jidong Zhao, PhD.
423. Liquefaction Earthquake Site Response Analysis Of Layered Soil Deposits Using Viscoplasticity Models
Miss Thao Nguyen Huynh Huu, M.S.
424. Flow of Granular Materials in a Rotating Cylinder
Dr. Suman K. Hajra ; Dr. Mehrdad Massoudi
425. Numerical Simulation Of Liquefaction Effects To Structures Subjected To Earthquake
Miss Thao Nguyen Huynh Huu, M.S.
426. Two-Dimensional Approximation to Static Three-Dimensional Elasto-Plastic Soil-Pile Interaction Problem
Dr. Annalingam (Rajah) Anandarajah, PhD.
427. Use of elastodynamic reciprocity for the analysis of point-load generated surface waves in an inhomogeneous transversely isotropic half-space
Dr. Anil C. Wijeyewickrema, PhD., Mr. Takatsugu Konno ; Miss Priza Kayestha
428. An Analytic Elastic Solution for a Multi-Layered Soil on a Buried Thrust Fault
Dr. Kam Tim Chau, PhD.
429. A New Rheological Soil Model For Liquefaction Analysis
Miss Thao Nguyen Huynh Huu, M.S.
430. Three Dimensional Discrete Element Modeling of Undrained Cyclic Response of Granular Media
Mr. Behrooz Ferdowsi, M.S., Dr. Abbas Soroush, PhD. ; Dr. Roozbeh Shafipour, PhD.
431. Torpedo Anchors in Soil: CFD and FE Simulations
Dr. Mohammad S. Raie ; Dr. John L. Tassoulas

Impact-Blasting-Penetration of Granular Materials

432. Simulation of High-velocity Penetration for Rigid Projectile into Plain Concrete Target using Discrete Element Method
Mr. yu zhou and Linbing Wang

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433. Asphalt Mixture Fatigue Evaluation Using X-Ray Tomography and Finite Element Simulation
Mr. Cheng Wan, PhD., Dr. Xiaoning Zhang, PhD. ; Dr. Linbing Wang, PhD.
434. DEM Simulation of Erosion Mechanism for Semi-rigid base using PFC3D
Mrs. Yanping Sheng, PhD., Mr. Shuanfa Chen, PhD. ; Dr. Linbing Wang, PhD.
435. Modeling Impacting Micropolar Bodies
Dr. Charles L. Randow ; Dr. George A. Gazonas

Innovative Instrumentation and Experimental Methods in Engineering Mechanics

436. Computer Vision Techniques to Measure Displacements in Civil Infrastructure.
Mr. Glen R. Wiegner ; Dr. Juan M. Caicedo
437. Monitoring of Interface Debonding and Slip Using OTDR Techniques
Dr. Steve C.S. Cai, Dr. Shuang Hou ; Dr. Jinping Ou
438. Applications of FBG Sensors for Subsidence and Moisture Monitoring
Dr. Shuang Hou, Dr. Steve C.S. Cai ; Dr. Jinping Ou
439. Progressive Bond Failure Investigation Using X-Ray Tomography
Ms. Jingjuan Li ; Dr. Laura N. Lowes
440. Mitigation of Bridge Deck Vibrations and Visualization of Flow Patterns Using PIV
Mr. Wei Zhang, Dr. Yaojun Ge ; Dr. Steve C. Cai
441. Experimental Studies of Vortex Shedding Excitation and Mitigation of Large Span Bridges by Guide Vanes
Mr. Wei Zhang, Dr. Yaojun GE ; Dr. Steve C.S. Cai

Instability in Solids and Structures

442. Real time experimental research of sandstone permeability on condition of temperature and triaxial pressure
Dr. Zhang Yuan, PhD., Dr. Zhao YangSheng ; Dr. Kang JianRong
443. Buckling with residual stresses
Dr. Ciprian D. COMAN, PhD.
444. Temporal statistics in 3D dislocation ensembles
Mr. Jie Deng, Mr. Mamdouh Mohamed ; Dr. Anter El-Azab
445. On lateral-torsional buckling of non-local beams
Dr. Noel Challamel ; Dr. Chien Ming Wang
446. Statistical averaging of stress-velocity law using dislocations dynamics modeling
Mr. Mamdouh S. Mohamed, Mr. Jie Deng ; Dr. Anter El-Azab

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447. Macroscopic Instabilities of Fiber Composites
Mr. Stephan Rudykh, M.S. ; Dr. Gal deBotton, PhD.
448. Finite Volume Meshless Local Petrov-Galerkin applied to thin beam static stability analysis
Dr. Abdelouahab Khelil, PhD. ; Dr. Reza Moosavi, PhD.
449. Inelastic Stability and Second-Order Analysis of Imperfect Columns with Non-linear Semirigid Connections under Eccentric Axial Loads
Dr. Jose D. Aristizabal-Ochoa, PhD.
450. Free-Vibration Characteristics of Unsymmetrically Laminated Composite Plates with Multiple Equilibrium Configurations
Mr. Grant A. Vogl ; Dr. Michael W. Hyer
451. Effect of Geometrical Defects on the Collapse of Straight or Curved Tubes Submitted to External Pressure
Dr. Ali LIMAM, PhD., Mr. DINH TRAN ; Dr. CEDRIC MATHON
452. Phonon analysis of carbon nanotubes with arbitrary chirality by the Objective Structures framework
Dr. Kaushik Dayal ; Dr. Ryan Elliott
453. Damage propagation in structures with inner instabilities
Dr. Andrej Cherkaev, Dr. Elena Cherkaev ; Dr. Leonid Slepyan
454. Investigation of Third Invariant Dependence on Strain Localization in Porous Sandstone
Dr. Kathleen A. Issen
455. Low Cycle Fatigue Failure Processes in Aluminum Foam
Mr. Mathew D. Ingraham, Dr. Kathleen A. Issen ; Dr. David J. Morrison
456. A Pressure-Dependent Energy-Based Yield Criterion for Cellular Solids
Dr. Murat Vural, PhD.
457. Effect of Topology and Morphology on the Deformation Mode of Cellular Solids
Dr. Murat Vural ; Dr. Maen Alkhader
458. Dynamic Collapse of Cylindrical Shells with Multiple Compartments
Dr. Liang-Hai Lee, Dr. Stelios Kyriakides ; Dr. K. Ravi-Chandar
459. Ratcheting, Wrinkling and Collapse of Tubes due to Axial Cycling
Mr. Rong Jiao, M.S. ; Dr. Stelios Kyriakides
460. Effect of microstructure on adiabatic shear bands in tungsten heavy alloy hollow cylinders
Dr. Anoop G. Varghese ; Dr. Romesh C. Batra

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461. Thermal Buckling and Impact Resistance of Axially Loaded Lattice Structures
Dr. Hans Obrecht, Mr. Ulf Reinicke ; Mr. Marcel Walkowiak
462. Thermal Post-Buckling and Vibration Characteristics of Composite Conical Shell Structures
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Interdisciplinary

463. Directional solidification of a binary alloy in the presence of a foreign particle
Dr. Layachi Hadji
464. Reliability Analysis for General Systems by Sequential Compounding Method
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465. Wave energy focusing for enhanced oil recovery
Mr. Chanseok Jeong, Dr. Chun Huh ; Dr. Loukas Kallivokas
466. Effect of Depth of Embedment on Bearing Capacity and Settlement of Prototype (1:3) Model Footing in Sand
Dr. Nihar R. Patra, PhD. ; Miss Namita Adarshi, M.S.
467. Hierarchical Nanostructures are Crucial to Mitigate Ultra-small Thermal Point Loads
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468. Exploring Efficiency in Reinforced Concrete with Topology Optimization
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469. Finite Element Eigen-Buckling Guidelines for Thin Plates in Shear
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470. Physics based Galerkin model reduction tools for fluid flow systems
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471. POD-Galerkin Reduced-Order Models for real-time surgical simulation
Dr. Alexander Hay, Mr. Martin Audet, Dr. Jean-Philippe Marcotte ; Dr. Jean-Francois Hetu
472. Uncertainty Quantification in Hierarchical Computational Models using Bayes Networks
Mr. Angel Urbina ; Dr. Sankaran Mahadevan
473. (WITHDRAWN) A Likelihood Based Approach to Probabilistic Representation of Interval Data
Mr. Shankar Sankararaman ; Dr. Sankaran Mahadevan
474. (WITHDRAWN) Robust Optimization with Sparse Data
Mr. Kais Zaman, Dr. Mark McDonald, Dr. Sirisha Rangavajhala ; Dr. Sankaran Mahadevan

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475. Representation, Aggregation and Propagation of Aleatory and Epistemic Uncertainty in Probabilistic Framework
Mr. Kais Zaman, Dr. Mark McDonald, Dr. Sirisha Rangavajhala ; Dr. Sankaran Mahadevan
476. (WITHDRAWN) Deriving Families of Probability Distribution for Random Variables Given Interval Data
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Interfacing Bio and Nano Phenomena

477. DNA translocation kinetics in functional nanopores
Dr. Yaling Liu, Mr. Abhijit Ramachandran. ; Dr. Samir M. Iqbal
478. Multiscale Modeling of DNA-CNT and DNA-Graphene Complexes
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479. An atomic scale perspective on the micro-mechanisms related to onset of spallation in nanocrystalline metals at ultra-high strain rates
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480. Multiscale Modeling of Glass Fiber Reinforced Viscoelastic Composites Subjected to Impact Loads
Mr. Victor F. Teixeira, Mr. Flavio V. Souza ; Dr. David H. Allen
481. Experimental and Microstructurally-Based Computational Investigation of the Dynamic Compressive Behavior of High Strength Aluminum Alloys
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482. A FIRST PRINCIPLES APPROXIMATION OF COMPOSITE MATERIAL RESPONSE TO SHOCK TUBE PULSE
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483. Z-Transforms and the Optimal Design of Goupillaud Type Layered Elastic Media
Dr. George A. Gazonas, Dr. Ani P. Velo ; Mr. Takano Ameya
484. Impact-induced Deformation and Stress in a LIGA Structure
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485. Inertial Effects in Numerical Simulations of Hopkinson Bar Tests on Nearly Incompressible Soft Materials
Dr. Mike Scheidler, Dr. Martin Raffenberg, Dr. Bryan Love ; Dr. Reuben Kraft
486. Structures and Deformation Mechanisms of the α -Al/ U and α -Al/ e ? Interfaces in Al-Cu-Mg-Ag Alloys: A First-Principles and Molecular Dynamics Simulation Study
Dr. Lipeng Sun, Dr. Mohammed Zikry ; Dr. Donald W. Brenner
487. High strain rate deformation and melting of single asperity electrical contacts
Dr. Douglas L. Irving

