UNIVERSITA' DEGLI STUDI
DI SALERNO

XXIII CONGRESSO
ASSOCIAZIONE ITALIANA DI MECCANICA TEORICA E APPLICATA

AIMETA 2017

SALERNO, 4-7 SETTEMBRE 2017

PROGRAMMA

PROGRAMMA GENERALE AIMETA 2017

Lunedì 4 settembre

8:15	*Registrazioni* Sala ATENA	
9:20	*Cerimonia di Apertura* Sala 1 TAFURI A	
10:00	*Relazione generale:* Claudio Giorgi *Presiede:* Sandra Carillo Sala 1 TAFURI A	
10:40	*Pausa Caffè* HALL hotel	
11:10	*Sessioni* Sale: 1, 2, 3, 4, 5, 6, 7, 8	
13:10	*Pausa Pranzo* Sala LA NINFEA	
14:30	*Sessioni* Sale: 1, 2, 3, 4, 5, 6, 7, 8	
16:30	*Pausa Caffè* HALL hotel	
16:50	*Sessioni* – Sale : 1, 2, 3, 5, 6, 7, 8	*Riunione del GADES* – Sala 4
18.30	*Riunione Gruppi AIMETA*	
20.00	*Cocktail* Roof Terrace SPECCHIO DI MARE	

Martedì 5 settembre

8:15	*Registrazioni* Sala ATENA
9:20	*Relazione generale:* Fabrizio Vestroni Resonance Phenomena in Hysteretic Systems *Presiede:* Carlo Cinquini SALA 1 TAFURI A
10:00	*Pausa Caffè* HALL hotel
10:30	*Sessioni* Sale: 1, 2, 3, 4, 5, 6, 7, 8
12:50	*Pausa Pranzo* Sala LA NINFEA
14:20	*Sessioni* Sale: 1, 2, 3, 4, 5, 6, 7, 8
16:20	*Pausa Caffè* HALL hotel
16:40	*Sessioni* – Sale: 1, 2, 3, 4, 5, 6, 7
18:00	*Assemblea AIMETA* Sala 1 TAFURI A

PROGRAMMA GENERALE AIMETA 2017

Mercoledì 6 settembre

8:15	*Registrazioni* Sala ATENA
9:00	*Relazione generale:* J.N. Reddy Recent developments in shell finite elements and non-local theories for composite structures *Presiede:* Luigi Ascione Sala 1 TAFURI A
9:40	*Relazione generale:* in corso di definizione Sala 1 TAFURI A
10:20	*Pausa Caffè* HALL Hotel
10:50	*Sessione speciale premi AIMETA* Sala 1 TAFURI A
12:50	*Pausa Pranzo* Sala LA NINFEA
14:10	*Sessioni* Sale: 1, 2, 3, 4, 5, 6, 7, 8
16:30	*Pausa Caffè* HALL Hotel
16:50	*Gita sociale*
20:30	*Cena Sociale* Roof Terrace SPECCHIO DI MARE

Giovedì 7 settembre

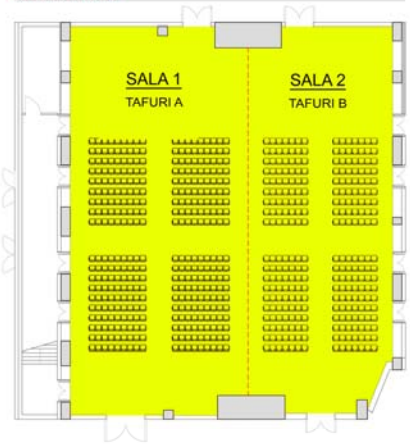
8:15	*Registrazioni* Sala ATENA
9:00	*Sessioni* Sale: 1, 2, 3, 4, 5, 6, 7, 8
11:20	*Pausa Caffè* HALL Hotel
11:40	*Relazione generale:* Vincenzo Parenti Castelli *Presiede:* Walter D'Ambrogio Sala 1 TAFURI A
12:20	*Sessioni* Sale: 1, 2, 3, 4, 5, 6, 7, 8
13:40	*Conclusione delle Sessioni*
14:30	*Dimostrazioni degli sponsor* Sale: 1, 2

PROGRAMMA GENERALE - AIMETA 2017

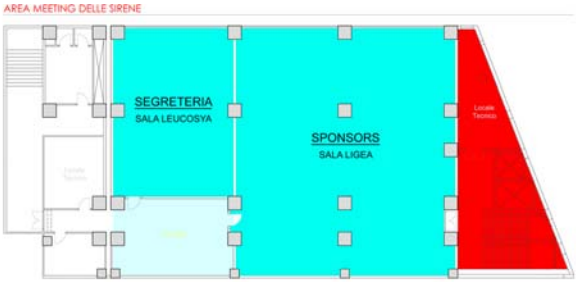
Sale sessioni
Segreteria e registrazione - Area sponsor
Accesso scale e ascensori
Aree ristoro

HALL - PIANO TERRA

AUDITORIUM TAFURI



AREA MEETING DELLE SIRENE



PROGRAMMA GENERALE - AIMETA 2017

Sale sessioni
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SALA BANCHETTI LA NINFEA

LUNCH
SALA NINFEA

RISTORANTE BRERA

AREA MEETING PANORAMICA A

CAPRI SALA 7 ISCHIA

SALA 4
VIETRI

SALA 8
RAVELLO

AREA MEETING PANORAMICA B

SALA 5
FURORE

SALA 6
POSITANO

ROOF TERRACE

BRINDISI DI BENVENUTO
SALA
LE DIVINE COSTIERE

BRINDISI DI BENVENUTO
ROOF TERRACE
SPECCHIO DI MARE

QUADRO SINOTTICO DELLE SESSIONI TEMATICHE E DEI MINISIMPOSI

Giorno	Orario	Sala 1 Tafuri A	Sala 2 Tafuri B	Sala 3 Atena	Sala 4 Vietri	Sala 5 Furore	Sala 6 Positano	Sala 7 Capri ed Ischia	Sala 8 Ravello
Lunedì	11:10 - 13:10	MS02	MS08	MSS	MS06	MF	MG	MS05a	MS09
	14:30 - 16:30	MS02	MS08	MSS	MS06	MS09c	MS10	MS05a	MS09
	16:50 - 18:30	MS02	MM	MSS	MS11		MS03	MF	MS01
Martedì	10:30 - 12:50	MS02	MS08	MS04	MS11	MS09c	MS03	MS05b	MS01
	14:20 - 16:20	MS02	MS08	MSS	MS06	MF	MS09a	MS05a	MM
	16:40 - 18:00	MS02	MG	MSS	MS13	MS07	MS09a	MS05b	MS09
Mercoledì	14:10 - 16:30	MS02	MS08	MS04	MM	MS09c	MS09d	MS07	MS09b
Giovedì	9:00 - 11:20	MS09b	MS05b	MS06	MS02	MS09c	MS04	MS13	MS12
	12:20 - 13:40	MS09b	MS05a	MSS	MS02	MS09	MM	MS08	MS04

Sessioni Tematiche

MG	Meccanica generale
MF	Meccanica dei fluidi
MSS	Meccanica dei solidi e delle strutture
MM	Meccanica delle macchine

Minisimposi		Organizzatori
MS01	Biomeccanica teorica e applicata per problemi cardiovascolari	*M. Conti, M. Marino, G. Vairo, M. Zingales*
MS02	Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh	*M.G. Naso, F. Pellicano, G. Piccardo*
MS03	Metodi variazionali e applicazioni nella meccanica dei solidi	*G. Cricrì, E. Zappale*
MS04	Strutture e materiali reticolari innovativi	*A. Favata, L. Feo, F. Fraternali, A. Micheletti, R.E. Skelton*
MS05a	Comportamento meccanico delle murature: modellazione e procedure numeriche	*D. Addessi, E. Sacco*
MS05b	Comportamento meccanico delle murature: analisi di strutture a guscio	*F. Marmo, G. Milani, L. Rosati*
MS06	Nuovi approcci nella meccanica computazionale, GIMC	*S. Marfia, A. Pandolfi, A. Reali*
MS07	Interazione fluido-struttura: metodi e applicazioni	*F. Auteri, M.D. de Tullio, F. Giannetti*
MS08	Frattura: modelli di interfaccia e approcci "phase-field"	*R. Alessi, F. Freddi, G. Lancioni, E. Sacco*
MS09	Meccanica e materiali, GMA	*L. Bardella, M. Paggi, P. Vena*
MS09a	Materiali soffici attivi, GMA	*G. Noselli, A. Lucantonio*
MS09b	Meccanica dei compositi "verdi": caratterizzazione meccanica e relativi aspetti tecnologici, GMA	*F. Fabbrocino, P. Russo, F. Colangelo*
MS09c	Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA	*A. Bacigalupo, F. Dal Corso, M. L. De Bellis, A. Piccolroaz*
MS09d	Meccanica e affidabilità dei materiali piezoelettrici, GMA	*P.S. Valvo, M. Paggi*
MS10	Metodi numerici avanzati e "physically oriented" per le simulazioni in meccanica del continuo	*G. Coppola, M.D. de Tullio, F. Capuano*
MS11	Approcci di calcolo stocastico e della probabilità nella meccanica, GMS	*A. Pirrotta, L. Rosati, S. Sessa*
MS12	Rivestimenti per applicazioni tribologiche: modellazione e caratterizzazione	*G. Carbone, M. Di Donato, G. Favaro*
MS13	Meccanica dei materiali estremi: grafene, compositi, metamateriali e materiali biologici/bioispirati	*F. Bosia, M.Fraldi, N.M. Pugno*

LUNEDÌ 4 SETTEMBRE, 11:10-13:10

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES , in memoria del prof. Ali H. Nayfeh Presiede Sandra Carillo		
11:10	On the response at the excitation frequency of a two degrees of freedom nonlinear oscillator	Gianluca Gatti, Michael Brennan, Ivana Kovacic
11:30	Linear and nonlinear dynamics of a beam-cable-beam model	Francesco Potenza, Marco Lepidi, Umberto Di Sabatino, Vincenzo Gattulli
11:50	Effects of the thermomechanical coupling on the nonlinear dynamics of a reduced order model of composite plate	Valeria Settimi, Eduardo Saetta, Giuseppe Rega
12:10	Il pendolo semplice a secondi fra teoria ed esperienze: la disputa scientifica fra G. Piola e F.W. Bessel del 1830-1831	Antonio Cazzani
12:30	Thermalisation of a coupled pendulum chain	Marta Greselin, Giovanni Salesi, Roberto Leporini
12:50	A nonlinear model for suspension bridges with fixed cable and extensible hangers	Alessio Falocchi, Filippo Gazzola

