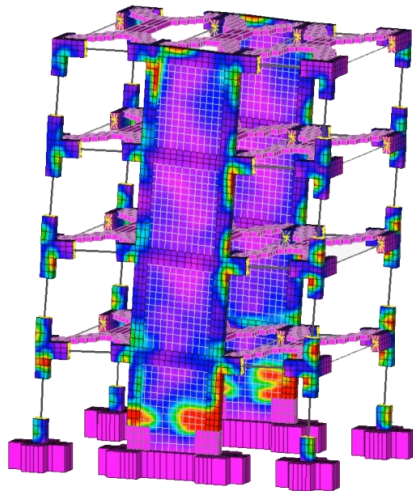




28-30 June 2021



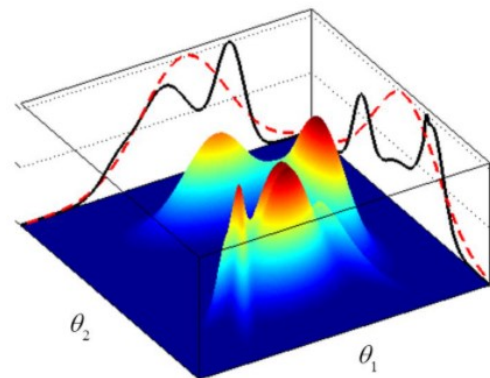
COMPDYN 2021

8th International Conference on
Computational Methods in
Structural Dynamics and Earthquake
Engineering

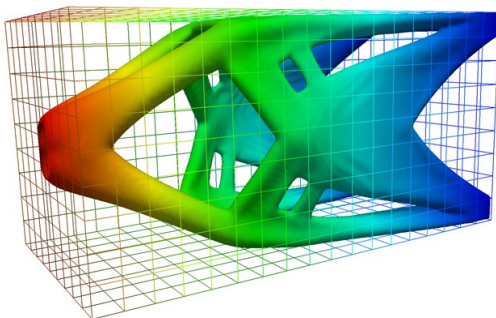
PROGRAMME

UNCECOMP 2021

4th International Conference
on Uncertainty Quantification
in Computational Sciences and
Engineering



Streamed from Athens, Greece



EUROGEN 2021

14th International Conference
on Evolutionary and Deterministic
Methods for Design, Optimization and
Control





Programme



Streamed from Athens, Greece
28-30 June 2021

COMPDYN 2021

**8th International Conference on Computational Methods in Structural Dynamics
and Earthquake Engineering**

*An ECCOMAS Thematic Conference
An IACM Special Interest Conference*

UNCECOMP 2021

**4th International Conference on
Uncertainty Quantification in
Computational Sciences and Engineering**

An ECCOMAS Thematic Conference

EUROGEN 2021

**14th International Conference on
Evolutionary and Deterministic Methods
For Design, Optimization and Control**

An ECCOMAS Thematic Conference



**Institute of Structural Analysis and Antiseismic Research
School of Civil Engineering
National Technical University of Athens**

PROGRAMME OVERVIEW

DAY 1 - MONDAY, JUNE 28

DAY 1 - MONDAY, JUNE 28										
Athens Time	Zoom Room 1	Zoom Room 2	Zoom Room 3	Zoom Room 4	Zoom Room 5	Zoom Room 6	Zoom Room 7	Zoom Room 8	Zoom Room 9	Zoom Room 10
12:00-12:15	OPENING									
12:15-13:35	COMPDYN-UNCECOMP PLENARY LECTURES Shinobu Yoshimura Sondipon Adhikari	EUROGEN PLENARY LECTURES Zhan Kang Gilbert Roge								
13:35-13:40	Break									
13:40-15:40	TECHNICAL SESSIONS									
	COMPDYN MS 12 ADVANCES IN COMPUTATIONAL MODELLING, EXPERIMENTAL TESTING AND OPTIMIZATION OF SEISMIC RETROFITTING	COMPDYN MS 2 REPAIR AND RETROFIT OF STRUCTURES	COMPDYN MS 42 ADVANCES IN MODEL REDUCTION TECHNIQUES OF COMPUTATIONAL AND STRUCTURAL DYNAMICS	COMPDYN MS 3 RECENT ADVANCES AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING COMPDYN TS 21 - I SEISMIC RISK AND RELIABILITY ANALYSIS	EUROGEN MS 7 OPTIMIZATION AND CONTROL INNOVATIVE DIGITALIZED METHODS FOR SOLVING NEW DESIGN CHALLENGES TOWARDS A NEUTRAL CLIMATE AVIATION	COMPDYN MS 29 SEISMIC PROTECTION OF NON-STRUCTURAL COMPONENTS: RECENT DEVELOPMENTS AND FUTURE CHALLENGES	UNCECOMP MS 8 DATA-DRIVEN UNCERTAINTY QUANTIFICATION AND DATA ASSIMILATION USING MANIFOLD LEARNING WITH SPARSE AND LOW-RANK REPRESENTATIONS	COMPDYN MS 11 RECENT FINDINGS AND OPEN ISSUES IN SEISMIC PERFORMANCE ASSESSMENT OF AS-BUILT AND RETROFITTED EXISTING RC BUILDINGS	UNCECOMP MS 14 CHALLENGES IN MODELLING FOR STRUCTURAL DESIGN IN THE PRESENCE OF POLYMORPHIC UNCERTAINTY	COMPDYN MS 13 MODELLING AND SOLUTION STRATEGIES FOR DYNAMIC PROBLEMS
						Round Table C-MS 29				Round Table C-MS 13
15:40-16:00	Break									
16:00-18:00	TECHNICAL SESSIONS									
	COMPDYN MS 20 COMPUTATIONAL DESIGN AND MODELING OF TENSEGRITY SYSTEMS FOR APPLICATIONS IN SCIENCE AND ENGINEERING COMPDYN MS 1 - I INFLUENCE OF INFILL MASONRY WALLS IN THE RESPONSE AND SAFETY OF BUILDINGS	COMPDYN MS 33 - I EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS	COMPDYN MS 34 - I FRAGILITY CURVES FOR EXISTING BUILDINGS: OPEN CHALLENGES IN THEIR DEFINITION AND USE FOR SEISMIC RISK ANALYSES	COMPDYN TS 21 - II SEISMIC RISK AND RELIABILITY ANALYSIS COMPDYN TS 20 SEISMIC ISOLATION	EUROGEN TS 21 MULTIDISCIPLINARY, MULTIPHYSICS, MULTI- OBJECTIVES AND MULTI- CRITERIA OPTIMIZATION METHODS	COMPDYN TS 17 - I PERFORMANCE-BASED EARTHQUAKE ENGINEERING	UNCECOMP MS 3 NON-DETERMINISTIC COMPUTATIONAL HOMOGENIZATION OF HETEROGENEOUS MATERIALS UNCECOMP MS 13 - I MULTISCALE ANALYSIS AND DESIGN OF RANDOM HETEROGENEOUS MEDIA	COMPDYN TS 32 DYNAMICS OF STEEL AND SLENDER STRUCTURES	UNCECOMP MS 2 - I UNCERTAINTY QUANTIFICATION UNDER LIMITED DATA	UNCECOMP MS 7 UNCERTAINTY QUANTIFICATION AND MACHINE LEARNING FOR MODELING AND OPTIMIZATION
18:00-18:05	Break									
18:05-18:45	COMPDYN PLENARY LECTURE Boris Jeremic	UNCECOMP PLENARY LECTURE Petros Koumoutsakos								
18:45-18:50	Break									
18:50-20:50	TECHNICAL SESSIONS									
	COMPDYN MS 1 - II INFLUENCE OF INFILL MASONRY WALLS IN THE RESPONSE AND SAFETY OF BUILDINGS COMPDYN TS 5 DYNAMICS OF CONCRETE AND MASONRY STRUCTURES	COMPDYN MS 33 - II EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS	COMPDYN MS 34 - II FRAGILITY CURVES FOR EXISTING BUILDINGS: OPEN CHALLENGES IN THEIR DEFINITION AND USE FOR SEISMIC RISK ANALYSES	EUROGEN TS 33 ADJOINT BASED AND ONE- SHOT METHODS EUROGEN TS 34 MATERIAL AND NON- LOCAL OPTIMIZATION PROBLEMS	EUROGEN MS 2 OPTIMIZATION IN STRUCTURAL ENGINEERING AND CONTROL	COMPDYN TS 17 - II PERFORMANCE-BASED EARTHQUAKE ENGINEERING	UNCECOMP MS 13 - II MULTISCALE ANALYSIS AND DESIGN OF RANDOM HETEROGENEOUS MEDIA	COMPDYN MS 35 RECENT ADVANCES IN SEISMIC ISOLATION AND SUPPLEMENTAL DAMPING SYSTEMS FOR VIBRATION CONTROL	UNCECOMP MS 2 - II UNCERTAINTY QUANTIFICATION UNDER LIMITED DATA	UNCECOMP MS 1 - I UNCERTAINTY QUANTIFICATION IN VIBRATION BASED MONITORING AND STRUCTURAL DYNAMICS SIMULATIONS
			Round Table C-MS 34				Round Table U-MS 13			

DAY 2 - TUESDAY, JUNE 29										
Athens Time	Zoom Room 1	Zoom Room 2	Zoom Room 3	Zoom Room 4	Zoom Room 5	Zoom Room 6	Zoom Room 7	Zoom Room 8	Zoom Room 9	Zoom Room 10
12:00-13:20	COMPDYN SEMI-PLENARY LECTURES Denis Duhamel Muneo Hori	COMPDYN SEMI-PLENARY LECTURES Giuseppe Muscolino Fernando Fraternali	UNCECOMP SEMI-PLENARY LECTURES David Moens Chao Jiang	UNCECOMP SEMI-PLENARY LECTURES Fabio Nobile Raul Tempone	EUROGEN SEMI-PLENARY LECTURES Shigeru Obayashi Takayuki Yamada	EUROGEN SEMI-PLENARY LECTURES Xu Guo Gil Yoon				
13:20-13:25	Break									
13:25-15:25	TECHNICAL SESSIONS									
	COMPDYN MS 4 - I ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES	COMPDYN MS 10 VULNERABILITY OF MUSEUM'S COLLECTIONS DYNAMIC RESPONSE, SAFETY ASSESSMENT AND DIGITAL INNOVATIONS	COMPDYN MS 6 - I ADVANCES ON SEISMIC ASSESSMENT AND LOCAL COLLAPSE MECHANISMS OF RIGID BLOCKS IN STRUCTURES AND INFRASTRUCTURES	COMPDYN MS 32 - I SIMPLIFIED METHODOLOGIES FOR PERFORMANCE AND LOSS ASSESSMENT AT BUILDING OR TERRITORIAL SCALE	EUROGEN MS 4 ADJOINT METHODS FOR MULTI-PHYSICS, INCLUDING APPLICATIONS	COMPDYN MS 7 - I NEW ADVANCES IN COMPUTATIONAL MODELLING AND EXPERIMENTAL TESTING OF INFILLED FRAMES (2ND EDITION)	UNCECOMP TS 21 - I UNCERTAINTY QUANTIFICATION, SYSTEM RELIABILITY ANALYSIS AND RISK ASSESSMENT	COMPDYN MS 30 - I DYNAMIC PROTECTION SYSTEMS AND DEVICES: EXPERIMENTAL TESTS, MATHEMATICAL MODELING AND DESIGN METHODS	UNCECOMP MS 10 - I SURROGATE MODELS FOR UNCERTAINTY QUANTIFICATION, RELIABILITY AND SENSITIVITY ANALYSIS	UNCECOMP MS 1- II UNCERTAINTY QUANTIFICATION IN VIBRATION BASED MONITORING AND STRUCTURAL DYNAMICS SIMULATIONS
		Round Table C-MS 10			Round Table E-MS 4					Round Table U-MS 1
15:25-15:45	Break									
15:45-17:45	TECHNICAL SESSIONS									
	COMPDYN MS 4 - II ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES	COMPDYN MS 33 - III EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS	COMPDYN MS 6 - II ADVANCES ON SEISMIC ASSESSMENT AND LOCAL COLLAPSE MECHANISMS OF RIGID BLOCKS IN STRUCTURES AND INFRASTRUCTURES COMPDYN MS 17 - I RECENT DEVELOPMENTS IN ROCKING STRUCTURES	COMPDYN MS 32 - II SIMPLIFIED METHODOLOGIES FOR PERFORMANCE AND LOSS ASSESSMENT AT BUILDING OR TERRITORIAL SCALE COMPDYN MS 36 METHODOLOGIES AND ADVANCED TOOLS FOR SEISMIC RISK ASSESSMENT, MANAGEMENT, AND MITIGATION: ADVANCES AND OPEN CHALLENGES	EUROGEN MS 6 SOFT COMPUTING METHODS AND APPLICATIONS IN CIVIL AND STRUCTURAL ENGINEERING EUROGEN TS 2 AERONAUTICAL AEROSPACE AND SPACE ENGINEERING	COMPDYN MS 7 - II NEW ADVANCES IN COMPUTATIONAL MODELLING AND EXPERIMENTAL TESTING OF INFILLED FRAMES (2ND EDITION)	UNCECOMP TS 21 - II UNCERTAINTY QUANTIFICATION, SYSTEM RELIABILITY ANALYSIS AND RISK ASSESSMENT	COMPDYN MS 30 - II DYNAMIC PROTECTION SYSTEMS AND DEVICES: EXPERIMENTAL TESTS, MATHEMATICAL MODELING AND DESIGN METHODS COMPDYN MS 38 - I DYNAMIC SOIL- FOUNDATION-STRUCTURE INTERACTION: DEVELOPMENTS AND EMERGING ISSUES	UNCECOMP MS 10 - II SURROGATE MODELS FOR UNCERTAINTY QUANTIFICATION, RELIABILITY AND SENSITIVITY ANALYSIS	UNCECOMP MS 6 MACHINE LEARNING AND UNCERTAINTY QUANTIFICATION IN BIOLOGICAL SYSTEMS
						Round Table C-MS 7				
17:45-17:50	Break									
17:50-19:10	COMPDYN SEMI-PLENARY LECTURES Alexander Idesman Jean-Mathieu Mencik	UNCECOMP SEMI- PLENARY LECTURES Alireza Doostan Hector Jensen	EUROGEN SEMI- PLENARY LECTURES Mateo Pini Kaisa Miettinen	EUROGEN SEMI- PLENARY LECTURES David Greiner Boyan Lazarov	EUROGEN SEMI- PLENARY LECTURES Emilio Fortunato Campana Matthijis Langelaar					
19:10-19:15	Break									
19:15-21:15	TECHNICAL SESSIONS									
	COMPDYN MS 4 - III ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES 7 + 1will	COMPDYN MS 33 - IV EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS	COMPDYN MS 17 - II RECENT DEVELOPMENTS IN ROCKING STRUCTURES	COMPDYN MS 16 DYNAMIC RESPONSE ASSESSMENT IN RAIL TRACK ENGINEERING COMPDYN MS 41 - I SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES	EUROGEN TS 32 OPTIMIZATION UNDER UNCERTAINTY-HYBRID METHODS, METAHEURISTICS AND EVOLUTIONARY ALGORITHMS, MACHINE LEARNING	COMPDYN MS 39 THE CONTRIBUTION OF DYNAMIC TESTS AND STRUCTURAL MONITORING ON THE SEISMIC RISK ASSESSMENT AND MITIGATION	UNCECOMP TS 21 - III UNCERTAINTY QUANTIFICATION, SYSTEM RELIABILITY ANALYSIS AND RISK ASSESSMENT COMPDYN TS 28 STOCHASTIC DYNAMICS	COMPDYN MS 38 - II DYNAMIC SOIL- FOUNDATION-STRUCTURE INTERACTION: DEVELOPMENTS AND EMERGING ISSUES	UNCECOMP MS 10 - III SURROGATE MODELS FOR UNCERTAINTY QUANTIFICATION, RELIABILITY AND SENSITIVITY ANALYSIS	Round Table U-MS 6
			Round Table C-MS 33					Round Table C-MS 38		

DAY 3 - WEDNESDAY, JUNE 30										
Athens Time	Zoom Room 1	Zoom Room 2	Zoom Room 3	Zoom Room 4	Zoom Room 5	Zoom Room 6	Zoom Room 7	Zoom Room 8	Zoom Room 9	Zoom Room 10
12:00-14:00	TECHNICAL SESSIONS									
	COMPDYN MS 4 - IV ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES	COMPDYN MS 27 - I TIMBER-BASED ELEMENTS: RECENT ADVANCEMENTS FOR NEW AND EXISTING SEISMIC-RESISTANT STRUCTURES	COMPDYN MS 37 - I RISK ASSESSMENT OF BRIDGES AND ROAD NETWORKS SUBJECTED TO NATURAL HAZARDS	COMPDYN MS 41 - II SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES	UNCECOMP MS 4 ADVANCES IN DATA-DRIVEN MODELING AND APPLICATIONS	COMPDYN MS 43 ANALYSES AND DESIGN OF STEEL JOINTS UNDER CYCLIC ACTION	UNCECOMP MS 12 SOFTWARE FOR UNCERTAINTY QUANTIFICATION	COMPDYN MS 22 CONDITION BASED MAINTENANCE AND POST-PROGNOSTICS OF COMPOSITE STRUCTURES: AN ENHANCED PLATFORM COMPDYN MS 40 - I ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN DESIGN AND ASSESSMENT OF STRUCTURES	COMPDYN MS 19 ADVANCES IN THE OPTIMUM DESIGN AND CONTROL OF LARGE STRUCTURES UNDER DYNAMIC LOADS	COMPDYN MS 25 - I MONITORING, IDENTIFICATION AND VIBRATION CONTROL OF STRUCTURES
14:00-14:05	Break									
14:05-16:05	TECHNICAL SESSIONS									
	COMPDYN MS 4 - V ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES	COMPDYN MS 27 - II TIMBER-BASED ELEMENTS: RECENT ADVANCEMENTS FOR NEW AND EXISTING SEISMIC-RESISTANT STRUCTURES	COMPDYN MS 37 - II RISK ASSESSMENT OF BRIDGES AND ROAD NETWORKS SUBJECTED TO NATURAL HAZARDS	COMPDYN MS 41 - III SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES	COMPDYN MS 14 SEISMIC ASSESSMENT AND RETROFITTING OF EXISTING STEEL STRUCTURES	COMPDYN MS 23 ADVANCED MODELS AND NUMERICAL METHODS IN DYNAMICS, WAVE PROPAGATION AND COUPLED PROBLEMS	COMPDYN TS 31 - I NUMERICAL SIMULATION OF GEOTECHNICAL PROBLEMS	COMPDYN MS 40 - II ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN DESIGN AND ASSESSMENT OF STRUCTURES	Round Table C-MS 19	COMPDYN MS 25 - II MONITORING, IDENTIFICATION AND VIBRATION CONTROL OF STRUCTURES
	Round Table C-MS 4			Round Table C-MS 41	Round Table C-MS 14			Round Table C-MS 40		
16:05-16:25	Break									
16:25-18:25	COMPDYN PLENARY LECTURES Peter Betsch Geert Lombaert Gabriele Milani	COMPDYN PLENARY LECTURE Hong Hao	EUROGEN PLENARY LECTURES Kalyanmoy Deb Thomas Rung Panos M. Pardalos							
		UNCECOMP PLENARY LECTURES George Karniadakis Bruno Sudret								
18:25-18:30	Break									
18:30-20:30	TECHNICAL SESSIONS									
	COMPDYN TS 19 REPAIR AND RETROFIT OF STRUCTURES	COMPDYN TS 34 NONLINEAR AND IMPACT DYNAMICS	COMPDYN TS 14 NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS	COMPDYN TS 15 OPTIMUM DESIGN AND CONTROL IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING	COMPDYN TS 33 AEROELASTICITY, SOUND AND VIBRATION AND BRIDGE DYNAMICS	COMPDYN MS 24 LIFE-CYCLE RISK-BASED STRUCTURAL ASSESSMENT AND COST ANALYSIS	COMPDYN TS 31 - II NUMERICAL SIMULATION OF GEOTECHNICAL PROBLEMS COMPDYN MS 8 A MATTER OF SCALE: FROM REAL-TIME MONITORING TO AREA-WIDE SEISMIC RISK ASSESSMENT	UNCECOMP MS 11 SENSORS PLACEMENT UNDER UNCERTAIN INFORMATION UNCECOMP MS 15 BAYESIAN INFERENCE AND MACHINE LEARNING FOR CHALLENGING ENGINEERING APPLICATIONS	COMPDYN MS 9 NONLINEAR MODELLING AND ASSESSMENT OF EXISTING REINFORCED CONCRETE ELEMENTS	COMPDYN MS 26 SEISMIC SAFETY ASSESSMENT OF STRUCTURES

Greetings from the Conference Co-Chairs

Dear colleagues and friends,

Welcome to the Trilogy of ECCOMAS Thematic Conferences: *The XIV International Conference on Evolutionary and Deterministic Methods for Design, Optimization and Control (EUROGEN 2021)*, the *VIII International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2021)* and *the IV International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2021)*.