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488. Predicting Mesh-Independent Ballistic Limits for Heterogeneous Targets by a Nonlocal Damage Computational Framework
Dr. Rashid K. Abu Al-Rub, PhD. ; Mr. Sun-Myung Kim
489. Atomic-level simulations of photomechanical damage and laser spallation
Dr. Leonid V. Zhigilei, Dr. Elodie Leveugle, Dr. Dmitriy S. Ivanov, Dr. Zhibin Lin ; Ms. Eaman Abdul Karim
490. Hot Electron Pressure in Short Pulse Laser Interaction with Metals
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491. Use of FRP Composites to Strengthen Concrete Structures
Dr. Saud Aldajah, Dr. Ashraf Biddah ; Mr. Ammar AL-Omari
492. Performance and Characterization of Two Water-Proof Crystalline Concrete Systems
Dr. Ali H. Al-Gadhib, M.A., Dr. Mohammed H. Baluch, PhD., Dr. Mohammed K. Rahman ; Mr. Naeem S. Saleem, M.S.
493. EFFECT OF ELEVATED TEMPERATURE ON FRACTURE PROPERTIES OF CONCRETE
Dr. Mohamed Gamal I. Mahdy, PhD., Dr. Mahmoud A. Imam, PhD. ; Mr. Ahamed I. Elsherbiny, M.S.
494. EFFECT OF STRENGTHING WITH CFRP ON FRACTURE PROPERTIES OF CONCRETE
Dr. Mohamed Gamal I. Mahdy, PhD., Dr. Mahmoud A. Imam, PhD. ; Mr. Ahamed I. Elsherbiny, M.S.
495. Effect of Sulfates and Acids on Concrete Containing Rubber
Dr. Amr F. Shaheen
496. Evaluating the effects of fine rubber aggregate on concrete performance
Dr. Amr F. Shaheen
497. Numerical simulation of concrete under high level of confinement using 3D discrete element method
Mr. Van Tieng TRAN, PhD., Dr. Frédéric Victor Donzé ; Dr. Philippe MARIN
498. The Effect of Cold Expansion Technique on the Fatigue Life Expansion of an Aluminum Alloy and Carbon Steel
Mr. Muhammed S. Rana ; Dr. Chobin Makabe, PhD.
499. Assessment of Stresses due to Pits induced during Corrosion Degradation Process
Dr. Ramana M. Pidaparti ; Mr. Ronak Patel
500. Vibration Analysis of Commercial Thermal Barrier Coatings
Dr. Anthony N. Palazotto, PhD., Mr. Armando Deleon, M.S. ; Mr. Lindell Pearson, M.S.
501. (WITHDRAWN) Understanding the Mechanics of Golf Ball Impact: Using standard mechanical testing techniques to characterise materials for finite element analysis.
Mr. Alistair W. Pugh, Dr. Robert Hamilton, Dr. David H. Nash ; Dr. Steve R. Otto
502. Development and Performance Evaluation of Design-Variable Hwangto Bricks
Miss Soyeon Lim, B.S., Mr. Hyunchul Lee, M.S., Dr. Hyeonku Park, PhD. ; Dr. Seong-Seok Go, PhD.
503. Double Vacuum Bagging Coupled with Quickstep Curing Process
Mr. Laraib Khan, M.S., Dr. A Nesbitt, PhD. ; Dr. Zaffar Khan, PhD.
504. A study on the development and performance evaluation of puzzled hwangto bricks

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Mr. Jung ho Kim, B.S., Mr. Gun Lee, M.S., Dr. Hyeon ku Park, PhD. ; Dr. Seong-seok Go, PhD.

505. The effect of micro dimples on friction and wear of polyoxymethylene during dry sliding
Dr. Seong Hyuk Lee, PhD., Mr. Jaebong Lee, Mr. Sangil Park ; Dr. Minhaeng Cho, PhD.
506. A new method for estimating size effect in granular materials
Dr. Wei Hu
507. Study on Crack Resistance of Steel Fiber Reinforced Concrete
Mr. Qingwen Ren ; Dr. Shanshan Wang
508. Test Study on Stabilization of Fine Sand with Silt
Mrs. Gao Hua-dong, PhD., Mr. Zhou Ke, Sr. ; Mr. Qin Peng-fei, Sr.
509. A New Experimental Method for Quantifying the Shrinkage Cracks in Concrete
Dr. Ayman N. Ababneh ; Dr. Mashal A. Sheban
510. A study on the development of environment-friendly loessboard
Mr. Gil-Jung Kim, B.S., Mr. Hyun-Chul Lee, M.S., Dr. Hyeon-ku Park, PhD. ; Dr. Seong-Seok Go, PhD.
511. Wear Of Automobile Clutch Liner
Mr. Ashutosh Pandey ; Mr. Vinay Choudhary
512. Influence of basalt fiber on performance of cement mortar , Influence of basalt fiber on performance of cement mortar
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Materials Science

513. The Clay of Fez (Morocco), Materials of High Technology
Dr. Bentama Jilali
514. Effect of Aggregate Saturation Methods on Fresh Lightweight Concrete Properties
Mr. Nihat KABAY, M.S. ; Dr. Fevziye AKOZ
515. Sliding Interfaces: NEMD Simulations and Theoretical Models
Dr. James E. Hammerberg, Dr. T C. Germann, Dr. B. L. Holian ; Dr. R. Ravelo
516. Laser Generated Plasma: A New Approach to Advanced Material Coatings
Dr. Ravindra Akarapu, Mr. Abdalla Nassar, Dr. Stephen Copley ; Dr. Judith Todd

Materiomics-Materials Science of Biological Protein Materials

517. A new molecular mechanism of fracture toughness of nacre
Miss Ying Wang ; Dr. Youping Chen
518. Micromechanisms of deformation of collagen fibrils under uniaxial tension
Dr. Roberto Ballarini, PhD., Dr. Yuye Tang, PhD., Dr. Markus J. Buehler, PhD. ; Dr. Steven J. Eppell, PhD.
519. Dissecting Molecular Mechanics in Different Binding Behaviors of Inhibitors to HIV-1 Protease with Coarse-Grained Molecular Dynamics Simulations
Dr. Baohua Ji

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520. Molecular and Mesoscale Mechanisms of Osteogenesis Imperfecta Disease
Dr. Markus J. Buehler ; Mr. Sebastien Uzel

Mathematical Tools-A Frontier between Mathematics and Engineering

521. Waste heat recovery in a refrigerant restaurant
Mr. Meisam Sadi, M.S.

Mechanics of Advanced Materials and Structures

522. Behavior of Concrete Slabs Strengthened with FRP
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523. Study of inclusion-matrix interfacial stresses in composites containing negative-stiffness phases
Mr. Chiching Ko
524. Boundary layer effect in partially composite beams
Dr. Noel Challamel ; Dr. Uffe Arne Girhammar
525. Mechanics of Non-coplanar Mesh Design for Stretchable Electronic Circuits
Dr. Jizou Song ; Dr. Yonggang Huang
526. A New Laminated Model for Functionally Graded Plates with Arbitrary Distributed Elastic Modulus
Dr. Zheng Zhong, PhD.
527. Analysis of Concrete Dam Crack Under Coupled Seepage and Temperature Field Based on EFM
Mr. Xu Liquan, PhD., Dr. Shen Zhenzhong ; Mr. Li Chenliang, PhD.
528. An Experimental Technique for Developing Intermediate Strain Rates on Ductile Metals
Mr. Hugh Gardenier, M.S., Dr. Anthony N. Palazotto, PhD. ; Dr. Reid Larson, PhD.
529. Delamination and Crack Deviation in Laminated Composites
Dr. Xiujun Fang ; Dr. Qingda Yang
530. Damage and Failure Mechanisms in 2D Triaxial Braided Carbon Fiber Epoxy Composites
Mr. Lee W. Kohlman, Dr. Wieslaw K. Binienda ; Dr. Gary D. Roberts
531. Dynamic Characteristics of Acoustic Metamaterials with Anisotropic Mass
Mr. Hsin-Haou Huang ; Dr. C.T. Sun, PhD.
532. Repair of Concrete Beams Aged by Accelerated Corrosion using Externally Bonded CFRP Fabrics
Dr. Julio F. Davalos, PhD., Mr. George C. Parish, M.S., Dr. An Chen, PhD. ; Dr. Indrajit Ray, PhD.
533. Evaluation of Load Distribution Factor by Approximate Series Solution
Dr. Julio F. Davalos, PhD., Dr. Bin Zou, PhD. ; Dr. An Chen, PhD.
534. Interfacial Stresses for Plated Beams Composed of Different Materials
Dr. An Chen, PhD., Dr. Julio F. Davalos, PhD. ; Ms. Fatemeh Sedigh Imani, M.S.
535. Vibrations of Noncircular Composite Cylinders
Mr. Hung-chieh Lo ; Dr. Michael W. Hyer
536. Analytical Damage Mechanics
Dr. Daniel H. Cortes ; Dr. Ever J. Barbero
537. Numerical Modeling of Low Velocity Impact Damage in Composite Laminates
Dr. Jifeng Xu