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" Presiede Francesco Freddi		
11:10	A Cohesive-Frictional interface model subjected to mixed complex loading paths	Guido Borino, Francesco Parrinello
11:30	Accurate XFEM simulation of failure and debonding of FRP-plate-reinforced beams of steel fiber reinforced concrete	Elena Benvenuti, Nicola Orlando
11:50	Mixed-Mode cohesive model with tensile frictional interaction for the simulation of delamination	Federica Confalonieri, Umberto Perego
12:10	On the evaluation of the interfacial adhesion of thin composites by laser-generated surface acoustic waves	Anna Castellano, Aguinaldo Fraddosio, Mario Daniele Piccioni
12:30	Interface models with microstructure via an asymptotic approach	Michele Serpilli
12:50	A multiscale model of imperfect interface with damage and unilateral contact	Elena Bonetti, Giovanna Bonsanti, Frédéric Lebon, Raffaella Rizzoni

LUNEDÌ 4 SETTEMBRE, 11:10-13:10

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture Presiede Mario Di Paola		
11:10	Dynamic nonlinear analysis of different base isolation systems for multi-storey reinforced concrete buildings	Fabio De Angelis, Donato Cancellara
11:30	Accurate and efficient account of geometrical imperfections in Koiter analysis	G.Garcea, F.S.Liguori, L. Leonetti, D. Magisano, A. Madeo
11:50	On the edge-wave of a thin elastic plate supported by an elastic half-space	Andrea Nobili, Julius Kaplunov, Enrico Radi, Angelo Marcello Tarantino
12:10	Improvement of the matched field approach for damage imaging in plates using elastic response-based weights	Simone Sternini, Antonino Quattrocchi, Roberto Montanini, Annamaria Pau, Francesco Lanza di Scalea
12:30	A base isolation system useful for structures subject to extreme seismic events.	Donato Cancellara, Fabio De Angelis
12:50	A novel numerical approach in crystal plasticity	Ivano Benedetti, Vincenzo Gulizzi, Vincenzo Mallardo

Sala 4 Vietri

MS06 - Nuovi approcci nella meccanica computazionale, GIMC Presiede Alessandro Reali		
11:10	A new non-linear beam element based on smart displacement shape functions	Salvatore Caddemi, Ivo Caliò, Bartolomeo Pantò, Davide Rapicavoli
11:30	Mixed 3D Timoshenko beam finite element based on a corotational formulation for damaging framed structures	Paolo Di Re, Daniela Addessi
11:50	On the nonlinear GBT finite element analysis based on the Implicit Corotational Method	Andrea W. Ruggerini, Antonio Madeo, Stefano de Miranda
12:10	Precomputation-based mixed membrane finite element for the analysis of inelastic structures	Nicola Antonio Nodargi, Paolo Bisegna
12:30	A new conforming family of finite elements: the case of Kirchhoff plate	Leopoldo Greco, Tiziano Battiato, Loredana Contrafatto, Massimo Cuomo
12:50	An explicit PFEM-FEM Coupling for Lagrangian Fluid-Structure Interaction Problems	Simone Meduri, Massimiliano Cremonesi, Umberto Perego

LUNEDÌ 4 SETTEMBRE, 11:10-13:10

Sala 5 Furore

MF – Meccanica dei fluidi **Presiede Luigi De Luca**		
11:10	Wetting and cavitation in nanoporous materials	Alberto Giacomello, Antonio Tinti, Carlo Massimo Casciola
11:30	Dynamics of a LASER induced cavitation bubble	Giorgia Sinibaldi, Francisco Pereira, Agostino Occhicone, Davide Caprini, Luca Marino, Francesco Michelotti, Carlo Massimo Casciola
11:50	Design of self-recovery superhydrophobic surfaces for reducing drag	Emanuele Lisi, Matteo Amabili, Simone Meloni, Alberto Giacomello, Carlo Massimo Casciola
12:10	Drag reduction in turbulent pipe flow induced by superhydrophobic surfaces	Roberta Costantini, Francesco Battista, Carlo Massimo Casciola
12:30	Stability and sensitivity analysis of the flow in a T-shaped micro-mixer with Superhydrophobic Surfaces	Raffaele Longobardi, Vincenzo Citro, Lorenzo Siconolfi, Flavio Giannetti, Paolo Luchini
12:50	Numerical analysis on the critical issues of a Cold Spray technology	Giovanni Paolo Reina, Serena Russo, Carlo de Nicola, Antonio Viscusi

Sala 6 Positano

MG – Meccanica Generale **Presiede Mauro Fabrizio**		
11:10	Electromagneto-elastic conductors: a microstructure approach	Maurizio Romeo
11:30	Improvement of High-Speed Trains Efficiency through the Use of Regenerative Braking	Amedeo Frilli, Enrico Meli, Simone Panconi, Luca Pugi, Andrea Rindi, Benedetta Romani
11:50	Experimental identification of faults in a railway pantograph mechanism in presence of nonlinear damping	Giancarlo Santamato, Massimiliano Solazzi, Antonio Frisoli
12:10	Stochastic response of uncertain-but-bounded linear fractional dynamical systems	Giulio Cottone, Roberta Santoro
12:30	Nano-pores in a thermo-elastic continuum with strain gradient effects	Pasquale Giovine
12:50	Caratterizzazione sperimentale di un guscio FGM	Antonio Zippo, Francesco Pellicano, Matteo Strozzi, Marco Barbieri

LUNEDÌ 4 SETTEMBRE, 11:10-13:10

Sala 7 Capri ed Ischia

MS05a – Comportamento meccanico delle murature: modellazione e procedure numeriche **Presiede Elio Sacco**		
11:10	Micropolar modelling of rigid blocky masonry with elastic mortar joints	Andrea Bacigalupo, Luigi Gambarotta, Marco Lepidi, Francesca Vadalà
11:30	The SEPUC for the estimation of failure surface of quasi-periodic masonries	Federico Cluni, Nicola Cavalagli, Vittorio Gusella
11:50	FE, DE and FE/DE models to investigate the non-linear behaviour of masonry walls: a critical comparison	Daniele Baraldi, Claudia Brito de Carvalho Bello, Emanuele Reccia, Antonella Cecchi
12:10	On the unit cell boundary value problem with meshless formulation for masonry structures	Emma La Malfa Ribolla, Antonino Spada, Giuseppe Giambanco
12:30	A couple-stress/Cauchy multiscale model for the nonlinear analysis of periodic masonries under in-plane loading conditions	Lorenzo Leonetti, Fabrizio Greco, Patrizia Trovalusci, Raimondo Luciano, Renato Masiani
12:50	A couple-stress multiscale model for the in-plane failure analysis of masonry walls: a validation with a combined FEM/DEM approach	Emanuele Reccia, Lorenzo Leonetti, Patrizia Trovalusci, Antonella Cecchi

Sala 8 Ravello

MS09 – Meccanica e materiali, GMA **Presiede Lorenzo Bardella**		
11:10	Multi-scale modeling of plasticity and phase transformation in steels	Francesco Maresca, Varvara Kouznetsova, Marc Geers, William Curtin
11:30	Molecular based elasto-viscoplastic constitutive modeling of elastomeric membranes	Federico Bosi, Sergio Pellegrino
11:50	Statistical micro-macro approach for the strength of aged brittle materials	Gabriele Pisano , Gianni Royer Carfagni
12:10	Fracture energy and mode mixity of face/core debonds in sandwich beams	Roberta Massabò, Christian Berggreen, Luca Barbieri
12:30	Effective elastic properties of sphere-reinforced particulate composites: effects of a functionally graded interphase zone	Roberta Sburlati
12:50	Adhesion of thin polymeric coatings: matching in-situ experiments and traction-separation parameters	Emanuele Cattarinuzzi, Dario Gastaldi, Pasquale Vena

LUNEDÌ 4 SETTEMBRE, 14:30-16:30

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh Presiede Stefano Lenci		
14:30	Norm–based based frequency optimization of uncertain dynamical systems	Paolo Venini, Carlo Cinquini
14:50	Optimal design of a novel tuned-mass-damper-inerter for reducing the displacement demand of base-isolated structures	Dario De Domenico, Giuseppe Ricciardi
15:10	Experimental investigation on MRE semi-active isolator for lightweight structures	Renato Brancati, Giandomenico Di Massa, Stefano Pagano
15:30	Evaluation of the performances of a SMA-based Tuned Mass Damper	Davide Bernardini, Vinicius Piccirillo, Giuseppe Rega
15:50	Randomized algorithm for performance evaluation of controlled structures with uncertainties	Mario L. Fravolini, Antonio Ficola, Ilaria Venanzi

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" Presiede Giovanni Lancioni		
14:30	A multiscale structural model for cohesive delamination of multilayered beams	Hossein Darban, Roberta Massabò
14:50	An innovative study of the debonding process for adhesively bonded interfaces under different loading conditions	Rossana Dimitri, Giorgio Zavarise
15:10	Behavior of bonded pultruded beams via an imperfect interface model with damage	Francesco Ascione, Marco Lamberti, Fréderic Lebon, Aurélien Maurel-Pantel, Maria Letizia Raffa
15:30	Fracture toughness of micro-synthetic polypropylene fibrillated fibre reinforced concret	Giovanni Donnini, Andrea bo, Camilla Ronchei, Daniela Scorza, Sabrina Vantadori
15:50	A gradient model for interface fracture	Nunziante Valoroso
16:10	Optimal flux densities for linear mappings and the multiscale geometry of structured deformations	David R. Owen, Roberto Paroni