The conferences are organized under the auspices of ECCOMAS, among the 30 ECCOMAS Thematic Conferences organized every two years and attract more than 3.000 participants. ECCOMAS Thematic Conferences have been established as the top scientific events worldwide in the area of computational methods in applied science and engineering and are highly anticipated every two years by the international community of computational mechanics.

Traditionally, COMPDYN and UNCECOMP conference series are held jointly, at the same place and time, with great success as it has been manifested by an increased number of papers presented over the years that could fit in both conference Programmes.

This model of merging ECCOMAS Thematic Conferences was attempted this time as well, with the incorporation of EUROGEN 2021 to the Technical Programme of the twin conferences. We expect that this trilogy will enhance even more the appeal of each separate conference to the participants of the other two, since there is considerable overlapping in the content of the papers among the three conferences.

The aim of this conference merge is to bring together researchers and engineers working in different fields of computational methods in applied science and engineering, by establishing a forum for facilitating the exchange of ideas and by providing a platform for creating links between research groups with complementary activities.

The current edition of EUROGEN, co-chaired by Nicolas Gauger, Kyriakos Giannakoglou, Manolis Papadrakakis and Jacques Periaux, is the 14th of a series of biannual International Conferences, which were initiated by Jacques Periaux in 1995, years before the creation of ECCOMAS Thematic Conferences, devoted to Evolutionary and Deterministic Computing for Industrial Applications. The first conference was held in Las Palmas de Gran Canaria (1995), followed by Trieste (1997), Jyväskylä (1999), Athens (2001), Barcelona in 2003, and from then onwards as ECCOMAS Thematic Conferences in Munich (2005), Jyväskylä (2007), Kracow (2009), Capua (2011), Las Palmas de Gran Canaria (2013), Glasgow (2015) Madrid (2017) and Guimaraes (2019).

The purpose of the COMPDYN Conference series, co-chaired by Michalis Fragiadakis and Manolis Papadrakakis, is to foster the interaction among the scientific communities of Computational Mechanics, Structural Dynamics and Earthquake Engineering, and act as a forum for exchanging ideas in topics of mutual interest. The previous meetings of COMPDYN were held in different islands of Greece, starting from Rethymno, Crete (2007), Rhodes (2009), Corfu (2011), Kos (2013), Hersonissos Crete (2015), Rhodes (2017) and Crete (2019) and attracted more than 3.400 participants in total.

The objective of UNCECOMP Conference series, co-chaired by Vissarion Papadopoulos, Manolis Papadrakakis and George Stefanou, is to reflect and disseminate recent research efforts and progress toward the analysis and design of complex systems with uncertain input parameters, and obtain reliable predictions of physical phenomena. UNCECOMP started in 2015 in Crete followed by Rhodes (2017) and Crete (2019) and attracted more than 560 participants.

The outburst of COVID-19 pandemic at the beginning of last year, created an unprecedented disruption in our everyday life with a number of painful side-effects, among them the organization and participation in international conferences. Contrary to what we had all hoped for, that COVID-19 would be harnessed by the end of last summer, the third wave, which broke out last autumn and continued throughout the winter, has left us with no other choice but to abandon the idea of in-person conferences and instead organize them as fully on-line events.

For this Trilogy of conferences, we did our best to deliver a virtual joint event, following the best practices of recent virtual conferences organized worldwide, based on a stimulating Technical Programme, with live presentations at the cutting edge of their respective fields and Conference Proceedings with high-quality full-length papers.

In order to counter-balance the benefits of physical socializing when attending an in-person event, in addition to the pre-recorded on-demand presentations, 640 presentations will be delivered live via Zoom followed by Q&A discussions. Among them 15 plenary and 22 semi-plenary talks will be delivered by distinguished researchers in the relative conference fields.

The Zoom Sessions will be complemented by 15 live Round-Table Sessions on selected topics of great scientific interest. All presented material will be available to the participants in the post-conference e-Library. Furthermore, 460 full-length papers have been accepted for publication in the Open Access ECCOMAS Proceedia, indexed by Scopus Database.

On this occasion, we take this opportunity to thank the authors for submitting their contributions and for their efforts to respect the deadlines, the speakers for preparing their presentations, as well as all participants who are attending this event from different parts of the world. Special thanks go to the 185 colleagues who actively participated in the organization of the 54 Minisymposia and to the reviewers who, with their work, contributed to the scientific quality of the Conference Proceedings.

We would like to express our gratitude to the Conference Secretariat, Eva Konti, the heart and soul of this conference, without whose every day devoted work on this project, in dealing with numerous organization aspects and in meeting all types of requests, it wouldn't have been possible to organize such an event. To Panagiota Kouniaki, for her invaluable assistance in the preparation of the e-book and the Open Access ECCOMAS Proceedia and to Jenny Mitsoura for the supervision of the live broadcasting of the Conference Programme.

From the city of Athens, we invite you to explore all available recourses and tools offered by this online event, in order to advance your research and to enrich your cooperation with colleagues with mutual interests. For the next three days, we urge you stay tuned, be active and interactive and enjoy the Trilogy of COMPDYN-UNCECOMP-EUROGEN 2021 virtual conferences.

The Conference Co-chairs

COMPDYN 2021
Michalis Fragiadakis
Manolis Papadrakakis

UNCECOMP 2021
Vissarion Papadopoulos
Manolis Papadrakakis
George Stefanou

EUROGEN 2021
Nicolas Gauger
Kyriakos Giannakoglou
Manolis Papadrakakis
Jacques Periaux

Table of Contents

COMPDYN 2021 Committees	8
UNCECOMP 2021 Committees	9
EUROGEN 2021 Committees	10
Plenary Lecturers	11
Semi-Plenary Lecturers	14
Round-Table Panelists	18
Mini Symposia- Thematic Sessions	21
Technical Programme	31

COMPDYN 2021

Scientific Committee

C. Adam, Austria	F. Di Trapani, Italy	F. Mollaioli, Italy
S. Adhikari, UK	D. Duhamel, France	G. Mylonakis, UK/Greece
O. Allix, France	A. Elgamal, USA	A. Naess, Norway
A. Ansal, Turkey	M. Erdik, Turkey	J. Narpstek, Czech Republic
D. Assimaki, USA	P. Fajfar, Slovenia	M. Ohsaki, Japan
A. Baratta, Italy	M. Fardis, Greece	E. Oñate, Spain
A. Barbat, Spain	C. Farhat, USA	C. Papadimitriou, Greece
R. Barros, Portugal	A. Filiatrault, USA/Italy	A. Papageorgiou, Greece
P. Bazzuro, Italy	F. Filippou, USA	K-C. Park, USA
J. Beck, USA	A. Formisano, Italy	A. Penna, Italy
M. Beer, UK	M. Fragiadakis, Greece	I. Psycharis, Greece
D. Beskos, Greece	D. Frangopol, USA	P. Ricci, Italy
F. Biondini, Italy	Ch. Gantes, Greece	C. Ricles, USA
B. Borzi, Italy	D. Givoli, Israel	E. Salajegheh, Iran
S. Bousias, Greece	M. Hori, Japan	E. Sapountzakis, Greece
M. Braz César, Portugal	T. Hughes, USA	D. A. Saravanos, Greece
M. Bruneau, USA	A. Idesman, USA	S. Sessa, Italy
E. Caetano, Portugal	F. Jalayer, Italy	A. Sextos, UK
G-M. Calvi, Italy	H. Jensen, Chile	A. Shabana, USA
P. Castaldo, Italy	A. Kappos, UAE	C. Soize, France
S. Cattari, Italy	S. Karamanos, Greece	A. Soroushian, Iran
L. Cavaleri, Italy	A. Kasai, Japan	C. Spyarakos, Greece
N. Chouh, New Zealand	C. Koenke, Germany	G. Stavroulakis, Greece
G.P. Cimellaro, Italy	R. Landolfo, Italy	H. Sucuoglu, Turkey
A. Combescure, France	A. Liolios, Greece	I. Takewaki, Japan
M. Constantinou, USA	P. Lourenco, Portugal	K. Tamma, USA
J. Conte, USA	H. Mang, Austria	A. Vakakis, USA
Á. Cunha, Portugal	G. Manolis, Greece	D. Vamvatsikos, Greece
G. De Roeck, Belgium	G. Manos, Greece	D. Vandepitte, Belgium
G. Degrande, Belgium	G.C. Marano, Italy	H. Varum, Portugal
G. Deodatis, USA	G. Markou, South Africa	F. Wuttke, Germany
A. Der Kiureghian, USA	S. Mehanny, Egypt	Y.B. Yang, Taiwan
L. Di Sarno, Italy/UK	G. Milani, Italy	S. Yoshimura, Japan
	N. Moes, France	

Chairpersons

- M. Fragiadakis, *National Technical University of Athens, Greece*
M. Papadrakakis, *National Technical University of Athens, Greece*

UNCECOMP 2021

Scientific Committee

S. Adhikari, UK	H. Matthies, Germany
S-K. Au, UK	D. Moens, Belgium
M. Barbato, USA	J.F. Molinari, Switzerland
A. Batou, France	A. Naess, Norway
A.T. Beck, Brazil	P.B. Nair, Canada
M. Beer, UK	H. Najm, USA
J.M. Bourinet, France	J.T. Oden, USA
C. Bucher, Austria	R. Ohayon, France
E. Chatzi, Switzerland	X. Oliver, Spain
J-B Chen, China	M. Ostoj-Starzewski, USA
A. Cicirello, UK	C. Papadimitriou, Greece
R. Cottureau, France	E. Patelli, UK
I. Elishakoff, USA	C. Proppe, Germany
J. Fish, USA	S. Prudhomme, Canada
D. Frangopol, USA	A. Quarteroni, Italy
M. Friswell, UK	S. Rahman, USA
W. Gao, Australia	F.G. Rammerstorfer, Austria
M. Geers, The Netherlands	G. Rozza, Italy
R. Ghanem, USA	S. Sakata, Japan
O. Ghattas, USA	M. Shields, USA
D. Giovanis, USA	A. Sofi, Italy
V. Gusella, Italy	C. Soize, France
A. Ibrahimbegovic, France	P. Steinmann, Germany
H. Jensen, Chile	D. Straub, Germany
M. Kamiński, Poland	B. Sudret, Switzerland
A. Kareem, USA	A. Taflanidis, USA
G. E. Karniadakis, USA	P. Trovalusci, Italy
O. Knio, USA	D. Vandepitte, Belgium
I. Kougiumtzoglou, USA	E. Vanmarcke, Belgium
P. Koumoutsakos, Switzerland	M. Vorechovsky, Czech Republic
P.S. Koutsourelakis, Germany	W. Wall, Germany
P. Ladevèze, France	D. Xiu, USA
O. Le Maitre, France	X. Xu, China
W.K. Liu, USA	N. Zabaras, USA
G. Lombaert, Belgium	J. Zeman, Czech Republic
D. Lucor, France	T.I. Zohdi, USA

Chairpersons

V. Papadopoulos, *National Technical University of Athens, Greece*
M. Papadrakakis, *National Technical University of Athens, Greece*
G. Stefanou, *Aristotle University of Thessaloniki, Greece*

EUROGEN 2021

Scientific Committee

M. Alves, Portugal	R. Makinen, Finland
E. Andrés, Spain	L. Mallozi, Italy
C. Antunes, Portugal	S. Martorell, Spain
V. Asouti, Greece	M. Meheut, France
T. Bäck, The Netherlands	E. Minisci, United Kingdom
H. Baier, Germany	F. Monge, Spain
A T Beck, Brazil	S Nishiwaki, Japan
A. Bekasiewicz, Iceland	S. Obayashi, Sweden
G. Bugada, Spain	M. Padulo, France
T. Burczynski, Poland	G. Papa, Slovenia
O. Burdakow, Sweden	P.Y. Papalambros, USA
C. Coello, Mexico	P.M. Pardalos, USA
L. Costa, Portugal	D. Pasini, Canada
A. Delbem, Brazil	R Pavanello, Brazil
C. Fonseca, Portugal	J. Periaux, Spain
M. Fragiadakis, Greece	V. Plevris, Norway
D. Frangopol, USA	D. Quagliarella, Italy
A. Gaspar-Cunha, Portugal	D. Redondo, Spain
N. Gauger, Germany	G. Roge, France
S. Gholizadeh, Iran	M.P. Saka, Turkey
D. Greiner, Spain	M Shimoda, Japan
A. Griewank, Germany	J. Sikora, Poland
J Guest, USA	Z. Tang, China
X Guo, China	H. Telib, Italy
C. Hirsch, Belgium	J. Tsompanakis, Greece
X Huang, Australia	E. Valero, Spain
E. Iuliano, Italy	T Yamada, Japan
Z. Kang, China	X.-S. Yang, United Kingdom
K Kapania, India	A. Zamuda, Slovenia
A. Kaveh, Iran	
W. Kus, Poland	
B S Lazarov, USA	

Chairpersons

N. Gauger, *TU Kaiserslautern, Germany*
K. Giannakoglou, *National Technical University of Athens, Greece and ERCOFTAC*
M. Papadrakakis, *National Technical University of Athens, Greece and ECCOMAS*
J. Periaux, *CIMNE, Univ. Jyväskylä and ECCOMAS*

Conference Guide

Programme Format

The Technical Programme consists of 15 Plenary Lectures, 22 semi-Plenary Lectures, 15 Round-Table Sessions and 54 Minisymposia. In total 640 presentations will take place during the four days of the conference.

Plenary Lecturers



Sondipon Adhikari

Swansea University, United Kingdom

C 20769 THE ROLE OF MICROSTRUCTURE UNCERTAINTY ON BROADBAND HOMOGENEOUS PROPERTIES OF LATTICE MATERIALS

Plenary Session, Monday, 12:15-13:35, Zoom Room 1



Peter Betsch

Karlsruher Institut für Technologie (KIT), Germany

C 20748 INVERSE DYNAMICS SIMULATION OF UNDERACTUATED MECHANICAL SYSTEMS

Plenary Session, Wednesday, 16:25-18:25, Zoom Room 1



Kalyanmoy Deb

Michigan State University, United States

E 18456 CUSTOMIZED OPTIMIZATION FOR ENGINEERING PROBLEM SOLVING

Plenary Session, Wednesday, 16:25-18:25, Zoom Room 3



Hong Hao

Curtin University, Australia

C 20559 CHALLENGES FOR HIGH-FIDELITY NUMERICAL PREDICTIONS OF STRUCTURAL DAMAGE AND FRAGMENTATION SUBJECTED TO EXTREME DYNAMIC LOADING

Plenary Session, Wednesday, 16:25-18:25, Zoom Room 2

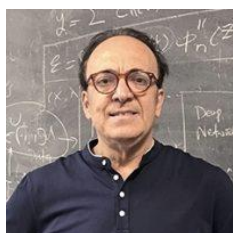


Boris Jeremic

University of California, United States

C 19572 FORWARD AND BACKWARD UNCERTAINTY PROPAGATION IN COMPUTATIONAL EARTHQUAKE ENGINEERING

Plenary Session, Monday, 18:05-18:45, Zoom Room 1



George Karniadakis

Brown University, United States

U 19564 MULTI-FIDELITY BAYESIAN NEURAL NETWORKS: ALGORITHMS AND APPLICATIONS

Plenary Session, Wednesday, 16:25-18:25, Zoom Room 2



Zhan Kang

Dalian University of Technology, China

E 18371 MULTI-MATERIAL AND MULTI-COMPONENT TOPOLOGY OPTIMIZATION

Plenary Session, Monday, 12:15-13:35, Zoom Room 2



Petros Koumoutsakos

Harvard University, United States

U 19438 DATA AS MODELS FOR BLOOD AND WATER

Plenary Session, Monday, 18:05-18:45, Zoom Room 2



Geert Lombaert

KU Leuven, Belgium

C 20128 STATE, INPUT, AND PARAMETER ESTIMATION FOR MONITORING OF CIVIL ENGINEERING STRUCTURES

Plenary Session, Wednesday, 16:25-18:25, Zoom Room 1



Gabriele Milani

Technical University of Milan, Italy

C 19570 SEISMIC VULNERABILITY OF MASONRY HISTORICAL STRUCTURES: A SIMPLE ADAPTIVE NURBS FE APPROACH FOR THE LIMIT AND THE SUBSEQUENT NON-LINEAR STATIC ANALYSIS WITH FEW DOFS

Plenary Session, Wednesday, 16:25-18:25, Zoom Room 1



Panos M. Pardalos

University of Florida, United States

E 18528 ARTIFICIAL INTELLIGENCE, DATA SCIENCES, AND OPTIMIZATION IN ECONOMICS AND FINANCE

Plenary Session, Wednesday, 16:25-18:25, Zoom Room 3



Gilbert Rogé

Dassault Aviation, France

E 18500 AERODYNAMICS SHAPE OPTIMIZATION: NEW TRENDS AT DASSAULT AVIATION
Plenary Session, Monday, 12:15-13:35, Zoom Room 2



Thomas Rung

Hamburg University of Technology (TUHH), Germany

E 18350 ADJOINT OPTIMISATION OF MARITIME ENGINEERING TWO-PHASE FLOWS
Plenary Session, Wednesday, 16:25-18:25, Zoom Room 3



Bruno Sudret

ETH Zürich, Switzerland

U 19437 RECENT DEVELOPMENTS ON SURROGATE MODELS FOR STOCHASTIC SIMULATORS
Plenary Session, Wednesday, 16:25-18:25, Zoom Room 2



Shinobu Yoshimura

The University of Tokyo, Japan

C 19568 SIMULATIONS OF FLOW-INDUCED VIBRATION AND FATIGUE DAMAGE OF LARGE SCALE OFFSHORE WIND TURBINE USING THE SUPERCOMPUTER FUGAKU
Plenary Session, Monday, 12:15-13:35, Zoom Room 1

Semi-Plenary Lecturers



Emilio Fortunato Campana

Italian National Research Council, CNR-INSEAN, Italy

- E 18560** DESIGN SPACE DIMENSIONALITY REDUCTION METHODS FOR LARGE-SCALE OPTIMIZATION PROBLEM
Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 5



Alireza Doostan

University of Colorado, United States

- U 19443** SCALABLE DESIGN OPTIMIZATION UNDER UNCERTAINTY: STOCHASTIC GRADIENT APPROACHES
Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 2



Denis Duhamel

ENPC - Laboratoire Navier, France

- C 18920** SOME RECENT ADVANCES IN THE WAVE FINITE ELEMENT METHOD
Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 1



Fernando Fraternali

University of Salerno, Italy

- C 20778** ON THE FOCUSING OF MECHANICAL WAVES THROUGH TENSEGRITY METAMATERIALS
Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 2



David Greiner

Universidad de Las Palmas de Gran Canaria, Spain

- E 18531** GAME THEORY BASED EVOLUTIONARY ALGORITHMS: APPLICATION IN OPTIMIZATION OF SKELETAL STRUCTURES
Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 4



Xu Guo

Dalian University of Technology, China

- E 18569** MOVING MORPHABLE COMPONENT (MMC)-BASED EXPLICIT TOPOLOGY OPTIMIZATION-SOME NEW DEVELOPMENTS
Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 6



Muneo Hori

University of Tokyo, Japan

C 19574 HIGH FIDELITY MODEL FOR NUMERICALLY ANALYSIS OF SOIL-STRUCTURE INTERACTION

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 1



Alexander Idesman

Texas Tech University, United States

C 19566 A NEW NUMERICAL APPROACH TO SOLUTION OF PDES WITH OPTIMAL ACCURACY ON IRREGULAR DOMAINS AND INTERFACES USING CARTESIAN MESHES. APPLICATION TO THE WAVE, HEAT, HELMHOLTZ, POISSON AND ELASTICITY EQUATIONS

Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 1



Hector Jensen

Santa Maria Technical University, Chile

U 19436 A UNIFIED STOCHASTIC FRAMEWORK FOR RELIABILITY-BASED DESIGN OPTIMIZATION OF STRUCTURAL DYNAMICAL SYSTEMS

Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 2



Chao Jiang

Hunan University, China

U 19577 INTERVAL PROCESS MODEL FOR DYNAMIC UNCERTAINTY QUANTIFICATION

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 3



Matthijs Langelaar

Delft University of Technology, Netherlands

E 18343 CHALLENGES IN DYNAMIC SYSTEM DESIGN USING LARGE-SCALE TOPOLOGY OPTIMIZATION: COMPUTATIONAL ASPECTS, MANUFACTURABILITY AND INTEGRATED CONTROLLER-STRUCTURE OPTIMIZATION

Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 5



Boyan Lazarov

Lawrence Livermore National Laboratory, United States

E 18401 LARGE SCALE DENSITY-BASED TOPOLOGY OPTIMIZATION WITH APPLICATIONS IN MECHANICS, AND COUPLED MULTIPHYSICS PROBLEMS

Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 4



Jean-Mathieu Mencik

INSA Centre Val de Loire, France

C 19149 DYNAMIC ANALYSIS OF PERIODIC STRUCTURES AND METAMATERIALS VIA WAVE APPROACHES AND FINITE ELEMENT PROCEDURES

Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 1



Kaisa Miettinen

University of Jyväskylä, Finland

E 18345 POTENTIAL OF INTERACTIVE MULTIOBJECTIVE OPTIMIZATION IN DECISION ANALYTICS

Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 3



David Moens

KU Leuven, Belgium

U 19736 RECENT ADVANCES IN INTERVAL FIELD UNCERTAINTY MODELLING FOR LARGE-SCALE FINITE ELEMENT MODELS

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 3



Giuseppe Muscolino

Università degli Studi di Messina, Italy

C 19782 SEISMIC ANALYSIS OF STRUCTURAL SYSTEMS SUBJECTED TO FULLY NON-STATIONARY ARTIFICIAL ACCELEROGRAMS: RECENT ADVANCES

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 2



Fabio Nobile

EPFL SB MATH CSQI, Switzerland

U 20750 HIERARCHICAL SAMPLING METHODS FOR BAYESIAN INVERSE PROBLEMS AND DATA ASSIMILATION

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 4

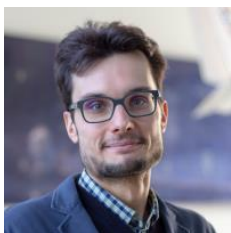


Shigeru Obayashi

Tohoku University, Japan

E 18406 DATA ASSIMILATION FOR ENGINEERING DESIGN AND OPERATION

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 5



Matteo Pini

Delft University of Technology, Netherlands

E 18408 AUTOMATED DESIGN OPTIMIZATION OF TURBOMACHINERY WITH THE DISCRETE ADJOINT METHOD: STATE-OF-THE-ART AND FUTURE PERSPECTIVES

Semi-Plenary Session, Tuesday, 17:50-19:10, Zoom Room 3



Raul Tempone

King Abdullah University of Science and Technology, Kingdom of Saudi Arabia and RWTH Aachen University

U 20752 COMBINING HIERARCHICAL APPROXIMATION WITH IMPORTANCE SAMPLING: APPROXIMATION AND OPTIMIZATION TECHNIQUES

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 4



Takayuki Yamada

University of Tokyo, Japan

E 18420 TOPOLOGY OPTIMIZATION WITH GEOMETRIC CONSTRAINT FOR MANUFACTURING

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 5



Gil Ho Yoon

Hanyang University, Republic of Korea

E 18458 TOPOLOGY OPTIMIZATION METHOD FOR MULTIPHYSICS SYSTEM

Semi-Plenary Session, Tuesday, 12:00-13:20, Zoom Room 6

Round-Table Sessions and Panelists

COMPDYN MS 4: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

Wednesday, 15:35-16:05, Zoom Room 1

Antonio Formisano,	<i>University of Naples Federico II, Italy (Moderator)</i>
Gabriele Milani,	<i>Politecnico di Milano, Italy</i>
Francesco Clementi,	<i>Polytechnic University of Marche, Italy</i>
Nicola Cavalagli,	<i>University of Perugia, Italy</i>
Vagelis Plevris,	<i>Oslo Metropolitan University, Norway</i>

COMPDYN MS 7: NEW ADVANCES IN COMPUTATIONAL MODELLING AND EXPERIMENTAL TESTING OF INFILLED FRAMES (2ND EDITION)

Tuesday, 17:15-17:45, Zoom Room 6

Fabio Di Trapani,	<i>Polytechnic of Turin, Italy (Moderator)</i>
-------------------	--

COMPDYN MS 10: VULNERABILITY OF MUSEUM'S COLLECTIONS DYNAMIC RESPONSE, SAFETY ASSESSMENT AND DIGITAL INNOVATIONS

Tuesday, 14:40-15:10, Zoom Room 2

Stefania Viti,	<i>University of Florence, Italy (Moderator)</i>
Edoardo Marino,	<i>University of Catania, Italy</i>
Michela Monaco,	<i>Università degli Studi del Sannio, Italy</i>
Francesco Portioli,	<i>University of Naples Federico II, Italy</i>
Michalis Fragiadakis,	<i>National Technical University of Athens, Greece</i>

COMPDYN MS 13: MODELLING AND SOLUTION STRATEGIES FOR DYNAMIC PROBLEMS

Monday, 15:10-15:40, Zoom Room 10

Aram Soroushian,	<i>International Institute of Earthquake Engineering and Seismology, Iran (Moderator)</i>
Kumar Tamma,	<i>University of Minnesota, USA (Moderator)</i>
J.C. Reyes,	<i>Universidad de los Andes, Colombia</i>
Mohsen Ghafory-Ashtiany,	<i>International Institute of Earthquake Engineering and Seismology, Iran</i>

COMPDYN MS 14: SEISMIC ASSESSMENT AND RETROFITTING OF EXISTING STEEL STRUCTURES

Wednesday, 15:20-15:50, Zoom Room 5

Luigi Di Sarno,	<i>University of Sannio, Italy (Moderator)</i>
-----------------	--

COMPDYN MS 19: ADVANCES IN THE OPTIMUM DESIGN AND CONTROL OF LARGE STRUCTURES UNDER DYNAMIC LOADS

Wednesday, 14:05-14:35, Zoom Room 9

Fabrizio Mollaioli,	<i>Sapienza University of Rome, Italy (Moderator)</i>
Jose Antonio Lozano Galant,	<i>University of Castilla-La Mancha, Spain</i>
Luigi Fenu,	<i>Università degli studi di Cagliari, Italy</i>
Nikos Lagaros,	<i>National Technical University of Athens, Greece</i>
Giuseppe Carlo Marano,	<i>Politecnico di Torino, Italy</i>

COMPDYN MS 29: SEISMIC PROTECTION OF NON-STRUCTURAL COMPONENTS: RECENT DEVELOPMENTS AND FUTURE CHALLENGES

Monday, 14:25-14:55, Zoom Room 6

Luigi Di Sarno,	<i>University of Sannio, Italy (Moderator)</i>
Roberto Nascimbene,	<i>European Centre for Training and Research in Earthquake Engineering, Italy</i>
Daniele Perrone,	<i>University of Salento, Italy</i>
Michalis Fragiadakis,	<i>National Technical University of Athens, Greece</i>

COMPDYN MS 33: EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

Tuesday, 20:45-21:30, Zoom Room 2

George C. Manos,	<i>Aristotle University of Thessaloniki, Greece (Moderator)</i>
Lazaros Melidis,	<i>Aristotle University of Thessaloniki, Greece</i>
Konstantinos Katakalos,	<i>Aristotle University of Thessaloniki, Greece</i>
Milton Dimosthenous,	<i>Frederick University, Cyprus</i>

COMPDYN MS 34: FRAGILITY CURVES FOR EXISTING BUILDINGS: OPEN CHALLENGES IN THEIR DEFINITION AND USE FOR SEISMIC RISK ANALYSES

Monday, 20:05-20:35, Zoom Room 3

Serena Cattari,	<i>Università degli Studi di Genova, Italy (Moderator)</i>
Mauro Dolce,	<i>Civil Protection Department of Italy, Italy</i>
Angelo Masi,	<i>Università degli Studi della Basilicata, Italy</i>
Sergio Lagomarsino,	<i>Università degli Studi di Genova, Italy</i>
Vitor Silva,	<i>Global Earthquake Model, Portugal</i>

COMPDYN MS 38: DYNAMIC SOIL-FOUNDATION-STRUCTURE INTERACTION: DEVELOPMENTS AND EMERGING ISSUES

Tuesday, 21:00-21:30, Zoom Room 8

Emmanouil Rovithis,	<i>Institute of Engineering Seismology and Earthquake Engineering, Greece (Moderator)</i>
Raffaele Di Laora,	<i>Università degli Studi della Campania "Luigi Vanvitelli", Italy (Moderator)</i>
Maria Iovino,	<i>Parthenope University of Naples, Italy (Moderator)</i>
Amir Kaynia,	<i>Norwegian University of Science and Technology, Norway</i>
George Mylonakis,	<i>University of Bristol, United Kingdom</i>
Scott Brandenburg,	<i>UCLA Samueli School Of Engineering, USA</i>

COMPDYN MS 40: ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN DESIGN AND ASSESSMENT OF STRUCTURES

Wednesday, 15:05-15:35, Zoom Room 8

George Markou,	<i>University of Pretoria, South Africa (Moderator)</i>
----------------	---

COMPDYN MS 41: SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES

Wednesday, 15:35-16:05, Zoom Room 4

Enrico Tubaldi,	<i>University of Strathclyde, United Kingdom (Moderator)</i>
Virginio Quaglini,	<i>Politecnico di Milano, Italy</i>
Alberto Pavese,	<i>University of Pavia, Italy</i>

UNCECOMP MS 1: UNCERTAINTY QUANTIFICATION IN VIBRATION BASED MONITORING AND STRUCTURAL DYNAMICS SIMULATIONS

Tuesday, 13:55-14:25, Zoom Room 10

Manolis Chatzis,	<i>The University of Oxford, United Kingdom (Moderator)</i>
Vasilis Dertimanis,	<i>ETH Zürich, Switzerland (Moderator)</i>
Alice Cicirello,	<i>TU Delft, Netherlands</i>
Timothy Rogers,	<i>University of Sheffield, United Kingdom</i>
Alessandro Palmeri,	<i>Loughborough University, United Kingdom</i>
Eleni Chatzi,	<i>ETH Zürich, Switzerland</i>
Geert Lombaert,	<i>KU Leuven, Belgium</i>
Costas Papadimitriou,	<i>University of Thessaly, Greece</i>

UNCECOMP MS 6: MACHINE LEARNING AND UNCERTAINTY QUANTIFICATION IN BIOLOGICAL SYSTEMS

Tuesday, 19:15-19:45, Zoom Room 10

Paris Perdikaris,	<i>University of Pennsylvania, United States (Moderator)</i>
Petros Koumoutsakos,	<i>Harvard University, United States</i>
Fabio Nobile,	<i>EPFL, Switzerland</i>
Simone Pezzuto,	<i>Università della Svizzera italiana, Switzerland</i>
Toni Lassila,	<i>University of Leeds, United Kingdom</i>
Andrea Manzoni,	<i>Politecnico di Milano, Italy</i>

UNCECOMP MS 13: MULTISCALE ANALYSIS AND DESIGN OF RANDOM HETEROGENEOUS MEDIA

Monday, 19:50-20:20, Zoom Room 7

George Stefanou,	<i>Aristotle University of Thessaloniki, Greece (Moderator)</i>
Johann Guilleminot,	<i>Duke University, United States</i>
Chenfeng Li,	<i>Swansea University, United Kingdom</i>
Sei-ichiro Sakata,	<i>Kindai University, Japan</i>
Patrizia Trovalusci,	<i>Sapienza University of Rome, Italy</i>

EUROGEN MS 4: ADJOINT METHODS FOR MULTI-PHYSICS, INCLUDING APPLICATIONS

Tuesday, 14:55-15:25, Zoom Room 5

Kyriakos Giannakoglou,	<i>National Technical University of Athens, Greece (Moderator)</i>
Michael Meheut,	<i>ONERA - The French Aerospace Lab, France</i>
Gilbert Roge,	<i>Dassault Aviation, France</i>
Shahrokh Shahpar,	<i>Rolls-Royce, United Kingdom</i>

COMPDYN 2021

Minisymposia (in Athens Time Zone)

MS 1: INFLUENCE OF INFILL MASONRY WALLS IN THE RESPONSE AND SAFETY OF BUILDINGS

MS Organizers: Humberto Varum, Hugo Rodrigues, Enrico Spacone

MS 1 - I: Monday, 16:00-18:00, Zoom Room 1

MS 1 - II: Monday, 18:50-20:50, Zoom Room 1

MS 2: REPAIR AND RETROFIT OF STRUCTURES

MS Organizers: Ciro Del Vecchio, Marco Di Ludovico, Alper Ilki

MS 2: Monday, 13:40-15:40, Zoom Room 2

MS 3: RECENT ADVANCES AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING

MS Organizers: Castorina Silva Vieira, Yiannis Tsompanakis

MS 3: Monday, 13:40-15:40, Zoom Room 4

MS 4: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

MS Organizers: Francesco Clementi, Nicola Cavalagli, Antonio Formisano, Gabriele Milani, Vagelis Plevris

MS 4 - I: Tuesday, 13:25-15:25, Zoom Room 1

MS 4 - II: Tuesday, 15:45-17:45, Zoom Room 1

MS 4 - III: Tuesday, 19:15-21:15, Zoom Room 1

MS 4 - IV: Wednesday 12:00-14:00 Zoom Room 1

MS 4 - V: Wednesday 14:05-15:35 Zoom Room 1

Round Table: Wednesday, 15:35-16:05, Zoom Room 1

MS 6: ADVANCES ON SEISMIC ASSESSMENT AND LOCAL COLLAPSE MECHANISMS OF RIGID BLOCKS IN STRUCTURES AND INFRASTRUCTURES

MS Organizers: Claudia Casapulla, Linda Giresini, Francesca Taddei, Ehsan Noroozinejad

MS 6 - I: Tuesday, 13:25-15:25, Zoom Room 3

MS 6 - II: Tuesday, 15:45-17:45, Zoom Room 3

MS 7: NEW ADVANCES IN COMPUTATIONAL MODELLING AND EXPERIMENTAL TESTING OF INFILLED FRAMES (2ND EDITION)

MS Organizers: Fabio Di Trapani, Liborio Cavaleri, Guido Camata, P. Benson Shing

MS 7 - I: Tuesday, 13:25-15:25, Zoom Room 6

MS 7 - II: Tuesday, 15:45-17:15, Zoom Room 6

Round Table: Tuesday, 17:15-17:45, Zoom Room 6

MS 8: A MATTER OF SCALE: FROM REAL-TIME MONITORING TO AREA-WIDE SEISMIC RISK ASSESSMENT

MS Organizer: Konstantinos G. Megalooikonomou

MS 8: Wednesday, 18:30-20:30, Zoom Room 7

MS 9: NONLINEAR MODELLING AND ASSESSMENT OF EXISTING REINFORCED CONCRETE ELEMENTS

MS Organizers: Mariano Di Domenico, Paolo Ricci, Gerardo M. Verderame

MS 9: Wednesday, 18:30-20:30, Zoom Room 9

MS 10: VULNERABILITY OF MUSEUM'S COLLECTIONS DYNAMIC RESPONSE, SAFETY ASSESSMENT AND DIGITAL INNOVATIONS

MS Organizers: Stefania Viti, Marco Tanganelli, Stefano Galassi

MS 10: Tuesday, 13:25-14:40, Zoom Room 2

Round Table: Tuesday, 14:40-15:10, Zoom Room 2

MS 11: RECENT FINDINGS AND OPEN ISSUES IN SEISMIC PERFORMANCE ASSESSMENT OF AS-BUILT AND RETROFITTED EXISTING RC BUILDINGS

MS Organizers: Maria Teresa De Risi, Carlo Del Gaudio, André Furtado, Gerardo M. Verderame, Humberto Varum

MS 11: Monday, 13:40-15:40, Zoom Room 8

MS 12: ADVANCES IN COMPUTATIONAL MODELLING, EXPERIMENTAL TESTING AND OPTIMIZATION OF SEISMIC RETROFITTING

MS Organizers: Liborio Cavaleri, Marco Filippo Ferrotto, Fabio Di Trapani, Giuseppe Carlo Marano

MS 12: Monday, 13:40-15:40, Zoom Room 1

MS 13: MODELLING AND SOLUTION STRATEGIES FOR DYNAMIC PROBLEMS

MS Organizers: Aram Soroushian, Kumar Tamma

MS 13: Monday, 13:40-15:10, Zoom Room 10

Round Table: Monday, 15:10-15:40, Zoom Room 10

MS 14: SEISMIC ASSESSMENT AND RETROFITTING OF EXISTING STEEL STRUCTURES

MS Organizers: Luigi Di Sarno, Fabio Freddi, Mario D'Aniello

MS 14: Wednesday, 14:05-15:20, Zoom Room 5

Round Table: Wednesday, 15:20-15:50, Zoom Room 5

MS 16: DYNAMIC RESPONSE ASSESSMENT IN RAIL TRACK ENGINEERING

MS Organizers: Lukas Moschen, Grigorios Tsinidis, Christoph Adam, Anastasios Sextos

MS 16: Tuesday, 19:15-21:15, Zoom Room 4

MS 17: RECENT DEVELOPMENTS IN ROCKING STRUCTURES

MS Organizers: Matt DeJong, Michalis Vassiliou

MS 17 - I: Tuesday, 15:45-17:45, Zoom Room 3

MS 17 - II: Tuesday, 19:15-21:15, Zoom Room 3

MS 19: ADVANCES IN THE OPTIMUM DESIGN AND CONTROL OF LARGE STRUCTURES UNDER DYNAMIC LOADS

MS Organizers: Fabrizio Mollaioli, Giulia Angelucci, Bruno Briseghella, Giuseppe Carlo Marano, Giuseppe Quaranta

MS 19: Wednesday, 12:00-14:00, Zoom Room 9

Round Table: Wednesday, 14:05-14:35, Zoom Room 9

MS 20: COMPUTATIONAL DESIGN AND MODELING OF TENSEGRITY SYSTEMS FOR APPLICATIONS IN SCIENCE AND ENGINEERING

MS Organizers: Fernando Fraternali, Ada Amendola

MS 20: Monday, 16:00-18:00, Zoom Room 1

MS 22: CONDITION BASED MAINTENANCE AND POST-PROGNOSTICS OF COMPOSITE STRUCTURES: AN ENHANCED PLATFORM

MS Organizers: Dimitrios Chronopoulos, Savvas Triantafyllou, Juan Chiachío Ruano, Manuel Chiachío Ruano

MS 22: Wednesday, 12:00-14:00, Zoom Room 8

MS 23: ADVANCED MODELS AND NUMERICAL METHODS IN DYNAMICS, WAVE PROPAGATION AND COUPLED PROBLEMS

MS Organizers: José A. González, Radek Kolman, Anton Tkachuk, Jiří Náprstek, K. C. Park