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538. Size and Geometry Effects on Flow Stress in Bioinspired Metal-Matrix Nanocomposites
Mr. Dipanjan Sen ; Dr. Markus J. Buehler
539. Constitutive Modeling of a Twaron®/Natural Rubber Composite
Mr. N. V. David ; Dr. Xin-Lin Gao
540. An Inverse Material Characterization Method for the Lead Rubber Bearing Under Non-Uniform Cyclic Stress States
Dr. Gunjin Yun, PhD. ; Dr. Atef F. Saleeb, PhD.
541. Exact solution for vibration of functionally graded SS-C-SS-C rectangular plates subjected to linearly varying in-plane loads
Mr. Mohammad Banakar ; Mr. AliReza Hosseini
542. Debonding analysis of flexural-cracked concrete beams externally reinforced with FRP plates
Mr. Fangliang Chen ; Dr. Pizhong Qiao
543. Mechanics of interface deformable magneto-electro-elastic layered structures
Mr. Fangliang Chen ; Dr. Pizhong Qiao
544. Integrated vibro-acoustic strategy for damage detection of composite laminated plates
Mr. Wei Fan, Dr. Pizhong Qiao ; Dr. Maosen Cao
545. Vibration-based damage identification methods for beam/plate-type structures
Mr. Wei Fan ; Dr. Pizhong Qiao
546. Multiscale Modeling of Triaxially Braided Polymer Matrix Composites
Dr. Brett A. Bednarczyk, Mr. Kuang C. Liu ; Dr. Steven M. Arnold

Mechanics of Biomembranes

547. Modeling protein and lipid organization in bacterial membranes
Dr. Ranjan Mukhopadhyay, Dr. Kerwyn C. Huang ; Dr. Ned Wingreen
548. Modeling Vesicular Exocytosis using Boundary Integral Method
Dr. Tai-Hsi Fan, PhD.
549. Adsorption of Flexible Macromolecules on Fluid Membranes ? Theory and Biological Applications
Dr. Shelly Tzliil, PhD. ; Dr. Avinoam Ben-Shaul, PhD.
550. Coarse-Grained Molecular Dynamics Simulations of Shape Transitions of Red Blood Cells
Mr. Hongyan Yuan, Mr. Changjin Huang, Dr. Ju Li ; Dr. Sulin Zhang

Mechanics of Liquid Crystals

551. Axial-symmetry breaking in constrained membranes
Dr. Paolo Biscari ; Dr. Gaetano Napoli
552. Modelling smectic materials
Dr. Iain W. Stewart
553. Modeling Smectic Materials
Dr. Iain W. Stewart, PhD. ; Dr. Raffaella De Vita, PhD.
554. Smectic energies and existence theorems for liquid crystals
Dr. Patricia Bauman, Dr. Daniel Phillips ; Dr. Jinhe Park

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555. Isotropic-to-nematic phase transition in a liquid-crystal droplet
Dr. Xuemei Chen, Mr. Benjamin D. Hamlington ; Dr. Amy Shen

556. Experiments in the formation and characterization of durable droplet-interface bilayers
Mr. Stephen A. Sarles, Mr. Miles A. Creasy ; Dr. Donald J. Leo, PhD.

Mechanics of Materials

557. (WITHDRAWN) Response of Axially Compressed Square Laminates Having a Rectangular Cut-out
Dr. Ashwini Kumar

558. An experimental study on the fatigue life of prestressed concrete beams under random-amplitude fatigue loading
Dr. Yupu Song ; Dr. Huailiang Wang

559. Analysis of Smart Hybrid Composite Reinforced With Carbon Nanotubes-Coated Piezoelectric Fibers
Dr. Manas C. Ray, PhD.

560. Application of the Linear Combination of Displacement BIE and Hypersingular BIE in Reducing the Condition Number of the System of Equations for Domains with Mathematical Cracks
Mr. Nimish Jagtap ; Dr. Yijun Liu

561. Numerical Study of Erosion of Loose Sand from an Overtopped Plunging Jet
Mr. Ge Wang, Mr. C. R. Song, Mr. J. Kim ; Mr. A. H. -D. Cheng

562. Collapse Analysis in Geomechanics using the Boundary Element Method
Mr. Jaideep Chatterjee, PhD.

563. An extension of the Zaki-Moumni model for shape memory alloys accounting for plastic deformation
Dr. Wael Zaki ; Dr. Ziad Moumni

564. FRACTURE PROPERTIES OF MODE II FOR HIGH STRENGTH CONCRETE
Dr. Mohamed Gamal I. Mahdy, PhD., Dr. Mahmoud A. Imam, PhD. ; Mr. Ahamed I. Elsherbiny, M.S.

565. Surface Loading of A Multilayered Viscoelastic Pavement: Moving Load
Dr. Ernian Pan ; Mr. Yuanguo Chen

566. Fracture Behavior of AISI304 Steel Welded Plates: An Experimental and Finite Element Analyses
Dr. Edison Goncalves, PhD. ; Dr. Miguel A. Calle

567. Optimisation of Micro and Nano-Imprinting
Mr. Tobias Balla ; Mr. S. Mark Spearing

568. A new constitutive theory for fiber-reinforced rubber-like materials
Dr. Martin I. Idiart ; Dr. Oscar Lopez-Pamies

569. Microstructure Evolution using Poroelastic Characterization of Early Age Hydrating Cement Paste
Mr. Xiaojun Wang, Dr. Kolluru V. Subramaniam ; Dr. Feng-Bao Lin

570. A Metric Theory of Large Deformation Generalized Plasticity
Mr. Vasileios P. Panoskaltzis, Mr. Dimitrios D. Soldatos ; Mr. Savvas P. Triantafyllou

571. Mechanics of composites with two families of finitely extensible fibers undergoing large deformations
Mr. Gal Shmuel, B.S.; Dr. Gal deBotton, PhD.

572. Modeling the dynamics of red-blood cell cytoskeleton-membrane interactions
Dr. Doron Kabaso, PhD., Mr. Roe Shlomovitz, B.S., Dr. Thorsten Auth, PhD., Dr. Nir Gov, PhD. ; Dr. Virgilio L. Lew, PhD.

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573. Longitudinal Vibration of Conical Bishop Rod
574. Effects of Defect Presence on the Formation and Evolution of Adiabatic Shear Bands
Dr. Bryan M. Love
575. Experimental Study of Kaolinite Particle Orientation Mechanism
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576. Static deformations of functionally graded polar-orthotropic cylinders with elliptical inner and circular outer surfaces
Dr. guojun nie, PhD. ; Dr. Romesh C. Batra, PhD.
577. Computational Modelling and Experimental Characterisation of Heterogeneous Materials
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578. Weibull analysis of loading rate effect on deformation behaviour and toughness of ABS
Mr. Jie Xu ; Dr. Ben Jar
579. Effect of K-dominance Zone Size on Brittle Fracture
Mr. Bhawesh Kumar, M.S., Mr. Suvanit Chitsiriphanit , M.S. ; Dr. C.T. Sun, PhD.
580. Elastic behavior of some random multi-scale highly-contrasted composites
Dr. François Willot ; Dr. Dominique Jeulin
581. Comparative Predictions of Slip-Systems Hardening Inequalities and a Viscoplastic Power-Law for FCC Crystals in Channel Die Compression
Dr. Kerry S. Havner
582. Boundary Element Method Applied to Fatigue Crack Propagation in a Thin Aluminum Plate
Mr. Marcel Sato, B.S., Dr. Paulo Sollero, PhD. ; Dr. Éder L. Albuquerque, PhD.
583. Characterization of Material Properties for a Random Chopped-Fiber Reinforced Composite
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584. The Design and Impact Analysis of a UAV Landing Gear
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585. Multiscale modeling of polyether polyurethane foams
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586. Adaptability of Contact Laws for Polygon Type Discrete Element Methods
Mr. Pengcheng Fu ; Dr. John T. Harvey
587. Evolution of Agglomeration States of Moist Granular Materials with Wide Particle Size Spectra
Mr. Pengcheng Fu, Dr. David Jones ; Dr. John T. Harvey
588. Application of the Linear Combination of Displacement BIE and Hypersingular BIE in Reducing the Condition Number of the System of Equations for Domains with Mathematical Cracks
Mr. Nimish Jagtap ; Dr. Yijun Liu
589. Overall properties of binary periodic composites with anisotropic dielectric components
Mr. Eduardo Lopez-Lopez, B.S. ; Dr. Federico J. Sabina, PhD.
590. Peeling Mechanics of Extensible Elastic Adhesive Tapes
Mr. Christopher Kovalchick, Dr. Alain Molinari ; Dr. Guruswami Ravichandran
591. Cell wall stiffness, geometric uncertainty, and the elastic properties of cellular networks
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592. (WITHDRAWN) Optical Diagnostics Applied to Hypervelocity Impact Damage
Ms. Leslie E. Lamberson, Dr. Veronica Eliasson, Dr. Ares J. Rosakis ; Dr. Marc Adams
593. Comparative Predictions of Slip-Systems Hardening Inequalities and a
Dr. Kerry Havner, PhD.
594. A comparison study of the energy absorption performance of square AA6061-T6 Aluminum extrusions
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Mr. Joy PAtthak
595. Estimation of Fracture Process Zone size and True Fracture Energy using Acoustic Emission Data
Mr. Muralidhara Sundareshan, Dr. Raghu Prasad B. K, PhD., Mr. Hamid E. Naddaf, M.S. ; Dr. Bhushan L.
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596. Getting proper condition of laser welding of TWBs to investigate effects of forming parameters on their
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597. Fundamental Studies of Stress Corrosion Cracking in Iron from DFT
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598. Comparison of M-K and MMFC criteria in investigation of formability of a steel sheet
Dr. Mostafa Ketabchi, PhD., Mr. Mahmoud Abbasi, M.S. ; Mr. Mohammad Abbasi, M.S.
599. The recovery of stress softening and Mullins effect of a Nanoparticle-filled Polymer
Mr. Lei Yan, Dr. David A. Dillard ; Dr. Robert L. West
600. A weibull E-N field model to be used in the strain based approach
Dr. Hernan A. Pinto, PhD., Dr. Alfonso Fernández-Canteli ; Dr. Enrique Castillo
601. Mean stress effects and mean stress relaxation in high strength aluminum alloys
Mr. Attilio Arcari, Dr. Norman E. Dowling, Mr. Christopher A. Calhoun ; Mr. David C. Moore

