



UNIVERSITA' DEGLI STUDI
DI SALERNO

XXIII CONGRESSO
ASSOCIAZIONE ITALIANA DI MECCANICA TEORICA E APPLICATA

AIMETA 2017

SALERNO, 4-7 SETTEMBRE 2017

PROGRAMMA



AIMETA
XXIII - Salerno

PROGRAMMA GENERALE AIMETA 2017

Lunedì 4 settembre

8:15	<i>Registrazioni</i> Sala ATENA
9:00	<i>Cerimonia di Apertura</i> Sala 1 TAFURI A
9:40	<i>Relazione generale: Claudio Giorgi</i> Analisi globale del comportamento asintotico per sistemi dinamici di dimensione infinita <i>Presiede: Sandra Carillo</i> Sala 1 TAFURI A
10:20	<i>Pausa Caffè</i>
10:40	<i>Sessioni</i> Sale: 1, 2, 3, 4, 5, 6, 7, 8
12:40	<i>Pausa Pranzo</i> Sala LA NINFEA
14:00	<i>Riunione Gruppi AIMETA</i>
15:30	<i>Sessioni</i> Sale: 1, 2, 3, 4, 5, 6, 7, 8
17:30	<i>Pausa Caffè</i>
17:50	<i>Sessioni</i> Sale: 1, 2, 3, 4, 6, 7, 8
19.30	<i>Cocktail</i> Roof Terrace SPECCHIO DI MARE

Martedì 5 settembre

8:15	<i>Registrazioni</i> Sala ATENA
9:00	<i>Relazione generale: Fabrizio Vestroni</i> Fenomeni di Risonanza in Sistemi Isteretici <i>Presiede: Carlo Cinquini</i> SALA 1 TAFURI A
9:40	<i>Relazione generale: Jan Pasfall</i> Perspective on market, barriers and examples of recent projects realized with GFRP <i>Presiede: Luigi Ascione</i> SALA 1 TAFURI A
10:20	<i>Pausa Caffè</i>
10:40	<i>Sessioni</i> Sale: 1, 2, 3, 4, 5, 6, 7, 8
13:00	<i>Pausa Pranzo</i> Sala LA NINFEA
14:20	<i>Sessioni</i> Sale: 1, 2, 3, 4, 5, 6, 7, 8
16:20	<i>Pausa Caffè</i>
16:40	<i>Sessioni</i> Sale: 1, 2, 3, 4, 5, 6, 7, 8
18:00	<i>Assemblea AIMETA</i> Sala 1 TAFURI A

PROGRAMMA GENERALE AIMETA 2017

Mercoledì 6 settembre

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

Giovedì 7 settembre

8:15	<i>Registrazioni</i> Sala ATENA
9:00	<i>Sessioni</i> Sale: 1, 2, 3, 4, 5, 6, 7, 8
11:20	<i>Pausa Caffè</i>
11:40	<i>Relazione generale:</i> Vincenzo Parenti Castelli Frontiere della Meccanica delle Macchine <i>Presiede:</i> Walter D'Ambrogio Sala 1 TAFURIA
12:20	<i>Sessioni</i> Sale: 1, 2, 3, 4, 5, 6, 7, 8
13:40	<i>Conclusione delle Sessioni</i> <i>Pausa Pranzo</i> Sala LA NINFEA
15:30	<i>Eventi organizzati in collaborazione con</i> <i>l'Ordine degli Ingegneri della Provincia di</i> <i>Salerno</i>

PROGRAMMA GENERALE - AIMETA 2017

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

PIANO TERRA

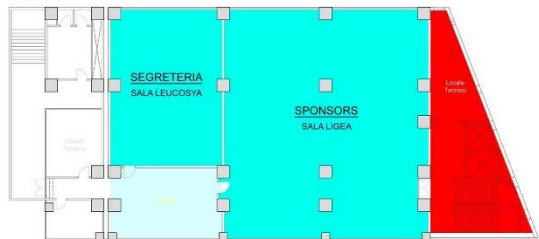


AUDITORIUM TAFURI



PIANO -1

AREA MEETING DELLE SIRENE



PROGRAMMA GENERALE - AIMETA 2017

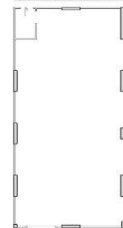
- Sale sessioni
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PRIMO PIANO

SALA BANCHETTI LA NINFEA



RISTORANTE BREKA



AREA MEETING PANORAMICA A



AREA MEETING PANORAMICA B



ROOF GARDEN

ROOF TERRACE



PROGRAMMA GENERALE - AIMETA 2017

QUADRO SINOTTICO DELLE SESSIONI TEMATICHE E DEI MINISIMPOSI

Giorno	Orario	Sala 1 Taufur A	Sala 2 Taufur B	Sala 3 Atena	Sala 4 Vetri	Sala 5 Furore	Sala 6 Positano	Sala 7 Capri ed Ischia	Sala 8 Ravello
Lunedì	10:40 - 12:40	MS02	MS08	MSS	MS06	MF	MG	MS05a	MS09
	15:30 - 17:30	MS02	MS08	MSS	MS06	MS09c	MS10	MS05a	MS09
	17:50 - 19:50	MS02	MM	MSS	MS11		MS03	MF	MS01
Martedì	10:40 - 13:00	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
	9:00 - 11:20	MS09b	MS05b	MS06	MS02	MS09c	MS04	MS13	MS12
Giovedì	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

- MS01** Biomeccanica teorica e applicata per problemi cardiovascolari
- MS02** Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh
- MS03** Metodi variazionali e applicazioni nella meccanica dei solidi
- MS04** Strutture e materiali reticolari innovativi
- MS05a** Comportamento meccanico delle murature: modellazione e procedure numeriche
- MS05b** Comportamento meccanico delle murature: analisi di strutture a guscio
- MS06** Nuovi approcci nella meccanica computazionale, GIMC
- MS07** Interazione fluido-struttura: metodi e applicazioni
- MS08** Frattura: modelli di interfaccia e approcci "phase-field"
- MS09** Meccanica e materiali, GMA
- MS09a** Materiali soffici attivi, GMA
- MS09b** Meccanica dei compositi "verdi": caratterizzazione meccanica e relativi aspetti tecnologici, GMA
- MS09c** Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA
- MS09d** Meccanica e affidabilità dei materiali piezoelettrici, GMA
- MS10** Metodi numerici avanzati e "physically oriented" per le simulazioni in meccanica del continuo
- MS11** Approcci di calcolo stocastico e della probabilità nella meccanica, GMS
- MS12** Rivelamenti per applicazioni tribologiche: modellazione e caratterizzazione
- MS13** Meccanica dei materiali estremi: grafene, compositi, metamateriali e materiali biologici/bioispirati

Organizzatori

- M. Conti, M. Marino, G. Vairo, M. Zingales*
- M.G. Naso, F. Pellicano, G. Piccaro*
- G. Crichì, E. Zappale*
- A. Favata, L. Feo, F. Fraternali, A. Michelanti, R.E. Skelton*
- D. Addressi, E. Sacco*
- F. Marmo, G. Milani, L. Rosati*
- S. Marfia, A. Pandolfi, A. Reali*
- F. Aurati, M.D. de Tullio, F. Giannetti*
- R. Alessi, F. Freddi, G. Lancioni, E. Sacco*
- L. Bardella, M. Paggi, P. Vena*
- G. Noselli, A. Lucantoni*
- F. Fabbrino, P. Russo, F. Colangelo*
- A. Bacigalupo, F. Dal Corso, M. L. De Bellis, A. Piccolroaz*
- P.S. Valvo, M. Paggi*
- G. Coppola, M.D. de Tullio, F. Capuano*
- A. Pirrotta, L. Rosati, S. Sessa*
- G. Carbone, M. Di Donato, G. Favaro*
- F. Bosia, M.Fraddi, N.M. Pugno*

LUNEDÌ 4 SETTEMBRE, 10:40-12:40

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES , in memoria del prof. Ali H. Nayfeh Presiede Sandra Carillo		
10:40	On the response at the excitation frequency of a two degrees of freedom nonlinear oscillator	<u>Gianluca Gatti</u> , Michael Brennan, Ivana Kovacic
11:00	Linear and nonlinear dynamics of a beam-cable-beam model	Francesco Potenza, Marco Lepidi, Umberto Di Sabatino, Vincenzo Gattulli
11:20	Effects of the thermomechanical coupling on the nonlinear dynamics of a reduced order model of composite plate	<u>Valeria Settimi</u> , Eduardo Saetta, Giuseppe Rega
11:40	Thermalisation of a coupled pendulum chain	<u>Marta Greselin</u> , Giovanni Salesi, Roberto Leporini
12:00	Structural instability in a simplified nonlinear model for suspension bridges	<u>Alessio Falocchi</u> , Filippo Gazzola

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" Presiede Francesco Freddi		
10:40	A Cohesive-Frictional interface model subjected to mixed complex loading paths	Guido Borino, <u>Francesco Parrinello</u>
11:00	Accurate XFEM simulation of failure and debonding of FRP-plate-reinforced beams of steel fiber reinforced concrete	Elena Benvenuti, <u>Nicola Orlando</u>
11:20	Mixed-Mode cohesive model with tensile frictional interaction for the simulation of delamination	<u>Federica Confalonieri</u> , Umberto Perego
11:40	Interface models with microstructure via an asymptotic approach	<u>Michele Serpilli</u>
12:00	A multiscale model of imperfect interface with damage and unilateral contact	Elena Bonetti, Giovanna Bonsanti, <u>Frédéric Lebon</u> , Raffaella Rizzoni