LUNEDÌ 4 SETTEMBRE, 14:30-16:30

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture **Presiede Fernando Fraternali**		
14:30	Limit analysis of nanoporous materials with a general isotropic plastic matrix under axisymmetric loads	Stella Brach, Kokou Anoukou, Djimedo Kondo, Giuseppe Vairo
14:50	Multi-physics interactions drive VEGFR2 relocation on endothelial cells.	Valentina Damioli, Alberto Salvadori, Gian Paolo Beretta, Cosetta Ravelli, Stefania Mitola
15:10	Exact solutions for free vibration analysis of laminated beams by refined layer-wise theory	Yang Yan, Alfonso Pagani, Erasmo Carrera
15:30	Modelling the axial-torsional response of metallic strands accounting for the deformability of the internal contact surfaces	Francesco Foti, Alessandro de Luca di Roseto, Luca Martinelli
15:50	Modeling and characterization of filled elastomers under planar biaxial loading conditions	Donato Di Vito, Angelo Rosario Carotenuto, Konrad Schneider, Massimiliano Fraldi
16:10	Limit analysis of planar frame structures under seismic load through evolutionary algorithms based on natural computation	Annalisa Greco, Francesco Cannizzaro, Alessandro Pluchino

Sala 4 Vietri

MS06 - Nuovi approcci nella meccanica computazionale, GIMC **Presiede Antonio Tralli**		
14:30	High-order virtual element method for 2D solid mechanics problems	Edoardo Artioli, Robert L. Taylor
14:50	On virtual element solutions of unilateral contact problems	Edoardo Artioli, Andrea Chiozzi, Antonio Tralli
15:10	Virtual element technique for computational homogenization problems	Edoardo Artioli, Sonia Marfia, Elio Sacco
15:30	An efficient blended mixed B-Spline formulation for avoiding membrane locking in non-polar thin structural models	Leopoldo Greco, Salvatore Gazzo, Loredana Contrafatto, Massimo Cuomo
15:50	A robust and efficient iterative strategy for geometrically non-linear structural problems: assessment in displacement-based FEA and IGA	Domenico Magisano, Leonardo Leonetti, Giovanni Garcea, Francesco Liguori
16:10	Isogeometric collocation method for geometrically exact Timoshenko beams	Enzo Marino

LUNEDÌ 4 SETTEMBRE, 14:30-16:30

Sala 5 Furore

MS09c – Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA **Presiede Andrea Piccolroaz**		
14:30	Wave propagation in innovative sandwich and layered plates	Roberta Massabò
14:50	Shape optimization of ultra-wide bandgap phononic slabs	Luca D'Alessandro, Tommaso Piferi, Raffaele Ardito
15:10	The generalized Bloch-Floquet spectrum in periodic thermodiffusive elastic laminates	Lorenzo Morini, Andrea Bacigalupo, Marco Paggi
15:30	Asymptotic approximation for the acoustic dispersion properties of periodic materials	Marco Lepidi, Andrea Bacigalupo
15:50	Perfectly Matched Layers for Flexural Waves in Plate Structures	Maryam Morvaridi, Michele Brun
16:10	Efficient computation of complex band structures in architected 3D lattices	Antonio Palermo, Alessandro Marzani

Sala 6 Positano

MS10 – Metodi numerici avanzati e "physically oriented" per le simulazioni in meccanica del continuo **Presiede Gennaro Coppola**		
14:30	Modelling momentum point sources in particle laden turbulent flows	Paolo Gualtieri, Francesco Battista, Jean-Paul Mollicone, Carlo .Massimo Casciola
14:50	Particle-laden turbulent jet in two way coupling regime	Francesco Battista, Paolo Gualtieri, Carlo .Massimi Casciola
15:10	An immersed boundary method for simulating the fluid-structure interaction of elastic bodies with arbitrary thickness	Marco D. de Tullio, Giuseppe Pascazio
15:30	Energy-preserving discretizations of the Navier-Stokes equations. Classical and modern approaches	Gennaro Coppola, Francesco Capuano, Luigi de Luca
15:50	A minimum-dissipation time integration strategy for large-eddy simulation of incompressible turbulent flows	Francesco Capuano, Benjamin. Sanderse, Enrico Maria De Angelis, Gennarpo Coppola
16:10	Helicity-preserving numerical methods for incompressible flow	Donato Vallefuoco, Francesco Capuano, Enrcio Maria De Angelis

Sala 7 Capri ed Ischia

MS05a - Comportamento meccanico delle murature: modellazione e procedure numeriche **Presiede Luigi Gambarotta**		
14:30	Dynamical collapse of masonry walls under constant impulse acceleration	Mario Como
15:10	Un modello elasto-plastico per le murature	Massimiliano Lucchesi, Barbara Pintucchi, Nicola Zani
15:30	Rigid blocks for masonry	Claudia Cennamo, Elena De Chiara, Fabiana De Serio, Antonio Gesualdo, Antonino Iannuzzo, Maurizio Angelillo
15:50	Collapse of masonry bay windows under horizontal actions: searching for kinematically and statically admissible load multipliers	Riccardo Barsotti, Stefano Bennati, Claudio Tirabasso
16:10	A force-based macroelement for the nonlinear dynamic analysis of masonry buildings	Domenico Liberatore, Daniela Addessi, Marialuigia Sangirardi

LUNEDÌ 4 SETTEMBRE, 14:30-16:30

Sala 8 Ravello

MS09 – Meccanica e materiali, GMA **Presiede Alberto Corigliano**		
14:30	From species diffusion to poroelasticity in modelling the Lamina Cribrosa	Amabile Tatone, Filippo Recrosi, Rodolfo Repetto
14:50	Electrical and mechanical properties of fiber-based electrodes for structural battery applications	Davide Grazioli, Mingzhao Zhuo, Angelo Simone
15:10	FEM analysis of metal on UHMWPE total hip prosthesis during normal walking cycle	Alessandro Ruggiero, Saverio Affatato, Massimiliano Merola, Marco Claudio De Simone
15:30	A chemo-mechanical model of the response of electrode particles in Li-ion batteries	Marco Magri, Alberto Salvadori, Davide Grazioli, Robert McMeeking
15:50	A Maxwell stress-based explanation of back-relaxation in ionic polymer metal composites	Lorenzo Bardella, Alessandro Leronni, Hesam Sharghi, Valentina Volpini, Maurizio Porfiri

LUNEDÌ 4 SETTEMBRE, 16:50-18:30

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh Presiede Francesco Pellicano		
16:50	Singular and regular kernel problems in materials with memory	Sandra Carillo
17:10	Identification of forces at the interface between substructures from responses of the coupled structure	Walter D'Ambrogio, Annalisa Fregolent
17:30	Investigation of synchronization properties in rings of coupled dry friction oscillators	Michal Marszal, Andrzej Stefanski
17:50	Assessment of the prediction of the Modal Absorption Index (MAI) on a complex frictional system using explicit transient analysis.	Jacopo Brunetti, Francesco Massi, Laurent Baillet, Walter D'Ambrogio

Sala 2 Tafuri B

MM – Meccanica delle macchine Presiede Nicola Ivan Giannoccaro		
16:50	Comparative Analysis of Formulation Strategies and Solution Procedures for the Equations of Motion of Rigid Multibody Systems	Carmine Maria Pappalardo, Domenico Guida
17:10	Development of an elastically compensated UPS-type constant-force generator for the static balancing of spatial parallel mechanisms	Alberto Martini
17:30	Gravity balancing of a spatial serial 4-dof arm without auxiliary links using minimum number of springs	Basilio Lenzo
17:50	Toward a Unified Theory for the Kinematic Synthesis of Involute Gears	Giorgio Figliolini, Hellmuth Stachel, Jorge Angeles
18:10	Analytical and graphical methods to synthesize three-poses rigid-body guidance mechanisms	Giorgio Figliolini, Pierluigi Rea

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture Presiede Alberto Taliercio		
16:50	Tall buildings subjected to horizontal loading: Analysis of two case studies by an in-house numerical code	Giuseppe Nitti, Giuseppe Lacidogna, Alberto Carpinteri
17:10	Non-prismatic thin-walled beams: critical issues and effective modeling	Giuseppe Balduzzi, Elio Sacco, Ferdinando Auricchio, Josef Füssl
17:30	A nonlinear frame-panel interaction model accounting for gap	Simona Di Nino, Angelo Luongo
17:50	Fractality and fracture toughness enhancement in carbon-based cementitious composites	Luciana Restuccia, Anna Reggio , Giuseppe Andrea Ferro
18:10	Hellinger-Reissner stationarity principle for stress gradient elastic bodies with embedded coherent interfaces	Guido Borino, Francesco Parrinello, Castrenze Polizzotto

LUNEDÌ 4 SETTEMBRE, 16:50-18:30

Sala 4 Vietri

MS11 - Approcci di calcolo stocastico e della probabilità nella meccanica, GMS **Presiede Antonina Pirrotta**		
16:50	Fragility analysis of masonry arch with geometrical uncertainties under pulse-like base motions	L. Severini, M. DeJong, N. Cavalagli, V. Gusella
17:10	Stochastic Approach for Theory of Plastic Mechansim Control	Paolo Castaldo, Elide Nastri, Vincenzo Piluso, Alessandro Pisapia
17:30	Stochastic Theory of Plastic Mechanism Control: Parametric analyses	Paolo Castaldo, Elide Nastri, Vincenzo Piluso, Alessandro Pisapia
17:50	Probabilistic optimal design of passive control devices coherently with seismic codes Response Spectra	Giacomo Navarra, Francesco Lo Iacono, Maria Oliva
18:10	Nonlinear energy sink optimal parameters in structures excited by response spectra-compatible ground motions	Giorgio Barone, Giacomo Navarra, Maria Oliva

Sala 6 Positano

MS03– Metodi variazionali e applicazioni nella meccanica dei solidi **Presiede Elvira Zappale**		
16:50	Elasticity with Gradient-Disarrangements	David R. Owen
17:10	Optimal Design of Fractured Media with Prescribed Macroscopic Strain	José Matias, Marco Morandotti, Elvira Zappale
17:30	Variational models for phase transitions in the presence of surfactants	Ana Cristina Barroso
17:50	Boundary behaviour and confinement of dislocations inside a crystal	Marco Morandotti
18:10	Numerical evaluations of a Griffith-like criterion for tracking crack paths in brittle materials	Gabriele Cricrì

Sala 7 Capri ed Ischia

MF – Meccanica dei fluidi **Presiede Giacomo Viccione**		
16:50	Estimation of the useful lifetime of a gate valve subjected to impact erosion	Gianandrea Vittorio Messa, Marco Negri, Yongbo Wang, Stefano Malavasi
17:10	A numerical-experimental investigation of the impact erosion of glass reinforced epoxies	Stefano Malavasi, Gianandrea Vittorio Messa, Luigi Piani
17:30	Morphodynamic Shoreline Boundary Conditions: shoreline reconstruction and experimental validation	Matteo Postacchini, Maurizio Brocchini
17:50	An LES approach for wind loads assessment on low-rise and high-rise buildings	Mattia Ricci, Luca Patruno, Ivo Kalkman, Bert Blocken, Stefano de Miranda
18:10	Two alternative drag breakdowns in unsteady flows	Mario Ostieri, Benedetto Mele, Renato Tognaccini