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602. A Multi-scale Study on the Fatigue Properties of Asphalt Mixture, Binder and Mastics
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603. Surface Loading of A Multilayered Viscoelastic Pavement: Moving Load
Mr. Yuanguo Chen ; Dr. Ernian Pan
604. Three-Dimensional Finite Element Modeling of Reflective Cracking in Hot-Mix Asphalt Overlay under
Transient Moving Vehicular Loading: Interface Condition Effects on Reflective Cracking Development
Mr. Jongeun Baek, Dr. Imad L. Al-Qadi, Mr. Hasan Ozer ; Mr. Hao Wang
605. Atomistic Modeling of Bitumen-Stone Interface under Tensile Loading
Mr. Yang LU ; Dr. Linbing Wang
606. 3D Aggregate Characterization for Modeling and Simulation of Mixture Properties
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607. Observing the Diffusion of Water into Asphalt Binder Using Magnetic Resonance Imaging
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608. Performance Monitoring of Pavement using Distributed Sensors
Mrs. Wenjing Xue, PhD. ; Dr. Linbing Wang
609. Damaged Viscoelastic-Viscoplastic Model for Asphalt Concrete Mixes
Mr. Michael A. Graham, Dr. Rashid K. Abu Al-Rub, Dr. Eyad A. Masad ; Dr. Dallas N. Little

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610. Viscoelastic Analysis of HMA Beams using Discrete Element Modeling
Dr. Sanjeev Adhikari, PhD., Dr. Qingli Dai, PhD., Mr. Yu Liu, PhD. ; Dr. Zhanping You
611. Predict Stiffness of Asphalt Concrete using the Strain Concentration Factor
Mr. Yu Liu, PhD. ; Dr. Zhanping You, PhD.
612. Three-dimensional Discrete Element Simulation of Asphalt Concrete using Frequency-temperature Superposition
Dr. Zhanping You, PhD., Mr. Yu Liu, PhD., Dr. Qingli Dai, PhD. ; Dr. Sanjeev Adhikari, PhD.
613. Modeling Fracture and Failure of Nonlinear, Inelastic Asphalt Concrete Mixtures
Mr. Thiago Francisco ; Dr. Yong-Rak Kim, PhD.

Mechanics of Phase Transformations

614. Mesoscopic theory of ferromagnetic shape memory alloys
Dr. Jiangyu Li ; Mr. Liangjun Li
615. The kinetics of 90-degrees domain switching in ferroelectric crystals at the individual domain level: Sub-processes and their kinetic laws
Dr. Doron Shilo, Mr. Yossi Abu ; Mr. Eilon Faran
616. Modeling of ferromagnetic shape memory composites
Mr. Liping Liu
617. Phase Fronts in Nickel-Titanium under Cyclic Mechanical Loads
Mr. Kyubum Kim ; Dr. Sam Daly
618. Temperature Effects on Piezoelectric Crystals
Mr. Yang Cao ; Dr. Jackie Li, PhD.
619. A Boundary Element Method Coupled to Phase Field to Compute Ferroelectric Domains in Complex Geometries
Dr. Kaushik Dayal ; Dr. Kaushik Bhattacharya
620. Dynamic Simulation of Pressure Induced Phase Transformation of Covalent Materials by a New Coarse Graining Methodology
Mr. Liming Xiong ; Dr. Youping Chen, PhD.
621. Continuum mechanics of rechargeable batteries and the effect of elastic energy barrier on the speed of charge/discharge
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Mechanics of Soft Matter and Soft Intelligent Materials

622. A new hyperelastic model for rubber elastic materials
Dr. Oscar Lopez-Pamies, PhD.
623. An exact result for the macroscopic response of porous Neo-Hookean solids
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624. Finite Deformation of Incompressible Fiber-Reinforced Elastomers: A Computational Micromechanics Approach
Dr. Joaquín Moraleta, Dr. Javier LLorca ; Dr. Javier Segurado
625. Damage by Decohesion during Finite Deformation of Fiber-Reinforced
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626. Macroscopic instabilities in fiber-reinforced elastomers at finite strain
Mr. Mihalis Agoras, Dr. Oscar Lopez-Pamies ; Dr. Pedro Ponte Castaneda
627. Nonlinear effects in electro-active materials
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628. Models for Composite Dielectric Elastomers
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629. Tribological Properties of Soft-Wet Materials
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630. Large deformation and instability in swelling gels
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631. Finite Element Analysis of Magnetolectric Composite Structures
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632. Compacting Sandstones Through Dilatancy
Dr. Yves M. Gueguen, PhD. ; Dr. Jerome Fortin, PhD.
633. Effect of induced intra-granular slip bands on the plastic behavior of polycrystals
Dr. Christophe Collard, PhD., Dr. Stephane Berbenni, PhD., Dr. Veronique Favier, PhD. ; Dr. Marcel Berveiller, PhD.
634. Micromechanical modelling of isotropic viscoelastic behavior of composites: translated field approach
Dr. stephane berbenni, Dr. duc phi do, PhD., Dr. giraud albert, PhD. ; Dr. dashnor hoxha
635. Heat Conduction and Deformations of Viscoelastic Functionally Graded Materials
Mr. Kamran A. Khan ; Dr. Anastasia H. Muliana
636. Notch Sensitivity and Fracture Resistance of Non-Woven Felts
Dr. Alvaro Ridruejo, Dr. Carlos González ; Dr. Javier LLorca
637. Some perspectives on the mechanics of nanocrystalline materials
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638. A MEMS based tensile stage and a microscale specimen with self-aligning mechanisms for uniaxial tensile testing
Mr. Wonmo Kang, Dr. Jong H. Han ; Dr. Taher Saif
639. Self-consistent methods of homogenization based on numerical solutions of the one-particle problems
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640. Entropy of microstructure in plasticity
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641. Incremental compliance and resistance of contacts on a rough interface: implications of the cross-property connection
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642. Infinite-contrast periodic composites with strongly nonlinear behavior: effective-medium theory versus full-field simulations

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Dr. Martin Idiart, Dr. Francois Willot, Dr. Yves-Patrick Pellegrini ; Dr. Pedro Ponte Castaneda

643. New bounds for effective properties of multimaterial composites and optimal microstructures
Dr. Andrej Cherkaev ; Ms. Yuan Zhang
644. Failure Initiation in PZT Sol-Gel Thin Films
Dr. Thomas A. Berfield, PhD. ; Dr. Nancy R. Sottos, PhD.
645. Effect of clusters of microcracks and pores on the statistics of peak stress and overall properties of porous/microcracked material
Dr. Igor Sevostianov
646. Identification of microstructural information from the effective properties of composite
Dr. Elena Cherkaev, Mr. Carlos Bonifasi-Lista ; Dr. Dali Zhang

Molecular Mechanics

647. Multiscale modeling of interfacial thermal transport
Mr. Ganesh Balasubramanian ; Dr. Ishwar K. Puri
648. Dynamics of Nanojet Collision
Mr. Ganesh Balasubramanian, Dr. Ishwar K. Puri ; Dr. Saad A. Ragab
649. Computational Scattering Experiments on Atomistic Material Models
Mr. Fritz Campo ; Dr. Ever J. Barbero
650. Molecular Dynamics Studies of Interfacial Separation in Carbon Nanotube Polymer Composites with Bond-breaking
Mr. Amnaya P. Awasthi ; Dr. Dimitris C. Lagoudas
651. Mechanical Properties of Silica Aerogel by Molecular Dynamics
Mr. John Sandro Rivas Murillo ; Dr. Ever J. Barbero

Multi-scale Behavior of Damage and Failure Mechanics

652. Size Effect on Strength and Lifetime Distributions of Quasibrittle Structures Implied by Atomistic Fracture Mechanics
Dr. Zdenek P. Bazant, PhD., Mr. Jia-Liang Le ; Dr. Martin Z. Bazant, PhD.
653. A Gradient Theory for Continuum Damage
Dr. Kiran N. Solanki ; Dr. Doug J. Bammann
654. Anisotropic Elastoplastic and Damage Behavior of Composite Sheets
Mr. Derek Skolnik, Dr. Haitao Liu ; Dr. Lizhi Sun
655. A Statistical Model for Damage Self-Sensing of Carbon-Fiber Reinforced Composites
Dr. Ercan Sevkat, Dr. Jackie Li, PhD., Dr. Feridun Delale, PhD. ; Dr. Ben Liaw, PhD.
656. A new formulation for multi-scale fatigue damage modeling
Ms. Zizi Lu ; Dr. Yongming Liu
657. A New Probabilistic Model for Damage in Ligaments
Mr. Zheyang Guo, M.S. ; Dr. Raffaella De Vita, PhD.
658. Multiscale Modeling of Failure in Plates
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659. Modeling Elasto-Plastic Fibrous Composite Material Behavior Using Meso-Scale Homogenization
Ms. Katherine Acton ; Dr. Lori Graham-Brady
660. Top-down Multiscale Approach for Complex Damage Evolution in Composites
Dr. Qingda Yang ; Dr. Brian Cox
661. Elasticity and Strength of H-bonded Protein Domains: Geometric Confinement and Size Effects at Multiple Scales
Mr. Sinan Keten ; Dr. Markus J. Buehler
662. Influence of Carbon Nanotubes on Interlaminar Fracture of Carbon-Fabric/Epoxy Composites
Mr. Piyush R. Thakre ; Dr. Dimitris C. Lagoudas
663. Meso-Scale Computational Modeling of the Damage Response of Plain Concrete
Dr. Rashid K. Abu Al-Rub, PhD. ; Mr. Sun-Myung Kim