LUNEDÌ 4 SETTEMBRE, 10:40-12:40

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture		
Presiede Mario Di Paola		
10:40	Dynamic nonlinear analysis of base isolation systems for multi-storey reinforced concrete buildings	<u>Fabio De Angelis</u> , Donato Cancellara
11:00	Accurate and efficient account of geometrical imperfections in Koiter analysis	<u>Giovanni Garcea</u> , F.S.Liguori, Lorenzo Leonetti, Domenico Magisano, Antonello Madeo
11:20	A base isolation system useful for structures subject to extreme seismic events.	Donato Cancellara, <u>Fabio De Angelis</u>
11:40	Improvement of the matched field approach for damage imaging in plates using elastic response-based weights	Simone Sternini, Antonino Quattrocchi, Roberto Montanini, <u>Annamaria Pau</u> , Francesco Lanza di Scalea
12:00	On the edge-wave of a thin elastic plate supported by an elastic half-space	<u>Andrea Nobili</u> , Julius Kaplunov, Enrico Radi, Angelo Marcello Tarantino

Sala 4 Vietri

MS06 - Nuovi approcci nella meccanica computazionale, GIMC		
Presiede Alessandro Reali		
10:40	A new non-linear beam element based on smart displacement shape functions	<u>Salvatore Caddemi</u> , Ivo Caliò, Bartolomeo Pantò, Davide Rapicavoli
11:00	Mixed 3D Timoshenko beam finite element based on a corotational formulation for damaging framed structures	<u>Paolo Di Re</u> , Daniela Addressi
11:20	On the nonlinear GBT finite element analysis based on the Implicit Corotational Method	<u>Andrea W. Ruggerini</u> , Antonio Madeo, Stefano de Miranda
11:40	Precomputation-based mixed membrane finite element for the analysis of inelastic structures	<u>Nicola Antonio Nodargi</u> , Paolo Bisegna
12:00	A new conforming family of finite elements: the case of Kirchhoff plate	Leopoldo Greco, Tiziano Battiato, Loredana Contrafatto, <u>Massimo Cuomo</u>
12:20	An explicit PFEM-FEM Coupling for Lagrangian Fluid-Structure Interaction Problems	<u>Simone Meduri</u> , Massimiliano Cremonesi, Umberto Perego

LUNEDÌ 4 SETTEMBRE, 10:40-12:40

Sala 5 Furore

MF – Meccanica dei fluidi Presiede Luigi De Luca		
10:40	Wetting and cavitation in nanoporous materials	<u>Alberto Giacomello</u> , Antonio Tinti, Carlo Massimo Casciola
11:00	Numerical analysis on the critical issues of a Cold Spray technology	Giovanni Paolo Reina, Serena Russo, Carlo de Nicola, Antonio Viscusi
11:20	Design of self-recovery superhydrophobic surfaces for reducing drag	<u>Emanuele Lisi</u> , Matteo Amabili, Simone Meloni, Alberto Giacomello, Carlo Massimo Casciola
11:40	Drag reduction in turbulent pipe flow induced by superhydrophobic surfaces	<u>Roberta Costantini</u> , Francesco Battista, Carlo Massimo Casciola
12:00	Stability and sensitivity analysis of the flow in a T-shaped micro-mixer with Superhydrophobic Surfaces	<u>Raffaele Longobardi</u> , Vincenzo Citro, Lorenzo Siconolfi, Flavio Giannetti, Paolo Luchini
12:20	Dynamics of a LASER induced cavitation bubble	<u>Giorgia Sinibaldi</u> , Francisco Pereira, Agostino Occhicone, Davide Caprini, Luca Marino, Francesco Michelotti, Carlo Massimo Casciola

Sala 6 Positano

MG – Meccanica Generale Presiede Mauro Fabrizio		
10:40	Electromagneto-elastic conductors: a microstructure approach	<u>Maurizio Romeo</u>
11:00	Improvement of High-Speed Trains Efficiency through the Use of Regenerative Braking	Amedeo Frilli, Enrico Meli, Simone Panconi, Luca Pugi, Andrea Rindi, <u>Benedetta Romani</u>
11:20	Experimental identification of faults in a railway pantograph mechanism in presence of nonlinear damping	<u>Giancarlo Santamato</u> , Massimiliano Solazzi, Antonio Frisoli
11:40	Nano-pores in a thermo-elastic continuum with strain gradient effects	<u>Pasquale Giovine</u>
12:00	Caratterizzazione sperimentale di un guscio FGM	<u>Antonio Zippo</u> , Francesco Pellicano, Matteo Strozzi, Marco Barbieri
12:20	On the development of a low-cost device for retrofitting tracked vehicles for autonomous navigation	Marco Claudio De Simone, Domenico Guida

LUNEDÌ 4 SETTEMBRE, 10:40-12:40

Sala 7 Capri ed Ischia

MS05a – Comportamento meccanico delle murature: modellazione e procedure numeriche		
Presiede Elio Sacco		
10:40	Micro-polar modelling of rigid blocky masonry with elastic mortar joints	Andrea Bacigalupo, <u>Luigi Gambarotta</u> , Marco Lepidi, Francesca Vadalà
11:00	The SEPUC for the estimation of failure surface of quasi-periodic masonries	<u>Federico Cluni</u> , Nicola Cavalagli, Vittorio Gusella
11:20	A couple-stress multiscale model for the in-plane failure analysis of masonry walls: a validation with a combined FEM/DEM approach	<u>Emanuele Reccia</u> , Lorenzo Leonetti, Patrizia Trovalusci, Antonella Cecchi
11:40	On the unit cell boundary value problem with meshless formulation for masonry structures	<u>Emma La Malfa Ribolla</u> , Antonino Spada, Giuseppe Giambanco
12:00	A couple-stress/Cauchy multiscale model for the nonlinear analysis of periodic masonries under in-plane loading conditions	<u>Lorenzo Leonetti</u> , Fabrizio Greco, Patrizia Trovalusci, Raimondo Luciano, Renato Masiani
12:20	FRCM strengthening of clay brick walls for out of plane loads	Claudio D'Ambrà, <u>Gian Piero Lignola</u> , Francesco Fabbrocino, Andrea Protà, Elio Sacco

Sala 8 Ravello

MS09 – Meccanica e materiali, GMA		
Presiede Lorenzo Bardella		
10:40	Multi-scale modeling of plasticity and phase transformation in steels	Francesco Maresca, Varvara Kouznetsova, Marc Geers, William Curtin
11:00	Molecular based elasto-viscoplastic constitutive modeling of elastomeric membranes	<u>Federico Bosi</u> , Sergio Pellegrino
11:20	Statistical micro-macro approach for the strength of aged brittle materials	<u>Gabriele Pisano</u> , Gianni Royer Carfagni
11:40	Energy release rate and mode mixity of face/core debonds in sandwich beams	<u>Roberta Massabò</u> , Christian Berggreen, Luca Barbieri
12:00	Effective elastic properties of sphere-reinforced particulate composites: effects of a functionally graded interphase zone	<u>Roberta Sburlati</u>
12:20	Adhesion of thin polymeric coatings: matching in-situ experiments and traction-separation parameters	<u>Emanuele Cattarinuzzi</u> , Dario Gastaldi, Pasquale Vena

LUNEDÌ 4 SETTEMBRE, 15:30-17:30

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh Presiede Stefano Lenci		
15:30	Norm-based based frequency optimization of uncertain dynamical systems	<u>Paolo Venini</u> , Carlo Cinquini
15:50	Optimal design of a novel tuned-mass-damper-inerter for reducing the displacement demand of base-isolated structures	<u>Dario De Domenico</u> , Giuseppe Ricciardi
16:10	Experimental investigation on MRE semi-active isolator for lightweight structures	Renato Brancati, <u>Giandomenico Di Massa</u> , Stefano Pagano
16:30	On the performances of a sma-based tuned mass damper	<u>Davide Bernardini</u> , Vinicius Piccirillo, Giuseppe Rega
16:50	Randomized algorithm for performance evaluation of controlled structures with uncertainties	Mario L. Fravolini, Antonio Ficola, <u>Iaria Venanzi</u>

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" Presiede Giovanni Lancioni		
15:30	A multiscale structural model for cohesive delamination of multilayered beams	<u>Hossein Darban</u> , Roberta Massabò
15:50	An innovative study of the debonding process for adhesively bonded interfaces under different loading conditions	<u>Rossana Dimitri</u> , Giorgio Zavarise
16:10	Behavior of bonded pultruded beams via an imperfect interface model with damage	<u>Francesco Ascione</u> , Marco Lamberti, Frédéric Lebon, Aurélien Maurel-Pantel, Maria Letizia Raffa
16:30	Fracture toughness of micro-synthetic polypropylene fibrillated fibre reinforced concret	<u>Giovanni Fortese</u> , Andrea Zanichelli, Camilla Ronchei, Daniela Scorza, Sabrina Vantadori
16:50	Mode II fracture behaviour of adhesively bonded reinforcements	<u>Michele Perrella</u> , Valentino Paolo Berardi, Gabriele Cricri