MS 23: Wednesday, 14:05-16:05, Zoom Room 6

MS 24: LIFE-CYCLE RISK-BASED STRUCTURAL ASSESSMENT AND COST ANALYSIS

MS Organizers: Ilaria Venanzi, Filippo Ubertini, Luca Caracoglia

MS 24: Wednesday, 18:30-20:30, Zoom Room 6

MS 25: MONITORING, IDENTIFICATION AND VIBRATION CONTROL OF STRUCTURES

MS Organizers: Rui Carneiro Barros, Manuel Braz-César

MS 25 - I: Wednesday, 12:00-14:00, Zoom Room 10

MS 25 - II: Wednesday, 14:05-16:05, Zoom Room 10

MS 26: SEISMIC SAFETY ASSESSMENT OF STRUCTURES

MS Organizers: Pedro Delgado, António Arêde

MS 26: Wednesday, 18:30-20:30, Zoom Room 10

MS 27: TIMBER-BASED ELEMENTS: RECENT ADVANCEMENTS FOR NEW AND EXISTING SEISMIC-RESISTANT STRUCTURES

MS Organizers: Antonio Sandoli, Bruno Calderoni, Beatrice Faggiano

MS 27 - I: Wednesday, 12:00-14:00, Zoom Room 2

MS 27 - II: Wednesday, 14:05-16:05, Zoom Room 2

MS 29: SEISMIC PROTECTION OF NON-STRUCTURAL COMPONENTS: RECENT DEVELOPMENTS AND FUTURE CHALLENGES

MS Organizers: Luigi Di Sarno, Michalis Fragiadakis

MS 29: Monday, 13:40-14:25, Zoom Room 6

Round Table: Monday, 14:25-14:55, Zoom Room 6

MS 30: DYNAMIC PROTECTION SYSTEMS AND DEVICES: EXPERIMENTAL TESTS, MATHEMATICAL MODELING AND DESIGN METHODS

MS Organizers: Nicolò Vaiana, Daniele Losanno, Salvatore Sessa

MS 30 - I: Tuesday, 13:25-15:25, Zoom Room 8

MS 30 - II: Tuesday, 15:45-16:30, Zoom Room 8

MS 32: SIMPLIFIED METHODOLOGIES FOR PERFORMANCE AND LOSS ASSESSMENT AT BUILDING OR TERRITORIAL SCALE

MS Organizers: Maria Polese, Marco Gaetani d'Aragona

MS 32 - I: Tuesday, 13:25-15:25, Zoom Room 4

MS 32 - II: Tuesday, 15:45-17:45, Zoom Room 4

MS 33: EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

MS Organizers: George C. Manos, Konstantinos Katakalos

MS 33 - I: Monday, 16:00-18:00, Zoom Room 2

MS 33 - II: Monday, 18:50-20:50, Zoom Room 2

MS 33 - III: Tuesday, 15:45-17:45, Zoom Room 2

MS 33 - IV: Tuesday, 19:15-20:45, Zoom Room 2

Round Table: Tuesday, 20:45-21:30, Zoom Room 2

MS 34: FRAGILITY CURVES FOR EXISTING BUILDINGS: OPEN CHALLENGES IN THEIR DEFINITION AND USE FOR SEISMIC RISK ANALYSES

MS Organizers: Serena Cattari, Angelo Masi

MS 34 - I: Monday, 16:00-18:00, Zoom Room 3

MS 34 - II: Monday, 18:50-20:05, Zoom Room 3

Round Table: Monday, 20:05-20:35, Zoom Room 3

MS 35: RECENT ADVANCES IN SEISMIC ISOLATION AND SUPPLEMENTAL DAMPING SYSTEMS FOR VIBRATION CONTROL

MS Organizers: Virginio Quaglini, Eleonora Bruschi, Emanuele Gandelli, Carlo Pettoruso

MS 35: Monday, 18:50-20:50, Zoom Room 8

MS 36: METHODOLOGIES AND ADVANCED TOOLS FOR SEISMIC RISK ASSESSMENT, MANAGEMENT, AND MITIGATION: ADVANCES AND OPEN CHALLENGES

MS Organizers: Marco Vona, Donatello Cardone, Amedeo Flora, Chiara Iacovino

MS 36: Tuesday, 15:45-17:45, Zoom Room 4

MS 37: RISK ASSESSMENT OF BRIDGES AND ROAD NETWORKS SUBJECTED TO NATURAL HAZARDS

MS Organizers: Michele Morici, Fabrizio Scozzese, Lucia Minnucci

MS 37 - I: Wednesday, 12:00-14:00, Zoom Room 3

MS 37 - II: Wednesday, 14:05-16:05, Zoom Room 3

MS 38: DYNAMIC SOIL-FOUNDATION-STRUCTURE INTERACTION: DEVELOPMENTS AND EMERGING ISSUES

MS Organizers: Emmanouil Rovithis, Raffaele Di Laora, Maria Iovino

MS 38 - I: Tuesday, 15:45-17:45, Zoom Room 8

MS 38 - II: Tuesday, 19:15-21:00, Zoom Room 8

Round Table: Tuesday, 21:00-21:30, Zoom Room 8

MS 39: THE CONTRIBUTION OF DYNAMIC TESTS AND STRUCTURAL MONITORING ON THE SEISMIC RISK ASSESSMENT AND MITIGATION

MS Organizers: Davide Arezzo, Sandro Carbonari, Vanni Nicoletti

MS 39: Tuesday, 19:15-21:15, Zoom Room 6

MS 40: ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN DESIGN AND ASSESSMENT OF STRUCTURES

MS Organizers: George Markou, Nikolaos P. Bakas

MS 40 - I: Wednesday, 12:00-14:00, Zoom Room 8

MS 40 - II: Wednesday, 14:05-15:05, Zoom Room 8

Round Table: Wednesday, 15:05-15:35, Zoom Room 5

MS 41: SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES

MS Organizers: Enrico Tubaldi, Laura Ragni, Dario De Domenico, Hamid Ahmadi

MS 41 - I: Tuesday, 19:15-21:15, Zoom Room 4

MS 41 - II: Wednesday, 12:00-14:00, Zoom Room 4

MS 41 - III: Wednesday, 14:05-15:35, Zoom Room 4

Round Table: Wednesday, 15:35-16:05, Zoom Room 4

MS 42: ADVANCES IN MODEL REDUCTION TECHNIQUES OF COMPUTATIONAL AND STRUCTURAL DYNAMICS

MS Organizers: Jin-Gyun Kim, K. C. Park, Roger Ohayon

MS 42: Monday, 13:40-15:40, Zoom Room 3

MS 43: ANALYSES AND DESIGN OF STEEL JOINTS UNDER CYCLIC ACTION

MS Organizers: Roberto Tartaglia, Mario D'Aniello, Gian Andera Rassati, James Swanson

MS 43: Wednesday, 12:00-14:00, Zoom Room 6

Thematic Sessions (in Athens Time Zone)

TS 5: DYNAMICS OF CONCRETE AND MASONRY STRUCTURES

TS 5: Monday, 18:50-20:50, Zoom Room 1

TS 14: NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS

TS 14: Wednesday, 18:30-20:30, Zoom Room 3

TS 15: OPTIMUM DESIGN AND CONTROL IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING

TS 15: Wednesday, 18:30-20:30, Zoom Room 4

TS 17: PERFORMANCE-BASED EARTHQUAKE ENGINEERING

TS 17 - I: Monday, 16:00-18:00, Zoom Room 6

TS 17 - II: Monday, 18:50-20:50, Zoom Room 6

TS 19: REPAIR AND RETROFIT OF STRUCTURES

TS 19: Wednesday, 18:30-20:30, Zoom Room 1

TS 20: SEISMIC ISOLATION

TS 20: Monday, 16:00-18:00, Zoom Room 4

TS 21: SEISMIC RISK AND RELIABILITY ANALYSIS

TS 21 - I: Monday, 13:40-15:40, Zoom Room 4

TS 21 - II: Monday, 16:00-18:00, Zoom Room 4

TS 28: STOCHASTIC DYNAMICS

TS 28: Tuesday, 19:15-21:15, Zoom Room 7

TS 31: NUMERICAL SIMULATION OF GEOTECHNICAL PROBLEMS

TS 31 - I: Wednesday, 14:05-16:05, Zoom Room 7

TS 31 - II: Wednesday, 18:30-20:30, Zoom Room 7

TS 32: DYNAMICS OF STEEL AND SLENDER STRUCTURES

TS 32: Monday, 16:00-18:00, Zoom Room 8

TS 33: AEROELASTICITY, SOUND AND VIBRATION AND BRIDGE DYNAMICS

TS 33: Wednesday, 18:30-20:30, Zoom Room 5

TS 34: NONLINEAR AND IMPACT DYNAMICS

TS 34: Wednesday, 18:30-20:30, Zoom Room 2

UNCECOMP 2021

Minisymposia (in Athens Time Zone)

MS 1: UNCERTAINTY QUANTIFICATION IN VIBRATION BASED MONITORING AND STRUCTURAL DYNAMICS SIMULATIONS

MS Organizers: Eleni Chatzi, Manolis Chatzis, Vasilis Dertimanis, Geert Lombaert, Costas Papadimitriou

MS 1 - I: Monday, 18:50-20:50, Zoom Room 10

MS 1 - II: Tuesday, 13:25-13:55, Zoom Room 10

Round Table: Tuesday, 13:55-14:25, Zoom Room 10

MS 2: UNCERTAINTY QUANTIFICATION UNDER LIMITED DATA

MS Organizers: Michael Hanss, David Moens, Matthias Faes, Edoardo Patelli, Alba Sofi

MS 2 - I: Monday, 16:00-18:00, Zoom Room 9

MS 2 - II: Monday, 18:50-20:50, Zoom Room 9

MS 3: NON-DETERMINISTIC COMPUTATIONAL HOMOGENIZATION OF HETEROGENEOUS MATERIALS

MS Organizers: Paul Steinmann, Dmytro Pivovarov

MS 3: Monday, 16:00-18:00, Zoom Room 7

MS 4: ADVANCES IN DATA-DRIVEN MODELING AND APPLICATIONS

MS Organizers: Ivi Tsantili, Evangelia Kalligiannaki, Dionissios Hristopoulos

MS 4: Wednesday, 12:00-14:00, Zoom Room 5

MS 6: MACHINE LEARNING AND UNCERTAINTY QUANTIFICATION IN BIOLOGICAL SYSTEMS

MS Organizers: Paris Perdikaris, Andrea Manzoni, Luca Dede

MS 6: Tuesday, 15:45-17:45, Zoom Room 10

Round Table: Tuesday, 19:15-19:45, Zoom Room 10

MS 7: UNCERTAINTY QUANTIFICATION AND MACHINE LEARNING FOR MODELING AND OPTIMIZATION

MS Organizers: Miguel Bessa, Alberto Figueroa Alvarez, Krishna Garikipati, Roger Ghanem, Christian Soize, James Stewart

MS 7: Monday, 16:00-18:00, Zoom Room 10

MS 8: DATA-DRIVEN UNCERTAINTY QUANTIFICATION AND DATA ASSIMILATION USING MANIFOLD LEARNING WITH SPARSE AND LOW-RANK REPRESENTATIONS

MS Organizers: Dimitrios G. Giovanis, Alexander Litvinenko, Bojana Rosic

MS 8: Monday, 13:40-15:40, Zoom Room 7

MS 10: SURROGATE MODELS FOR UNCERTAINTY QUANTIFICATION, RELIABILITY AND SENSITIVITY ANALYSIS

MS Organizers: Bruno Sudret, Jean-Marc Bourinet, Sankaran Mahadevan, Alexandros Taflanidis

MS 10 - I: Tuesday, 13:25-15:25, Zoom Room 9

MS 10 - II: Tuesday, 15:45-17:45, Zoom Room 9

MS 10 - III: Tuesday, 19:15-21:15, Zoom Room 9

MS 11: SENSORS PLACEMENT UNDER UNCERTAIN INFORMATION

MS Organizers: Eliz-Mari Lourens, Alice Cicirello

MS 11: Wednesday, 18:30-20:30, Zoom Room 8

MS 12: SOFTWARE FOR UNCERTAINTY QUANTIFICATION AND METHODS FOR IMPROVING THE EFFICIENCY OF MONTE CARLO SIMULATION

MS Organizers: Stefano Marelli, Edoardo Patelli, Dirk Pflüger

MS 12: Wednesday, 12:00-14:00, Zoom Room 7

MS 13: MULTISCALE ANALYSIS AND DESIGN OF RANDOM HETEROGENEOUS MEDIA

MS Organizers: George Stefanou, Dimitrios Savvas, Marco Pingaro, Patrizia Trovalusci

MS 13 - I: Monday, 16:00-18:00, Zoom Room 7

MS 13 - II: Monday, 18:50-19:50, Zoom Room 7

Round Table: Monday, 19:50-20:20, Zoom Room 7

MS 14: CHALLENGES IN MODELLING FOR STRUCTURAL DESIGN IN THE PRESENCE OF POLYMORPHIC UNCERTAINTY

MS Organizers: Michael Kaliske, Wolfgang Graf, Stefanie Reese, Sigrid Leyendecker

MS 14: Monday, 13:40-15:40, Zoom Room 9

MS 15: BAYESIAN INFERENCE AND MACHINE LEARNING FOR CHALLENGING ENGINEERING APPLICATIONS

MS Organizers: George Arampatzis, Ioannis Kalogeris, Petros Koumoutsakos, Vissarion Papadopoulos

MS 15: Wednesday, 18:30-20:30, Zoom Room 8

Thematic Sessions (in Athens Time Zone)

TS 21: UNCERTAINTY QUANTIFICATION, SYSTEM RELIABILITY ANALYSIS AND RISK ASSESSMENT

TS 21 - I: Tuesday, 13:25-15:25, Zoom Room 7

TS 21 - II: Tuesday, 15:45-17:45, Zoom Room 7

TS 21 - III: Tuesday, 19:15-21:15, Zoom Room 7

EUROGEN 2021

Minisymposia (in Athens Time Zone)

MS 2: OPTIMIZATION IN STRUCTURAL ENGINEERING AND CONTROL

MS Organizers: Sinan Melih Nigdeli, Gebrail Bekdaş

MS 2: Monday, 18:50-20:50, Zoom Room 5

MS 4: ADJOINT METHODS FOR MULTI-PHYSICS, INCLUDING APPLICATIONS

MS Organizers: Michaël Meheut, Kyriakos Giannakoglou

MS 4: Tuesday, 13:25-14:55, Zoom Room 5

Round Table: Tuesday, 14:55-15:25, Zoom Room 5

MS 6: SOFT COMPUTING METHODS AND APPLICATIONS IN CIVIL AND STRUCTURAL ENGINEERING

MS Organizers: Vagelis Plevris, German Solorzano, Afaq Ahmad, Mohamed El Amine Ben Seghier

MS 6: Tuesday, 15:45-17:45, Zoom Room 5

MS 7: OPTIMIZATION AND CONTROL INNOVATIVE DIGITALIZED METHODS FOR SOLVING NEW DESIGN CHALLENGES TOWARDS A NEUTRAL CLIMATE AVIATION

MS Organizers: Jacques Periaux, Gabriel Bugada

MS 7: Monday, 13:40-15:40, Zoom Room 5

Thematic Sessions (in Athens Time Zone)

TS 2: AERONAUTICAL AEROSPACE AND SPACE ENGINEERING

TS 2: Tuesday, 15:45-17:45, Zoom Room 5

TS 21: MULTIDISCIPLINARY, MULTIPHYSICS, MULTI-OBJECTIVES AND MULTI-CRITERIA OPTIMIZATION METHODS

TS 21: Monday, 16:00-18:00, Zoom Room 5

TS 32: OPTIMIZATION UNDER UNCERTAINTY-HYBRID METHODS, METAHEURISTICS AND EVOLUTIONARY ALGORITHMS, MACHINE LEARNING

TS 32: Tuesday, 19:15-21:15, Zoom Room 5

TS 33: ADJOINT BASED AND ONE-SHOT METHODS

TS 33: Monday, 18:50-20:50, Zoom Room 4

TS 34: MATERIAL AND NON-LOCAL OPTIMIZATION PROBLEMS

TS 34: Monday, 18:50-20:50, Zoom Room 4

Monday, June 28
12:00-12:15

Zoom Room 1

**OPENING
GREETINGS**

Manolis Papadrakakis, Co-Chair: COMPDYN, UNCECOMP, EUROGEN 2021

PLENARY LECTURES

Monday, June 28
12:15-13:35

Zoom Room 1

COMPDYN-UNCECOMP

Chair: Michalis Fragiadakis

C 19568 SIMULATIONS OF FLOW-INDUCED VIBRATION AND FATIGUE DAMAGE OF LARGE SCALE OFFSHORE WIND TURBINE USING THE SUPERCOMPUTER FUGAKU
Shinobu Yoshimura, Shunhua Chen, Tomonori Yamada, Yasunori Yusa, Akiyoshi Iida, Chisachi Kato, Yoshinobu Yamade

C 20769 THE ROLE OF MICROSTRUCTURE UNCERTAINTY ON BROADBAND HOMOGENEOUS PROPERTIES OF LATTICE MATERIALS
Sondipon Adhikari

Monday, June 28
12:15-13:35

Zoom Room 2

EUROGEN

Chair: Jacques Periaux

E 18371 MULTI-MATERIAL AND MULTI-COMPONENT TOPOLOGY OPTIMIZATION
Zhan Kang, Pai Liu, Yaguang Wang

E 18500 AERODYNAMICS SHAPE OPTIMIZATION: NEW TRENDS AT DASSAULT AVIATION
Gilbert Rogé, S. Kleinveld, S. Julisson, L. Martin

13:35-13:40

Break

TECHNICAL SESSIONS

Monday, June 28 13:40-15:40		Zoom Room 1
COMPDYN MS 12: ADVANCES IN COMPUTATIONAL MODELLING, EXPERIMENTAL TESTING AND OPTIMIZATION OF SEISMIC RETROFITTING <i>MS Organizers:</i> Liborio Cavaleri, Marco Filippo Ferrotto, Fabio Di Trapani, Giuseppe Carlo Marano <i>Chair:</i> Giuseppe Carlo Marano, Marco Filippo Ferrotto		
C 20713	LARGE-SCALE TESTING FOR ENHANCING THE SEISMIC RESILIENCE OF SCHOOL INFRASTRUCTURE IN DEVELOPING COUNTRIES: CHALLENGES, ANALOGIES AND LESSONS LEARNT <i>Anastasios Sextos, N. Alexander, Anastasios Tsiavos, M. Kashani, A. Stavridis</i>	
C 19535	EXPECTED ANNUAL LOSS ORIENTED SEISMIC RETROFITTING OPTIMIZATION OF RC FRAME STRUCTURES USING A NEW AI-BASED FRAMEWORK <i>Fabio Di Trapani, Antonio Pio Sberna, Giuseppe Carlo Marano</i>	
C 19069	GENETIC OPTIMIZATION FOR THE DESIGN OF SEISMIC RETROFITTING OF PLANE RC FRAMES WITH BUCKLING RESTRAINED BRACES (BRBS) <i>Giovanni Minafò, Gaetano Camarda</i>	
C 19548	THE ROLE OF THE SUSTAINED LOADS ON THE BEARING CAPACITY OF REINFORCED CONCRETE COLUMNS RETROFITTED BY STEEL JACKETS <i>Marco Filippo Ferrotto, Bharat Pradhan, Liborio Cavaleri</i>	
C 18997	EXPERIMENTAL STUDY ON THE IN-PLANE RESPONSE OF ADOBE MASONRY WALLS STRENGTHENED WITH TEXTILE REINFORCED MATRIX SYSTEMS <i>Paolino Cassese, Luigi Fenu, Domenico Asprone, Antonio Occhiuzzi, Fulvio Parisi</i>	
C 19417	INFLUENCE OF THE EFFECTIVENESS FACTORS IN ASSESSING THE SHEAR CAPACITY OF RC BEAMS STRENGTHENED WITH FRP <i>Piero Colajanni, Salvatore Pagnotta</i>	
C 19534	OPTIMIZATION OF STEEL-JACKETING RETROFITTING OF SHEAR-CRITICAL AND DUCTILITYCRITICAL RC FRAME STRUCTURES BY A NOVEL GENETIC ALGORITHM FRAMEWORK <i>Antonio Pio Sberna, Fabio Di Trapani, Giuseppe Carlo Marano</i>	
C 19370	NUMERICAL INVESTIGATION OF THE LOCALIZED FAILURE OF CFRP RETROFITTED REINFORCED CONCRETE JOINTS WITH EMBEDDED ANCHORS <i>Francesco Riccardi, Cédric Giry, Fabrice Gatuingt</i>	

Monday, June 28
13:40-15:40

Zoom Room 2

COMPDYN MS 2: REPAIR AND RETROFIT OF STRUCTURES

MS Organizers: Ciro Del Vecchio, Marco Di Ludovico, Alper Ilki

Chair: Ciro Del Vecchio

-
- C 18992** EXPERIMENTAL RESPONSE AND NUMERICAL MODELLING OF TWO-STOREY INFILLED RC FRAME
Ciro Del Vecchio, C. Moliterno, Marco Di Ludovico, Gerardo Mario Verderame, Andrea Prota, Gaetano Manfredi
- C 19619** APPLICATION OF C-FRP SHEETS FOR STRUCTURAL REPAIRING OF RC BEAM-COLUMN CONNECTIONS DAMAGED UNDER CYCLIC LOADING – EXPERIMENTAL STUDY
Emmanouil Golia, Stavroula Katsimene, Eirini Ziavra, Konstantinos Kirtsonis, Constantin E. Chalioris, Chris C. Karayannis
- C 18768** DAMAGE EVOLUTION FOR REPAIRABILITY OF SUBSTANDARD BEAM-COLUMN JOINTS
Özgür Yurdakul, Ciro Del Vecchio, Marco Di Ludovico, Ladislav Řoutil, Özgür Avşar
- C 19260** DEFENCE OF ARCHITECTURAL HERITAGE: EXPERIMENTAL CAMPAIGN ON MASONRIES REINFORCED WITH NATURAL FRM COMPOSITE MATERIALS
Riccardo Liberotti, Nicola Cavalagli, Federico Cluni, Massimiliano Gioffrè, Chiara Pepi, Vittorio Gusella
- C 19388** PERFORMANCE OF EXISTING REINFORCED CONCRETE ARCH BRIDGES UNDER CURRENT NON SEISMIC LOADS
Giovanni Crisci, Francesca Ceroni, Gian Piero Lignola, Andrea Prota
- C 19390** EXPERIMENTAL AND NUMERICAL INVESTIGATION OF SRG BOND BEHAVIOUR VIA PULL-OUT TESTS
Francesca Roscini, Maurizio Guadagnini
- C 18708** SEISMIC BEHAVIOR OF SUBSTANDARD EXTENDED RECTANGULAR RC COLUMNS JACKETED WITH SPRAYED GFRM
Muhsin Can Lülec, Bilal Sari, Ugur Demir, Muhammed Marasli, Alper Ilki
- C 19269** NUMERICAL MODELLING AND ANALYSIS OF ECCENTRIC BRACING WITH VERTICAL SHEAR LINKS
Gaetano Cantisani, Emilio Rodontini, Gaetano Della Corte
- C 19389** A SUSTAINABLE SOLUTION FOR THE SEISMIC STRENGTHENING OF RC EXISTING BUILDINGS THROUGH THE HPDF SYSTEM (HPDF): A CASE STUDY
Giuseppe Ventura, Vincenzo Manfredi, Angelo Masi, Giuseppe Santarsiero, Andrea Digrisolo