Multi-scale Modeling and Characterization of Nano-Structured Polymer Composites

664. Mechanics of Near-Single-Crystal Thermoplastic Elastomers
Dr. Oscar Lopez-Pamies, PhD., Dr. Pedro Ponte Castaneda, PhD. ; Dr. Vikranth Racherla, PhD.
665. Micromechanics Modeling of Carbon Nanotube-Epoxy Nanocomposites and Unidirectional Hybrid Laminates: Summary of Elastic, Thermal and Electrical Properties with Emphasis on Coefficient of Thermal Expansion
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666. Atomistic Simulations of Properties of Polymer Nanocomposites
Dr. Thomas Clancy ; Dr. Sarah Frankland
667. Modeling of three-phase bio-based nanocomposites: Determining bio-resin distribution in a RVE with prescribed thermo-elastic properties
Mr. Mahmoodul Haq ; Dr. Rigoberto Burgueno
668. Tensile behavior of bio-based nanocomposites: Modeling and simulation through a multi-level FE approach with enhanced three-phase RVEs
Dr. Rigoberto Burgueno ; Mr. Mahmoodul Haq
669. ELASTIC CONSTANTS AND COEFFICIENTS OF THERMAL EXPANSION FOR TOUGHENED EPOXY-NANOTUBE COMPOSITES FROM MOLECULAR DYNAMICS SIMULATION
Dr. S .J. V. Frankland ; Dr. T. C. Clancy
670. Effect of Single Wall Carbon Nanotubes on Mechanical and Electrical Properties of Unidirectional Carbon-Fiber/Epoxy Matrix Composites
Mr. Piyush R. Thakre ; Dr. Dimitris C. Lagoudas
671. Electrical and Thermo-mechanical Characterization of Carbon Nanotube Reinforced Toughened Epoxy Nanocomposites
Dr. Dimitris C. Lagoudas, Mr. Patrick J. Klein, Mr. Piyush R. Thakre ; Dr. Jiang Zhu
672. Mechanical Characterization and Constitutive Modeling of Polyurethane-Montmorillonite Nanocomposites
Mr. Amit Kaushik, Dr. Ellen Arruda, Dr. Anthony Waas, Dr. Paul Podsiadlo, Dr. Nicholas Kotov ; Mr. Ming Qin

Multi-scale Modeling and Multi-scale Mechanics

673. Finite strain micromorphic pressure-sensitive elastoplasticity
Dr. Richard Regueiro

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674. Peridynamics as an Upscaling of Molecular Dynamics
Mr. Pablo Seleson, Dr. Michael L. Parks, Dr. Max Gunzburger ; Dr. Richard B. Lehoucq
675. Implementation of Higher Order Basis Functions in the Multiscale Finite Element Method for Elliptic Problems
Mr. Soheil Soghrati ; Dr. Ilinca Stanculescu
676. Coarse-graining molecular models for solids: from statics to dynamics and from zero temperature to finite temperature
Dr. xiantao li
677. Microscopic origins of continuum balances and peridynamics
Dr. Richard B. Lehoucq
678. Mesoscale Simulations with Microscale Tools: Peridynamics in a Molecular Dynamics Code
Dr. Michael L. Parks, Dr. Richard B. Lehoucq, Dr. Steven J. Plimpton ; Dr. Stewart A. Silling
679. A Multiscale Concurrent Atomistic/Continuum Theory And its Numerical Implementation
Dr. James D. Lee
680. Simulation of Wave Propagation by a Multiscale Field Theory
Mr. Xianqiao Wang ; Dr. James D. Lee
681. A Multiscale Modeling of Dynamic Crack Propagation
Mr. James Chen, Mr. Xianqiao Wang, Miss Huachuan Wang ; Dr. James D. Lee
682. A new constitutive theory for fiber-reinforced rubber-like materials
Dr. Martin I. Idiart ; Dr. Oscar Lopez-Pamies
683. Finite Element Methods for a Peridynamic Model of Mechanics
Mr. XI CHEN ; Dr. Max Gunzburger
684. Validation of the Thermomechanical Atomistic-to-Continuum Model
Mr. Mesut Kirca, Dr. Wei He ; Dr. Albert C. To
685. Quantum Mechanics to Mechanics: Electronic structure calculations at macroscopic scales
Mr. Balachandran GR ; Dr. Vikram Gavini
686. Concurrent Atomistic-Continuum Simulation of Multiscale Dynamic Materials Behavior
Dr. Youping Chen, PhD. ; Mr. Liming Xiong
687. A Computational Framework for Multiscale Analysis of Laminated Composite Plates
Dr. Hashem M. Mourad, Dr. Todd O. Williams ; Dr. Francis L. Addessio
688. A multiscale model for martensitic transformations and accompanying plasticity in metastable austenitic materials
Mr. Farshid Roumi ; Dr. Kaushik Bhattacharya
689. Connecting Length Scales with Peridynamic Mechanics
Dr. Stewart A. Silling, Dr. Richard B. Lehoucq ; Dr. Michael L. Parks

Multi-scale Modeling of Defects in Materials

690. Onset of cavitation in hyperelastic solids under arbitrary 3D loading conditions
Dr. Oscar Lopez-Pamies, PhD. ; Dr. Martin I. Idiart, PhD.
691. Peridynamics as a Mesoscale Limit of a Crystal Lattice
Dr. Kaushik Dayal

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692. Role of the defect-core in energetics of vacancies: An electronic-structure study
Dr. Vikram Gavini
693. Dynamic Simulation of Dislocations and Shear Bands with Multiple Resolutions
Mr. Liming Xiong ; Dr. Youping Chen, PhD.
694. Variability of strength in brittle materials with randomly occurring flaws and pores
Dr. Lori Graham-Brady ; Ms. Cynthia Zingale
695. Investigation of a mathematical model for surface roughness of surface produce in high speed and ultra high speed milling of gamma titanium aluminide based on empirical tests
Mr. sajad kolahdouz, M.S. ; Dr. Behruz Arezou

Multi-scale Multi-physics in Granular Materials

696. A Micromechanical Constitutive Model of Dense Granular Assemblies considering Force Chain Buckling
Dr. Takashi Matsushima ; Dr. Ching S. Chang
697. Multiscale Kinematics In Granular Media
Dr. John F. Peters ; Dr. David A. Horner
698. Micromechanical Studies on the Critical State of Granular Materials
Dr. Annalingam Anandarajah, PhD.
699. Characterizing tribo-electric charging and adhesion for granular materials
Dr. Scott Johnson ; Dr. Otis Walton
700. Assessing Friction and Cohesion of Natural Porous Nanogranular Composites by Nanoindentation
Dr. Christopher P. Bobko, Mr. Benjamin Gathier ; Dr. Franz-Josef Ulm
701. Modeling the permeability at mesoscopic scale
Dr. Bogdan MURESAN, Dr. Nadia SAIYOURI ; Dr. Pierre-Yves HICHER, PhD.
702. Particulate flow modeling with distributed Lagrange multiplier technique
Dr. Yuliya Kanarska, Dr. Ilya Lomov ; Dr. Tarabay Antoun

Nano-Structured Materials Multi-scale Modeling and Simulation

703. Wave Propagation Prediction in Homogeneous Materials Using Hybrid Lattice Particle Modeling
Dr. Ge Wang, Sr.
704. Continuum Modeling of Boron Nitride Nanotubes
Dr. Jizou Song ; Dr. Yonggang Huang
705. Molecular Dynamics Simulations of Graphite ?Vinyl Ester Nanocomposite and Its Constituents
Ms. Hunain Alkhateb, Dr. Ahmed Al-Ostaz, Dr. Alexander Cheng ; Dr. P. Raju Mantena

Nano-, Bio-, Cellular and Multi-Functional Materials

706. Dynamic Mechanical Analysis of Magnetorheological Smart Nanocomposites
Mr. Rui Li ; Dr. Lizhi Sun
707. (WITHDRAWN) A New Reddy-Levinson Beam Model Incorporating the Size Effect
Dr. Xin-Lin Gao ; Ms. Hemei Ma
708. Wrinkled Surface Topographies of Electrospun Polymer Fibers
Dr. Lifeng Wang, Miss Chia-Ling Pai, Dr. Mary Boyce ; Dr. Gregory Rutledge

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709. Eshelby's Tensor for a Spherical Inclusion in a Finite Spherical Matrix Based on a Simplified Strain Gradient Elasticity Theory
Dr. Xin-Lin Gao ; Ms. Hemei Ma
710. Alpha-Helical Protein Filaments Unify Strength and Robustness Through Hierarchical Nanostructures
Dr. Markus J. Buehler, Mr. Zhao Qin, Mr. Steven Cranford ; Mr. Theodor Ackbarow
711. Mechanical and Electrical Properties of Carbon Nanofiber/Epoxy Nanocomposites
Ms. Lanhui Sun, Dr. Zoubeida Ounaies, Dr. Xin-Lin Gao, Mr. Casey A. Whalenb ; Dr. Zhenguo Yang
712. Fabrication and Modeling of InTi Shape Memory Alloy Nanowires
Mr. Francis Phillips, Dr. Hongxing Zheng ; Dr. Dimitris C. Lagoudas
713. Physical Properties of Glassy Carbon Films and Nanowires
Dr. Aman Haque ; Mr. Mohan Manoharan
714. Thermo-Mechanical Properties of Nanoscale Thin Films
Dr. Aman Haque
715. In-situ TEM Studies of Size Effects in Thin Films
Dr. Aman Haque ; Mr. Sandeep Kumar
716. Carbon Nanotubes for Enhancing the Mechanical Properties of Cementitious Materials
Mr. Bryan M. Tyson, Dr. Rashid K. Abu Al-Rub, PhD., Mr. Ardavan Yazdanbakhsh ; Dr. Zachary Grasley
717. Probe Tip Shape and Size Effects in Nanoscale Indentation Tests for Elastic and Viscoelastic Materials
Mr. Michael A. Graham, Dr. Zachry C. Grasley, PhD. ; Dr. Rashid K. Abu Al-Rub, PhD.