LUNEDÌ 4 SETTEMBRE, 16:50-18:30

Sala 8 Ravello

MS01 – Biomeccanica teorica e applicata per problemi cardiovascolari **Presiede Massimiliano Zingales**		
16:50	Additive manufacturing for a low-cost biaxial testing machine	Gianluca Alaimo, Ferdinando Auricchio, Hermes Giberti, Simone Morganti
17:10	The inhomogeneous mechanical behaviour of Ascending Thoracic Aortic Aneurism (ATAA)	Roberta Montagno, Salvatore Pasta, Angela Alessia Giglia, Giuseppe Raffa, Michele Pilato, Emanuela Bologna, Luca Deseri, Massimiliano Zingales
17:30	Influence of molecular and intermolecular mechanisms on the visco-elasto-damage response of collagen fibrils	Giuseppe Vairo, Michele Marino, René Svensson
17:50	Modeling of fiber-reinforced bio-materials via a generalized statistical approach	M. Vasta, A. Gizzi, A. Pandolfi
18:10	Modeling strategies for arterial mechanobiology	Daniele Bianchi, Michele Marino, Giuseppe Vairo, Peter Wriggers

MARTEDÌ 5 SETTEMBRE, 10:30-12:50

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh Presiede Giuseppe Piccardo		
10:30	An equivalent shear-shear torsional beam model for linear dynamic analysis of multi-store tower buildings	Martina Sciomenta, Angelo Luongo
10:50	A minimal continuous model for tower-building nonlinear static analysis	Francesco D'Annibale, Manuel Ferretti, Angelo Luongo
11:10	Buckling and postbuckling analyses of tower-like structures	Manuel Ferretti, Francesco D'Annibale, Angelo Luongo
11:30	A discrete nonlinear model of shear-shear-torsional beam for building analysis	Angelo Luongo, Daniele Zulli
11:50	Nonlinear dynamics of continuized tall buildings	Daniele Zulli, Giuseppe Piccardo, Angelo Luongo
12:10	Equivalent Timoshenko beam model for the dynamic analysis of tower buildings	Federica Tubino, Giuseppe Piccardo, Angelo Luongo
12:30	A warpable beam model for the analysis of tower buildings	Giuseppe Piccardo, Angelo Luongo

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" Presiede Elio Sacco		
10:30	The overall stress-strain response of 1D bars, from the unloaded state to the fracture onset	Gianpietro Del Piero
11:10	Phase field approximation: fracture energy and internal length scale	Francesco Freddi
11:30	Cohesive fracture with irreversibility: quasistatic evolution for a model subject to fatigue	Vito Crismale, Giuliano Lazzaroni, Gianluca Orlando
11:50	A framework for the interplay between the phase field approach for brittle fracture and the interface cohesive zone model	Marco Paggi, José Reinoso
12:10	Numerical insight of a variational smeared approach to cohesive fracture	Francesco Freddi, Flaviana Iurlano
12:30	Fracture mechanisms in FRCM systems: experiments and variational modeling	Giovanni Lancioni, Jacopo Donnini

MARTEDÌ 5 SETTEMBRE, 10:30-12:50

Sala 3 Atena

MS04 – Strutture e materiali reticolari innovativi **Presiede Andrea Micheletti**		
10:30	A Hierarchal Tensegrity Structure for Morphing	Robert Telford, Paul Weaver
10:50	Fractality in optimal selfsimilar elastic structures	Domenico De Tommasi, Francesco Maddalena, Giuseppe Puglisi, Francesco Trentadue
11:10	On the mechanics of pentamode lattices	Magdalini Titirla, Francesco Fabbrocino, Ada Amendola, Gianmario Benzoni, Fernando Fraternali
11:30	Equilibrium and self-stress of rigid origami structures	Andrea Micheletti, Giuseppe Ruscica, Giuseppe Tomassetti
11:50	Adaptive tensegrity structures for dynamic facades of energy efficient buildings	Raffaele Miranda, Francesco Fabbrocino, Enrico Sicignano, Robert E. Skelton, Fernando Fraternali
12:10	Highly nonlinear solitary waves propagating in a granular medium for nondestructive testing applications	Piervincenzo Rizzo

Sala 4 Vietri

MS11 - Approcci di calcolo stocastico e della probabilità nella meccanica, GMS **Presiede Mario Di Paola**		
10:30	An efficient way to perform stochastic dynamic analysis in fractional order systems	Gioacchino Alotta, Mario Di Paola, Giuseppe Failla, Francesco P. Pinnola, Giorgio Zavarise
10:50	Static Analysis Of Structures With Uncertainties Described By Imprecise Probability	Filippo Giunta, Giuseppe Muscolino, Alba Sofi
11:10	Markovian approximation of linear systems with fractional viscolastic term	Natalia Colinas-Armijo, Mario Di Paola, Antonina Pirrotta
11:30	First passage problems for fractional linear oscillators	Salvatore Benfratello, Giulio Cottone, Luigi Palizzolo
11:50	Approximate determination of survival probability of Bouc-Wen hysteretic systems comprising a fractional derivative element	Alberto Di Matteo, Antonina Pirrotta, Pol D. Spanos
12:10	Dynamic response of damaged beams with uncertain crack depth	Giuseppe Muscolino, Roberta Santoro
12:30	Probabilistic assessment of historical masonry walls retrofitted with through-the-thickness confinement devices	Salvatore Sessa, Roberto Serpieri, Luciano Rosati

MARTEDÌ 5 SETTEMBRE, 10:30-12:50

Sala 5 Furore

MS09c – Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA **Presiede Maria Laura De Bellis**		
10:30	Minimum principles for linear initial-value problems	Angelo Carini, Francesca Fantoni
10:50	Metamaterials for crashworthiness of small cars	Claudia Comi, Larissa Driemeier
11:10	Structured interface in a dynamic lattice of flexural beams	Andrea Piccolroaz, Alexander Movchan, Luigi Cabras
11:30	Buckling of lipid monolayers on viscous layers mimicking lung surfactants	Luka Pocivavsek, Valentina Piccolo, Ka Ye Lee, Sachin Velankar, Massimiliano Fraldi, Massimiliano Zingales, Luca Deseri
11:50	Quasiperiodic and quasicrystalline modulated structures: dynamic spectra and self-similar pattern identification	Lorenzo Morini, Massimiliano Gei
12:10	Analytical and computational methods for modeling mechanical filters against Bloch wave propagation	Francesca Vadalà, Andrea Bacigalupo, Marco Lepidi, Luigi Gambarotta
12:30	Phononic band gap optimization of auxetic microstructured filters	Andrea Bacigalupo, Giorgio Gnecco, Marco Lepidi, Luigi Gambarotta

Sala 6 Positano

MS03 – Metodi variazionali e applicazioni nella meccanica dei solidi **Presiede Gabriele Cricrì**		
10:30	A new crack modelling strategy for baffle modules of nuclear fusion experiment “Wendelstein 7-X”	Marcello Lepore, Venanzio Giannella1, Raffaele Sepe, Joris Fellinger, Michael Czerwinski, Reinhold Stadler, Roberto Citarella
10:50	A variational model for anisotropic and naturally twisted ribbons	Roberto Paroni
11:10	Existence for dynamic Griffith fracture with a weak maximal dissipation condition	Gianni Dal Maso, Christopher J. Larsen, Rodica Toader
11:30	Homogenization of a concentrated model in electrical conduction	Micol Amar, Daniele Andreucci, Roberto Gianni, Claudia Timofte
11:50	Cohesive law prediction of adhesive joints under mode II fracture loading condition	Gabriele Cricrì, Valentino Paolo Berardi, Michele Perrella
12:10	LCF assessment for baffle modules of nuclear fusion experiment “Wendelstein 7-X	Venanzio Giannella, Roberto Citarella, Joris Fellinger, Michael Czerwinski, Reinhold Stadler, Renato Esposito
12:30	An eigenfracture model with damage in variational fracture	Veronika Auer, Francesco Fabbrocino, Fernando Fraternali, Bernd Schmidt

MARTEDÌ 5 SETTEMBRE, 10:30-12:50

Sala 7 Capri ed Ischia

MS05b - Comportamento meccanico delle murature: analisi di strutture a guscio **Presiede Luciano Rosati**		
10:30	Adaptive models of no-tension masonry vaults	Valentino Paolo Berardi, Mariella De Piano, Giuseppe Teodosio, Rosa Penna, Luciano Feo
10:50	A micro-macro homogenization for modeling the masonry out-of-plane response	Daniela Addessi, Elio Sacco, Paolo Di Re
11:10	The cross vault of Santa Maria Incoronata in Naples and its buttresses system. A study on form and stability	Claudia Cennamo, Concetta Cusano
11:30	Advanced limit analysis approaches for historical masonry vaults	Aguinaldo Fraddosio, Nicola Lepore, Mario Daniele Piccioni
11:50	Analytical determination of statically admissible thrust surfaces for the limit analysis of masonry vaults and domes	Riccardo Barsotti, Stefano Bennati, Riccardo Stagnari

Sala 8 Ravello

MS01 – Biomeccanica teorica e applicata per problemi cardiovascolari **Presiede Giuseppe Vairo**		
10:30	The Neochord Mitral Valve Repair Procedure: Numerical Simulation of Different Neochords Tensioning Protocols	Luigi Di Micco, Paolo Peruzzo, Giulia Comunale, Andrea Colli, Gaetano Burriesci, Daniela Boso, Francesca M. Susin
10:50	Mechanics and modern shape analysis in heart analysis	Giuseppe Esposito, Stefano Gabriele, Paolo Piras, Valerio Varano
11:10	Left–Heart Pressure-Volume Relationships	J. Iván Colorado-Cervantes, Vittorio Sansalone, Luciano Teresi, Valerio Varano
11:30	Computational modelling of multiscale tissue mechanics and FSI coupling in arterial vessels	Daniele Bianchi, Alessio Gizzi, Michele Marino, Simonetta Filippi, Giuseppe Vairo
11:50	Structural finite element analysis of popliteal stenting: three patient-specific clinical cases	Michele Conti, Giovanni Spinella, Giulia Campanile, Domenico Palombo, Ferdinando Auricchio
12:10	Influence of plaque properties and constitutive modeling approach on the simulation of percutaneous angioplasty of chronic total occlusions	Andrea Avanzini, Camilla Vecchi, Davide Battini
12:30	Thermal distribution in cancerous breast with anisotropic properties via a semi-analytical homogenization approach	Ariel Ramírez-Torres, Alfio Grillo, Luigi Preziosi, Reinaldo Rodríguez-Ramos, Julián Bravo-Castillero, Raúl Guinovart-Díaz, Federico Sabina