Monday, June 28
13:40-15:40

Zoom Room 3

COMPDYN MS 42: ADVANCES IN MODEL REDUCTION TECHNIQUES OF COMPUTATIONAL AND STRUCTURAL DYNAMICS

MS Organizers: Jin-Gyun Kim, K.C. Park, Roger Ohayon

Chair: Jin-Gyun Kim

-
- C 18766** MULTIPHYSICS MODE SYNTHESIS OF VIBRO-ACOUSTIC INTERACTION WITH TWO-STEP STRONGLY COUPLED REDUCTION
Jin-Gyun Kim, Soo Min Kim, Soo-Won Chae, K.C. Park
- C 19512** DYNAMIC REANALYSIS METHOD USING DEGREE OF FREEDOM-BASED MODEL ORDER REDUCTION
Seongmin Chang, Maenghyo Cho
- C 19429** SPENT NUCLEAR FUEL CANISTER VIBRATION ANALYSIS IN PRESENCE OF UNCERTAINTY AND HIGH MODAL DENSITY
Olivier Ezvan, Xiaoshu Zeng, Roger Ghanem, Bora Gencturk
- C 18758** ON THE APPLICATION OF GENERALISED SCHUR COMPLEMENTS TO SUBSYSTEM-LEVEL VARIABILITY QUANTIFICATION
Vladimir Yotov
- C 18591** A NEW PARALLEL ALGORITHM FOR THE OPTIMUM EMBEDDED REBAR MESH GENERATION FOR LARGE-SCALE REINFORCED CONCRETE STRUCTURES
Dewald Gravett, George Markou
- C 18743** A STUDY OF DNN-BASED METAMODELING TECHNIQUE FOR THE REAL-TIME FLEXIBLE MULTIBODY DYNAMICS SIMULATIONS
Seongji Han, Hee-Sun Choi, Juhwan Choi, Jin Hwan Choi, Jin-Gyun Kim
- C 18755** TOWARD REAL-TIME VIRTUAL SENSING OF STRUCTURAL VIBRATION WITH LIMITED PHYSICAL SENSORS
Seungin Oh, Jin-Gyun Kim
- C 19028** REDUCED ORDER MODELING FOR SYSTEMS WITH COMPONENT NONLINEARITIES
Konstantinos Vlachas, Konstantinos Tatsis, Adam R. Brink, Dane Quinn, Eleni Chatzi

Monday, June 28
13:40-15:40

Zoom Room 4

COMPDYN MS 3: RECENT ADVANCES AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING

MS Organizers: Castorina Silva Vieira, Yiannis Tsompanakis

Chair: Yiannis Tsompanakis

C 19194 PIPELINES DISTRESS DUE TO SECONDARY FAULTING

Dionysios Chatzidakis, Yiannis Tsompanakis, Prodromos N. Psarropoulos

C 18971 SEISMIC VULNERABILITY OF SHALLOW UNDERGROUND CAVITIES IN SOFT ROCK

Stefania Fabozzi, Filomena De Silva, Marco Nocentini, Edoardo Peronace, Emilio Bilotta, Massimiliano Moscatelli

C 19074 EFFICIENCY OF SEISMIC LIQUEFACTION MITIGATION METHODS FOR EXISTING STRUCTURES

Alexandros Valsamis, Taxiarchoula Limnaiou, Achilleas Papadimitriou

C 19393 PREDICTING RAILWAY TRACK DISPLACEMENTS WITH THE HARDENING SOIL SMALL STRAIN MODEL NEAR CRITICAL SPEED

Jesús Fernández-Ruiz, Pedro Alves Costa

COMPDYN TS 21 - I: SEISMIC RISK AND RELIABILITY ANALYSIS

Chair: Yiannis Tsompanakis

C 18583 THE EFFECT OF SOIL-STRUCTURE INTERACTION AND LIQUEFACTION ON THE SEISMIC VULNERABILITY OF TYPICAL PORT STEEL LIGHT-FRAME WAREHOUSES

Stella Karafagka, Stavroula Fotopoulou, Anna Karatzetzou, Giorgos Malliotakis, Dimitrios Pitilakis

C 18968 VULNERABILITY ASSESSMENT OF MASONRY BUILDINGS: BREAKING THE CURSE OF STRUCTURAL TYPOLOGIES

Panagiotis Martakis, Yves Reuland, Eleni Chatzi

C 18980 COMPARATIVE ASSESSMENT OF EMPIRICAL AND MECHANICAL APPROACHES FOR THE ESTIMATION OF THE SEISMIC FRAGILITY OF ORDINARY MASONRY BUILDINGS TYPE IN THE INNER CENTRAL ITALY

Ilaria Capanna, Franco Di Fabio, Massimo Fragiocomo

C 19223 EVALUATION OF SEISMIC RESILIENCE OF RC-BUILDINGS SUBJECTED TO REPEATED EARTHQUAKE USING RESILIENT INDEX AND FRAGILITY SURFACE FUNCTIONS

Moustafa Moufid Kassem, Fadzli Mohamed Nazri, Ahmad Mohamad El-Maissi

Monday, June 28
13:40-15:40

Zoom Room 5

EUROGEN MS 7: OPTIMIZATION AND CONTROL INNOVATIVE DIGITALIZED METHODS FOR SOLVING NEW DESIGN CHALLENGES TOWARDS A NEUTRAL CLIMATE AVIATION

MS Organizers: Jacques Periaux, Gabriel Bugada

Chair: Jacques Periaux, Gabriel Bugada

E 18437 OPTIMUM STRUCTURE DESIGN OF AIRCRAFT WINGS USING CARBON FIBER REINFORCED PLASTICS (CFRPS)

Yoshiaki Abe, Shugo Date, Keiichi Shirasu, Hikaru Takami, Tomonaga Okabe, Shigeru Obayashi

E 18508 ON EFFECTIVE MANY-OBJECTIVE OPTIMISATION IN MULTIDISCIPLINARY OPTIMISATION

Boris Naujoks

E 18502 ONE-SHOT, ADJOINT-BASED DESIGN OPTIMISATION OF AN INTERNAL COOLING CHANNEL U-BEND FOR MINIMISED PRESSURE LOSSES

Luca Zampini, Tom Verstraete, Lasse Müller, Tom De Bruyn

E 18506 3-D NATURAL LAMINAR FLOW UAV WING DESIGN OPTIMIZATION AT SUBSONIC REGIMES USING GENETIC ALGORITHMS AND A VARIABLE FIDELITY HIERARCHICAL METHOD

Yongbin Chen, Zhili Tang, Jacques Périaux

Monday, June 28
13:40-14:25

Zoom Room 6

COMPDYN MS 29: SEISMIC PROTECTION OF NON-STRUCTURAL COMPONENTS: RECENT DEVELOPMENTS AND FUTURE CHALLENGES

MS Organizers: Luigi Di Sarno, Michalis Fragiadakis

Chair: Michalis Fragiadakis

C 20536 SEISMIC RISK ASSESSMENT OF ROCKING BUILDING CONTENTS
Michalis Fragiadakis, Spyridon Diamantopoulos

C 18655 IMPROVEMENT OF DYNAMIC AND SEISMIC BEHAVIOUR OF CABINETS THROUGH CONTROLLED DEFORMATION
Stefano Pagliaro, Angelo Di Egidio, Alessandro Contento

C 19008 NUMERICAL MODELING OF ROCKING AND SLIDING CYLINDRICAL COLUMNS UNDER SEISMIC EXCITATION
Antonios Katsamakas, Michalis Vassiliou

Monday, June 28
14:25-14:55

Zoom Room 6

ROUND TABLE

COMPDYN MS 29: SEISMIC PROTECTION OF NON-STRUCTURAL COMPONENTS: RECENT DEVELOPMENTS AND FUTURE CHALLENGES

Moderator: Luigi Di Sarno

Panel: Roberto Nascimbene, Daniele Perrone, Michalis Fragiadakis

Agenda:

- Industrial Non-structural components: experience from past earthquakes and new trends
- Design and qualification of non-structural elements
- Behaviour of freestanding non-structural elements

Monday, June 28
13:40-15:40

Zoom Room 7

UNCECOMP MS 8: DATA-DRIVEN UNCERTAINTY QUANTIFICATION AND DATA ASSIMILATION USING MANIFOLD LEARNING WITH SPARSE AND LOW-RANK REPRESENTATIONS

MS Organizers: Dimitrios G. Giovanis, Alexander Litvinenko, Bojana Rosic

Chair: Alexander Litvinenko

U 19161 IDENTIFICATION OF UNKNOWN PARAMETERS AND PREDICTION WITH HIERARCHICAL MATRICES
Alexander Litvinenko, Ronald Kriemann, Vladimir Berikov

U 19147 ADAPTIVE CONSTRUCTION OF REDUCED-ORDER MODELS FOR TIME-DEPENDENT PROBLEMS
Serge Prudhomme

U 19133 SENSITIVITY OF UNCERTAINTY QUANTIFICATION AND BAYESIAN INVERSION
Oliver Ernst, Alois Pichler, Bjoern Sprungk

U 18892 STOCHASTIC MULTI-SCALE MATERIAL MODELING VIA MANIFOLD LEARNING
Katiana Kontolati, Darius Alix-Williams, Michael L. Falk, Chris H. Rycroft, Michael D. Shields

U 19083 A-OPTIMALITY BAYESIAN EXPERIMENTAL DESIGN VIA CONDITIONAL EXPECTATION
Truong Vinh Hoang, Sebastian Krumscheid, Raul Tempone

U 19118 DYNAMICAL LOW RANK APPROXIMATION FOR HIGH-DIMENSIONAL DATA ASSIMILATION
Yoshihito Kazashi, Kody Law, Fabio Nobile, Eva Vidlickova

Monday, June 28
13:40-15:40

Zoom Room 8

COMPDYN MS 11: RECENT FINDINGS AND OPEN ISSUES IN SEISMIC PERFORMANCE ASSESSMENT OF AS-BUILT AND RETROFITTED EXISTING RC BUILDINGS

MS Organizers: Maria Teresa De Risi, Carlo Del Gaudio, André Furtado, Gerardo Mario Verderame, Humberto Varum

Chair: Maria Teresa De Risi, Carlo Del Gaudio, André Furtado

C 19372 SEISMIC PERFORMANCE ASSESSMENT OF AS-BUILT AND RETROFITTED RC BUILDINGS CONSIDERING THE INFLUENCE OF INFILLS: PRE-'70 LOW-MID RISE CASE-STUDIES
Maria Teresa De Risi, Santa Anna Scala, Carlo Del Gaudio, Gerardo Mario Verderame

C 19187 OUT-OF-PLANE TESTING OF MASONRY INFILL WALLS MADE WITH LIGHTWEIGHT CONCRETE BLOCKS
M. Agante, André Furtado, Hugo Rodrigues, António Arêde, P. Fernandes, Humberto Varum

C 19161 EXPERIMENTAL INVESTIGATION ON ANCHORAGE PERFORMANCE OF EMBEDDED SMOOTH REBARS SUBJECTED TO CYCLIC LOADING
Anthony Paderno, Simone Pelucco, Marco Preti

C 19363 SIMPLIFIED LOSS ESTIMATION IN INFILLED RC BUILDINGS: MECHANICAL METHOD AND VALIDATION
Carlo Del Gaudio, Maria Teresa De Risi, Gerardo Mario Verderame

C 19257 SELECTION OF OPTIMAL SEISMIC RETROFITTING FOR EXISTING SCHOOL BUILDINGS THROUGH MULTI-CRITERIA DECISION MAKING
Wilson Carofilis, Nicholas Clemett, Giammaria Gabbianelli, Gerard O'Reilly, Ricardo Monteiro

C 18737 EVALUATION OF A NUMERICAL MODELLING APPROACH FOR THE SIMULATION OF RETROFITTED RC ELEMENTS
Ines Sousa, Rita Couto, Rita Peres, José Miguel Castro, Rita Bento

C 19481 MAPPING PERFORMANCE-TARGETED RETROFITTING TO SEISMIC FRAGILITY REDUCTION
Karim Aljawhari, Roberto Gentile, Carmine Galasso

C 19297 NUMERICAL INVESTIGATIONS ON THE RESIDUAL CAPACITY AND ECONOMIC LOSSES OF EARTHQUAKE-DAMAGED REINFORCED CONCRETE WALL STRUCTURES
Cristiana Ceccarelli, Simona Bianchi, Livio Pedone, Stefano Pampanin

Monday, June 28
13:40-15:40

Zoom Room 9

UNCECOMP MS 14: CHALLENGES IN MODELLING FOR STRUCTURAL DESIGN IN THE PRESENCE OF POLYMORPHIC UNCERTAINTY

MS Organizers: Michael Kaliske, Wolfgang Graf, Stefanie Reese, Sigrid Leyendecker

Chair: Vissarion Papadopoulos

U 18973 OPTIMIZING THE CONCRETE COVER OF RC STRUCTURES CONSIDERING POLYMORPHIC UNCERTAINTY IN MULTIPHYSICS SIMULATIONS

Stefanie Roskosch, Steffen Freitag, Philipp Edler, Günther Meschke

U 19014 COPULA INTERDEPENDENCIES FOR FUZZY VARIABLES

F. Niklas Schietzold, Ferenc Leichsenring, Wolfgang Graf, Michael Kaliske

U 19020 CONSTRUCTION OF MODEL HIERARCHIES FOR STRUCTURAL RELIABILITY ESTIMATION USING COPULA- AND INFORMATION-BASED MEASURES

Jonas Kaupp, Carsten Proppe

U 19042 GRADIENT-ENHANCED BAYESIAN SENSITIVITY ANALYSIS IN THE FRAMEWORK OF GEOTECHNICAL FINITE ELEMENT SIMULATIONS CONSIDERING POLYMORPHIC UNCERTAINTIES

Carmen van Meegen, Carla Henning, Katja Ickstadt, Tim Ricken

U 19044 NUMERICAL MODELING OF AN EXTRUSION-BASED 3D CONCRETE PRINTING PROCESS CONSIDERING SPATIAL AND TEMPORAL CORRELATED PARAMETER VARIABILITY

Albrecht Schmidt, Meron Mengesha, Carsten Könke, Tom Lahmer

U 19019 MODEL ORDER REDUCTION METHODS AS SURROGATES IN THE CONTEXT OF UNCERTAINTY QUANTIFICATION

Steffen Kastian, Stefanie Reese

Monday, June 28
13:40-15:10

Zoom Room 10

COMPDYN MS 13: MODELLING AND SOLUTION STRATEGIES FOR DYNAMIC PROBLEMS

MS Organizers: Aram Soroushian, Kumar Tamma

Chair: Aram Soroushian

C 19609 A TECHNIQUE FOR TIME INTEGRATION WITH STEPS LARGER THAN THE EXCITATION STEPS: REVIEW OF THE PAST AND ADDRESSING THE EXISTING CHALLENGES AND A PERSPECTIVE OF THE FUTURE
Aram Soroushian

C 19285 CASE STUDY OF CONNECTIVITY OF DIGITAL TWINS AND EXPERIMENTAL SYSTEMS
Matthew Bonney, Paul Gardner, David Wagg, Robin Mills

C 19448 A NOVEL METHOD FOR THE GENERATION OF FULLY NON-STATIONARY SPECTRUM COMPATIBLE ARTIFICIAL ACCELEROGRAMS
Federica Genovese, Giuseppe Muscolino, G. Biondi, E. Cascone

C 19594 MULTI-RESOLUTION FINITE WAVELET DOMAIN METHOD FOR FAST TRANSIENT DYNAMIC ANALYSIS IN HOMOGENEOUS AND HETEROGENEOUS RODS AND BEAMS
Dimitris K. Dimitriou, Christos V. Nastos, Dimitris A. Saravanos

C 19399 AN ADAPTIVE FAST NONLINEAR ANALYSIS (AFNA) ALGORITHM FOR RAPID TIME HISTORY ANALYSIS
Bowei Li, Wei-Chu Chuang, Seymour M.J. Spence

C 19536 AN APPLICATION OF THE PROPER ORTHOGONAL DECOMPOSITION METHOD FOR NONLINEAR DYNAMIC ANALYSIS OF REINFORCED CONCRETE STRUCTURES SUBJECTED TO EARTHQUAKES
Naim Ayoub, Walid Labri, Joseph Pais, Lucie Rouleau, Jean-François Deu

Monday, June 28
15:10-15:40

Zoom Room 10

ROUND TABLE

COMPDYN MS 13: MODELLING AND SOLUTION STRATEGIES FOR DYNAMIC PROBLEMS

Topic: Efficient time history analysis against earthquake excitations

Moderators: Aram Soroushian, Kumar Tamma

Panel: J.C. Reyes, Mohsen Ghafory-Ashtiany

Agenda: Efficient modeling and analysis of structural systems subjected to earthquake excitations

15:40-16:00

Break

TECHNICAL SESSIONS

Monday, June 28 16:00-18:00		Zoom Room 1
COMPdyn MS 20:	COMPUTATIONAL DESIGN AND MODELING OF TENSEGRITY SYSTEMS FOR APPLICATIONS IN SCIENCE AND ENGINEERING	
<i>MS Organizers:</i>	Fernando Fraternali, Ada Amendola	
<i>Chair:</i>	Fernando Fraternali	
C 18826	ADAPTIVE BENDING-ACTIVE MODULES FOR A TENSILE SOLAR SHADING SYSTEM <i>Alessandro D'Ambrosio, Maria Matheou, Rosario Montuori, Elide Nastri</i>	
C 19155	GEOMETRIC PATTERNS AND DYNAMICS OF FOLDABLE MODULI FOR ADAPTIVE FAÇADES <i>Veronica Abbate, Enrico Babilio, Filipe Amarante dos Santos, Narinder Singh, Fernando Fraternali</i>	
C 19264	A DYNAMIC-STIFFNESS APPROACH FOR DAMPED LOCALLY-RESONANT TIMOSHENKO BEAMS <i>Andrea Francesco Russillo, Giuseppe Failla, Antonina Pirrotta, Fernando Fraternali</i>	
C 19232	MODELING AND DESIGN OF PERIODIC LATTICES WITH TENSEGRITY ARCHITECTURE AND HIGHLY NONLINEAR RESPONSE <i>Andrea Micheletti, Claudio Intrigila, Nicola Nodargi, Edoardo Artioli, Fernando Fraternali, Paolo Bisegna</i>	
C 19199	CONTROLLING THE DISPERSION BAND STRUCTURE VIA THE APPLICATION OF AN EXTERNAL STATE OF PRESTRESS IN INERTIALLY AMPLIFIED PHONONIC CRYSTALS <i>Marco Miniaci, Matteo Mazzotti, Ada Amendola, Narinder Singh, Fernando Fraternali</i>	
C 19347	SEISMIC METAMATERIALS WITH TENSEGRITY ARCHITECTURE <i>Filipe Santos, Narinder Singh, Ada Amendola, Fernando Fraternali, Andrea Micheletti</i>	
C 19120	A MESOSCALE TENSEGRITY MODEL OF SPIDER DRAGLINE SILK FIBER <i>Ada Amendola, Narinder Singh, Cornelia Rodenburg, Chris Holland, Fernando Fraternali</i>	
COMPdyn MS 1 - I:	INFLUENCE OF INFILL MASONRY WALLS IN THE RESPONSE AND SAFETY OF BUILDINGS	
<i>MS Organizers:</i>	Humberto Varum, Hugo Rodrigues, Enrico Spacone	
<i>Chair:</i>	Fernando Fraternali	
C 19354	SEISMIC LOSS ANALYSIS OF A CODE-DESIGNED INFILLED RC BUILDING ACCOUNTING FOR INFILL MODEL CLASS UNCERTAINTY <i>Fabio Romano, Mohammad S. Alam, Maria Zucconi, Marco Faggella, Andre R. Barbosa, Barbara Ferracuti</i>	
C 18662	IMPACT OF MASONRY INFILL VARIABILITY ON THE ESTIMATION OF FLOOR RESPONSE SPECTRA IN RC BUILDINGS <i>Gianrocco Mucedero, Daniele Perrone, Emanuele Brunesi, Ricardo Monteiro</i>	