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718. Adherence of Microorganisms to Carbon Nanostructures
Miss Sonal Mazumder, Dr. Ishwar K. Puri, Dr. Joseph Falkinham, Dr. Andrea M. Dietrich ; Dr. Roop L. Mahajan
719. Multiscale Reinforced Bio-based Composites: Synergistic Behavior of UPE/EML blends, Natural fibers and Nanoclay
Dr. Rigoberto Burgueno, Mr. Mahmoodul Haq, Dr. Amar K. Mohanty ; Dr. Manjusri Misra
720. Hollow Nanospheres, Modeling and Open Questions
Dr. F.D. Fischer
721. Guided Assembly of Three-Dimensional Nanostructures via Elastic Interactions
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722. Inextensible Elastica Model for the Collapse of Nanotubes
Dr. Tian Tang ; Dr. Nicholas J. Glassmaker
723. An Atomic-Scale Instability Criterion for Defect Initiation
Dr. Terry J. Delph, Dr. Jon A. Zimmerman ; Dr. Jeffery M. Rickman
724. Atomic-Scale Surface Stresses in (001)Si and Continuum Instabilities
Dr. Terry J. Delph
725. Thermal Properties at Nanoscale
Mr. Xianqiao Wang ; Dr. James D. Lee

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726. Original Surface Stress Generation of Alkanethiols on Gold Surface
Mr. Yue Zhao, Mr. Kyungho Kang ; Dr. Pranav Shrotriya
727. Buckling of a Graphene Sheet Interacting with a Rigid Substrate
Dr. Patrick Wilber
728. Molecular Simulations of Clay Minerals under Static Loading Conditions
Dr. Jianfeng Wang ; Dr. Marte Gutierrez
729. Molecular Dynamics Simulation of Electrical Field Induced Conformational Transition and Associated Frictional Performance of Monomolecular Films
Mr. Xiao Ma ; Dr. Pranav Shrotriya
730. Nano-Micro Fracture using Moment Tensor based on AE
731. Cooperative Buckling of Thick Multi-Walled Carbon Nanotubes Under Uniaxial Compression
Dr. Sulin Zhang ; Mr. Xu Huang
732. Nanomechanics of Graphene Fracture
Dr. Sulin Zhang, Mr. Sachin S. Terdalkar, Mr. Shan Huang, Mr. Hongyan Yuan, Dr. Ting Zhu ; Dr. Joseph Rencis

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733. Estimation of influence tensors for eigenstressed multiphase elastic media with non-aligned inclusion phases of arbitrary ellipsoidal shape
Dr. Bernhard Pichler ; Dr. Christian Hellmich
734. A homogenization-based constitutive model for viscoplastic porous media with evolving microstructure
Dr. Kostas Danas ; Dr. Pedro Ponte Castaneda
735. Influence of the temperature on the behavior of unsaturated porous media: a micromechanical approach
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Nonlinear Oscillations and Instabilities of Advanced Structures

736. Some Comments on the Nonlinear Dynamics Interactions Behavior of Electrostatically Actuated Microstructures
Dr. José M. Balthazar, PhD. ; Dr. Jorge L. Palacios Felix, PhD.
737. Suppressing Chaotic behavior in a Double-Well Oscillator with Limited Power Supply Using Electromechanical Damped Device
Dr. José M. Balthazar, PhD., Mr. Juliano G. Iossaqui1, B.S. ; Dr. Bento R. Pontes Jr., PhD.
738. Impact Damping of a Non-Ideal Motor/ Structure System: Optimization
Dr. Reyolando M. Brasil ; Dr. Marcelo A. Silva
739. Nonlinear Vibrations of a Partially Fluid-Filled Cylindrical Shell
Dr. Paulo B. Gonçalves, PhD., Dr. Frederico M. Silva, PhD. ; Dr. Zenón Del Prado, PhD.
740. Influence of Initial Stresses on the Nonlinear Vibrations of Circular Hyperelastic Membranes
Dr. Paulo B. Gonçalves, PhD., Dr. Renata M. Soares, PhD. ; Dr. Djenane Pamplona, PhD.
741. Pull-in retarding in nonlinear Mathieu NEMS resonators under superharmonic excitation
Mr. NAJIB KACEM, PhD., Dr. SEBASTIEN HENTZ, Dr. SEBASTIEN BAGUET ; Mr. REGIS DUFOUR
742. Simulation of Railway Vehicle Hunting By Equalizing Frictional Dampers In Matlab Software
Mr. Seyyed Ali Akbar Mirmohammadi, Sr., Mr. Mohammad Reza Behi, Mr. Hamid Reza Behi ; Mr. Amin Yahyaie

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743. On Chaotic Motions of a Nonideal System with (SMA) Considering the Dynamic of the DC Motor
Dr. José M. Balthazar, PhD., Mr. Vinicius Piccirillo, B.S., Dr. Luiz S. Goes, PhD. ; Dr. Luiz S. Goes, PhD.

744. Symmetry breaking, snap-through, and pull-in instabilities under dynamic loading of
microelectromechanical shallow arch
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Particle-Fluidized Interaction

745. Erosion and dispersion of soils by water: comparison between two tests
Dr. Christophe Chevalier, Dr. Myriam Duc, Dr. Sylvine Guedon, Dr. Tuan Long Pham ; Dr. Philippe Reiffsteck

746. A proposed new method of analysis for two erodimeters
Mr. Pierre L. Regazzoni, Dr. Didier Marot ; Mr. Tony Wahl

747. Erosion-Induced Deformations in Soils
Dr. Pierre Y. HICHER ; Dr. Ching S. CHANG

748. A granulometric study of internal erosion mechanisms
Dr. Bogdan MURESAN, Mr. Achraf GUEFRECH ; Dr. Nadia SAIYOURI

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749. Local Band Edges of Strained Quantum Dots in Half-Space Substrates
Dr. Ernie Pan, Mr. Yu Zou, Dr. Peter W. Chung ; Dr. John D. Albrecht

750. Three-dimensional InAs/GaAs quantum dots size and density study using kinetic Monte Carlo simulation
Dr. Ernie Pan, Miss Mingkun Sun ; Dr. Peter Chung

751. Elasto-Plastic analysis of functionally graded spheres
Mr. yousef amirirad, M.S., Mr. ali niknami, M.S. ; Mr. sina jahangiri, M.S.

Rate Dependent Behavior of Granular Materials

752. Optimal Control of Electrostatic Self-Assembly of Binary Monolayers
Mr. Nickolay V. Shestopalov, Dr. Graeme Henkelman, Mr. Travis Powell ; Dr. Gregory J. Rodin

753. Micromechanical Model of Interfaces with Rate-Dependent Asperity Contacts
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754. A strain-rate based micromechanical model for soft soils
Dr. Ching S. Chang, Dr. Zhen Y. Yin ; Dr. Pierre-Yves Hicher

755. A Visco-elastic Wedge Driven by A Sudden State-Dependent Frictional Slipage: Application to Wenchuan Earthquake
Dr. Kam Tim Chau, PhD.

Recent Advances in Nondestructive Evaluation and Test Method in Transportation Engineering

756. Investigation of the Nuclear Gauge Density Calibration Method
Dr. Huiming Yin; Dr. Zairen Luo

Reduced Order Modeling of Large Multi-Disciplinary Systems

757. A Lumped Parameter Model of Failure Cascade Dynamics
Mr. Giovanni Sansavini, Dr. Muhammad R. Hajj, Dr. Ishwar K. Puri ; Dr. Enrico Zio

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Shape Memory Alloys

758. Shape Memory with Multi-stage Transformations
Dr. Huseyin Sehitoglu, PhD.
759. Analyses and evaluations for composite moment frames with SMA PR-CFT connections
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760. Application of Shape Memory Alloy as an Energy Dissipater in Civil Engineering
Dr. Seyyed Mahdi Zahrai, PhD. ; Mr. Mohammad Javad Hamidia, M.S.
761. Stability Analysis in Magnetic Shape Memory Alloys
Dr. George Chatzigeorgiou, Mr. Krishnendu Haldar ; Dr. Dimitris C. Lagoudas
762. Effect of irrecoverable strains on the martensitic transformation of TiPdNi High Temperature Shape Memory Alloy
Mr. Parikshith Kumar ; Dr. Dimitris C. Lagoudas
763. Magnetic Field-Induced Phase Transformation in NiMnCoIn Metamagnetic Shape Memory Alloys
Dr. Ibrahim Karaman, Mr. Burak Basaran, Mr. Ruixian Zhu ; Dr. Haluk E. Karaca
764. Modeling of Magnetic Field-Induced Phase Transformations in NiMnCoIn Magnetic Shape Memory Alloys
Mr. Krishnendu Haldar, Dr. Dimitris Lagoudas, PhD., Mr. Burak Basaran ; Dr. Ibrahim Karaman
765. Macroscopic modeling of shape memory alloys for composite structures and materials simulation
Mr. Yves Chemisky, Mr. Arnaud Duval, Mr. Boris Piotrowski, Mr. Tarak Ben-Zineb ; Mr. Etienne Patoor
766. Transformation Induced Fatigue Life of Nickel-Rich NiTi SMA Actuators: Failure Mechanisms and Investigations of the Interactions Precipitates/Matrix upon Cyclic Transformation
Mr. Olivier W. Bertacchini, Mr. Justin Schick, Dr. Hongxing Zheng ; Dr. Dimitris C. Lagoudas
767. Intragranular austenite orientation evolution of a Cu-Al-Be SMA during an in-situ tensile test
Dr. Sophie Berveiller, Dr. Benoit MALARD ; Dr. Etienne PATOOR
768. Three-Dimensional Modeling of Viscoplastic Deformation in Shape Memory Alloys
Mr. Darren J. Hartl, Dr. George Chatzigeorgiou ; Dr. Dimitris C. Lagoudas

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769. Computational Modeling of Lunar Sand Behavior for Traction Analysis
Mrs. Marisa K. Orr, Dr. Balajee Ananthasayanam, Dr. Joshua D. Summers, Dr. Paul F. Joseph ; Dr. Sherrill B. Biggers, Jr.
770. Modeling Full-Scale Operation of Earth-Moving Machinery using Coupled Particle Dynamics, Machine Dynamics and Hydraulic Control Simulation
Dr. John Favier, Mr. Paul Naude, Dr. Richard D. LaRoche ; Mr. Mark Cook

Solid Mechanics

771. Three-dimensional Numerical Analysis of Construction Process for Tunnel Opening
Mr. Hongjian Li
772. Distortional Buckling: An Important Aspect for Short I-Beams
Dr. Ashwini Kumar
773. Probabilistic design optimization for Fatigue Failures of drillstrings
Mr. mohammad golestani sehat, M.S.