LUNEDÌ 4 SETTEMBRE, 15:30-17:30

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture		
Presiede Fernando Fraternali		
15:30	Limit analysis of nanoporous materials with a general isotropic plastic matrix under axisymmetric loads	<u>Stella Brach</u> , Kokou Anoukou, Djimedo Kondo, Giuseppe Vairo
15:50	About the steel “Dog-Bones” in wooden beams	<u>Rosario Montuori</u> , Valeria Sagarese
16:10	Exact solutions for free vibration analysis of laminated beams by refined layer-wise theory	<u>Yang Yan</u> , Alfonso Pagani, Erasmo Carrera
16:30	Modelling the axial-torsional response of metallic strands accounting for the deformability of the internal contact surfaces	<u>Francesco Foti</u> , Alessandro de Luca di Roseto, Luca Martinelli
16:50	Modeling and characterization of filled elastomers under planar biaxial loading conditions	Donato Di Vito, Angelo Rosario Carotenuto, Konrad Schneider, Massimiliano Fraldi
17:10	Limit analysis of planar frame structures under seismic load through IMMUNE algorithms	<u>Annalisa Greco</u> , Francesco Cannizzaro, Alessandro Pluchino

Sala 4 Vietri

MS06 - Nuovi approcci nella meccanica computazionale, GIMC		
Presiede Antonio Tralli		
15:30	High-order virtual element method for 2D solid mechanics problems	<u>Edoardo Artioli</u> , Robert L. Taylor
15:50	On virtual element solutions of unilateral contact problems	Edoardo Artioli, <u>Andrea Chiozzi</u> , Antonio Tralli
16:10	Virtual element technique for computational homogenization problems	Edoardo Artioli, Sonia Marfia, <u>Elio Sacco</u>
16:30	A robust and efficient iterative strategy for geometrically non-linear structural problems: assessment in displacement-based FEA and IGA	<u>Domenico Magisano</u> , Leonardo Leonetti, Giovanni Garcea, Francesco Liguori
16:50	Isogeometric collocation method for geometrically exact Timoshenko beams	<u>Enzo Marino</u>
17:10	A three-dimensional isogeometric boundary element analysis in elasto-plasticity	<u>Vincenzo Mallardo</u> , Gernot Beer

LUNEDÌ 4 SETTEMBRE, 15:30-17:30

Sala 5 Furore

MS09c – Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA Presiede Andrea Piccolroaz		
15:30	Shape optimization of ultra-wide bandgap phononic slabs	Luca D' Alessandro, Tommaso Piferi, <u>Raffaele Ardito</u>
15:50	Asymptotic approximation for the acoustic dispersion properties of periodic materials	<u>Marco Lepidi</u> , Andrea Bacigalupo
16:10	Invariance of eigenfrequencies under geometric transformation in plate structures	<u>Maryam Morvaridi</u> , Michele Brun
16:30	Efficient computation of complex band structures in architected 3D lattices	<u>Antonio Palermo</u> , Alessandro Marzani

Sala 6 Positano

MS10 – Metodi numerici avanzati e "physically oriented" per le simulazioni in meccanica del continuo Presiede Gennaro Coppola		
15:30	Modelling momentum point sources in particle laden turbulent flows	<u>Paolo Gualtieri</u> , Francesco Battista, Jean-Paul Mollicone, Carlo Massimo Casciola
15:50	Particle-laden turbulent jet in two way coupling regime	<u>Francesco Battista</u> , Paolo Gualtieri, Carlo Massimi Casciola
16:10	An immersed boundary method for simulating the fluid-structure interaction of elastic bodies with arbitrary thickness	Marco D. de Tullio, <u>Giuseppe Pascazio</u>
16:30	Energy-preserving discretizations of the Navier-Stokes equations. Classical and modern approaches	<u>Gennaro Coppola</u> , Francesco Capuano, <u>Luigi de Luca</u>
16:50	A minimum-dissipation time integration strategy for large-eddy simulation of incompressible turbulent flows	Francesco Capuano, Benjamin. Sanderse, <u>Enrico Maria De Angelis</u> , Gennarpo Coppola
17:10	Helicity-preserving numerical methods for incompressible flow	Donato Vallefuoco, <u>Francesco Capuano</u> , Enrcio Maria De Angelis

Sala 7 Capri ed Ischia

MS05a - Comportamento meccanico delle murature: modellazione e procedure numeriche Presiede Luigi Gambarotta		
15:30	Rocking of cracked masonry walls under constant acceleration impulse	<u>Mario Como</u> , Fabio Di Carlo
16:10	Un modello elasto-plastico per le murature	Massimiliano Lucchesi, Barbara Pintucchi, <u>Nicola Zani</u>
16:30	Rigid blocks for masonry	Claudia Cennamo, <u>Elena De Chiara</u> , Fabiana De Serio, Antonio Gesualdo, Antonino Iannuzzo, <u>Maurizio Angelillo</u>
16:50	Collapse of masonry bay windows under horizontal actions: searching for kinematically and statically admissible load multipliers	<u>Riccardo Barsotti</u> , Stefano Bennati, Claudio Tirabasso
17:10	A force-based macroelement for the nonlinear dynamic analysis of masonry buildings	<u>Domenico Liberatore</u> , Daniela Addressi, <u>Marialuigia Sangirardi</u>

LUNEDÌ 4 SETTEMBRE, 15:30-17:30

Sala 8 Ravello

MS09 – Meccanica e materiali, GMA Presiede Alberto Corigliano		
15:30	From species diffusion to poroelasticity in modelling the Lamina Cribrosa	<u>Amabile Tatone</u> , Filippo Recrosi, Rodolfo Repetto
15:50	Electrical and mechanical properties of fiber-based electrodes for structural battery applications	<u>Davide Grazioli</u> , Mingzhao Zhuo, Angelo Simone
16:10	FEM analysis of metal on UHMWPE total hip prosthesis during normal walking cycle	Alessandro Ruggiero, Saverio Affatato, <u>Massimiliano Merola</u> , Marco Claudio De Simone
16:30	A chemo-mechanical model of the response of electrode particles in Li-ion batteries	<u>Marco Magri</u> , Alberto Salvadori, Davide Grazioli, Robert McMeeking
16:50	A Maxwell stress-based explanation of back-relaxation in ionic polymer metal composites	<u>Lorenzo Bardella</u> , Alessandro Leronni, Hesam Sharghi, Valentina Volpini, Maurizio Porfiri

LUNEDÌ 4 SETTEMBRE, 17:50-19:30

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh Presiede Francesco Pellicano		
17:50	Commemorazione del prof. Ali H. Nayfeh	
18:10	Singular and regular kernel problems in materials with memory	<u>Sandra Carillo</u>
18:30	Investigation of synchronization properties in rings of coupled dry friction oscillators	<u>Michal Marszał</u> , <u>Andrzej Stefanski</u>
18:50	Assessment of the prediction of the Modal Absorption Index (MAI) on a complex frictional system using explicit transient analysis.	<u>Jacopo Brunetti</u> , <u>Francesco Massi</u> , <u>Laurent Baillet</u> , <u>Walter D'Ambrogio</u>
19:10	Experimental investigation of the dynamic performances of the LEDA shaking tables system	<u>Francesco Lo Iacono</u> , <u>Giacomo Navarra</u> , <u>Maria Oliva</u> , <u>Dario Cascone</u>

Sala 2 Tafuri B

MM – Meccanica delle macchine Presiede Nicola Ivan Giannoccaro		
17:50	Dynamic lumped model of an externally pressurized air bearing	<u>Federico Colombo</u> , <u>Mona Moradi</u> , <u>Terenziano Raparelli</u> , <u>Andrea Trivella</u> , <u>Vladimir Viktorov</u>
18:10	Development of an elastically compensated UPS-type constant-force generator for the static balancing of spatial parallel mechanisms	<u>Alberto Martini</u>
18:30	Gravity balancing of a spatial serial 4-dof arm without auxiliary links using minimum number of springs	<u>Basilio Lenzo</u>
18:50	Synthesis of the involute tooth profiles of gears and their rack	<u>Giorgio Figliolini</u> , <u>Hellmuth Stachel</u> , <u>Jorge Angeles</u>
19:10	Analytical and graphical methods to synthesize three-poses rigid-body guidance mechanisms	<u>Giorgio Figliolini</u> , <u>Luciano Fazio</u> , <u>Pierluigi Rea</u>

Sala 3 Atena

MSS - Meccanica dei solidi e delle strutture Presiede Alberto Taliervo		
17:50	Tall buildings subjected to horizontal loading: Analysis of two case studies by an in-house numerical code	<u>Giuseppe Nitti</u> , <u>Giuseppe Lacidogna</u> , <u>Alberto Carpinteri</u>
18:10	Non-prismatic thin-walled beams: critical issues and effective modeling	<u>Giuseppe Balduzzi</u> , <u>Elio Sacco</u> , <u>Ferdinando Auricchio</u> , <u>Josef Füss</u>
18:30	A flexural-shear beam model for interaction analysis of frame-wall systems	<u>Simona Di Nino</u> , <u>Angelo Luongo</u>
18:50	Hellinger-Reissner stationarity principle for stress gradient elastic bodies with embedded coherent interfaces	<u>Guido Borino</u> , <u>Francesco Parrinello</u> , <u>Castrenze Polizzotto</u>
19:10	Fractality and fracture toughness enhancement in carbon-based cementitious composites	<u>Luciana Restuccia</u> , <u>Anna Reggio</u> , <u>Giuseppe Andrea Ferro</u>