Monday, June 28
16:00-18:00

Zoom Room 2

COMPDYN MS 33 - I: EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

MS Organizers: George C. Manos, Konstantinos Katakalos

Chair: George C. Manos, Konstantinos Katakalos

To the memory of Professor Ioannis Tegos

C 19498 EXPERIMENTAL & NUMERICAL INVESTIGATION OF LAP-SPLICED R/C COLUMNS UNDER THREE POINT BENDING & AXIAL COMPRESSION

Pelagia Kastiza, Lazaros Melidis, Konstantinos Katakalos

C 19494 EXPERIMENTAL AND NUMERICAL INVESTIGATION OF FRP STRENGTHENED R/C BEAM-TO-COLUMN JOINTS SUBJECTED TO CYCLIC SEISMIC-TYPE LOADING

*Lazaros Melidis, George C. Manos, J. Maranos, **Konstantinos Katakalos***

C 19596 NUMERICAL SIMULATIONS OF THE EXPERIMENTAL RESULTS OF STEEL FRAME MODEL WITH ROOF ROLLER SYSTEM SUBJECTED TO DYNAMIC BASE EXCITATIONS

Nikodemos Kouroufexis, Milton Demosthenous

C 18669 ANALYTICAL INVESTIGATION OF THE TENSILE EXPERIMENTS TO PRISMS WITH VARYING LONGITUDINAL RATIO FOR STUDYING THE LATERAL BUCKLING OF R/C WALLS

Theodoros Chrysanidis, Vassilis Panoskaltsis

C 18668 ANALYTICAL INVESTIGATION OF THE TENSILE EXPERIMENTS MODELING THE ELONGATION DEGREE OF R/C WALLS FOR STUDYING THE LATERAL BUCKLING PHENOMENON

Theodoros Chrysanidis, Vassilis Panoskaltsis

C 19041 EXPERIMENTAL TESTS AND NUMERICAL STUDY OF THE PLASTIC CYCLIC BEHAVIOUR OF A STEEL BEAM-TO-COLUMN CONNECTION

*George C. Manos, **Alexandra Nalmpantidou***

C 19039 EXPERIMENTAL AND NUMERICAL INVESTIGATION OF THE PLASTIC CYCLIC BEHAVIOUR OF SIMPLE STEEL COUPONS

***Alexandra Nalmpantidou**, George C. Manos*

Monday, June 28
16:00-18:00

Zoom Room 3

COMPDYN MS 34 - I: FRAGILITY CURVES FOR EXISTING BUILDINGS: OPEN CHALLENGES IN THEIR DEFINITION AND USE FOR SEISMIC RISK ANALYSES

MS Organizers: Serena Cattari, Angelo Masi

Chair: Serena Cattari

C 19294 COMPARATIVE STUDY ON TWO ANALYTICAL MECHANICAL-BASED METHODS FOR DERIVING FRAGILITY CURVES TARGETED TO MASONRY SCHOOL BUILDINGS

Serena Cattari, Sara Alfano, Daria Ottonelli, Elisa Saler, Francesca da Porto

C 18784 SEISMIC FRAGILITY ASSESSMENT FOR A CLASS OF RC SCHOOL BUILDINGS IN ITALY LEVERAGING DETAILED AND REDUCED-ORDER MODELS

Sergio Ruggieri, Giuseppina Uva

C 18805 FRAGILITY CURVES FOR RC FRAMED BUILDINGS CONSIDERING CUMULATIVE DAMAGE DUE TO EARTHQUAKE GROUND MOTION AND SLOW-MOVING LANDSLIDES

Fulvio Parisi, Elia Acconcia

C 18819 FRAGILITY CURVES FOR ITALIAN RESIDENTIAL MASONRY BUILDINGS WITH RETROFIT INTERVENTIONS

Veronica Follador, Marco Donà, Pietro Carpanese, Francesca da Porto

C 19014 FRAGILITY ASSESSMENT OF THE ITALIAN MASONRY SCHOOL BUILDING ASSET FOR RISK EVALUATION AT NATIONAL SCALE

Elisa Saler, Veronica Follador, Pietro Carpanese, Francesca da Porto

Monday, June 28
16:00-18:00

Zoom Room 4

COMPDYN TS 21 - II: SEISMIC RISK AND RELIABILITY ANALYSIS

Chair: Luigi Di Sarno

C 19490 RELIABILITY ASSESSMENT OF RC BRIDGE PIERS EXPOSED TO SPATIAL VARIABILITY OF CORROSION
*F. Pugliese, **Luigi Di Sarno**, R. De Risi*

C 19502 A SIMPLIFIED APPROACH FOR THE VULNERABILITY ASSESSMENT OF REGULAR AND IRREGULAR REINFORCED CONCRETE BUILDINGS AT THE LARGE SCALE
***Valentina Blasone**, Alberto Basaglia, Raffaele De Risi, Flavia De Luca, Enrico Spacone*

COMPDYN TS 20: SEISMIC ISOLATION

Chair: Luigi Di Sarno

C 18986 SEISMIC PERFORMANCE OF DOUBLE FRICTION PENDULUM BEARINGS UNDER HORIZONTAL AND VERTICAL EXCITATION
Ioannis E. Kavvadias

C 18964 METAFoundation AS A NEW APPROACH FOR SEISMIC ISOLATION OF BUILDINGS
***Stefania Fiore**, Domenico Magisano, Giovanni Finocchio, Massimo Chiappini*

C 19288 SEISMIC DEVICES FOR STEEL STORAGE STRUCTURES
***Marco Simoncelli**, Bonaventura Tagliaferro, Rosario Montuori*

C 19560 ANALYSIS OF THE PARTICLES DISTRIBUTION INFLUENCE ON THE RECYCLED RUBBER PROPERTIES TO BE USED AS A MATRIX OF LOW-COST SEISMIC ISOLATORS
*Carolina Rojas Cabrera, **Lizeth F. Ortega Escobar**, Ingrid E. Madera Sierra, Daniele Losanno, Albert R. Ortíz Lasprilla*

Monday, June 28
16:00-18:00

Zoom Room 5

EUROGEN TS 21: MULTIDISCIPLINARY, MULTIPHYSICS, MULTI-OBJECTIVES AND MULTI-CRITERIA OPTIMIZATION METHODS

Chair: Célio Fernandes

-
- E 18329** ON THE SIMULATION OF THE NEWTONIAN FLUID EXTRUDATE SWELL USING A MOVING MESH FINITE VOLUME INTERFACE TRACKING METHOD
*Ahmad Fakhari, Željko Tuković, Olga Sousa Carneiro, **Célio Fernandes***
- E 18321** MODEL IDENTIFICATION FOR BIRD STRIKE SIMULATIONS WITH SMOOTHED PARTICLE HYDRODYNAMICS
Michael Lockan, Dieter Bestle, Jonas Sarrar
- E 18341** ASSESSMENT OF MULTI-OBJECTIVE AND COEVOLUTIONARY GENETIC PROGRAMMING FOR PREDICTING THE STOKES FLOW AROUND A SPHERE
Heiner Zille, Fabien Evrard, Julia Reuter, Sanaz Mostaghim, Berend van Wachem
- E 18348** ON THE USE OF DESIRABLE VALUES FOR THE OBJECTIVE FUNCTIONS IN EVOLUTIONARY MULTIOBJECTIVE OPTIMIZATION
Sandra González-Gallardo, Ruben Saborido, Ana B. Ruiz, Mariano Luque
- E 18382** ADJOINTOPTIMISATIONFOAM: AN OPENFOAM-BASED FRAMEWORK FOR ADJOINT-ASSISTED OPTIMISATION
Evangelos Papoutsis-Kiachagias, Konstantinos Gkaragkounis, Andreas-Stefanos Margetis, Themis Skamagkis, Varvara Asouti, Kyriakos Giannakoglou
- E 18351** OPTIMIZATION-BASED DESIGN PROPOSALS FOR BIAXIAL TENSILE TEST SPECIMENS
Florian Dextl, Andreas Hauffe, Johannes Markmiller
- E 18326** ISOGEOMETRIC ANALYSIS BASED DETERMINISTIC AERODYNAMIC SHAPE OPTIMIZATION WITH USE OF ALGORITHMIC DIFFERENTIATION
Andrzej Jaeschke, Matthias Möller
- E 18535** COMPUTATIONAL DESIGN OF COMPARATIVE MODELS AND GEOMETRICALLY CONSTRAINED OPTIMIZATION OF A MULTI DOMAIN VARIABLE SECTION BEAM BASED ON TIMOSHENKO MODEL
Laura Sardone, Marco M. Rosso, **Raffaele Cucuzza**, Rita Greco, Giuseppe Carlo Marano

Monday, June 28
16:00-18:00

Zoom Room 6

COMPDYN TS 17 - I: PERFORMANCE-BASED EARTHQUAKE ENGINEERING

Chair: Francesco Messali

-
- C 20521** AN EFFICIENT RECORD-TRUNCATION SCHEME FOR PULSE-LIKE RECORDS USING A WAVELET-BASED APPROACH
Vicky Dimakopoulou, Michalis Fragiadakis, Ioannis Taflampas
- C 18506** A COMPARATIVE STUDY ON SEISMIC RESPONSE OF A SUPER HIGH-RISE BUILDING USING CONVENTIONAL AND MODAL PUSHOVER ANALYSIS
Xianlong Zhang, Hao Wu, Qiao Yu, Yang Liu, Lingzhi Li, Wannan Xu, Junyan Zhou
- C 18628** CALIBRATION OF A MECHANISM-BASED METHOD AGAINST FINITE ELEMENT ANALYSES FOR THE PUSHOVER ANALYSES OF LOW-RISE MASONRY BUILDINGS
Francesco Messali, Michele Longo, Ahmet Tavus, Anmol Singla
- C 18709** ESTIMATION OF DUCTILITY IN ASYMMETRIC-PLAN STRUCTURES
Kaan Kaatsiz, Haluk Sucuoğlu
- C 19158** EFFECT OF THE DAMPING RATIO OF THE NON-STRUCTURAL COMPONENTS ON FLOOR ACCELERATION DEMANDS IN TORSIONALLY IRREGULAR BUILDINGS
Ankur Jain, Mitesh Surana
- C 19356** EXPLORING THE EXPECTED INCREASE OF COSTS AND LOSS REDUCTION BY RAISING THE BAR IN SEISMIC DESIGN: COMPARISON OF ALTERNATIVE DESIGN METHODOLOGIES AND EARTHQUAKE-RESISTANT TECHNOLOGIES
Francesca Gentili, Jonathan Ciurlanti, Simona Bianchi, Stefano Pampanin
- C 19469** SEISMIC RESPONSE OF A TRANSPARENT PAVILION MADE OF STRUCTURAL GLASS
Dimitra V. Achillopoulou, Nikoleta K. Stamataki

Monday, June 28
16:00-18:00

Zoom Room 7

UNCECOMP MS 3: NON-DETERMINISTIC COMPUTATIONAL HOMOGENIZATION OF HETEROGENEOUS MATERIALS

MS Organizers: Paul Steinmann, Dmytro Pivovarov

Chair: Dmytro Pivovarov

U 18972 DIMENSION REDUCTION FOR IMPRECISE PROBABILITIES WITHIN THE INTRUSIVE SPECTRAL FEM: APPLICATION TO COMPUTATIONAL HOMOGENIZATION
Dmytro Pivovarov, Kai Willner, Paul Steinmann

U 19034 MICROSTRUCTURE-INFORMED REDUCED MODES FOR MACROSCOPIC ANALYSES WITH FULLY RESOLVED MICROSTRUCTURAL GEOMETRY
Martin Doškář, Jan Novák, Jan Zeman

U 18985 NUMERICAL SIMULATION FOR 3D PRINTED WALL STRUCTURE DURING THE PROCESS OF PRINTING CONSIDERING UNCERTAINTY
Meron Wondafraash, Albrecht Schmidt, Luise Göbel, Tom Lahmer, Carsten Könke

UNCECOMP MS 13 - I: MULTISCALE ANALYSIS AND DESIGN OF RANDOM HETEROGENEOUS MEDIA

MS Organizers: George Stefanou, Dimitrios Savvas, Marco Pingaro, Patrizia Trovalusci

Chair: Marco Pingaro

U 19165 PARAMETER IDENTIFICATION OF THE RANDOM APPARENT MATERIAL PROPERTIES OF TWO-PHASE COMPOSITES IN A BAYESIAN FRAMEWORK
George Stefanou, Dimitrios Savvas, Iason Papaioannou

U 19166 APPLICATION OF FAST STATISTICAL HOMOGENIZATION PROCEDURE (FSHP) FOR POLYCRYSTALS MATERIALS WITH THIN INTERFACES
Marco Pingaro, Maria Laura De Bellis, Patrizia Trovalusci

U 18864 STOCHASTIC MODELING OF MATERIAL UNCERTAINTIES ON STRUCTURES PRODUCED BY ADDITIVE MANUFACTURING
Shanshan Chu, Johann Guilleminot

U 19007 STATE ESTIMATION OF LITHIUM-ION BATTERIES IN AEROSPACE
Linda J. Bolay, Omar S. Mendoza-Hernandez, Yoshitsugu Sone, Eiji Hosono, Daisuke Asakura, Hirofumi Matsuda, Minoru Umeda, Arnulf Latz, Birger Horstmann

U 19139 MULTISCALE STOCHASTIC STRESS ANALYSIS OF PARTICLE REINFORCE COMPOSITES CONSIDERING RANDOM LOCATION VARIATION OF PARTICLE WITH AN IMPROVED MESH SUPERPOSITION METHOD
Yuki Arai, Sei-ichiro Sakata

Monday, June 28
16:00-18:00

Zoom Room 8

COMPDYN TS 32: DYNAMICS OF STEEL AND SLENDER STRUCTURES

Chair: Pablo Torres-Rodas

C 18503 ADVANCES IN COMPUTATIONAL AND ANALYTICAL MODELS FOR COLUMN BASE CONNECTIONS

Pablo Torres-Rodas

C 18546 INFLUENCE OF EARTHQUAKE MECHANISMS TO THE SEISMIC RESPONSE OF STEEL MOMENT FRAMES

Liseth Campos, Pablo Torres-Rodas, Pablo Quinde, Fabricio Yepez

C 18598 SEISMIC ACTION COMBINATION RULES FOR THE DESIGN OF AZIMUTH-INDEPENDENT STRUCTURES

Nikolaos Karaferis, Dimitrios Vamvatsikos

C 19088 INVESTIGATING THE OVERTURNING STABILITY OF UNANCHORED CONTAINERS WITH FINITE ELEMENT SIMULATIONS

Stefanos Gkatzogiannis, Peter Knoedel, Thomas Ummenhofer

C 19561 PARAMETRIC STUDY OF STEEL COLUMN-BASE CONNECTION SUBJECTED TO BIDIRECTIONAL BENDING AND AXIAL COMPRESSION

Md. Asif Bin Kabir, Ahm Muntasir Billah

Monday, June 28
16:00-18:00

Zoom Room 9

UNCECOMP MS 2 - I: UNCERTAINTY QUANTIFICATION UNDER LIMITED DATA

MS Organizers: Michael Hanss, David Moens, Matthias Faes, Edoardo Patelli, Alba Sofi

Chair: David Moens

-
- U 18940** BOUNDS OF RELIABILITY FUNCTION FOR STRUCTURAL SYSTEMS SUBJECTED TO A SET OF RECORDED ACCELEROGRAMS
*Federica Genovese, Giuseppe Muscolino, **Alba Sofi***
- U 18852** BREAKING THE DOUBLE LOOP IN NONLINEAR DYNAMIC RELIABILITY ANALYSIS UNDER EPISTEMIC UNCERTAINTY
Matthias G.R. Faes, Vasileios C. Fragkoulis, Peihua Ni, Marcos A. Valdebenito, Danko Jerez, Michael Beer
- U 18856** LOW-COMPLEXITY ZONOTOPES CAN ENHANCE UNCERTAINTY QUANTIFICATION (UQ)
*Olga Kosheleva, **Vladik Kreinovich***
- U 18912** SHIFTED INTERVAL METHOD - AN EFFICIENT AND ROBUST APPROACH FOR CONSTRAINT OPTIMIZATION CONSIDERING INTERVAL PARAMETERS
Philipp Edler, Steffen Freitag, Stefanie Roskosch, Günther Meschke
- U 18949** PARAMETERISATION OF PHYSICS-BASED BATTERY MODELS FROM FEW NOISY MEASUREMENTS
Yannick Kuhn, Birger Horstmann, Arnulf Latz
- U 18956** UNCERTAINTY QUANTIFICATION OF PIPELINE CORROSION INCORPORATING MECHANICAL-ELECTROCHEMICAL EFFECT BASED ON MACHINE LEARNING APPROACH
Yuanbin Yao, Di Wu, Wei Gao
- U 18961** STRUCTURAL RELIABILITY ESTIMATION OF STEEL MAST EXHIBITING RANDOM MECHANICAL AND ENVIRONMENTAL PARAMETERS
Rafał Bredow, Marcin Kamiński
- U 18974** INTERVAL ANALYSIS USING MULTILEVEL QUASI MONTE CARLO
Robin Callens, Matthias Faes, David Moens

Monday, June 28
16:00-18:00

Zoom Room 10

UNCECOMP MS 7: UNCERTAINTY QUANTIFICATION AND MACHINE LEARNING FOR MODELING AND OPTIMIZATION

MS Organizers: Miguel Bessa, Alberto Figueroa Alvarez, Krishna Garikipati, Roger Ghanem, Christian Soize

Chair: Roger Ghanem

U 19151 AN ARTIFICIAL NEURAL NETWORK-BASED IDENTIFICATION METHOD APPLIED TO A RANDOM ELASTO-ACOUSTIC WAVE PROPAGATION PROBLEM IN COMPUTATIONAL BIOMECHANICS
Florent Pled, Christophe Desceliers, Amir H. Gandomi

U 18950 STOCHASTIC MODELLING OF GEOMETRICAL UNCERTAINTIES ON COMPLEX STRUCTURES PRODUCED BY ADDITIVE MANUFACTURING
Hao Zhang, Johann Guilleminot

U 19150 STATISTICAL INVERSE PROBLEM FOR THE MESOSCALE MODEL OF APPARENT ELASTICITY PROPERTIES BY TRAINING AN ARTIFICIAL NEURAL NETWORK
Florent Pled, Christophe Desceliers, Tianyu Zhang

U 19155 A TRANSFER LEARNING BASED 2D AND 3D MICROSTRUCTURE RECONSTRUCTION APPROACH USING MULTIPLE LOSS FUNCTIONS
Ashwini Gupta, Anindya Bhaduri, Lori Graham-Brady

18:00-18:05

Break

PLENARY LECTURES

Monday, June 28
18:05-18:45

Zoom Room 1

COMPDYN

Chair: Vissarion Papadopoulos

C 19572 FORWARD AND BACKWARD UNCERTAINTY PROPAGATION IN COMPUTATIONAL EARTHQUAKE ENGINEERING
Hexiang Wang, Han Yang, Fangbo Wang, Boris Jeremic

Monday, June 28
18:05-18:45

Zoom Room 2

UNCECOMP

Chair: George Stefanou

U 19438 DATA AS MODELS FOR BLOOD AND WATER
Petros Koumoutsakos

18:45-18:50
Break

TECHNICAL SESSIONS

Monday, June 28
18:50-20:50

Zoom Room 1

COMPDYN MS 1 - II: INFLUENCE OF INFILL MASONRY WALLS IN THE RESPONSE AND SAFETY OF BUILDINGS

MS Organizers: Humberto Varum, Hugo Rodrigues, Enrico Spacone

Chair: Mariano Di Domenico

C 19313 EFFECT OF IN-PLANE/OUT-OF-PLANE INTERACTION IN INFILL WALLS ON THE FLOOR SPECTRA OF REINFORCED CONCRETE BUILDINGS