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774. Analyzing random vibration fatigue of Drillstrings
Mr. mohammad golestani sehat, M.S.
775. Predicting Cutting Temperatures when Turning Stainless Steel with Worn Tools
Mr. Chung-Shin Chang, PhD.
776. A New Method in Sheet Metal forming using Chemical Energy
Dr. Mehran Moradi, Dr. Boozarjomehr Ghasemi ; Mr. Reza Abbasian
777. Characteristic orthogonal polynomials in the study of transverse vibrations of nonhomogeneous rectangular orthotropic plates of bilinearly varying thickness
Dr. Roshan Lal, PhD. ; Mr. Yajuvindra Kumar
778. A Magnetoelastic Coupling Constitutive Model for deformable magnetized Materials
Dr. Hao-Miao Zhou, PhD.
779. Contact stress analysis around pin-loaded holes in orthotropic plates
Dr. Olanrewaju Aluko ; Dr. Horace Whitworth
780. A Newly Developed Cruciform Specimens Geometry for Biaxial Stress Evaluation Using NDE
Mr. Mohamed A. Mustafa, B.S.
781. Constitutive Modeling for Simulating Uniaxial and Multiaxial Cyclic and Ratcheting Responses
Dr. Shree Krishna ; Dr. Tasnim Hassan
782. Predicting Cutting Temperatures When Turning Stainless Steel With Worn Tools
Dr. Chung-Shin Chang
783. Potential fields of an infinite medium containing arbitrarily positioned elliptic cylinders
Dr. Hsin-Yi Kuo
784. Point Force Solutions of an Infinite Bi-Material Two-Dimensional Quasicrystal Solids
Dr. Yang Gao, PhD.
785. The Application of Universal Serendipity Elements as Transition Elements in The Transient Problems
Dr. Semih Kucukarlan, PhD.
786. The Geometric Theory of Elasticity and its Application to Shape Optimization of Solids
Dr. Valery V. Vasiliev
787. An Augmented Lagrangian Treatment for Viscoelastic Contact Formulation
Mr. Hoseyn Ashrafi, M.S.
788. Phase-field modeling of domain structures in ferroelectric thin films
Dr. Antonios Kotsos ; Dr. Chad M. Landis
789. Recent Advances on the Investigation of a Class of Constrained Aeolotropic Solids
Mr. Adair R. Aguiar, PhD. and R.L. Fosdick
790. Buckling of Thin Cylindrical Shells: Identification of Critical Length Scales of Random imperfections Modeled as Random Fields
Mr. Kirubel Teferra ; Dr. George Deodatis
791. Finite Element Modeling of Bond For Reinforced Concrete Structures
Ms. jingjuan Li ; Dr. Laura N. Lowes
792. A Microstructure-based Continuum Theory for Multiphase Solids
Dr. Franck Vernerey

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793. Coupled study of kinematic and thermal fields at the microstructure scale of metallic materials
Mrs. Laurence Bodelot, Dr. Laurent Sabatier, Dr. Eric Charkaluk ; Dr. Philippe Dufrenoy
794. Straight Fold Models for Axial Crushing of Thin Walled Frusta and Tubes
Mr. S Haider, Dr. M Hosseini, Dr. T Naqvi ; Dr. Husain Abbas
795. A study of restitution coefficient in low velocity impact: size and material type effects
Mr. Kamyar Hashemnia, M.S., Mr. Ashkan Aryaei, M.S. ; Dr. Khosrow Jafarpur, PhD.
796. Computational Life Assessment of Nonlinear Viscoelastic Components
Dr. Sebnem Ozupek
797. The Effect of Varying Strain Rates and Stress States on the Plasticity, Damage, and Fracture of Aluminum Alloys
Mr. Matthew T. Tucker, Dr. Mark F. Horstemeyer, Mr. Wilburn R. Whittington, Dr. Kiran N. Solanki ; Dr. Phillip M. Gullett
798. Simulation of weld line movement during forming of TWBs
Dr. Mostafa Ketabchi, PhD., Mr. Mahmoud Abbasi, M.S. ; Mr. Mohammad Abbasi, M.S.
799. Evaluation of the 3D Anisotropic Elastostatic Fundamental Solution by Using the Telles Transformation
Mr. Anderson Gabriel Santiago, M.S., Mr. Paulo Sollero, PhD.; Mr. Eder L. Albuquerque, PhD.

Stability of Solids and Structures

800. Eigen-Analysis of Shear Buildings under Gravity Loads
Dr. Mehmet Sahin, PhD.
801. Local buckling of rotationally and vertically restrained orthotropic plates
Dr. Pizhong Qiao ; Ms. Xuping Huo
802. Lower Bound Buckling Pressures for Metal Tanks with Variable Thickness
Dr. Luis A. Godoy, PhD. ; Mrs. Rossana Jaca, PhD.
803. On the lateral-torsional buckling of partially composite beams
Dr. Noel Challamel ; Dr. Ulfe Arne Girhammar
804. Edge Effects in Buckled Thin Films on Elastomeric Substrates
Dr. Jizhou Song, Dr. Zhuangjian Liu ; Dr. Yonggang Huang
805. Flat Composite Beam Flexural-Torsional Buckling Analysis
Dr. Jiangtian Cheng
806. Effect of Hydroplaning on Hydrodynamic Stresses Applied on Submarine Landslides
Dr. Hongrui Rainey Hu
807. Snap Through of Curved Beams - A Nonlinear Thermomechanical Coupled Field Problem
Miss Yenny Chandra ; Dr. Ilinca Stanciulescu
808. Dynamic Stability of water Tanks
Dr. Sukhvarsh Jerath, PhD. ; Ms. Wei Qiao
809. Effects of core models in the interactive buckling of sandwich struts
Dr. Ahmer Wadee, Mr. Stylianos Yiatros ; Mr. Marios Theofanous
810. Buckling and Vibration of Rectangular Plates with Transverse Surface Cracks
Dr. Yang Xiang, Mr. Tyrone Attard ; Dr. Jie Yang

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811. Non-Linear Behavior and Failure of FRP Composite Closed-Section Thin-Walled Beams
Mr. Nuno Silva, Dr. Nuno Silvestre ; Dr. Dinar Camotim
812. Torsion Warping Transmission at Thin-Walled Frame Joints: Kinematics, Modeling and Influence on the Structural Response
Mr. Cilmar Basaglia, Dr. Dinar Camotim ; Dr. Nuno Silvestre
813. A Fat Simulation Tool for Buckling and Postbuckling Analysis of Composite Structures
Dr. Jifeng Xu
814. Web Local Buckling Analysis of FRP Structural Shapes
Dr. Pizhong Qiao ; Ms. Xuping Huo
815. Equivalent Load Approach for Buckling Analysis of Tapered Members
Dr. Miguel A. Serna ; Mr. José R. Ibañez
816. Imperfection modeling for thin-walled members
Mr. Vahid M. Zeinoddini ; Dr. Benjamin W. Schafer
817. FSM and cFSM stability analysis for general boundary conditions
Mr. Zhanjie Li ; Dr. Benjamin W. Schafer

Structural Optimization-Advances and Applications in Solid, Structural, and Fluid Mechanics

818. Improvement of segmented constrained layer damping on a large frequency range using simplex method
Mr. Grégoire Lepoittevin, PhD.
819. Stress constrained continuum structural topology optimization via genetic algorithms
Mr. James K. Guest ; Ms. Lindsey C. Smith Genut
820. Controlling feature geometry in topology optimization
Dr. James K. Guest

Symposium in Honor of Zdenek Bazant

821. On the bending collapse of hardening-softening beams
Dr. Noel Challamel, Dr. Christophe Lanos ; Dr. Charles Casandjian
822. Field verification of quasi-brittle fracture mechanics for snow slab avalanches
Dr. David McClung
823. On the Size Effect on Ductile Void Growth in FCC Single Crystals and Polycrystals
Dr. Javier Segurado ; Dr. Javier LLorca
824. Two-Level Multiscale Failure Model for Heterogeneous Materials
Dr. Caglar Oskay ; Mr. Robert D. Crouch
825. Analytical modelling of buckling driven delamination in composite plates
Dr. Ahmer Wadee ; Ms. Christina Voellmecke
826. Some perspectives on the thermodynamic driving force in ferroelectric crystals
Dr. George J. Weng
827. Formation of multiple shear bands in strain-gradient plasticity
Dr. Francesco Dal Corso ; Dr. John R. Willis
828. Dislocation dynamics across twin boundaries
Dr. Hanchen Huang

Accepted Abstracts

829. Ductile-brittle transitions in bundles of time-dependent, Weibull fibers under local load sharing
Dr. Stuart L. Phoenix, PhD. ; Dr. William I. Newman, PhD.
830. Large deformation and electrochemistry of polyelectrolyte gels
Dr. zhigang suo
831. Cohesive Fracture and Size Effect
Mr. Edward A. Schaufert ; Dr. Gianluca Cusatis
832. Reliability Analysis of Fracture in Piezoelectric Components with a Random Microstructure
Dr. Miguel A. Gutierrez ; Mr. Clemens V. Verhoosel
833. Mechanical Testing of Nanostructures - Seeing the Invisible
Dr. Horacio D. Espinosa, PhD. ; Mr. Ravi Agrawal, M.S.
834. Numerical Simulation of Blast and Penetration Effects on Structures
Dr. Gianluca Cusatis
835. Molecular Mechanics Simulations of Instabilities in 3D Deformations of Gold Nanospecimens
Dr. Alejandro A. Pacheco ; Dr. Romesh C. Batra
836. Hygro-Thermo-Mechanical Interaction in Concrete Materials
Mr. Kaspar J. Willam
837. Probabilistic modelling of fracture in piezoelectric ceramics
Dr. Miguel A. Gutierrez ; Mr. Clemens V. Verhoosel