LUNEDÌ 4 SETTEMBRE, 17:50-19:30

Sala 4 Vietri

MS11 - Approcci di calcolo stocastico e della probabilità nella meccanica, GMS		
Presiede Antonina Pirrotta		
17:50	Fragility analysis of masonry arch with geometrical uncertainties under pulse-like base motions	Laura Severini, Matthew DeJong, Nicola Cavalagli, Vittorio Gusella
18:10	Stochastic Approach for Theory of Plastic Mechansim Control	Vincenzo Piluso, Paolo Castaldo, <u>Elide NASTRI</u> , Alessandro Pisapia
18:30	Stochastic Theory of Plastic Mechanism Control: Parametric analyses	Vincenzo Piluso, Paolo Castaldo, Elide NASTRI, Alessandro Pisapia
18:50	Probabilistic optimal design of passive control devices coherently with seismic codes Response Spectra	<u>Giacomo Navarra</u> , Francesco Lo Iacono, Maria Oliva
19:10	Simplified design of Nonlinear Energy Sinks for MDOF structures excited by white noise base excitations	<u>Maria Oliva</u> , Giorgio Barone, Francesco Lo Iacono, Giacomo Navarra

Sala 6 Positano

MS03– Metodi variazionali e applicazioni nella meccanica dei solidi		
Presiede Elvira Zappale		
17:50	Elasticity with Gradient-Disarrangements	<u>David R. Owen</u>
18:10	Optimal Design of Fractured Media with Prescribed Macroscopic Strain	<u>José Matias</u> , Marco Morandotti, Elvira Zappale
18:30	Variational models for phase transitions in the presence of surfactants	<u>Ana Cristina Barroso</u>
18:50	Boundary behaviour and confinement of dislocations inside a crystal	<u>Marco Morandotti</u>
19:10	Numerical evaluations of a Griffith-like criterion for tracking crack paths in brittle materials	<u>Gabriele Crici</u>

Sala 7 Capri ed Ischia

MF – Meccanica dei fluidi		
Presiede Giacomo Viccione		
17:50	Estimation of the useful lifetime of a gate valve subjected to impact erosion	<u>Gianandrea Vittorio Messa</u> , Marco Negri, Yongbo Wang, Stefano Malavasi
18:10	A numerical-experimental investigation of the impact erosion of glass reinforced epoxies	Stefano Malavasi, <u>Gianandrea Vittorio Messa</u> , Luigi Piani
18:30	An LES approach for wind loads assessment on low-rise and high-rise buildings	<u>Mattia Ricci</u> , Luca Patruno, Ivo Kalkman, Bert Blocken, Stefano de Miranda
18:50	Two alternative drag breakdowns in unsteady flows	<u>Mario Ostieri</u> , Renato Tognaccini, Didier Bailly, Daniel Destarac
19:10	Morphodynamic Shoreline Boundary Conditions: shoreline reconstruction and experimental validation	<u>Matteo Postacchini</u> , Maurizio Brocchini

LUNEDÌ 4 SETTEMBRE, 17:50-19:30

Sala 8 Ravello

MS01 – Biomeccanica teorica e applicata per problemi cardiovascolari Presiede Massimiliano Zingales		
17:50	Additive manufacturing for a low-cost biaxial testing machine	Gianluca Alaimo, Ferdinando Auricchio, Hermes Giberti, <u>Simone Morganti</u>
18:10	Modeling strategies for arterial mechanobiology	<u>Daniele Bianchi</u> , Michele Marino, Giuseppe Vairo, Peter Wriggers
18:30	Influence of molecular and intermolecular mechanisms on the visco-elasto-damage response of collagen fibrils	<u>Giuseppe Vairo</u> , Michele Marino, René Svensson
18:50	Left Heart Pressure Volume Relationships	<u>J. Iván Colorado-Cervantes</u> , Vittorio Sansalone, Luciano Teresi, Valerio Varano
19:10	The inhomogeneous mechanical behaviour of Ascending Thoracic Aortic Aneurism (ATAA)	Salvatore Pasta, Angela Alessia Giglia, Giuseppe Raffa, Michele Pilato, Emanuela Bologna, Luca Deseri, <u>Massimiliano Zingales</u>

MARTEDÌ 5 SETTEMBRE, 10:40-13:00

Sala 1 Tafuri A

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh Presiede Giuseppe Piccardo		
10:40	An equivalent shear-shear torsional beam model for linear dynamic analysis of multi-store tower buildings	<u>Martina Sciomenta</u> , Angelo Luongo
11:00	A minimal continuous model for tower-building nonlinear static analysis	<u>Francesco D'Annibale</u> , Manuel Ferretti, Angelo Luongo
11:20	Buckling and postbuckling analyses of tower-like structures	<u>Manuel Ferretti</u> , Francesco D'Annibale, Angelo Luongo
11:40	A discrete nonlinear model of shear-shear-torsional beam for building analysis	<u>Angelo Luongo</u> , Daniele Zulli
12:00	Nonlinear dynamics of continuized tall buildings	<u>Daniele Zulli</u> , Giuseppe Piccardo, Angelo Luongo
12:20	Equivalent Timoshenko beam model for the dynamic analysis of tower buildings	<u>Federica Tubino</u> , Giuseppe Piccardo, Angelo Luongo
12:40	A warpable beam model for the analysis of tower buildings	<u>Giuseppe Piccardo</u> , Angelo Luongo

Sala 2 Tafuri B

MS08 - Frattura: modelli di interfaccia e approcci "phase-field" Presiede Elio Sacco		
10:40	The overall stress-strain response of 1D bars, from the unloaded state to the fracture onset	<u>Gianpietro Del Piero</u>
11:20	Phase field approximation: fracture energy and internal length scale	<u>Francesco Freddi</u>
11:40	Cohesive fracture with irreversibility: quasistatic evolution for a model subject to fatigue	Vito Crismale, Giuliano Lazzaroni, <u>Gianluca Orlando</u>
12:00	A framework for the interplay between the phase field approach for brittle fracture and the interface cohesive zone model	<u>Marco Paggi</u> , José Reinoso
12:20	Numerical insight of a variational smeared approach to cohesive fracture	Francesco Freddi, <u>Flaviana Iurlano</u>
12:40	Fracture mechanisms in FRCM systems: experiments and variational modeling	<u>Giovanni Lancioni</u> , Jacopo Donnini

MARTEDÌ 5 SETTEMBRE, 10:40-13:00

Sala 3 Atena

MS04 – Strutture e materiali reticolari innovativi		
Presiede Andrea Micheletti		
10:40	A hierarchical tensegrity structure for morphing	Robert Telford, Paul Weaver
11:00	Fractality in optimal selfsimilar elastic structures	Domenico De Tommasi, Francesco Maddalena, Giuseppe Puglisi, Francesco Trentadue
11:20	Equilibrium and self-stress of rigid origami structures	Andrea Micheletti, Giuseppe Ruscica, Giuseppe Tomassetti
11:40	Adaptive tensegrity structures for dynamic facades of energy efficient buildings	<u>Raffaele Miranda</u> , Francesco Fabbrocino, Maria Matheou, Marios C. Phocas, Fernando Fraternali
12:00	Highly nonlinear solitary waves propagating in a granular medium for nondestructive testing applications	<u>Piervincenzo Rizzo</u>
12:20	Two-bar planar truss with non linear precritical behavior: cusp bifurcation	Ida Mascolo, Mariano Modano, Michele Buonsanti, Giulio Zuccaro
12:40	Explicit conditions on geometry and elastic moduli of stiffest anisotropic tetrakis and tetrakis-like lattices	<u>Enrico Babilio</u> , Francesco Fabbrocino, Marc Durand, Fernando Fraternali

Sala 4 Vietri

MS11 - Approcci di calcolo stocastico e della probabilità nella meccanica, GMS		
Presiede Mario Di Paola		
10:40	An efficient way to perform stochastic dynamic analysis in fractional order systems	Gioacchino Alotta, Mario Di Paola, Giuseppe Failla, <u>Francesco P. Pinnola</u> , Giorgio Zavarise
11:00	Static analysis of structures with uncertainties described by imprecise probability	Filippo Giunta, <u>Giuseppe Muscolino</u> , Alba Sofi
11:20	Markovian approximation of linear systems with fractional viscolastic term	<u>Natalia Colinas-Armijo</u> , Mario Di Paola, Antonina Pirrotta
11:40	Approximate determination of survival probability of Bouc-Wen hysteretic systems comprising a fractional derivative element	<u>Alberto Di Matteo</u> , Antonina Pirrotta, Pol D. Spanos
12:00	Dynamic response of damaged beams with uncertain crack depth	Giuseppe Muscolino, <u>Roberta Santoro</u>
12:20	Probabilistic assessment of historical masonry walls retrofitted with through-the-thickness confinement devices	<u>Salvatore Sessa</u> , Roberto Serpieri, Luciano Rosati