MARTEDÌ 5 SETTEMBRE, 14:20-16:20

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh **Presiede Angelo Luongo**		
14:20	Carichi critici per nano-travi in elasticità non locale	Raffaele Barretta, Raimondo Luciano, Francesco Marotti de Sciarra, Giuseppe Ruta
14:40	A computational framework to hysteretic damping optimization in carbon nanotube nanocomposites	Giovanni Formica, Franco Milicchio, Walter Lacarbonara
15:00	A 2D continuum with latent internal microstructure for the nonlinear analysis of beam networks	Ugo Andreaus, Francesco dell'Isola, Ivan Giorgio, Nicola Rizzi, Emilio Turco
15:20	Buckling of an open thin-walled beam with an intermediate stiffener	Gianfranco Piana, Egidio Lofrano, Alberto Carpinteri, Giuseppe Ruta
15:40	Nonlinear cross-section analysis for open and closed thin-walled beams in the framework of the Generalized Beam Theory	Alberto Ferrarotti, Giuseppe Piccardo, Angelo Luongo

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" **Presiede Gianni Royer-Carfagni**		
14:20	Dynamic evolutions for a peeling test in dimension one	Gianni Dal Maso, Giuliano Lazzaroni, Lorenzo Nardini
14:40	Poroelastic toughening in polymer gels: A theoretical and numerical study	Alessandro Lucantonio, Giovanni Noselli, Robert M. McMeeking, Antonio DeSimone
15:00	Mathematical modeling of damage for conservation and restoration of historical buildings	Elena Bonetti, cecilia Cavaterra, Francesco Freddi, Maurizio Grasselli, Roberto Natalini
15:20	Quasistatic crack growth in 2d-linearized elasticity	Francesco Solombrino, Manuel Friedrich
15:40	Globally stable quasistatic evolution for strain gradient plasticity coupled with damage	Vito Crismale
16:00	Optimal design for hyperelastic and fragile materials	Elvira Zappale

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture **Presiede Nicola M. Pugno**		
14:20	Protection of a trilithic structure from the overturning by using a pendulum mass damper	Andrea Matteo de Leo, Angelo Di Egidio
14:40	Reliability-based optimization framework for the design of frames subjected to fully non-stationary excitations	Giulio Cottone, Luigi Palizzolo, Pietro Tabbuso
15:00	Mechanical design of a fully-differential triaxial Frequency Modulated MEMS gyroscope	Claudia Comi, Alberto Corigliano, Luca Falorni, Giacomo Langfelder, Paolo Minotti, Alessandro Tocchio, Valentina Zega
15:20	Strain measure in laboratory experiments on concrete beams by means of optical fibre sensors	Vincenzo Minutolo, Eugenio Ruocco, Aldo Minardo, Luigi Zeni
15:40	Comparison among different dynamic shakedown approaches	Salvatore Benfratello, Luigi Palizzolo, Pietro Tabbuso

MARTEDÌ 5 SETTEMBRE, 14:20-16:20

Sala 4 Vietri

MS06 - Nuovi approcci nella meccanica computazionale, GIMC Presiede Daniela Addessi		
14:20	Incremental energy minimization and mixed finite element formulations for the analysis of inelastic structures	Nicola Antonio Nodargi (Premio GIMC)
14:40	The Modified Finite Particle Method: theory and application	Andrea Montanino (Premio GIMC)
15:00	Model order reduction in viscoplasticity	Federica Covezzi, Stefano de Miranda, Felix Fritzen, Sonia Marfia, Elio Sacco
15:20	A novel finite-element multiscale formulation for microstructured soft materials with crimped fibers	Michele Marino, Peter Wriggers
15:40	Mechanical Behavior of Laminated Composite Shells with Arbitrary Domains: Comparison Between Weak and Strong Formulations	Francesco Tornabene, Nicholas Fantuzzi, Michele Bacciocchi, Erasmo Viola
16:00	Recent outcomes on the fracture propagation in brittle materials as a standard dissipative process.	Alberto Salvadori, Paul Wawrzynek, Francesca Fantoni

Sala 5 Furore

MF – Meccanica dei fluidi Presiede Roberto Camussi		
14:20	Experimental characterization of plasma synthetic jet actuators	M. Chiatto, A. Palumbo, L. de Luca
14:40	On the thrust generated by a plunging plate	Lorenzo Russo, Mario Ostieri, Renato Tognaccini
15:00	Wind tunnel investigation on a square-back commercial vehicle equipped with active flow control	Costantino Sardu, Juan José Cerutti, Gaetano Iuso
15:20	Friction drag measurements in turbulent wall flows	Gaetano Iuso, Salvatore Sedda, Matteo Pesando, Costantino Sardu
15:40	Direct numerical simulation of open-channel flow at fully-rough regime	Marco Mazzuoli, Markus Uhlmann
16:00	Application of time-frequency decompositions in jet aeroacoustics	Roberto Camussi, Matteo Mancinelli, Alessandro Di Marco

Sala 6 Positano

MS09a – Materiali soffici attivi, GMA Presiede Giovanni Noselli		
14:20	Tuning sound propagation with soft dielectric tubes	Eliana Bortot, Gal Shmuel
14:40	Archetypal sensing and actuation in soft gel beams	Michele Curatolo, Paola Nardinocchi, Eric Puntel
15:00	In-plane contraction of dielectric hierarchical composite elastomer actuators	Massimiliano Gei, Roberta Springhetti
15:20	Constitutive models for shape memory foams	Andrea Vigliotti
15:40	pH-driven chemo-mechanical response of cavitand-added elastomers	Roberto Brighenti, Alessandro Pedrini, Enrico Dalcanale, Federico Artoni
16:00	Thinning instabilities in soft dielectrics	Michel Destrade, Domenico DeTommasi, Giuseppe Puglisi, Giuseppe Zurlo

MARTEDÌ 5 SETTEMBRE, 14:20-16:20

Sala 7 Capri ed Ischia

MS05a - Comportamento meccanico delle murature: modellazione e procedure numeriche **Presiede Alberto Taliercio**		
14:20	Dynamic analysis of the ancient masonry tower by the Non-Smooth Contact Dynamics method	Francesco Clementi, Angela Ferrante, Stefano Lenci
14:40	A full discrete approach for modelling the orthotropic shear damage response of masonry walls	Siro Casolo
15:00	Investigation on the stability of an ancient masonry tower	Stefano Invernizzi, Giuseppe Lacidogna, Alberto Carpinteri
15:20	Optimal fiber-reinforcement of masonry walls with negligible tensile strength: a numerical study	Matteo Bruggi, Alberto Taliercio
15:40	Debonding phenomenon at the FRP-masonry interface: numerical validation and experimental results	Antonio Maria D'Altri, Christian Carloni, Giovanni Castellazzi, Stefano de Miranda
16:00	Numerical modelling of the bond behaviour of NSM steel bars in masonry	Matteo Maragna, Cristina Gentilini, Christian Carloni

Sala 8 Ravello

MM - Meccanica delle macchine **Presiede Adolfo Senatore**		
14:20	Finite Element simulations of pin-on-disc wear tests using submodeling	Cristina Curreli, Lorenza Mattei, Francesca Di Puccio
14:40	Investigation on the feasibility of bone stiffness assessment from in-vivo tests	Francesca Di Puccio, Lorenza Mattei
15:00	Reconstruction of knee cartilage distribution from joint motion	Michele Conconi, Nicola Sancisi, Vincenzo Parenti Castelli
15:20	System for fast estimation of mechanical tension in cable transmissions using frequency-based method	Marco Fontana, Daniele Bortoluzzi
15:40	An Analysis on Stress Field Distribution in a Deformable Rubber Specimen due to Indentation	Francesco Carputo, Flavio Farroni, Andrea Genovese, Aleksandr Sakhnevych, Francesco Timpone
16:00	Modeling and Control of Anti-Lock Brake Systems via Co-simulation	Nicola Ivan Giannoccaro, Arcangelo Messina, Giulio Reina

MARTEDÌ 5 SETTEMBRE, 16:40-18:00

Sala 1 Tafuri

MS02 - Dinamica e stabilità di sistemi meccanici, GADES , in memoria del prof. Ali H. Nayfeh Presiede Federica Tubino		
16:40	Control of vortex-induced parametric instabilities in suspension bridges	Andrea Arena, Walter Lacarbonara
17:00	Galloping of suspended cables: a corotational finite element approach	Francesco Foti, Luca Martinelli, Federico Perotti
17:20	The effect of large-scale turbulence on the interference of vortex shedding and galloping: A numerical study	Claudio Mannini
17:40	Hard loss of stability and damping effects on flow-induced flutter	Luca Pigolotti, Claudio Mannini, Gianni Bartoli

Sala 2 Tafuri B

MG – Meccanica Generale Presiede Maurzio Romeo		
16:40	Analysis of arbitrarily shaped plates via meshfree LEM solution	Giuseppe Battaglia, Alberto Di Matteo, Giorgio Micale, Antonina Pirrotta
17:00	Analysis and design of network arch bridges	Domenico Bruno, Paolo Lonetti, Arturo Pascuzzo
17:20	Fracto-emissions as seismic precursors: The case-study of "San Pietro-Prato Nuovo" gypsum mine	Oscar Borla, Alberto Carpinteri
17:40	Exact solutions for the statics of the multi-cracked circular arch	Francesco Cannizzaro, Annalisa Greco, Salvatore Caddemi, Ivo Caliò

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture Presiede Stefano Lenci		
16:40	Overstrength for enhancing the robustness of structures	Antonio Ventura, Bernardino M. Chiaia, Valerio De Biagi
17:00	The role of complexity in random element removal in statically indeterminate structures	Valerio De Biagi
17:20	About the Steel “Dog-Bones” in Wooden Beams	Rosario Montuori, Valeria Sagarese
17:40	Correlation structure of wind-tunnel pressure fields for a hyperbolic paraboloid roof.	Fabio Rizzo, Vincenzo Sepe, Marcello Vasta