Mariano Di Domenico, Paolo Ricci, Gerardo M. Verderame

C 19516 EXPERIMENTAL CHARACTERIZATION OF THE OUT-OF-PLANE BEHAVIOUR OF MASONRY INFILL WALLS MADE WITH CONCRETE BLOCKS

Marta Agante, André Furtado, Hugo Rodrigues, António Arêde, Paulo Fernandes, Humberto Varum

COMPDYN TS 5: DYNAMICS OF CONCRETE AND MASONRY STRUCTURES

Chair: Mariano Di Domenico

C 19173 SHAKING TABLE TEST ON THE EFFECTS OF SHEAR WALLS FOR LONG-SPAN KOREAN TRADITIONAL TIMBER STRUCTURE

Yeong-Min Kim

C 18732 SEISMIC RESPONSE OF SEVEN EXISTING REINFORCED CONCRETE CHIMNEYS EQUIPPED WITH TUNED MASS DAMPERS UNDER FIVE STRONG SEISMIC EVENTS

Pietro Giuseppe Crespi, Nicola Longarini, Marco Valente, Marco Zucca

C 19608 COMPARISON OF THE EFFICIENCY OF MINIMUM-THICKNESS CIRCULAR AND PARABOLIC ARCHES FOR VARIOUS GRAVITY CONDITIONS

Nicos Kalapodis, Georgios Kampas, Thomas McLean, Christian Malaga-Chuquitaype

C 18719 EVALUATION OF THE SEISMIC BEHAVIOR OF HISTORICAL CHURCHES REINFORCED BY CROSS-LAM ROOF-STRUCTURES

Nicola Longarini, Pietro Crespi, Marco Zucca

C 19245 FLEXURAL PERFORMANCE OF CONCRETE BEAMS UNDER CYCLIC LOADING

Waseem Khan, Saleem Akhtar, Aruna Rawat, Anindya Basu

C 19942 LARGE-DISPLACEMENT RESPONSE OF UNREINFORCED MASONRY STRUCTURES: COMPARISON BETWEEN ANALYTICAL SOLUTIONS AND DEM MODELS INCLUDING OPEN-SOURCE SOFTWARE

Igor Bouckaert, Michele Godio, João Pacheco de Almeida

Monday, June 28
18:50-20:50

Zoom Room 2

COMPDYN MS 33 - II: EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

MS Organizers: George C. Manos, Konstantinos Katakalos

Chair: Konstantinos Katakalos, Milton Demosthenous

To the memory of Dr. Nikolaos Simos

C 19021 STUDYING THE PERFORMANCE OF STONE MASONRY ARCH BRIDGES EMPLOYING IN-SITU MEASUREMENTS AND NUMERICAL PREDICTIONS

George C. Manos, N. Simos

C 19019 SEISMIC PERFORMANCE OF BELL TOWERS

George C. Manos

C 19499 DEVELOPMENT OF AN EXPERIMENTAL SETUP FOR MEASURING THE EFFECTIVENESS OF STRENGTHENED PRESTRESSED CONCRETE CYLINDER PIPES (PCCP)

Sofia Gkaraklova, Lazaros Melidis, George C. Manos, Konstantinos Katakalos

C 19038 INVESTIGATION OF LOW COST SMAS UNDER ELEVATED TEMPERATURES

Sofia Piliafa, Lazaros Melidis, Lambros Kotoulas, Nikolaos Makris, Konstantinos Katakalos

C 19524 THE INFLUENCE OF WOODEN ROOF CONNECTION ON THE DYNAMIC AND EARTHQUAKE RESPONSE OF OLD INDUSTRIAL STONE MASONRY BUILDINGS

George C. Manos, Lampros Kotoulas

C 19598 EXPERIMENTAL AND NUMERICAL INVESTIGATION OF A MASONRY MODEL BUILDING SUBJECTED TO DYNAMIC BASE EXCITATIONS

Stefania Demosthenous, Milton Demosthenous

C 19484 ASSESSMENT OF THE VIBRATION OF REINFORCED CONCRETE PRECAST ONE – WAY JOIST SLAB FLOOR SYSTEM UNDER HUMAN INDUCED LOADS

Omar Caballero-Garatachea, Gelacio Juarez-Luna, Manuel E. Ruiz-Sandoval

C 18853 PRELIMINARY CONSIDERATIONS ON THE LOSS OF SUPPORT FOR PRECAST BEAM ELEMENTS

Marius Eteme Minkada, Simone Labò, Alessandra Marini, Andrea Belleri

Monday, June 28
18:50-20:05

Zoom Room 3

COMPDYN MS 34 - II: FRAGILITY CURVES FOR EXISTING BUILDINGS: OPEN CHALLENGES IN THEIR DEFINITION AND USE FOR SEISMIC RISK ANALYSES

MS Organizers: Serena Cattari, Angelo Masi

Chair: Angelo Masi

C 19325 ROLE OF DESIGN LEVEL AND INFILL ARRANGEMENT ON THE SEISMIC FRAGILITY CURVES OF ITALIAN RC EXISTING BUILDINGS

Angelo Masi, Vincenzo Manfredi, Giuseppe Nicodemo, Andrea Digrisolo

C 19031 SEISMIC FRAGILITY ASSESSMENT OF TYPICAL URM BUILDINGS OF THE EMILIA ROMAGNA REGION (ITALY)

Francesca Ferretti, Elena Simoni, Lidia Battaglia, Nicola Buratti, Claudio Mazzotti

C 19026 TYPOLOGICAL ANALYSIS AND VULNERABILITY CURVES FOR MASONRY CHURCHES

Elvis Cescatti, Veronica Follador, Francesca da Porto

C 19020 DERIVATION OF SEISMIC FRAGILITY CURVES OF A GRAVITY-LOAD DESIGNED RC SCHOOL BUILDING THROUGH NLTHA

Elisa Saler, Pietro Carpanese, Veronica Follador, Francesca da Porto

C 18863 FRAGILITY MODELS FOR EXISTING MASONRY INFILLED RC FRAMES IN THE EMILIA AREA

Gianluca Salamida, Nicola Buratti

Monday, June 28
20:05-20:35

Zoom Room 3

ROUND TABLE

COMPDYN MS 34: FRAGILITY CURVES FOR EXISTING BUILDINGS: OPEN CHALLENGES IN THEIR DEFINITION AND USE FOR SEISMIC RISK ANALYSES

Topic: Seismic Risk Assessment at national and global scale: what challenges? What answers?

Moderator: *Serena Cattari*

Panel: *Mauro Dolce, Angelo Masi, Sergio Lagomarsino, Vitor Silva*

- Agenda:
- National Risk Assessment for Civil Protection Aims
 - Challenges and developments in the seismic risk assessment in Italy: the MARS Project
 - Fragility curves for existing buildings: a challenge that requires a complex but intelligible answer
 - Global Risk Assessment: mistakes from the past and promises for the future

Monday, June 28
18:50-20:50

Zoom Room 4

EUROGEN TS 33: ADJOINT BASED AND ONE-SHOT METHODS

Chair: Lars Radtke

E 18417 ADJOINT SHAPE OPTIMIZATION PROCEDURES FOR CARDIOVASCULAR FLUID-STRUCTURE INTERACTION PROBLEMS

Lars Radtke, George Bletsos, Thomas Rung, Alexander Düster

E 18361 MINIMIZATION OF HEMOLYSIS INDUCTION IN BIOMEDICAL MACHINERY THROUGH AN ADJOINT-BASED SHAPE OPTIMIZATION STRATEGY

Georgios Bletsos, Thomas Rung

E 18373 NUMERICAL INVESTIGATION ON A P-HARMONIC DESCENT APPROACH FOR SHAPE OPTIMISATION UNDER GEOMETRICAL CONSTRAINTS

Peter Marvin Müller, Martin Siebenborn, Niklas Kühl, Klaus Deckelnick, Michael Hinze, Thomas Rung

E 18385 OPTIMIZER-COUPLED ADJOINT FOR AN AEROSTRUCTURAL MODEL PROBLEM

Caslav Ilic

EUROGEN TS 34: MATERIAL AND NON-LOCAL OPTIMIZATION PROBLEMS

Chair: Lars Radtke

E 18360 TESTS OF SCRATCH RESISTANCE OF POLYMER MATERIAL SURFACES

Janusz Sikora, Daniel Pieniak

E 18340 SOFTWARE PACKAGE FOR THE NUMERICAL SOLUTION OF NONLOCAL OPTIMIZATION PROBLEMS

Pavel Sorokovikov, Alexander Yu. Gornov

Monday, June 28
18:50-20:50

Zoom Room 5

EUROGEN MS 2: OPTIMIZATION IN STRUCTURAL ENGINEERING AND CONTROL

MS Organizers: Sinan Melih Nigdeli, Gebrail Bekdaş

Chair: Sinan Melih Nigdeli

-
- E 18378** OPTIMUM DESIGN OF TUNED MASS DAMPERS FOR REAL-SIZE STRUCTURES VIA ADAPTIVE HARMONY SEARCH ALGORITHM
Aylin Ece Kayabekir, Sinan Melih Nigdeli, Gebrail Bekdaş, Melda Yücel
- E 18379** OPTIMUM DESIGN OF REINFORCED CONCRETE RETAINING WALLS BY USING SPECIFIC PARAMETER-FREE METAHEURISTIC ALGORITHMS
Melda Yücel, Gebrail Bekdaş, Sinan Melih Nigdeli, Aylin Ece Kayabekir
- E 18386** NEW MODIFICATIONS OF TEACHING FACTOR IN TEACHING-LEARNING-BASED OPTIMIZATION FOR STRUCTURAL MECHANICS
Gebrail Bekdaş, Sinan Melih Nigdeli
- E 18387** THE EFFECT OF THE ASSUMED INHERENT DAMPING IN THE TUNING OF TUNED MASS DAMPERS
Ayla Ocak, Gebrail Bekdaş, Sinan Melih Nigdeli
- E 18388** A NEW MODIFIED JAYA ALGORITHM FOR OPTIMUM DESIGN OF TUNED MASS DAMPERS
Sinan Melih Nigdeli, Gebrail Bekdaş
- E 18391** THE VARIATIONS OF THE ULTIMATE SHEAR AND LATERAL-TORSIONAL BUCKLING CAPACITIES WITH RESPECT TO THE CROSS-SECTIONAL PROPERTIES OF A PLATE GIRDER
Celal Cakiroglu, Gebrail Bekdaş

Monday, June 28
18:50-20:50

Zoom Room 6

COMPDYN TS 17 - II: PERFORMANCE-BASED EARTHQUAKE ENGINEERING

Chair: Konstantinos G. Megalooikonomou

-
- C 18441** NUMERICAL MODELING OF SLIP RESPONSE OF Laterally SWAYING BRIDGE PIERS' TENSILE REINFORCEMENT
Konstantinos G. Megalooikonomou
- C 18725** A MULTI-OBJECTIVE DISPLACEMENT-BASED DESIGN PROCEDURE OF VISCOUS AND HYSTERETIC DAMPED BRACES FOR THE SEISMIC PROTECTION OF RC BUILDINGS
Fabio Mazza, Carlo Pasceri
- C 18550** SEISMIC RELIABILITY OF BRIDGES ISOLATED WITH FPS
Paolo Castaldo, Guglielmo Amendola, Luca Giordano, Diego Gino, Elena Miceli
- C 19489** ON THE USE OF INSTANTANEOUS POWER FOR NEAR-FAULT RECORD MODIFICATION
Esra Zengin, Norman Abrahamson
- C 18488** SEISMIC RISK ASSESSMENT OF A PROCESS PLANT UNIT ACCOUNTING FOR DYNAMIC INTERACTION
George Karagiannakis, Luigi di Sarno
- C 18508** NUMERICAL PARAMETRIC STUDY OF GRILLE-TYPE STEEL CONCRETE COMPOSITE SHEAR WALL FOR SEISMIC REGIONS
Tian Wang, Qiao Yu, Hao Wu, Yang Liu, Lingzhi Li, Xianlong Zhang
- C 18557** INTENSITY MEASURES PROPERTIES AND SELECTION FOR RISK ANALYSIS ON STRUCTURES SUBJECTED TO EARTHQUAKE INDUCED BUILDING POUNDING WITH A NON SMOOTH CONTACT DYNAMICS METHOD
Thomas Lenglade, David Bertrand, Stéphane Grange, Gabriel Candia, Juan Carlos de la Llera
- C 20119** SEISMIC DESIGN OF STEEL FRAMES WITH INTENTIONALLY ECCENTRIC INDUCTION-HEAT TREATED STEEL BRACES
Thomas Whittall, Konstantinos A. Skalomenos

Monday, June 28
18:50-19:50

Zoom Room 7

UNCECOMP MS 13 - II: MULTISCALE ANALYSIS AND DESIGN OF RANDOM HETEROGENEOUS MEDIA

MS Organizers: George Stefanou, Dimitrios Savvas, Marco Pingaro, Patrizia Trovalusci

Chair: George Stefanou

U 19102 PERMEABILITY PREDICTION FOR NATURAL POROUS ROCKS THROUGH FEATURE SELECTION AND MACHINE LEARNING
*Jinlong Fu, **Chenfeng Li***

U 19004 MULTISCALE STOCHASTIC STRESS ANALYSIS OF UNIDIRECTIONAL FRP WITH RANDOM FIELD MODELING OF FIBER ARRANGEMENT BASED ON EXPERIMENTAL OBSERVATION
Sei-ichiro Sakata, Keitaro Fukuda

U 19163 DETERMINATION OF RANDOM APPARENT MATERIAL PROPERTIES OF CONCRETE BASED ON CT IMAGE RECONSTRUCTION
Dimitrios Savvas, George Stefanou, Panagiotis Metsis

U 19061 GENERATION OF VIRTUAL 3D MICROSTRUCTURES BASED ON EXPERIMENTAL 2D DATA AND MICROSTRUCTURE-BASED SIMULATION
Selina Neuhaus, Alexander Bäumchen, Kinshuk Srivastava, Sebastian Scholl, Stefan Diebels

Monday, June 28
19:50-20:20

Zoom Room 7

ROUND TABLE

UNCECOMP MS 13: MULTISCALE ANALYSIS AND DESIGN OF RANDOM HETEROGENEOUS MEDIA

Moderator: George Stefanou

Panel: Johann Guilleminot, Chenfeng Li, Sei-ichiro Sakata, Patrizia Trovalusci

Agenda:

- Representations of stochastic material parameters in linear and nonlinear multiscale analyses
- Some notes on characterization, statistical reconstruction and property prediction of heterogeneous materials
- On quantitative strength estimation of heterogeneous material based on the multiscale stochastic stress analysis
- Multiscale non-local (size-dependent) continuum description of material with periodic and random microstructure

Monday, June 28
18:50-20:50

Zoom Room 8

COMPDYN MS 35: RECENT ADVANCES IN SEISMIC ISOLATION AND SUPPLEMENTAL DAMPING SYSTEMS FOR VIBRATION CONTROL

MS Organizers: Virginio Quaglini, Eleonora Bruschi, Emanuele Gandelli, Carlo Pettoruso

Chair: Virginio Quaglini

-
- C 18633** EXPERIMENTAL AND NUMERICAL ASSESSMENT OF ISOLATION SEISMIC DEVICE FOR RETROFIT OF INDUSTRIAL EXISTING SHED
*Luca Mari, **Virginio Quaglini**, Carlo Pettoruso, Eleonora Bruschi*
- C 20758** ASSESSMENT OF THE SHEAR PROPERTIES OF HDRBS UNDER DIFFERENT COMPRESSION LEVELS
***Eleonora Bruschi**, Emanuele Gandeli, Carlo Pettoruso, Virginio Quaglini*
- C 18637** INVESTIGATION OF THE BREAKAWAY FRICTION INFLUENCE ON THE SEISMIC RESPONSE OF BUILDINGS ISOLATED WITH CURVED SURFACE SLIDERS
***Eleonora Bruschi**, Virginio Quaglini, Emanuele Gandelli*
- C 18671** AN INNOVATIVE STEEL DAMPER WITH ADAPTIVE HYSTERETIC BEHAVIOR
***Emanuele Gandelli**, Johan Distl, Peter Huber, Christian Braun*
- C 18638** SUPPLEMENTAL ENERGY DISSIPATION WITH PRESTRESSED LEAD EXTRUSION DAMPERS (P-LED): EXPERIMENTS AND MODELING
***Carlo Pettoruso**, Eleonora Bruschi, Virginio Quaglini*
- C 19005** MODELING STRATEGIES FOR THE LATERAL RESPONSE OF CURVED SURFACE SLIDER DEVICES UNDER EXTREME DISPLACEMENT DEMANDS
***Marco Furinghetti**, Alberto Pavese*
- C 18889** INVESTIGATIONS ON INTER-STOREY SEISMIC ISOLATION AS A TECHNIQUE FOR ADDING UPPER STOREYS
***Enrico Bernardi**, Marco Donà, Francesca da Porto, Ping Tan*
- C 18924** THEORETICAL AND EXPERIMENTAL INVESTIGATION OF MDOF SYSTEMS WITH A COULOMB CONTACT
***Luca Marino**, Alice Cicirello*
- C 18955** FUNCTIONAL ACCEPTANCE TESTS FOR THE SEISMIC ISOLATION DEVICES OF THE NEW SAN GIORGIO BRIDGE IN GENOA
***Marcello Cademartori**, Andrea Miano, Antimo Fiorillo, Alessandro Aliotta, Marco Di Ludovico, Andrea Prota, Simone Dellacasagrande, Alaeddine Fatnassi, Daniele Pastorelli*

Monday, June 28
18:50-20:50

Zoom Room 9

UNCECOMP MS 2 - II: UNCERTAINTY QUANTIFICATION UNDER LIMITED DATA

MS Organizers: Michael Hanss, David Moens, Matthias Faes, Edoardo Patelli, Alba Sofi

Chair: Alba Sofi

U 18986 ROBUSTNESS OF COMPONENT IMPACT PERFORMANCE WITH RESPECT TO INTERVAL VALUED
UNCERTAIN BOUNDARY CONDITIONS

Conradus van Mierlo, Matthias G. R. Faes, David Moens, Fabian Duddeck

U 18997 INVERSE PROBLEMS FOR STOCHASTIC NEUTRONICS

Corentin Houpert, Josselin Garnier, Philippe Humbert

U 19068 MACHINE LEARNING AIDED STOCHASTIC SLOPE STABILITY ANALYSIS

Zhanpeng Liu, Di Wu, Daichao Sheng, Behzad Fatahi, Hadi Khabbaz

U 19110 LIMIT REPRESENTATIONS OF IMPRECISE RANDOM FIELDS

Mona M. Dannert, Johannes L. Häufner, Udo Nackenhorst

Monday, June 28
18:50-20:50

Zoom Room 10

UNCECOMP MS 1 - I: UNCERTAINTY QUANTIFICATION IN VIBRATION BASED MONITORING AND STRUCTURAL DYNAMICS SIMULATIONS

MS Organizers: Eleni Chatzi, Manolis Chatzis, Vasilis Dertimanis, Geert Lombaert, Costas Papadimitriou

Chair: Eleni Chatzi, Geert Lombaert

U 18937 NONLINEAR GAUSSIAN PROCESS LATENT FORCE MODELS FOR INPUT ESTIMATION IN HYSTERETIC SYSTEMS

Timothy J. Rogers, Joe D. Longbottom, Keith Worden, Elizabeth J. Cross

U 19024 MONITORING THE AMPLITUDE-DEPENDENT DYNAMIC RESPONSE OF MASONRY BUILDINGS

Yves Reuland, Panagiotis Martakis, Eleni Chatzi

U 18891 RELIABILITY ANALYSIS OF COMPLEX STRUCTURAL SYSTEMS EQUIPPED WITH FRICTION-BASED DEVICES UNDER STOCHASTIC EXCITATION

Hector Jensen, Danko Jerez, Franco Mayorga

U 18947 OPTIMIZATION UNDER UNCERTAINTIES OF HIGH-SPEED TRAIN SPEED TO LIMIT ENERGY CONSUMPTION

Julien Nespoulous, Christian Soize, Christine Funfschilling, Guillaume Perrin

U 18962 A ROBUST RELIABILITY ALGORITHM FOR STRUCTURES UNDER SEISMIC EXCITATION

Xuanli Sun, Kostas Margellos, Martin Williams, Manolis Chatzis

U 19098 BAYESIAN LEARNING IN MULTI-LEVEL MODELING OF DYNAMICAL SYSTEMS USING MULTI-LEVEL DATA

Xinyu Jia, Costas Papadimitriou

U 19129 INFLUENCE OF DIFFERENT FULLY NON-STATIONARY ARTIFICIAL TIME HISTORIES GENERATION METHODS ON THE SEISMIC RESPONSE OF FREQUENCY-DEPENDENT STRUCTURES