MARTEDÌ 5 SETTEMBRE, 10:40-13:00

Sala 5 Furore

MS09c – Progressi recenti nella modellazione meccanica dei materiali compositi e delle strutture periodiche, GMA Presiede Maria Laura De Bellis		
10:40	Minimum principles for linear initial-value problems	<u>Angelo Carini</u> , Francesca Fantoni
11:00	Metamaterials for crashworthiness of small cars	<u>Claudia Comi</u> , Larissa Driemeier
11:20	Structured interface in a dynamic lattice of flexural beams	<u>Andrea Piccolroaz</u> , Alexander Movchan, Luigi Cabras
11:40	Phononic band gap optimization of auxetic microstructured filters	Andrea Bacigalupo, <u>Giorgio Gnecco</u> , Marco Lepidi, Luigi Gambarotta
12:00	Quasiperiodic and quasicrystalline modulated structures: dynamic spectra and self-similar pattern identification	<u>Lorenzo Morini</u> , Massimiliano Gei
12:20	Analytical and computational methods for modeling mechanical filters against Bloch wave propagation	<u>Francesca Vadalà</u> , Andrea Bacigalupo, Marco Lepidi, Luigi Gambarotta
12:40	Buckling of lipid monolayers on viscous layers mimicking lung surfactants	Luka Pocivavsek, Valentina Piccolo, Ka Ye Lee, Sachin Velankar, Massimiliano Fraldi, Massimiliano Zingales, <u>Luca Deseri</u>

Sala 6 Positano

MS03 – Metodi variazionali e applicazioni nella meccanica dei solidi Presiede Gabriele Cricri		
10:40	Crack reconstruction by ct scan and modelling by dbem to analyse the fracture behaviour of a baffle module of nuclear fusion experiment “WENDELSTEIN 7- x”	Marcello Lepore, <u>Venanzio Giannella</u> , Raffaele Sepe, Joris Fellingner, Michael Czerwinski, Reinhold Stadler, Roberto Citarella
11:00	A variational model for anisotropic and naturally twisted ribbons	<u>Roberto Paroni</u>
11:20	Existence for dynamic Griffith fracture with a weak maximal dissipation condition	Gianni Dal Maso, Christopher J. Larsen, <u>Rodica Toader</u>
11:40	Homogenization of a concentrated model in electrical conduction	Micol Amar, <u>Daniele Andreucci</u> , Roberto Gianni, Claudia Timofte
12:00	Cohesive law prediction of adhesive joints under mode II fracture loading condition	<u>Gabriele Cricri</u> , Valentino Paolo Berardi, Michele Perrella
12:20	LCF assessment for baffle modules of nuclear fusion experiment “Wendelstein 7-X	<u>Venanzio Giannella</u> , Roberto Citarella, Joris Fellingner, Michael Czerwinski, Reinhold Stadler, Renato Esposito
12:40	An eigenfracture model with damage in variational fracture	<u>Veronika Auer</u> , Francesco Fabbrocino, Fernando Fraternali, Bernd Schmidt

MARTEDÌ 5 SETTEMBRE, 10:40-13:00

Sala 7 Capri ed Ischia

MS05b - Comportamento meccanico delle murature: analisi di strutture a guscio		
Presiede Luciano Rosati		
10:40	Adaptive models of no-tension masonry vaults	Valentino Paolo Berardi, <u>Mariella De Piano</u> , Giuseppe Teodosio, Rosa Penna, Luciano Feo
11:00	A micro-macro homogenization for modeling the masonry out-of-plane response	<u>Daniela Addressi</u> , Elio Sacco, Paolo Di Re
11:20	The neoclassical dome of San Francesco di Paola in Naples. a study on form and stability	Claudia Cennamo, <u>Concetta Cusano</u> , Mauzio Angelillo
11:40	The slicing technique for the evaluation of the formal efficiency: a comparative study.	Concetta Cusano, Claudia Cennamo, Luigi Guerriero
12:00	Analytical determination of statically admissible thrust surfaces for the limit analysis of masonry vaults and domes	<u>Riccardo Barsotti</u> , Stefano Bennati, Riccardo Stagnari
12:40	Advanced limit analysis approaches for historical masonry vaults	<u>Aguinaldo Fraddosio</u> , Nicola Lepore, Mario Daniele Piccioni

Sala 8 Ravello

MS01 – Biomeccanica teorica e applicata per problemi cardiovascolari		
Presiede Giuseppe Vairo		
10:40	The Neochord Mitral Valve Repair Procedure: Numerical Simulation of Different Neochords Tensioning Protocols	<u>Luigi Di Micco</u> , Paolo Peruzzo, Giulia Comunale, Andrea Colli, Gaetano Burriesci, Daniela Boso, Francesca M. Susin
11:00	Mechanics and modern shape analysis in heart analysis	Giuseppe Esposito, Stefano Gabriele, Paolo Piras, <u>Valerio Varano</u>
11:20	Modeling of fiber-reinforced bio-materials via a generalized statistical approach	<u>Marcello Vasta</u> , Alessio Gizzi, Anna Pandolfi
11:40	Computational modelling of multiscale tissue mechanics and FSI coupling in arterial vessels	Daniele Bianchi, <u>Alessio Gizzi</u> , Michele Marino, Simonetta Filippi, Giuseppe Vairo
12:00	Structural finite element analysis of popliteal stenting: three patient-specific clinical cases	<u>Michele Conti</u> , Giovanni Spinella, Giulia Campanile, Domenico Palombo, Ferdinando Auricchio
12:20	Influence of plaque properties and constitutive modeling approach on the simulation of percutaneous angioplasty of chronic total occlusions	<u>Andrea Avanzini</u> , Camilla Vecchi, Davide Battini
12:40	Thermal distribution in cancerous breast with anisotropic properties via a semi-analytical homogenization approach	<u>Ariel Ramírez-Torres</u> , 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	Identification of forces at the interface between substructures from responses of the coupled structure	Walter D'Ambrogio, <u>Annalisa Fregolent</u>
14:40	Carichi critici per nano-travi in elasticità non locale	Raffaele Barretta, Raimondo Luciano, Francesco Marotti de Sciarra, <u>Giuseppe Ruta</u>
15:00	A computational framework to hysteretic damping optimization in carbon nanotube nanocomposites	<u>Giovanni Formica</u> , Franco Milicchio, Walter Lacarbonara
15:20	A 2D continuum with latent internal microstructure for the nonlinear analysis of beam networks	Ugo Andreas, Francesco dell'Isola, Ivan Giorgio, <u>Nicola Rizzi</u> , Emilio Turco
15:40	Buckling of an open thin-walled beam with an intermediate stiffener	<u>Gianfranco Piana</u> , Egidio Lofrano, Alberto Carpinteri, Giuseppe Ruta
16:00	Nonlinear cross-section analysis for open and closed thin-walled beams in the framework of the Generalized Beam Theory	<u>Alberto Ferrarotti</u> , 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, <u>Giuliano Lazzaroni</u> , Lorenzo Nardini
14:40	Poroelastic toughening in polymer gels: A theoretical and numerical study	<u>Alessandro Lucantonio</u> , Giovanni Noselli, Robert M. McMeeking, Antonio DeSimone
15:00	Mathematical modeling of damage for conservation and restoration of historical buildings	<u>Elena Bonetti</u> , Cecilia Cavaterra, Francesco Freddi, Maurizio Grasselli, Roberto Natalini
15:20	Quasistatic crack growth in 2d-linearized elasticity	<u>Francesco Solombrino</u> , Manuel Friedrich
15:40	Globally stable quasistatic evolution for strain gradient plasticity coupled with damage	<u>Vito Crismale</u>
16:00	A note on optimal design problems in dimension reduction	<u>Elvira Zappale</u>

MARTEDÌ 5 SETTEMBRE, 14:20-16:20

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	<u>Andrea Matteo de Leo</u> , Angelo Di Egidio
14:40	Mechanical design of a fully-differential triaxial Frequency Modulated MEMS gyroscope	Claudia Comi, <u>Alberto Corigliano</u> , Luca Falorni, Giacomo Langfelder, Paolo Minotti, Alessandro Tocchio, Valentina Zega
15:00	Strain measure in laboratory experiments on concrete beams by means of optical fibre sensors	<u>Vincenzo Minutolo</u> , Eugenio Ruocco, Aldo Minardo, <u>Luigi Zeni</u>
15:20	Comparison among different dynamic shakedown approaches	Salvatore Benfratello, Luigi Palizzolo, Pietro Tabbuso
16:00	On the mechanics of pentamode lattices	<u>Magdalini Titirla</u> , Francesco Fabbrocino, Ada Amendola, Gianmario Benzoni, Fernando Fraternali