Sala 4 Vietri

MS13 – Meccanica dei materiali estremi: grafene, compositi, metamateriali e materiali biologici/bioispirati Presiede Nicola M. Pugno		
16:40	Adhesion of surfaces with wavy roughness and a shallow depression	Antonio Papangelo, Michele Ciavarella
17:00	A theoretical approach to characterize the superhydrophobic properties of randomly rough surfaces	Luciano Afferrante, Giuseppe Carbone
17:20	Residual stress-induced stiffness in growing biological media	Angelo Rosario Carotenuto, Arsenio Cutolo, Donato Di Vito, Massimiliano Fraldi
17:40	Mechanical modelling of the penetration and growth of plant roots	Benedetta Calusi, Barbara Mazzolai, Nicola M. Pugno

MARTEDÌ 5 SETTEMBRE, 16:40-18:00

Sala 5 Furore

MS07 – Interazione fluido-struttura: metodi e applicazioni **Presiede Marco De Tullio**		
16:40	Wave-structure interactions a 2D innovative numerical methodology	Angela Di Leo, Ferdinando Reale, Fabio Dentale, Giacomo Viccione, Eugenio Pugliese Carratelli
17:00	Recent developments in the extraction of Equivalent Static Wind Loads	Luca Patruno, Mattia Ricci, Stefano de Miranda
17:20	Predicting flutter instability by means of an Immersed Boundary Fluid-Structure-Interaction method	Dario De Marinis, Marco Donato de Tullio, Michele Napolitano, Giuseppe Pascazio
17:40	A comparative numerical study of the Coanda effect	Vittorio Bovolin, Giacomo Viccione, Angela Di Leo, Fabio Dentale

Sala 6 Positano

MS09a - Materiali soffici attivi, GMA **Presiede Alessandro Lucantonio**		
16:40	A computational framework for electro-mechanical contact between excitable deformable cells	Pietro Lenarda, Alessio Gizzi, Marco Paggi
17:00	Compatibility issues in layered soft structures inspired by heart mechanics	Stefano Gabriele, Paola Nardinocchi, Luciano Teresi, Valerio Varano
17:20	Metaboly and shape control in euglenids	Giovanni Noselli, Marino Arroyo, Antonio DeSimone
17:40	Shape programming of pre-stretched bilayers	Noè Caruso, Aleksandar Cvetković, Alessandro Lucantonio, Giovanni Noselli, Antonio DeSimone

Sala 7 Capri ed Ischia

MS05b - Comportamento meccanico delle murature: analisi di strutture a guscio **Presiede Gabriele Milani**		
16:40	A no-tension model for the analysis of combined masonry vaults	Immacolata Bergamasco, Antonio Fortunato, Antonio Gesualdo, Antonino Iannuzzo, Michela Monaco
17:00	A modern reinterpretation of Durand-Claye's method for the study of equilibrium conditions of masonry domes	Danila Aita, Riccardo Barsotti, Stefano Bennati
17:20	The collapse of a magasin à poudre described by Frézier: an interesting case study from the past	Danila Aita, Riccardo Barsotti, Stefano Bennati
17:40	Non linear static analysis of FRP reinforced masonry vaults with preliminary limit analysis mesh adaptation	Gabriele Milani

MARTEDÌ 5 SETTEMBRE, 16:40-18:00

Sala 8 Ravello

MS09 – Meccanica e materiali, GMA **Presiede Roberta Massabò**		
16:40	A Micromorphic Approach to Thermomechanically Coupled Pseudoelasticity in Shape Memory Alloys	Mohsen Rezaee Hajidehi, Giuseppe Giambanco, Stainslaw Stupkiewicz
17:00	Transverse waves propagation in Bernoulli-Euler (BE) beams in presence of long-range interactions	Emanuela Bologna, Luca Deseri, Massimiliano Zingales
17:20	Numerical and experimental methodologies for dry and lubricated contact mechanics between viscoelastic solids	Carmine Putignano, Giuseppe Carbone, Luigi Mangialardi
17:40	The theory of field patterns	Ornella Mattei, Graeme Walter Milton

MERCOLEDÌ 6 SETTEMBRE, 14:10-16:30

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh Presiede Walter D'Ambrogio		
14:10	Hierarchical MPC control scheme with obstacle free replanner	Stefano Arrigoni, Federico Cheli, Francesco Braghin
14:30	Innovative TEHD Tilting pad journal bearing model for rotordynamic analyses	Enrico Boccini, Amedeo Frilli, Enrico Meli, Daniele Nocciolini, Simone Panconi, Andrea Rindi, Benedetta Romani
14:50	A Smart Device to Self-Suppress Vibration in Structure	Simone Cinquemani, Francesco Braghin, Andrea Costa
15:10	Impinging jet pressure field identification by an Energy Based model	Silvia Milana, Giorgia Sinibaldi, Antonio Culla, Luca Marino
15:30	Optimization of planetary gearboxes	Asma Masoumi, Marco Barbieri, Francesco Pellicano
15:50	Bifurcation and chaos analysis of planetary gearboxes with bearing compliance and tooth profile modifications	Asma Masoumi, Marco Barbieri, Antonio Zippo, Francesco Pellicano
16:10	Obstacles induced jamming in the linear Boltzmann dynamics	Alessandro Ciallella, Emilio N.M. Cirillo

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" Presiede Frédric Lebon		
14:10	Strain-Gradient Isotropic Materials: a Mixed Finite Element Formulation	Matteo Brunetti, Giulio Sciarra, Stefano Vidoli
14:30	A new approach for a consistent simulation of crack propagation and delamination in multi-layered composites	Valerio Carollo, José Reinoso, Marco Paggi
14:50	Multiplane cohesive-zone models accounting for friction, finite dilation and asperity degradation under mixed-mode cyclic loading	Roberto Serpieri, Giulio Alfano, Elio Sacco
15:10	Numerical modelling of the pseudo-ductile response of hybrid laminates with a phase-field approach	Roberto Alessi, Francesco Freddi
15:30	Are configurational forces real forces?	Roberto Ballarini, Gianni Royer Carfagni
15:50	A roughness model for frictional interfaces under mixed-mode loading	Andrea Spagnoli, Andrea Carpinteri, Michele Terzano
16:10	Extended quadratic elements for strong discontinuities	Nunziante Valoroso

MERCOLEDÌ 6 SETTEMBRE, 14:10-16:30

Sala 3 Atena

MS04 – Strutture e materiali reticolari innovativi **Presiede Antonino Favata**		
14:10	Spider weight dragging and lifting mechanics	Nicola M. Pugno
14:30	Platonic crystal with snail resonator-type scatterers	Michele Brun, Maryam Morvaridi, Giorgio Carta
14:50	Scattering reduction for flexural vibrations in a structured plate	Diego Misseroni, A.B. Movchan
15:10	Nonlinear cellular tensegrity materials	Andrea Micheletti, Vittorio Paris, Attilio Pizzigoni, Giuseppe Ruscica
15:30	Frequency band gaps for 2D lattice structures	Agostina Orefice, Ada Amendola, Rosa Penna, Geminiano Mancusi, Luciano Feo
15:50	Waves propagation in a saturated aggregate of particles	Luigi La Ragione, Giuseppina Recchia

Sala 4 Vietri

MM - Meccanica delle macchine **Presiede Enrico Ciulli**		
14:10	Thermo-Mechanical Transient Analysis in Automotive Dry-Clutch	Adolfo Senatore, Vincenzo D'Agostino, Mario Pisaturo
14:30	Real time Identification of Automotive Dry Clutch Frictional Characteristics Using Trust Region Methods	Adolfo Senatore, Mario Pisaturo, Mojtaba Sharifzadeh
14:50	A 6DoF/HIL setup for wind tunnel hybrid tests on a 1/75 scale model of a 10 MW floating offshore wind turbine	Ilmas Bayati, Marco Belloli, Alan Facchinetti, Hermes Giberti
15:10	Design and set up of an innovative ball screw endurance test bench	Hermes Giberti, Andrea Collina, Marco Bocciolone
15:30	Open and closed loop control of an active air bearing with digital valves	Federico Colombo, Daniela Maffiodo, Terenziano Raparelli
15:50	Numerical and experimental three-dimensional analysis of wakes in complex terrain	Davide Astolfi, Francesco Castellani, Lorenzo Scappaticci, Ludovico Terzi
16:10	Dynamic Model of a Grooved Aerostatic Thrust Bearing: Numerical Model and Experimental Validation	Federico Colombo, Luigi Lentini, Terenziano Raparelli, Andrea Trivella, Vladimir Viktorov

MERCOLEDÌ 6 SETTEMBRE, 14:10-16:30

Sala 5 Furore

MS09c – Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA **Presiede Maria Laura De Bellis/Andrea Bacigalupo**		
14:10	Homogenized analysis for cracked three-layer laminates	Laura Galuppi, Gianni Royer Carfagni
14:30	A three–scale model for random particle composites: from lattice microstructures to micropolar continua	Maria Laura De Bellis, Patrizia Trovalusci, Renato Masiani
14:50	Dynamic multi-field asymptotic homogenization of periodic thermodiffusive elastic materials	Andrea Bacigalupo, Lorenzo Morini, Marco Paggi
15:10	Effective thermal properties of fibre reinforced materials	Lanzoni L., Radi E., Tarantino A.M.
15:30	Nonlinear elasticity in 1D periodic structures with disarrangements	Stefania Palumbo, Andrea Cugno, Luca Deseri, Massimiliano Fraldi
15:50	Vierendeel girder homogenization into a polar beam	Esposito Luca, Antonio Gesualdo, Antonino Iannuzzo, Michela Monaco, Francesco Penta, Giovanni Pio Pucillo
16:10	Integrated Procedure for Homogenization of Particle Random Composites Using Virtual Element Method	Marco Pingaro, Patrizia Trovalusci, Emanuele Reccia