Teaching Mechanics

838. Teaching Undergraduate Mechanics Courses: Presentation Color Codes and Hands-on Demonstrations
Dr. Jin-Song Pei, Ms. Amy C. Hufnagel, Ms. Priyantha B. Wijesinghe, Mr. Michael Van Zandt, Mr. Wassim Tabet, Mr. Richard C. Davis, Mr. Eric C. Mai ; Mr. Randall D. Martin

Turbulence and Fluid Mechanics in Renewable Energy

839. Magnetohydrodynamics of viscoelastic fluid over a stretching surface with suction within a porous medium
Dr. Andrew Chan, Dr. Ulavathi Mahabaleswar ; Dr. Pradeep Siddheshwar

Turbulence Measurement and Modeling

840. Internal-Wave Radiation on Horizontal Turbulence in Stratified Flow
Dr. Vincent H. Chu ; Dr. Camilo E. Pinilla
841. Turbulence Simulations by Lagrangian Blocks
Dr. Vincent H. Chu

Vibratory Energy Harvesting Systems

842. On the Influence of a Nonlinear Restoring Force on Piezoelectric Cantilever Energy Harvesting
Mr. Samuel C. Stanton ; Dr. Brian P. Mann
843. Analytical Analysis of Power Harvesting from Environments with Time-Varying Frequency
Mr. Thiago Osorio ; Dr. Mohammed Daqaq
844. Energy Harvesting via Parametric Excitations
Dr. Mohammed Daqaq, Mr. Christopher Stabler, Mr. Yousef Qaroush ; Mr. Thiago Osorio
845. Feedback optimization in passive energy harvesting networks
Dr. Jeffrey T. Scruggs

Accepted Abstracts

846. Lift Force in a Reciprocating Small Scale Low-Head, Low-Flow Rate Hydropower Concept
Dr. Ramesh B. Malla, Ms. Binu Shrestha, Mr. Jonathan Drasdis ; Dr. Amvrossios Bagtzoglou

847. Analytical Modeling and Experimental Verification of a Broadband Piezoelectric Energy Harvester
Mr. Alper Erturk, Mr. Steven R. Anton, Mr. Pablo A. Tarazaga ; Dr. Daniel J. Inman

Vulnerability of Structures subject to Extreme Dynamic Loading

848. Blast Resistance of Unreinforced Masonry (URM) Walls Retrofitted With Nano Reinforced Elastomeric Materials
Mr. Mohammad Irshidat, Dr. Ahmed Al-Ostaz, Dr. Alexander Cheng ; Dr. Christopher Mullen

849. A Thermoplastic Damage Model with Application to Cyclic Loading of Metallic Plate Dampers
Mr. Dongkeon Kim ; Dr. Gary F. Dargush

Wind Engineering and Hazard

850. (WITHDRAWN) Numerical Investigation of Aerodynamic Characteristics of a New Wind Turbine
Miss Mien-Ying Kung, M.S.

851. Prediction of Wind Induced Significant Wave Height using Fuzzy Logic Model
Dr. Abdüsselam Altunkaynak ; Dr. K. H. Wang

Proper Orthogonal Decomposition Methods in Dynamical Systems

852. A Correlation Matrix Approach to Estimating Velocity Fields Using Sensor Measurements
D. Rempfer and P. Mokhasi

853. Improvement of the POD ROM Robustness using Optimal Sampling
M. Bergmann

854. An Adaptive POD-Krylov Reduced-order Modeling Framework for Repeated Analysis Problem
K. Calberg and C. Farhat

855. Reduced-order Model of the Velocity Field of a Micro-air Vehicle Hover Motion
C. Chabalko, P. Beran, R. Snyder, and M. R. Hajj

856. Application of Proper Orthogonal Decomposition in Computing Functional Gains
I. Akhtar, J. Borggaard, J. Burns, and L. Zietsman

857. Using Low-order Models to Assess Turbulent Convective Heat Transfer Effectiveness
M. Schwanen and A. Duggleby

858. Reduced-order Modeling of Turbulent Flows
T. Iliescu, J. Borggaard, I. Akhtar, and Z. Wang

Recent Submissions:

901. Dynamic Response of Polycarbonate in Tube Expansion Experiments:
H. Zhang; K. Ravi-Chandar

902. Seismic response of steel-concrete composite bridges accounting for model parameter uncertainties
Enrico Tubaldi, Michele Barbato, and Andrea Dall'Asta

903. Multi-Scale Modeling for Nanoparticle Reinforced Polymer Composites
S.H. Pyo, G. Lemaire and H.K. Lee

Accepted Abstracts

904. A Coupled Meshfree – Finite Element Multi-scale Formulation and Kernel Contact Algorithm for Modeling Soil-Machine Interaction
J. S. Chen, P. Guan
905. Development of nickel-free shape memory alloys for biomedical applications
P. Laheurte, W. Elmay, A. Eberhardt, T. Gloriant, F. Prima, and E. Patoor
906. A Semi-Lagrangian Meshfree Formulation and Kernel Contact Algorithms for Modeling Soil-Machine Interaction
J.S. Chen and P. Guan
907. Investigation of the Interface in NiTi Shape Memory Fibre-Epoxy Matrix Composite
Yousef Payandeh, Fodil Meraghni, Etienne Patoor, and Andre Eberhardt
908. No entry
909. Investigation of Behavior of Cracked Beam Members after Earthquakes
Armagan Korkmaz and Fuat Demir
910. Cyclic thermomechanical behavior modeling of SMA materials in applications
L. Saint-Sulpice, S. Arbab Chirani, and S. Calloch
911. A Unified Potential-Based Approach for Mixed-Mode Cohesive Fracture
Glaucio H. Paulino, Kyoungsoo Park and Jeffery R. Roesler
912. Tensile Shock Waves in Rubber
Johnathan Niemczura and K. Ravi-Chandar
913. Effects of size and grain boundaries on the energetic and dissipative concepts in Thermodynamic formulation of the Polycrystalline
G. Z. Voyiadjis and B. Deliktas
914. Adhesive inter-laminar and cohesive inner-layer damage mechanisms for composite materials
Guido Borino, Boris Failla and Francesco Parrinello
915. High strain rate deformation of ultra-fine grain sized nanocrystalline Cu
A. M. Dongare, A. M. Rajendran, B. LaMattina, D. W. Brenner, and M. A. Zikry
916. No entry
917. A Coarse-Grain Model for Erythrocyte Membrane
George Lykotrafitis, Ju Li and Subra Suresh
918. A Combined Cohesive-Continuum Formulation for Ductile Fracture
K. D. Papoulia
919. INTERACTION DURING TUNNELING
Jiří Boštlík, Kamila Weiglová
920. Probing cell membrane fluctuations with light
Gabriel Popescu
921. Plastic Flow with Microstructural Evolution and its Effect on Strain Localization
John L. Bassani and Haizhen Pan
922. Effects of Material Anisotropy on Aggregation
Qiwei Shi and John L. Bassani
923. VISCOELASTIC FRACTURE OF HYDROGEL MATERIALS

Accepted Abstracts

Geoffrey Tizard, Katie Murray, Wonho Kim, and David Dillard

924. NUMERICAL MODELING OF CORTICAL BONE ADAPTATION DUE TO MECHANICAL LOADING USING FINITE ELEMENTS
Natarajan Chennimalai Kumar, Iwona M. Jasiuk, Jonathan A. Dantzig
925. Development and Mixing of Turbulent Thermohaline fountains
R.E. Baddour and H. Zhang
926. (WITHDRAWN) EFFECT OF FRESHWATER DIVERSION ON THE ECOSYSTEM OF MAUREPAS WETLAND
Himangshu S. Das (Coastal Hydrodynamics)
927. Simulation of Impact Behavior of Composite Materials using Thermodynamically Consistent Coupled Viscoplastic Damage Model
George Z. Voyiadjis and Babur Deliktas
928. Nonlinear Stochastic Modeling of Composites using the Energy-based Characterization
Jan Wei Pan and Tomonari Furukawa
939. Numerical and Analytical Investigations of Bearing Behavior in Thin Walled Steel Bolted Connection at Elevated Temperatures
H. He and Y. C. Wang
940. Fatigue Reliability of Composite Laminates under Multiaxial Loading
Y. Ziang and Y. Liu
941. Evaluation of concrete mix designs for migrating early-age shrinkage cracking
J. Zhuang, P. Qiao, and D. Mclean
943. Modeling and Performance Study of a Beam Microgyroscope
M. Ghommem, A. H. Nayfeh, S. Choura, F. Najjar, ZE.M. Abdel Rahman
944. A Fundamental Platform for Dynamic Soil-Structure Interaction by Linearized Theory
R. Pak and J. Ashlock
945. On-line Parametric Identification of Nonlinear Hysteretic Systems with Model Uncertainty
E. Chatzi and A. Smyth
946. Challenges for Pavement Mechanics
C. Schwartz
947. Achieving Enhanced Understanding of Flexible Pavement Distress Mechanisms through the Use of Advanced Models
R. Roque
948. Study of Indirect Tension Strain Based on Digital Speckle Correlation Method
Y. Tan
949. DEM Simulation of Erosion Mechanism for Semi-rigid base using PFC3D
Y. Sheng, S. Chen, and L. Wang
950. Asphalt Mixture Fatigue Evaluation using X-Ray Tomography and Finite Element Simulation
C. Wan, X. Zhang, and L. Wang
951. Effect of Random fields on the mechanics of systems at multiple scales
J. Andrade and Q. Chen
952. Modeling of Lamb Waves for Application to Crack Identification

Accepted Abstracts

E. Palmos, Y. W. Kwon, and R.D. Pollak

953. Damage Detection in Non-Uniform Thickness Laminated Composite Beams using Vibration based Health Monitoring Technique

H. Ghaffare, A. Zabihollah, E. Saeedi

954. Damage Detection in Multi-Stable Laminated Composites using Vibration based Health Monitoring Technique

H. Ghaffare, A. Zabihollah, E. Saeedi