Sala 4 Vietri

MS06 - Nuovi approcci nella meccanica computazionale, GIMC		
Presiede Daniela Addressi		
14:20	Incremental energy minimization and mixed finite element formulations for the analysis of inelastic structures	<u>Nicola Antonio Nodargi</u> (Premio GIMC)
14:40	The modified finite particle method: theory and application	<u>Andrea Montanino</u> (Premio GIMC)
15:00	Model order reduction in viscoplasticity	<u>Federica Covezzi</u> , Stefano de Miranda, Felix Fritzen, Sonia Marfia, Elio Sacco
15:20	A novel finite-element multiscale formulation for microstructured soft materials with crimped fibers	<u>Michele Marino</u> , Peter Wriggers
15:40	Mechanical behavior of laminated composite shells with arbitrary domains: comparison between weak and strong formulations	<u>Francesco Tornabene</u> , Nicholas Fantuzzi, Michele Bacciocchi, Erasmo Viola
16:00	Recent outcomes on the fracture propagation in brittle materials as a standard dissipative process.	<u>Alberto Salvadori</u> , Paul Wawrzynek, Francesca Fantoni

Sala 5 Furore

MF - Meccanica dei fluidi		
Presiede Roberto Camussi		
14:20	Experimental characterization of plasma synthetic jet actuators	<u>Matteo Chiatto</u> , Andrea Palumbo, Luigi de Luca
14:40	Link between thrust and vorticity in steady and unsteady flows	<u>Lorenzo Russo</u> , Mario Ostieri, Renato Tognaccini
15:00	Wind tunnel investigation on a square-back commercial vehicle equipped with active flow control	<u>Costantino Sardu</u> , Juan José Cerutti, Gaetano Iuso
15:20	Friction drag measurements in turbulent wall flows	<u>Gaetano Iuso</u> , Salvatore Sedda, Matteo Pesando, Costantino Sardu
15:40	Direct numerical simulation of open-channel flow at fully-rough regime	<u>Marco Mazzuoli</u> , Markus Uhlmann
16:00	Application of time-frequency decompositions in jet aeroacoustics	<u>Roberto Camussi</u> , Matteo Mancinelli, Alessandro Di Marco

MARTEDÌ 5 SETTEMBRE, 14:20-16:20

Sala 6 Positano

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

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	<u>Francesco Clementi</u> , Angela Ferrante, Stefano Lenci
14:40	A full discrete approach for modelling the orthotropic shear damage response of masonry walls	<u>Siro Casolo</u>
15:00	Investigation on the stability of an ancient masonry tower	<u>Stefano Invernizzi</u> , Giuseppe Lacidogna, Alberto Carpinteri
15:20	Optimal fiber-reinforcement of masonry walls with negligible tensile strength: a numerical study	Matteo Bruggi, <u>Alberto Taliercio</u>
15:40	Debonding phenomenon at the FRP-masonry interface: numerical validation and experimental results	<u>Antonio Maria D'Altri</u> , Christian Carloni, Giovanni Castellazzi, Stefano de Miranda
16:00	Numerical modelling of the bond behaviour of NSM steel bars in masonry	<u>Matteo Maragna</u> , Cristina Gentilini, Christian Carloni

Sala 8 Ravello

MM - Meccanica delle macchine Presiede Andrea Trivella		
14:20	Finite Element simulations of pin-on-disc wear tests using submodeling	<u>Cristina Curreli</u> , Lorenza Mattei, Francesca Di Puccio
14:40	Investigation on the feasibility of bone stiffness assessment from in-vivo tests	Francesca Di Puccio, <u>Lorenza Mattei</u>
15:00	Reconstruction of knee cartilage distribution from joint motion	<u>Michele Conconi</u> , Nicola Sancisi, Vincenzo Parenti Castelli
15:20	System for fast estimation of mechanical tension in cable transmissions using frequency-based method	<u>Marco Fontana</u> , Daniele Bortoluzzi, Giacomo Moretti
15:40	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, <u>Marco Belloli</u> , Alan Facchinetti, Hermes Giberti
16:00	Modeling and Control of Anti-Lock Brake Systems via Co-simulation	<u>Nicola Ivan Giannoccaro</u> , 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	<u>Andrea Arena</u> , Walter Lacarbonara
17:00	Galloping of suspended cables: a corotational finite element approach	<u>Francesco Foti</u> , Luca Martinelli, Federico Perotti
17:20	The effect of large-scale turbulence on the interference of vortex shedding and galloping: A numerical study	<u>Claudio Mannini</u>
17:40	Hard loss of stability and damping effects on flow-induced flutter	<u>Luca Pigoletti</u> , Claudio Mannini, Gianni Bartoli

Sala 2 Tafuri B

MG – Meccanica Generale Presiede Maurizio Romeo		
16:40	Analysis of arbitrarily shaped plates via meshfree LEM solution	Giuseppe Battaglia, <u>Alberto Di Matteo</u> , Giorgio Micale, Antonina Pirrotta
17:00	Fracto-emissions as seismic precursors: The case-study of "San Pietro-Prato Nuovo" gypsum mine	<u>Oscar Borla</u> , Alberto Carpinteri
17:20	Exact solutions for the statics of the multi-cracked circular arch	<u>Francesco Cannizzaro</u> , 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	<u>Antonio Ventura</u> , Bernardino M. Chiaia, Valerio De Biagi
17:00	The role of complexity in random element removal in statically indeterminate structures	<u>Valerio De Biagi</u>
17:20	Multi-physics interactions drive VEGFR2 relocation on endothelial cells.	<u>Valentina Damioli</u> , Alberto Salvadori, Gian Paolo Beretta, Cosetta Ravelli, Stefania Mitola
17:40	Correlation structure of wind-tunnel pressure fields for a hyperbolic paraboloid roof.	Fabio Rizzo, <u>Vincenzo Sepe</u> , 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	<u>Antonio Papangelo</u> , Michele Ciavarella
17:00	A theoretical approach to characterize the superhydrophobic properties of randomly rough surfaces	Luciano Afferrante, <u>Giuseppe Carbone</u>
17:20	Residual stress-induced stiffness in growing biological media	<u>Angelo Rosario Carotenuto</u> , 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	<u>Angela Di Leo</u> , Ferdinando Reale, Fabio Dentale, Giacomo Viccione, Eugenio Pugliese Carratelli
17:00	Recent developments in the extraction of Equivalent Static Wind Loads	<u>Luca Patrino</u> , Mattia Ricci, Stefano de Miranda
17:20	Predicting flutter instability by means of an Immersed Boundary Fluid-Structure-Interaction method	<u>Dario De Marinis</u> , Marco Donato de Tullio, Michele Napolitano, Giuseppe Pascazio
17:40	A comparative numerical study of the Coanda effect	Vittorio Bovolin, <u>Giacomo Viccione</u> , 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, <u>Alessio Gizzi</u> , Marco Paggi
17:00	Compatibility issues in layered soft structures inspired by heart mechanics	Stefano Gabriele, <u>Paola Nardinocchi</u> , Luciano Teresi, Valerio Varano
17:20	Metaboly and shape control in euglenids	<u>Giovanni Noselli</u> , Marino Arroyo, 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, <u>Antonio Gesualdo</u> , Antonino Iannuzzo, Michela Monaco
17:00	A modern reinterpretation of Durand-Claye's method for the study of equilibrium conditions of masonry domes	<u>Danila Aita</u> , Riccardo Barsotti, Stefano Bennati
17:20	The collapse of a magasin à poudre described by Frézier: an interesting case study from the past	<u>Danila Aita</u> , Riccardo Barsotti, Stefano Bennati
17:40	Non linear static analysis of FRP reinforced masonry vaults with preliminary limit analysis mesh adaptation	<u>Gabriele Milani</u>

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	<u>Mohsen Rezaee Hajidehi</u> , Giuseppe Giambanco, Stainslaw Stupkiewicz
17:00	Numerical and experimental methodologies for dry and lubricated contact mechanics between viscoelastic solids	<u>Carmine Putignano</u> , Giuseppe Carbone, Luigi Mangialardi

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	Innovative TEHD Tilting pad journal bearing model for rotordynamic analyses	Enrico Boccini, <u>Amedeo Frilli</u> , Enrico Meli, Daniele Nocciolini, Simone Panconi, Andrea Rindi, Benedetta Romani
14:30	Impinging jet pressure field identification by an Energy Based model	Silvia Milana, Giorgia Sinibaldi, Antonio Culla, Luca Marino
14:50	Optimization of planetary gearboxes	Asma Masoumi, Marco Barbieri, Francesco Pellicano
15:10	Bifurcation and chaos analysis of planetary gearboxes with bearing compliance and tooth profile modifications	Asma Masoumi, Marco Barbieri, Antonio Zippo, Francesco Pellicano
15:30	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 Frédéric Lebon		
14:10	Strain-Gradient isotropic materials: a mixed finite element formulation	<u>Matteo Brunetti</u> , Giulio Sciarra, Stefano Vidoli
14:30	A new approach for a consistent simulation of crack propagation and delamination in multi-layered composites	<u>Valerio Carollo</u> , José Reinoso, Marco Paggi
14:50	Multiplane cohesive-zone models accounting for friction, finite dilation and asperity degradation under mixed-mode cyclic loading	<u>Roberto Serpieri</u> , Giulio Alfano, Elio Sacco
15:10	Numerical modelling of the pseudo-ductile response of hybrid laminates with a phase-field approach	<u>Roberto Alessi</u> , Francesco Freddi
15:30	Are configurational forces real forces?	Roberto Ballarini, <u>Gianni Royer Carfagni</u>
15:50	A roughness model for frictional interfaces under mixed-mode loading	Andrea Spagnoli, Andrea Carpinteri, <u>Michele Terzano</u>
16:10	Extended quadratic elements for strong discontinuities	<u>Nunziante Valoroso</u>