Sala 6 Positano

MS09d – Meccanica e affidabilità dei materiali piezoelettrici, GMA **Presiede Marco Paggi**		
14:10	Domain evolution in ferroelectric thin films: a phase-field approach	Patrick Fedeli, Attilio Frangi
14:30	Thermo-Piezo-Elastic analysis of beam structures using node-dependent kinematics one-dimensional models	Enrico Zappino, Erasmo Carrera, Guohong Li
14:50	A corotational formulation for the static nonlinear analysis of piezoactuated shells	Paolo Bisegna, Giovanni Caruso, Federica Caselli, Nicola A. Nodargi
15:10	Efficienza del posizionamento di piastre piezoelettriche per lo smorzamento delle vibrazioni flessionali di travi fisse e rotanti	Fabio Botta
15:30	Convalidazione sperimentale di un metodo di posizionamento ottimale di piastre PZT per il controllo attivo delle vibrazioni di una mensola	Fabio Botta, Andrea Rossi, Francesco Orsini, Lorenzo Schinaia, Andrea Scorza, Salvatore Andrea Sciuto
15:50	A FE2 based approach for multiscale modeling and design of energy harvesting devices	Claudio Maruccio, Giuseppe Quaranta, Giorgio Monti, Laura De Lorenzis
16:10	Energy harvesting from bridge vibrations with piezoelectric devices – A feasibility study	Paolo S. Valvo, Jacopo Bonari, Davide Colonna, Ramazan-Ali Jafari-Talookolaei, Maryam Abedi

MERCOLEDÌ 6 SETTEMBRE, 14:10-16:30

Sala 7 Capri ed Ischia

MS07 – Interazione fluido-struttura: metodi e applicazioni **Presiede Franco Auteri**		
14:10	Fluid-structure-interaction of prosthetic heart valves	Marco D. de Tullio
14:30	Fluid/structure interaction for the flow in the left heart ventricle coupled with natural and prosthetic mitral valves	Valentina Meschini, Marco D. de Tullio, Giorgio Querzoli, Roberto Verzicco
14:50	FSI simulation of a detached retina	Peyman Davvalo Khongar, Franco Auteri, Marco Donato de Tullio, Jean-Luc Guermond, Anna Pandolfi, Jan Oscar Pralits, Rodolfo Repetto
15:10	Effects of inlet conditions in the simulation of hemodynamics in a thoracic aortic aneurysm	Alessandro Boccadifuoco, Alessandro Mariotti, Simona Celi, Nicola Martini, Maria Vittoria Salvetti
15:30	Passive control of fluid-structure instabilities by means of piezoelectric shunts	Marquet Olivier, Carini Marco, Pfister Jean-Lou
15:50	Namib Desert inspired hierarchical hydrophilic/hydrophobic microstructured surfaces for water harvesting	Simone Ghio, Maurizio Boscardin, Nicola Pugno
16:10	Faster than the wind: analysis of land rotor geared vehicles	Vittorio Bovolin

Sala 8 Ravello

MS09b - Meccanica dei compositi "verdi": caratterizzazione meccanica e relativi aspetti tecnologici, GMA **Presiede Pietro Russo**		
14:10	Reinforcement of cement mortars with additively manufactured recycled nylon fibers	Ilenia Farina, Francesco Colangelo, Francesco Fabbrocino, Pietro Russo, Fernando Fraternali
14:30	Mechanical and low-velocity impact behavior of polypropylene composite laminates reinforced with a poly(lactic acid)/flex fabric	Pietro Russo, Francesca Cimino, Ilaria Papa, Antonio Langella, Fabrizio Sarasini, Jacopo Tirillò, Giorgio Simeoli, Valentina Lopresto
14:50	Effect of temperature on the low-velocity impact response of green sandwich structures	Fabrizio Sarasini, Jacopo Tirillò, Luca Lampani, Teodoro Valente, Paolo Gaudenzi, Andrea Calzolari
15:10	Damage behavior of basalt/epoxy laminated structures under dynamic conditions	Valentina Lopresto, Ilaria Papa, Antonio Langella, Maria Rosaria Ricciardi, Vincenza Antonucci, Fabrizio Sarasini, Iacopo Tirillò, M.C. Seghini, Vito Pagliarulo, Pietro Ferraro, Pietro Russo
15:30	Monitoring of mechanical loading of poly(lactic acid) matrix jute reinforced composites	Simone Boccardi, Giovanni Maria Carlomagno, Carosena Meola, Pietro Russo, Giorgio Simeoli
15:50	Analysis of Environmental impacts of Geopolymers: The future of construction materials	Antonella Petrillo, Francesco Colangelo, Raffaele Cioffi, Fabio De Felice, Domenico Falcone

GIOVEDÌ 7 SETTEMBRE, 9:00-11:20

Sala 1 Tafuri A

MS09b - Meccanica dei compositi "verdi": caratterizzazione meccanica e relativi aspetti tecnologici, GMA **Presiede Francesco Fabbrocino**		
9:00	An innovative hemp fibre composite system for strenghtening applications: mechanical characterization and FE modeling	Costantino Menna, Massimo Durante, Domenico Asprone, Francesco Fabbrocino
9:20	Impact of natural fibers on the ultimate behavior of masonry elements	Giancarlo Ramaglia, Gian Piero Lignola, Francesco Fabbrocino, Andrea Prota
9:40	Experimental tests on lime mortar reinforced with jute fibres	Antonio Formisano, Enzo Junior Dessì, Francesco Fabbrocino, Raffaele Landolfo
10:00	Experimental analysis on adhesion of NFRCM systems applied to masonry structures	Renato S. Oliveto, Rosamaria Codispoti, Carmelo Scuro
10:20	Influence of Sisal fibers in hollow concrete block structural masonry	Indara Soto Izquierdo, Orieta Soto Izquierdo, Marcio Antonio Ramalho, Alberto Taliercio
10:40	Stabilization of pedestrian and cycling pathways: a mechanical characterization	Barbara Liguori, Francesco Fabbrocino, Domenico Caputo, Andrea Prota, Gian Piero Lignola
11:00	Re-use of Etna pyroclasts inmortar and concrete manufacturing	Loredana Contraffatto, Salvatore Gazzo

Sala 2 Tafuri B

MS05b - Comportamento meccanico delle murature: analisi di strutture a guscio **Presiede Ivo Caliò**		
9:00	A parsimonious discrete modeling approach for the structural assessment of curved geometry masonry structures	Salvatore Caddemi, Ivo Caliò, Francesco Cannizzaro, Bartolomeo Pantò
9:20	Thrust network analysis of masonry helicoidal staircases	Francesco Marmo, Daniele Masi, Luciano Rosati
9:40	Vulnerability assessment of masonry churches through a fast limit analysis approach	Andrea Chiozzi, Gabriele Milani, Nicola Grillanda, Antonio Tralli
10:00	A numerical approach to the evaluation of collapse load multiplier of masonry curved structures	Valentino Paolo Berardi, Andrea Chiozzi, Fernando Fraternali, Nicola Grillanda, Mariella De Piano, Gabriele Milani, Antonio Tralli
10:20	Response of pointed arches subjected to horizontal loading. Experimental and numerical evaluations	Giulia Misseri, Luisa Rovero
10:40	Numerical methods for the lower bound limit analysis of masonry arches	Eleonora Ricci, Aguinaldo Fraddosio, Mario Daniele Piccioni, Elio Sacco

GIOVEDÌ 7 SETTEMBRE, 9:00-11:20

Sala 3 Atena

MS06 - Nuovi approcci nella meccanica computazionale, GIMC **Presiede Sonia Marfia**		
9:00	Stochastic discrete approaches for glass strength estimation	Vito Diana, Siro Casolo
9:20	Higher-order modelling of one-dimensional flows	Erasmo Carrera, Daniele Guarnera, Alfonso Pagani, Alberto Varello
9:40	Computational modeling of the wave dynamics of tensegrity lattices	Ada Amendola, Francesco Fabbrocino, Antonino Favata, Andrea Micheletti, Chiara Daraio
10:00	A variational formulation for 3D-Volume Digital Image Correlation and a finite element implementation	Roberto Fedele, Antonia Ciani, Luca Galantucci

Sala 4 Vietri

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh **Presiede Annalisa Fregolent**		
9:00	Kalman-Filter Based Data Fusion to Enhance the Accuracy of Dynamic Displacements from GPS Measurements	Sara Casciati
9:20	Moving multi-loads problem in layered cracked beams with interlayer slip	Salvatore Di Lorenzo, Christoph Adam, Giuseppe Failla, Antonina Pirrotta
9:40	Identification of Hysteretic Systems: Parametric vs. Nonparametric Methods	Biagio Carboni, Walter Lacarbonara, Patrick Brewick, Sami Masri
10:00	Identificazione dinamica ed effetti del danno pregresso su torri campanarie storiche	Luca Facchini, Michele Betti, Andrea Gena
10:20	Experimental investigation of the dynamic performances of the LEDA shaking tables system	Francesco Lo Iacono, Giacomo Navarra, Maria Oliva, Dario Cascone
10:40	Dynamic behaviour of two stacked rigid blocks	Antonio Gesualdo, Antonino Iannuzzo, Michela Monaco

Sala 5 Fuore

MS09c – Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA **Presiede Andrea Bacigalupo**		
9:00	Characterization of thermo-piezoelectric bending actuators trough multi-field asymptotic homogenization technique	Francesca Fantoni, Andrea Bacigalupo, Marco Paggi, Angelo Carini
9:20	Piezoelectric strain sensors with auxetic microstructure	Maria Laura De Bellis, Andrea Bacigalupo, Giorgio Zavarise
9:40	An elastic-interface model for buckling-driven delamination growth in four-point bending tests	Stefano Bennati, Nicola Dardano, Paolo S. Valvo
10:00	Experimental validation of the enhanced beam-theory model of the mixed-mode bending test	Stefano Bennati, Paolo Fisicaro, Luca Taglialegne, Paolo S. Valvo
10:20	Modeling of carbon nanotube nanocomposites mechanical and damping response and experimental validation	Talò M., Lacarbonara W., Formica G., Lanzara G.
10:40	Numerical simulation of the cyclic response of FRP Strips Glued to Concrete	Enzo Martinelli, Antonio Caggiano
11:00	Comparison of LVI and QSI damage induced anisotropy in GFRP composites by ultrasonic immersion tests	Anna Castellano, Aguinaldo Fraddosio, Mario Daniele Piccioni