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	On a novel energy dissipation mechanism of truss structures	Magdalini Titirla, Konstantinos Katakalos, Giulio Zuccaro, Francesco Fabbrocino
15:10	Frequency band gaps for 2D lattice structures	Agostina Orefice, Ada Amendola, Rosa Penna, Geminiano Mancusi, Luciano Feo
15:30	Waves propagation in a saturated aggregate of particles	Luigi La Ragione, Giuseppina Recchia
15:50	Nonlinear cellular tensegrity materials	Andrea Micheletti, Vittorio Paris, Attilio Pizzigoni, Giuseppe Ruscica

Sala 4 Vietri

MM - Meccanica delle macchine		
Presiede Riccardo Russo		
14:10	Thermo-Mechanical transient analysis in automotive dry-clutch	Adolfo Senatore, Vincenzo D'Agostino, Mario Pisaturo
14:30	Design and set up of an innovative ball screw endurance test bench	Hermes Giberti, Andrea Collina, Marco Bocciolone
14:50	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
15:10	Real time Identification of Automotive Dry Clutch Frictional Characteristics Using Trust Region Methods	Adolfo Senatore, Mario Pisaturo, Mojtaba Sharifzadeh
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		
14:10	Homogenized analysis for cracked three-layer laminates	<u>Laura Galuppi</u> , Gianni Royer Carfagni
14:30	A three-scale model for random particle composites: from lattice microstructures to micropolar continua	<u>Maria Laura De Bellis</u> , Patrizia Trovalusci, Renato Masiani
14:50	Dynamic multi-field asymptotic homogenization of periodic thermodiffusive elastic materials	<u>Andrea Bacigalupo</u> , Lorenzo Morini, Marco Paggi
15:10	Effective thermal properties of fibre reinforced materials	<u>Luca Lanzoni</u> , Enrico Radi, Angelo M. Tarantino
15:30	Nonlinear elasticity in 1D periodic structures with disarrangements	<u>Stefania Palumbo</u> , Andrea Cugno, Luca Deseri, Massimiliano Fraldi
15:50	Vierendeel girder homogenization into a polar beam	Esposito Luca, <u>Antonio Gesualdo</u> , Antonino Iannuzzo, Michela Monaco, Francesco Penta, Giovanni Pio Pucillo
16:10	Integrated procedure for homogenization of particle random composites using virtual element method	<u>Marco Pingaro</u> , 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	<u>Patrick Fedeli</u> , Attilio Frangi
14:30	Thermo-Piezo-Elastic analysis of beam structures using node-dependent kinematics one-dimensional models	<u>Enrico Zappino</u> , Erasmo Carrera, Guohong Li
14:50	A corotational formulation for the static nonlinear analysis of piezoactuated shells	Nicola A. Nodargi, Federica Caselli, Giovanni Caruso, <u>Paolo Bisegna</u>
15:10	Efficienza del posizionamento di piastre piezoelettriche per lo smorzamento delle vibrazioni flessionali di travi fisse e rotanti	<u>Fabio Botta</u>
15:30	Experimental validation on optimal placement of pzt plates for active beam multimode vibrations reduction	Fabio Botta, <u>Andrea Rossi</u> , Francesco Orsini, Lorenzo Schinaia, Andrea Scorza, Salvatore Andrea Sciuto
15:50	A FE2 based approach for multiscale modeling and design of energy harvesting devices	<u>Claudio Maruccio</u> , 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	<u>Marco D. de Tullio</u>
14:30	Fluid/structure interaction for the flow in the left heart ventricle coupled with natural and prosthetic mitral valves	<u>Valentina Meschini</u> , Marco D. de Tullio, Giorgio Querzoli, Roberto Verzicco
14:50	FSI simulation of a detached retina	<u>Peyman Davvalo Khongar</u> , 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	<u>Alessandro Boccadifuoco</u> , Alessandro Mariotti, Simona Celi, Nicola Martini, Maria Vittoria Salvetti
15:30	Fluid-solid-electric stability analysis and passive control of a piezoelectric flexible plate clamped on a rigid cylinder	<u>Marquet Olivier</u> , Carini Marco, Pfister Jean-Lou
15:50	Namib Desert inspired hierarchical hydrophilic/hydrophobic microstructured surfaces for water harvesting	<u>Simone Ghio</u> , Maurizio Boscardin, Nicola Pugno
16:10	Faster than the wind: analysis of land rotor geared vehicles	<u>Vittorio Bovolin</u>

MERCOLEDÌ 6 SETTEMBRE, 14:10-16:30

Sala 8 Ravello

MS09b - Meccanica dei compositi "verdi": caratterizzazione meccanica e relativi aspetti tecnologici, GMA		
Presiede Pietro Russo		
14:10	Influence of Sisal fibers in hollow concrete block structural masonry	Indara Soto Izquierdo, Orieta Soto Izquierdo, Marcio Antonio Ramalho, <u>Alberto Talierno</u>
14:30	Reinforcement of cement mortars with additively manufactured recycled nylon fibers	<u>Ilenia Farina</u> , Francesco Colangelo, Francesco Fabbrocino, Pietro Russo, Fernando Fraternali
14:50	Mechanical and low-velocity impact behavior of polypropylene composite laminates reinforced with a poly(lactic acid)/flex fabric	Pietro Russo, Francesca Cimino, <u>Ilaria Papa</u> , Antonio Langella, Fabrizio Sarasini, Jacopo Tirillò, Giorgio Simeoli, Valentina Lopresto
15:10	Effect of temperature on the low-velocity impact response of green sandwich structures	<u>Fabrizio Sarasini</u> , Jacopo Tirillò, Luca Lampani, Teodoro Valente, Paolo Gaudenzi, Andrea Calzolari
15:30	Damage behavior of basalt/epoxy laminated structures under dynamic conditions	<u>Valentina Lopresto</u> , Ilaria Papa, Antonio Langella, Maria Rosaria Ricciardi, Vincenza Antonucci, Fabrizio Sarasini, Iacopo Tirillò, M.C. Seghini, Vito Pagliarulo, Pietro Ferraro, Pietro Russo
15:50	Monitoring of mechanical loading of poly(lactic acid) matrix jute reinforced composites	Simone Boccardi, Giovanni Maria Carlomagno, Carosena Meola, Pietro Russo, <u>Giorgio Simeoli</u>

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	Re-use of Etna pyroclasts in mortar and concrete manufacturing	<u>Loredana Contraffatto</u> , Salvatore Gazzo
9:20	Experimental shear tests on tuff blocks triplets with hemp fibres reinforced lime mortar	<u>Antonio Formisano</u> , Francesco Fabbrocino, Enzo Junior Dessì, Giovanni Chiumiento
9:40	Experimental analysis on adhesion of NFRCM systems applied to masonry structures	Renato S. Oliveto, <u>Rosamaria Codispoti</u> , Carmelo Scuro
10:00	Stabilization of pedestrian and cycling pathways: a mechanical characterization	<u>Barbara Liguori</u> , Francesco Fabbrocino, Domenico Caputo, Andrea Prota, Gian Piero Lignola
10:20	Impact of natural fibers on the ultimate behavior of masonry elements	<u>Giancarlo Ramaglia</u> , Gian Piero Lignola, Francesco Fabbrocino, Andrea Prota
10:40	The European Project SUREBridge – A case study in Tuscany	Paolo S. Valvo, <u>Erika Davini</u> , Cristiano Alocci, Antonfranco Pasquale, Fabio Ricci, Juan Carlos Miranda Santos, Martijn Veltkamp, Reza Haghani
11:00	An innovative hemp fibre composite system for strengthening applications: mechanical characterization and FE modeling	<u>Costantino Menna</u> , Massimo Durante, Domenico Asprone, Francesco Fabbrocino

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, <u>Ivo Caliò</u> , Francesco Cannizzaro, Bartolomeo Pantò
9:20	Thrust network analysis of masonry helicoidal staircases	<u>Francesco Marmo</u> , Daniele Masi, Luciano Rosati
9:40	Vulnerability assessment of masonry churches through an automated fast limit analysis approach	<u>Andrea Chiozzi</u> , 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, Aginaldo 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	Erasmus Carrera, <u>Daniele Guarnera</u> , Alfonso Pagani, Alberto Varello
9:40	A variational formulation for 3D-Volume Digital image correlation and a finite element implementation	<u>Roberto Fedele</u> , Antonia Ciani, Luca Galantucci
10:00	An efficient blended mixed b-spline formulation for non-polar thin structural models	Leopoldo Greco, Massimo Cuomo, Loredana Contrafatto, <u>Salvatore Gazzo</u>

Sala 4 Vietri

MS02 - Dinamica e stabilità di sistemi meccanici, GADES, in memoria del prof. Ali H. Nayfeh		
Presiede Annalisa Fregolent		
9:20	Kalman-Filter based data fusion to enhance the accuracy of dynamic displacements from GPS measurements	<u>Sara Casciati</u>
9:40	Moving multi-loads problem in layered cracked beams with interlayer slip	<u>Salvatore Di Lorenzo</u> , Christoph Adam, Giuseppe Failla, Antonina Pirrotta
10:00	Identification of hysteretic systems: parametric vs. nonparametric methods	<u>Biagio Carboni</u> , Walter Lacarbonara, Patrick Brewick, Sami Masri
10:20	Dynamic identification and seismic damage accumulation effects in masonry bell-towers	Luca Facchini, <u>Michele Betti</u> , Andrea Gena
10:40	Dynamic behaviour of two stacked rigid blocks	Antonio Gesualdo, Antonino Iannuzzo, Mariano Modano, <u>Michela Monaco</u>

GIOVEDÌ 7 SETTEMBRE, 9:00-11:20

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 through 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, <u>Nicola Dardano</u> , Paolo S. Valvo
10:00	Experimental validation of the enhanced beam-theory model of the mixed-mode bending test	Stefano Bennati, Paolo Fiscaro, <u>Luca Taglialegne</u> , Paolo S. Valvo
10:20	Modeling of carbon nanotube nanocomposites mechanical and damping response and experimental validation	<u>Michela Talò</u> , Walter Lacarbonara, Giovanni Formica, Giulia Lanzara
10:40	Numerical simulation of the cyclic response of FRP Strips Glued to Concrete	Enzo Martinelli, <u>Antonio Caggiano</u>
11:00	Comparison of LVI and QSI damage induced anisotropy in GFRP composites by ultrasonic immersion tests	Anna Castellano, Aginaldo Fraddosio, Mario Daniele Piccioni

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	The bending behavior of graphene: from lattice to continuum modeling	Cesare Davini, <u>Antonino Favata</u> , Roberto Paroni
9:40	In-plane vibration analysis of homogenized truss-lattice plates.	Alessandro De Felice, Silvio Sorrentino
10:00	Computational modeling of the wave dynamics of tensegrity lattices	<u>Ada Amendola</u> , Francesco Fabbrocino, Antonino Favata, Andrea Micheletti, Chiara Daraio
10:20	Elastic properties of single-wall carbon nanotubes through molecular mechanics and discrete homogenization	Andrea Genoese, Alessandra Genoese, Nicola L. Rizzi, Ginevra Salerno
10:40	Dynamic testing and structural identification of innovative network structures	Mariano Modano, Antonio Gesualdo, Ida Mascolo, Ilenia Farina
11:00	Stress-driven nonlocal elastic modeling of nano-beams	Raffaele Barretta, Luciano Feo, Raimondo Luciano, Francesco Marotti de Sciarra

GIOVEDÌ 7 SETTEMBRE, 9:00-11:20

Sala 7 Capri ed Ischia

MS13 – Meccanica dei materiali estremi: grafene, compositi, metamateriali e materiali biologici/bioispirati Presiede Massimiliano Fraldi		
9:00	Experimental evidence of the interaction between snap-through and buckling in shallow structures	<u>Fabio Bazzucchi</u> , Amedeo Manuello, Alberto Carpinteri
9:20	A multiscale model for predicting the macroscopic behaviour of protein materials from macromolecular properties	Domenico De Tommasi, <u>Giuseppe Puglisi</u> , Maria F. Pantano, Nicola M. Pugno, Giuseppe Saccomandi
9:40	Enhancement of microfibers toughness through rubber-based frictional elements	<u>Maria F Pantano</u> , Alice Berardo, Nicola M Pugno
10:00	Engineering ultra-wide and tunable bandgaps in three-dimensional periodic structures	<u>Luca D'Alessandro</u> , Raffaele Ardito, Alberto Corigliano
10:20	Seismic shielding using elastic metamaterials	<u>Federico Borgia</u> , Marco Miniaci, Anastasiia Krushynska, Nicola M. Pugno
10:40	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, <u>Nicola M. Pugno</u>

Sala 8 Ravello

MS12 - Rivestimenti per applicazioni tribologiche: modellazione e caratterizzazione Presiede Giuseppe Carbone		
9:00	Fluid and granular lubrication between hierarchical surfaces	<u>Roberto Guarino</u> , Nicola M. Pugno
9:20	Numerical simulations of friction of structured hierarchical surfaces	<u>Gianluca Costagliola</u> , Federico Borgia, Nicola M. Pugno
9:40	An analysis on stress field distribution in a deformable rubber specimen due to indentation	<u>Francesco Carputo</u> , Flavio Farroni, Andrea Genovese, Aleksandr Sakhnevych, Francesco Timpone
10:00	Optimized design of surface mechanical testing procedures	<u>Gregory Favaro</u> , Marco Di Donato, Nick Bierwisch, Norbert Schwarzer
10:20	Analytical modeling of hierarchical anisotropic friction and wear	<u>Alice Berardo</u> , Nicola M. Pugno
10:40	The contact mechanics of elastic thin layers	<u>Nicola Menga</u> , Luciano Afferrante, Giuseppe Carbone, Giuseppe P. Demelio
11:00	Enhanced surface tribology via femtosecond laser micro-texturing	Gagandeep Singh Joshi, Catenina Gaudiuso, <u>Carmine Putignano</u> , Antonio Ancona, Giuseppe Carbone

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	Analysis of Environmental impacts of Geopolymers: The future of construction materials	Antonella Petrillo, Francesco Colangelo, Raffaele Cioffi, Fabio De Felice, Claudia Borrelli
12:40	Environmental Impact Analysis of concretes to support sustainable building materials	Francesco Colangelo, Antonella Petrillo, Ilenia Farina, Raffaele Cioffi, Federico Zomparelli, Antonio Forcina
13:00	Life cycle assessment and environmental impacts of recycled concretes in building sector	Francesco Colangelo, Raffaele Cioffi, Antonio Forcina, Antonella Petrillo, Giuseppina Belfiore, Domenico Falcone

Sala 2 Tafuri B

MS05a - Comportamento meccanico delle murature: modellazione e procedure numeriche Presiede Daniela Adessi		
12:20	Fixed strength and stiffness hinges for steel frames	Salvatore Benfratello, Calogero Cucchiara, Luigi Palizzolo, Pietro Tabbuso
12:40	FE, DE and FE/DE models to investigate the non-linear behaviour of masonry walls: a critical comparison	Daniele Baraldi, <u>Claudia Brito de Carvalho Bello</u> , Emanuele Reccia, Antonella Cecchi
13:00	Non-linear modelling of masonry structures: application to the case study of the Carmine Bell Tower	<u>Filomena de Silva</u> , Francesca Ceroni
13:20	Masonry compressive strength of heterogeneous walls made with blends of different brick materials	<u>Andrea Benedetti</u>

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, <u>Daniele Pellegrini</u>
12:40	Protection of slender rigid blocks from the overturning by using an active control system	<u>Angelo Di Egidio</u> , Giorgia Simoneschi, Carlo Olivieri, Andrea M. de Leo
13:00	Evaluation of Imperfection Effects on the Stability of Geometrically Nonlinear Structures	<u>Amedeo Manuello</u> , 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, <u>Stefano Lenci</u> , Giuseppe Rega
12:40	A state-space approach to dynamic stability of fractional-order systems	<u>Emanuela Bologna</u> , Luca Deseri, Massimiliano Zingales
13:00	Detecting vibration modes and shapes for Timoshenko beam model: a comparison between available eigensolvers	Flavio Stochino, <u>Antonio Cazzani</u> , Emilio Turco
13:20	Poroacoustic waves under a mixture-theoretic based reformulation of the Jordan–Darcy–Cattaneo model	Pedro M. Jordan, Francesca Passarella, <u>Vincenzo Tibullo</u>

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	In-situ Mechanical Characterization of Deformable Metal/Polymer Electrical Interconnects	<u>Emanuele Cattarinuzzi</u> (Premio GMA)

Sala 6 Positano

MM - Meccanica delle macchine Presiede Adolfo Senatore		
12:20	Torsional vibrations in an automotive drive-line equipped with a Magneto-rheological elastomeric spring damper	Renato Brancati, Ernesto Rocca, <u>Riccardo Russo</u> , Sergio Savino
12:40	Dynamic stiffness and damping of a semi-active air pad	Federico Colombo, Danial Ghodsiyeh, Terenziano Raparelli, <u>Andrea Trivella</u> , Vladimir Viktorov
13:00	Comparative analysis of formulation strategies and solution procedures for the equations of motion of rigid multibody systems	<u>Carmine Maria Pappalardo</u> , Domenico Guida
13:20	System for fast estimation of mechanical tension in cable transmissions using frequency-based method	Michele Righi, Giacomo Moretti, Daniele Bortoluzzi, Marco Fontana

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	Interfacial behaviour of SRP-concrete joints: a numerical and experimental investigation	Christian Carloni, <u>Mattia Santandrea</u> , Imohamed Ali Omar Imohamed, Roman Wendner
12:40	Dynamic debonding phenomena in Z-pin reinforced laminates	Domenico Bruno, <u>Marco Francesco Funari</u> , Fabrizio Greco, Paolo Lonetti

Sala 8 Ravello

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

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*L'iniziativa si terrà con il contributo dell'Ateneo