GIOVEDÌ 7 SETTEMBRE, 9:00-11:20

Sala 6 Positano

MS04 – Strutture e materiali reticolari innovativi **Presiede Fernando Fraternali**		
9:00	The notion of elastic state and application to nonlocal models	Giovanni Romano, Raffaele Barretta, Marina Diaco
9:20	Stress-driven nonlocal elastic modeling of nano-beams	Raffaele Barretta, Luciano Feo, Raimondo Luciano, Francesco Marotti de Sciarra
9:40	The Bending Behavior of Graphene: from Lattice to Continuum Modeling	Cesare Davini, Antonino Favata, Roberto Paroni
10:00	In–plane vibration analysis of homogenized truss–lattice plates.	Alessandro De Felice, Silvio Sorrentino
10:20	Explicit conditions on geometry and elastic moduli of stiffest anisotropic tetrakis and tetrakis-like lattices	Enrico Babilio, Francesco Fabbrocino, Marc Durand, Fernando Fraternali
10:40	Elastic properties of single-wall carbon nanotubes through molecular mechanics and discrete homogenization	Andrea Genoese, Alessandra Genoese, Nicola L. Rizzi, Ginevra Salerno
11:00	Dynamic testing and structural identification of innovative network structures	Mariano Modano, Antonio Gesualdo, Ida Mascolo, Ilenia Farina

Sala 7 Capri ed Ischia

MS13 – Meccanica dei materiali estremi: grafene, compositi, metamateriali e materiali biologici/bioispirati **Presiede Massimiliano Fraldi**		
9:00	Mechanics of aerographite tetrapods	Raimonds Meija, Stefano Signetti, Arnim Schuchardt, Kerstin Meurisch, Daria Smazna, Matthias Mecklenburg, Karl Schulte, Donats Erts, Oleg Lupan, Bodo Fiedler, Yogendra Mishra, Rainer Adelung, Nicola Pugno
9:20	On the optimal design of pentamode lattices	Ada Amendola, Magdalini Titirla, Rosa Penna, Francesco Fabbrocino
9:40	Experimental evidence of the interaction between snap-through and buckling in shallow structures	Fabio Bazzucchi, Amedeo Manuello, Alberto Carpinteri
10:00	A multiscale model for predicting the macroscopic behaviour of protein materials from macromolecular properties	Domenico De Tommasi, Giuseppe Puglisi, Maria F. Pantano, Nicola M. Pugno, Giuseppe Saccomandi
10:20	Enhancement of microfibers toughness through rubber-based frictional elements	Maria F Pantano, Alice Berardo, Nicola M Pugno
10:40	Engineering ultra-wide and tunable bandgaps in three-dimensional periodic structures	Luca D'Alessandro, Raffaele Ardito, Alberto Corigliano
11:00	Seismic shielding using elastic metamaterials	Federico Bosia, Marco Miniaci, Anastasiia Krushynska, Nicola Pugno

GIOVEDÌ 7 SETTEMBRE, 9:00-11:20

Sala 8 Ravello

MS12 - Rivestimenti per applicazioni tribologiche: modellazione e caratterizzazione **Presiede Giuseppe Carbone**		
9:00	Fluid and granular lubrication between hierarchical surfaces	Roberto Guarino, Nicola M. Pugno
9:20	Enhanced surface tribology via femtosecond laser micro-texturing	Carmine Putignano,, Pasquale Guglielmi,Gagandeep Singh Joshi, Catenina Gaudiuso, Antonio Ancona, Gianfranco Palumbo, Giuseppe Carbone
9:40	On the wear protection ability of three eco-friendly base lubricants: first results from wear debris analysis	Alessandro Ruggiero, Vincenzo D'Agostino, Massimiliano Merola, Roberto D'Amato
10:00	Optimized Design of Surface Mechanical Testing Procedures	Gregory Favaro, Marco Di Donato, Nick Bierwisch, Norbert Schwarzer
10:20	Analytical modeling of hierarchical anisotropic friction and wear	Alice Berardo, Nicola M. Pugno
10:40	The contact mechanics of elastic thin layers	Nicola Menga, Luciano Afferrante, Giuseppe Carbone, Giuseppe P. Demelio
11:00	Numerical simulations of friction of structured hierarchical surfaces	Gianluca Costagliola, Federico Bosia, Nicola Pugno

GIOVEDÌ 7 SETTEMBRE, 12:20-13:40

Sala 1 Tafuri A

MS09b - Meccanica dei compositi "verdi": caratterizzazione meccanica e relativi aspetti tecnologici, GMA **Presiede Francesco Colangelo**		
12:20	Environmental Impact Analysis of concrete sto support sustainable building materials	Francesco Colangelo, Antonella Petrillo, Fabio De Felice, Ilenia Farina, Raffaele Cioffi, Federico Zomparelli
12:40	The European Project SUREBridge – A case study in Tuscany	Paolo S. Valvo, Erika Davini, Cristiano Alocci, Antonfranco Pasquale, Fabio Ricci, Juan Carlos Miranda Santos, Martijn Veltkamp, Reza Haghani
13:00	Life cycle assessment and environmental impacts of recycled concretes in building sector	Francesco Colangelo, Raffaele Cioffi, Antonio Forcina, Antonella Petrillo, Giuseppina Belfiore, Federico Zomparelli

Sala 2 Tafuri B

MS05a - Comportamento meccanico delle murature: modellazione e procedure numeriche **Presiede Daniela Addessi**		
12:20	Strength and stiffness restoration in masonry walls	Salvatore Benfratello, Calogero Cucchiara, Lidia La Mendola, Luigi Palizzolo, Pietro Tabbuso
12:40	Masonry compressive strength of heterogeneous walls made with blends of different brick materials	Andrea Benedetti
13:00	FRCM strengthening of clay brick walls for out of plane loads	Claudio D'Ambra, Gian Piero Lignola, Francesco Fabbrocino, Andrea Prota, Elio Sacco
13:20	Non-linear modelling of masonry structures: application to the case study of the Carmine Bell Tower	Filomena de Silva, Francesca Ceroni

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture **Presiede Antonio Tralli**		
12:20	Effects of the stress field on the dynamic properties of masonry bell towers	Maria Girardi, Cristina Padovani, Daniele Pellegrini
12:40	Protection of slender rigid blocks from the overturning by using an active control system	Angelo Di Egidio, Giorgia Simoneschi, Carlo Olivieri, Andrea M. de Leo
13:00	A three-dimensional isogeometric boundary element analysis in elasto-plasticity	Vincenzo Mallardo, Gernot Beer
13:20	Evaluation of Imperfection Effects on the Stability of Geometrically Nonlinear Structures	Amedeo Manuello, Fabio Bazucchi, Alberto Carpinteri

GIOVEDÌ 7 SETTEMBRE, 12:20-13:40

Sala 4 Vietri

MS02 - Dinamica e stabilità di sistemi meccanici, GADES , in memoria del prof. Ali H. Nayfeh Presiede Walter Lacarbonara		
12:20	Improved reliability of dynamical integrity measures by means of higher-dimensional basins of attraction	Pierpaolo Belardinelli, Stefano Lenci, Giuseppe Rega
12:40	A state-space approach to dynamic stability of fractional-order systems	Emanuela Bologna, Luca Deseri, Massimiliano Zingales
13:00	Detecting vibration modes and shapes for Timoshenko beam model: a comparison between available eigensolvers	Flavio Stochino, Antonio Cazzani, Emilio Turco
13:20	Exact modal solutions for continuous structural systems with spring-mass attachments	Giuseppe Failla

Sala 5 Furore

MS09 – Meccanica e materiali, GMA Presiede Marco Paggi		
12:20	Multi-scale modelling of alkali-silica reaction-induced damage in concrete dams	Mauro Corrado, Aurelia Isabel Cuba Ramos, Jean-Francois Molinari
12:40	A limit analysis approach in the context of nonlocal materials	Aurora Angela Pisano, Paolo Fuschi
13:00	Effect of curvature on fibrous reinforcement strength	Saverio Spadea, Francesco Ascione, Marco Lamberti
13:20	Best GMA PhD thesis	

Sala 6 Positano

MM - Meccanica delle macchine Presiede Andrea Trivella		
12:20	Analysis of automotive driveline torsional vibrations with a Magneto-rheological elastomer spring damper	Renato Brancati, Ernesto Rocca, Riccardo Russo, Sergio Savino
12:40	Dynamic stiffness and damping of a semi-active air pad	Federico Colombo, Danial Ghodsiyeh, Terenziano Raparelli, Andrea Trivella, Vladimir Viktorov
13:00	Dynamic lumped model of an externally pressurized air bearing	Federico Colombo, Mona Moradi, Terenziano Raparelli, Andrea Trivella, Vladimir Viktorov
13:20	Geometric loci for the kinematic analysis of planar mechanisms via the instantaneous geometric invariants	Giorgio Figliolini Chiara Lanni

GIOVEDÌ 7 SETTEMBRE, 12:20-13:40

Sala 7 Capri ed Ischia

MS08 – Frattura: modelli di interfaccia e approcci "phase-field **Presiede Roberto Alessi**		
12:20	Dynamic debonding phenomena in Z-pin reinforced laminates	Marco Francesco Funari, Fabrizio Greco, Paolo Lonetti
12:40	Interfacial behaviour of SRP-concrete joints: a numerical and experimental investigation	Christian Carloni, Mattia Santandrea, Imohamed Ali Omar Imohamed, Roman Wendner
13:00	Numerical modelling of the toughening mechanism in cement composites reinforced with bio-char particles	Mauro Corrado, Luciana Restuccia, Giuseppe Andrea Ferro
13:20	Mode II fracture behaviour of adhesively bonded reinforcements	Michele Perrella, Valentino Paolo Berardi, Gabriele Cricrì

Sala 8 Ravello

MS04 – Strutture e materiali reticolari innovativi **Presiede Ada Amendola**		
12:20	Form finding of light structures with non linear constraints	Massimo Cuomo, Leopoldo Greco
12:40	New V-Expander tensegrity grids: design of self-stress states	Aguinaldo Fraddosio, Gaetano Pavone, Mario Daniele Piccioni
13:00	Comparative analysis on two actuation methods of 9-bar systems through kinematics analysis and experimental testing	Maria Matheou, Marios C. Phocas, Eftychios G. Chistoforou, Andreas Müller
13:20	The self-equilibrium configurations for the Class-Theta triangular tensegrity prism	Zbigniew Bieniek

XXIII Congresso - Associazione Italiana di Meccanica Teorica e Applicata
Salerno, 4-7 Settembre 2017

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