Federica Genovese, Giuseppe Muscolino, Alessandro Palmeri

SEMI-PLenary LECTURES

Tuesday, June 29
12:00-13:20

Zoom Room 1

COMPDYN

Chair: Shinobu Yoshimura

C 18920 SOME RECENT ADVANCES IN THE WAVE FINITE ELEMENT METHOD
Denis Duhamel, B. Claudet, T. Hoang, G. Foret, Jean-Mathieu Mencik

C 19574 HIGH FIDELITY MODEL FOR NUMERICALLY ANALYSIS OF SOIL-STRUCTURE INTERACTION
Muneo Hori, Muhammad Rizwan Riaz, Hiroki Motoyama

Tuesday, June 29
12:00-13:20

Zoom Room 2

COMPDYN

Chair: Gabriele Milani

C 19782 SEISMIC ANALYSIS OF STRUCTURAL SYSTEMS SUBJECTED TO FULLY NON-STATIONARY ARTIFICIAL ACCELEROGRAMS: RECENT ADVANCES
Giuseppe Muscolino

C 20778 ON THE FOCUSING OF MECHANICAL WAVES THROUGH TENSEGRITY METAMATERIALS
Fernando Fraternali

Tuesday, June 29
12:00-13:20

Zoom Room 3

UNCECOMP

Chair: Geert Lombaert

U 19736 RECENT ADVANCES IN INTERVAL FIELD UNCERTAINTY MODELLING FOR LARGE-SCALE FINITE ELEMENT MODELS
David Moens

U 19577 INTERVAL PROCESS MODEL FOR DYNAMIC UNCERTAINTY QUANTIFICATION
Chao Jiang, Bingyu Ni, Jinwu Li

Tuesday, June 29
12:00-13:20

Zoom Room 4

UNCECOMP

Chair: Sondipon Adhikari

U 20750 HIERARCHICAL SAMPLING METHODS FOR BAYESIAN INVERSE PROBLEMS AND DATA ASSIMILATION
Fabio Nobile

U 20752 COMBINING HIERARCHICAL APPROXIMATION WITH IMPORTANCE SAMPLING: APPROXIMATION AND OPTIMIZATION TECHNIQUES
Raul Tempone

Tuesday, June 29
12:00-13:20

Zoom Room 5

EUROGEN

Chair: Zhan Kang

E 18406 DATA ASSIMILATION FOR ENGINEERING DESIGN AND OPERATION
Shigeru Obayashi, Takashi Misaka, Aiko Yakeno, Ryota Kikuchi

E 18420 TOPOLOGY OPTIMIZATION WITH GEOMETRIC CONSTRAINT FOR MANUFACTURING
Takayuki Yamada

Tuesday, June 29
12:00-13:20

Zoom Room 6

EUROGEN

Chair: Kyriakos Giannakoglou

E 18569 MOVING MORPHABLE COMPONENT (MMC)-BASED EXPLICIT TOPOLOGY OPTIMIZATION-SOME
NEW DEVELOPMENTS
Xu Guo

E 18458 TOPOLOGY OPTIMIZATION METHOD FOR MULTIPHYSICS SYSTEM
Gil Ho Yoon

13:20-13:25

Break

TECHNICAL SESSIONS

Tuesday, June 29
13:25-15:25

Zoom Room 1

COMPDYN MS 4 - I: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

MS Organizers: Francesco Clementi, Nicola Cavalagli, Antonio Formisano, Gabriele Milani, Vagelis Plevris

Chair: Gabriele Milani

C 19238 ROLE OF REPEATED SEISMIC EVENTS ON THE COLLAPSE OF TWO CALIDARIA IN ROME DATING BACK TO THE IMPERIAL AGE

Francesca Faleri, Nicola Grillanda, Selman Tezcan, Renato Perucchio, Gabriele Milani

C 19272 COMPARATIVE ANALYSIS AMONG DIFFERENT ANALYSIS PROGRAMS FOR SEISMIC VULNERABILITY EVALUATION OF A MASONRY BUILDING COMPOUND IN THE DISTRICT OF NAPLES

Generoso Vaiano, Antonio Formisano

C 19073 SETTLEMENT-INDUCED DAMAGE ASSESSMENT IN UNILATERAL MASONRY-LIKE STRUCTURES: A PIECEWISE RIGID DISPLACEMENT APPROACH

Ida Mascolo, Antonio Fortunato

C 18885 ANALYSIS OF THE DAMAGE STATE OF A MONUMENTAL BUILDING BY CONSIDERING THE VARIATIONS IN SOIL CONDITIONS

Erica Lenticchia, Gaetano Miraglia, Stefania Coccimiglio, Rosario Ceravolo

C 18935 ADVANCED NUMERICAL PREDICTION OF UNREINFORCED U-SHAPED MASONRY WALLS LOADED OUT-OF-PLANE

Jacopo Scacco, Luís C. Silva, Graça Vasconcelos, Gabriele Milani, Paulo B. Lourenço

C 19613 HORIZONTAL FORCE CAPACITY OF A HEMI-SPHERICAL DOME

Carlo Olivieri, Anna Castellano, Isabella Elia, Antonio Fortunato, Ida Mascolo

Tuesday, June 29
13:25-14:40

Zoom Room 2

COMPDYN MS 10: VULNERABILITY OF MUSEUM'S COLLECTIONS DYNAMIC RESPONSE, SAFETY ASSESSMENT AND DIGITAL INNOVATIONS

MS Organizers: Stefania Viti, Marco Tanganelli, Stefano Galassi

Chair: Stefania Viti

C 18862 VULNERABILITY OF ART WORKS TO BLAST HAZARD: THE FOUNTAIN OF NEPTUNE IN FLORENCE
*Marco Domaneschi, Marco Tanganelli, **Stefania Viti**, Gian Paolo Cimellaro*

C 19352 CORRELATION OF VULNERABILITY AND CONSERVATION BETWEEN ARTISTIC ASSETS AND STRUCTURAL ELEMENTS: CAMPAIGN OF THERMOGRAPHIC SURVEYS ON THE FRESCOES OF THE TEMPLAR CHURCH OF SAN BEVIGNATE
***Riccardo Liberotti**, Federico Cluni, F. Faralli, Vittorio Gusella*

C 18876 SIMPLIFIED ANALYSES FOR THE MODEL SETTING OF SCULPTURES: THE "OCEANO" BY GIAMBOLOGNA
*Marco Tanganelli, **Stefano Galassi**, Stefania Viti*

C 19043 VULNERABILITY ASSESSMENT OF MONUMENTAL ARTWORKS USING CONTACT TIME-HISTORY ANALYSIS
***Raffaele Gagliardo**, Michele Godio, Lucrezia Cascini, Francesco Portioli, Raffaele Landolfo*

C 19145 THE TARANTOLA ETRUSCAN PEDIMENT: NDT AND 3D MODEL CONTENT
*Anna Livia Ciuffreda, Massimo Coli, **Tessa Donigaglia**, Paola Ilaria Mariotti, Teresa Salvatici, Gabriela Simoni*

Tuesday, June 29
14:40-15:10

Zoom Room 2

ROUND TABLE

COMPDYN MS 10: VULNERABILITY OF MUSEUM'S COLLECTIONS DYNAMIC RESPONSE, SAFETY ASSESSMENT AND DIGITAL INNOVATIONS

Topic: Numerical modeling of artifacts: main approaches and future developments

Moderator: Stefania Viti

Panel: Edoardo Marino, Michela Monaco, Francesco Portioli, Michalis Fragiadakis

Agenda: The numerical representation of the mechanical behavior of art goods plays a crucial role in their conservation and protection to various hazards, including earthquakes. Art goods, indeed, present a high variety as regards their material, geometry, dimension and possible collapse mechanisms. Currently, different analytical approaches are adopted to predict their seismic response. They differ from each other for effectiveness, computational effort and response parameters. The round table is focused on this issue, and it aims at pointing out the most promising current developments.

Tuesday, June 29
13:25-15:25

Zoom Room 3

COMPDYN MS 6 - I: ADVANCES ON SEISMIC ASSESSMENT AND LOCAL COLLAPSE MECHANISMS OF RIGID BLOCKS IN STRUCTURES AND INFRASTRUCTURES

MS Organizers: Claudia Casapulla, Linda Giresini, Francesca Taddei, Ehsan Noroozinejad

Chair: Claudia Casapulla

-
- C 18850** INFLUENCE OF THE ELASTO-PLASTIC BEHAVIOR OF TIE-RODS IN THE RESPONSE OF ROCKING MASONRY WALLS THROUGH SEISMIC DEMAND HAZARD CURVES
*Fabio Solarino, **Linda Giresini**, Pietro Croce*
- C 19462** VISUAL PROGRAMMING FOR MACRO-BLOCK ANALYSIS OF MULTI-STOREY MASONRY BUILDINGS
Elham Mousavian, Luca Umberto Argiento, Claudia Casapulla
- C 18726** PREFABRICATED REINFORCED CONCRETE CLADDING PANELS SUPPORTS: DESIGN AND NUMERICAL MODELLING
Flavio Stochino, Fausto Mistretta, Mario Lucio Puppio, Mauro Sassu
- C 18895** GRAPHICAL METHODS, KINEMATIC AND FINITE ELEMENT ANALYSIS OF THE PREMILCUORE MASONRY BRIDGE
*Linda Giresini, Daniela De Paola, **Mario Lucio Puppio**, Giovanni Buratti*
- C 19300** PROBABILISTIC SEISMIC FRAGILITY FOR ROCKING MASONRY FAÇADES USING CLOUD ANALYSIS
Armando Benenato, Stefania Imperatore, Gian Piero Lignola, Barbara Ferracuti
- C 19477** OUT-OF-PLANE RESPONSE OF T-SHAPED MASONRY WALLS STRENGTHENED WITH CFRP INJECTED ANCHORS: MODELLING AND DESIGN PROVISIONS
Alessandra Maione, Claudia Casapulla, Francesca Ceroni, Marco Di Ludovico, Andrea Prota
- C 19366** MODELLING OF THE OUT-OF-PLANE BEHAVIOUR OF UNREINFORCED MASONRY PANELS USING THE DISCRETE MACRO-ELEMENT METHOD (DMEM)
Valeria Cusmano, Bartolomeo Pantò, Ivo Calì, Paulo B. Lourenço
- C 18975** AN EQUIVALENT VISCOUS DAMPING PROPOSAL FOR BLOCK-BASED ROCKING MODELS
Georgios Vlachakis, Carla Colombo, Anastasios Giouvanidis, Anjali Mehrotra, Nathanael Savalle, Paulo B. Lourenço

Tuesday, June 29
13:25-15:25

Zoom Room 4

COMPDYN MS 32 - I: SIMPLIFIED METHODOLOGIES FOR PERFORMANCE AND LOSS ASSESSMENT AT BUILDING OR TERRITORIAL SCALE

MS Organizers: Maria Polese, Marco Gaetani d'Aragona

Chair: Maria Polese, Marco Gaetani d'Aragona

C 19152 CAESAR II: AN ITALIAN DECISION SUPPORT TOOL FOR THE SEISMIC RISK. THE CASE STUDY OF TORRE PELLICE, VILLAR PELLICE AND PINEROLO MUNICIPALITIES

Giulio Zuccaro, Daniela De Gregorio, Stefano Nardone, Francesca Linda Perelli, Erika Ceriana Mayneri

C 18854 THE USE OF STICK-IT MODEL FOR EDP ASSESSMENT IN EXISTING RC INFILLED TYPOLOGIES

Marco Gaetani d'Aragona, Maria Polese, Marco Di Ludovico, Andrea Prota

C 18814 ASSESSMENT OF POST-EARTHQUAKE DAMAGES ON ITALIAN SCHOOL BUILDINGS PORTFOLIO OVER THE LAST 50 YEARS

Sergio Ruggieri, Chiara Tosto, Daniele Perrone, Giuseppina Uva, Maria Antonietta Aiello

C 19367 OPEN MODELS AND SOFTWARE FOR ASSESSING THE VULNERABILITY OF THE EUROPEAN BUILDING STOCK

Helen Crowley, Vitor Silva, Luis Martins, Xavier Romão, Nuno Pereira

C 19411 EFFECT OF BUILDING SAMPLE SELECTION ON SEISMIC FRAGILITY CURVES FOR RC BUILDINGS AT TERRITORIAL SCALE

Maria Zucconi, Fabio Romano, Barbara Ferracuti

C 19424 HOMOGENIZED BEAM MODELS FOR THE VIBRATION ANALYSIS OF REGULAR BUILDINGS

Carolina Franco, Céline Chesnais, Jean-François Semblat, Cédric Giry, Cédric Desprez

C 18545 ACCURATE COLLAPSE CAPACITY QUANTIFICATION FOR INFILLED RC FRAME BUILDINGS

Al Mouayed Bellah Nafeh, Gerard O'Reilly

C 18833 SEISMIC RISK ASSESSMENT FOR THE ITALIAN RESIDENTIAL MASONRY BUILT STOCK AND EFFECTIVENESS OF DIFFERENT MITIGATION STRATEGIES

Pietro Carpanese, Veronica Follador, Elisa Saler, Francesca da Porto

C 18917 APPLICATION OF THE EMPIRICAL PREDICTIVE DAMAGE MODEL OF HISTORICAL CHURCHES

Claudia Canuti, Michele Morici, Andrea Dall'Asta, Graziano Leoni

Tuesday, June 29
13:25-14:55

Zoom Room 5

EUROGEN MS 4: ADJOINT METHODS FOR MULTI-PHYSICS, INCLUDING APPLICATIONS

MS Organizers: Michaël Meheut, Kyriakos Giannakoglou

Chair: Michaël Meheut

E 18396 HIGH-FIDELITY ADJOINT-BASED MULTI-DISCIPLINARY OPTIMISATION IN THE MADELEINE PROJECT

Michaël Meheut

E 18398 GRADIENT-BASED AEROSTRUCTURAL OPTIMIZATION OF TRIMMED AIRCRAFT SUBJECT TO COMPREHENSIVE SET OF LOADS

Mohammad Abu-Zurayk, Andrei Merle, Caslav Ilic, Johan Feldwisch, Matthias Schulze

E 18377 CONTINUOUS ADJOINT-BASED AEROACOUSTIC SHAPE OPTIMIZATION OF AN AERO-ENGINE INTAKE

Morteza Monfaredi, Varvara Asouti, Xenofon Trompoukis, Konstantinos Tsiakas, Kyriakos Giannakoglou

E 18375 OPTIMIZATION OF A MIXING DEVICE WITH BAFFLES USING THE ENHANCED SURFACE INTEGRAL (E-SI) CONTINUOUS ADJOINT METHOD FOR TWO-PHASE FLOWS

Nikolaos Galanos, Evangelos M. Papoutsis-Kiachagias, Kyriakos C. Giannakoglou

E 18374 AERODYNAMIC SHAPE OPTIMIZATION OF THE MEXICO WIND TURBINE BLADE USING THE CONTINUOUS ADJOINT METHOD

Evangelos Papoutsis-Kiachagias, Mohammaderfan Farhikhteh, Themis Skamagkis, Kyriakos Giannakoglou

E 18383 AGGREGATED FORMULATION OF GEOMETRIC CONSTRAINTS FOR NODE-BASED SHAPE OPTIMIZATION WITH VERTEX MORPHING

Armin Geiser, Ihar Antonau, Kai-Uwe Bletzinger

Tuesday, June 29
14:55-15:25

Zoom Room 5

ROUND TABLE

EUROGEN MS 4: ADJOINT METHODS FOR MULTI-PHYSICS, INCLUDING APPLICATIONS

Topic: Adjoint Methods for Multi-disciplinary Industrial Optimization

Moderator: Kyriakos Giannakoglou

Panel: Michael Meheut, Gilbert Roge, Shahrokh Shahpar

Agenda: Recent achievements and the state-of-the-art of adjoint solvers used in multi-disciplinary optimization in aeronautics will be discussed. The discussion will focus on aerothermal, aerostructural and aeroacoustic optimization. The accuracy with which these methods compute gradients, methods to couple gradients computed for different disciplines, standards set by industries, adjoints for optimization under uncertainties will be discussed.

Tuesday, June 29
13:25-15:25

Zoom Room 6

COMPDYN MS 7 - I: NEW ADVANCES IN COMPUTATIONAL MODELLING AND EXPERIMENTAL TESTING OF INFILLED FRAMES (2ND EDITION)

MS Organizers: Fabio Di Trapani, Liborio Cavaleri, Guido Camata, P. Benson Shing

Chair: Fabio Di Trapani, Liborio Cavaleri, Guido Camata, P. Benson Shing

C 19558 EMPIRICAL FORMULATION OF THE OUT-OF-PLANE RESISTANCE OF INFILLED FRAMES
Fabio Di Trapani, Alessandro Vizzino, Giovanni Tomaselli, P. Benson Shing

C 18873 ASSESSMENT OF OUT-OF-PLANE STRENGTH OF MASONRY INFILLS ACCORDING TO EC6
Laura Liberatore

C 19369 INFLUENCE OF THE INFILL TYPOLOGY IN THE EVALUATION OF THE ANNUAL LOSSES OF RC STRUCTURES THROUGH THE APPLICATION OF A NEW METHOD
Andrea Rossi, Paolo Morandi, Riccardo R Milanesi, Guido Magenes

C 19546 SEISMIC PERFORMANCE OF PAKISTANI-TECHNIQUE INFILLED REINFORCED CONCRETE FRAMES
Nisar Ali Khan, Alessandro Vittorio Bergami, Camillo Nuti, Giorgio Monti, Marco Vailati, Bruno Briseghella

C 19078 A SIMPLE METHODOLOGY FOR THE INFILL MASONRY WALL STIFFNESS ESTIMATION
Vanni Nicoletti, Davide Arezzo, Sandro Carbonari, Fabrizio Gara

C 18913 INFLUENCE OF PRIOR IN-PLANE DAMAGE ON THE OUT-OF-PLANE RESPONSE OF NON-LOAD BEARING UNREINFORCED MASONRY WALLS UNDER SEISMIC LOAD
Bogdan Šakić, Aleksa Milijaš, Marko Marinković, Christoph Butenweg, Sven Klinkel

C 19549 GENERATION OF OUT-OF-PLANE FRAGILITY FUNCTIONS FOR IN-PLANE DAMAGED UNREINFORCED MASONRY INFILLS
Bharat Pradhan, Liborio Cavaleri, Vasilis Sarhosis, Marco Filippo Ferrotto

C 19075 STRUCTURAL CONCEPTS IN THE DESIGN OF MASONRY-INFILLED STEEL FRAMES
Dario Sokic, Damir Markulak, Tihomir Doksanovic, Ivan Radic

Tuesday, June 29
13:25-15:25

Zoom Room 7

UNCECOMP TS 21 - I: UNCERTAINTY QUANTIFICATION, SYSTEM RELIABILITY ANALYSIS AND RISK ASSESSMENT

Chair: Miroslav Vořechovský

-
- U 18924** ANALYTICAL MODEL FOR FRACTURE IN RANDOM QUASIBRITTLE MEDIA BASED ON EXTREMES OF THE AVERAGING PROCESS
Miroslav Vořechovský
- U 19369** UNCERTAINTY QUANTIFICATION OF FAILURE OF CLAYS WITH A MODIFIED CAM CLAY YIELD CRITERION AND STOCHASTIC FEM
Ambrosios Antonios Savvides, Manolis Papadrakakis
- U 19145** UNCERTAINTY QUANTIFICATION FOR DEEP LEARNING REGRESSION MODELS IN THE LOW DATA LIMIT
Cristina Garcia-Cardona, Yen Ting Lin, Tanmoy Bhattacharya
- U 19146** THE ENSEMBLE-EVOLVING-BASED GENERALIZED DENSITY EVOLUTION EQUATION OF HIGH-DIMENSIONAL NONLINEAR SYSTEMS WITH RANDOM PARAMETERS SUBJECTED TO ADDITIVE WHITE NOISE EXCITATIONS
Jian-Bing Chen, Meng-Ze Lyu
- U 19149** ERROR ESTIMATION OF THE PROBABILITY DENSITY EVOLUTION METHOD - CHANGE OF PROBABILITY MEASURE (PDEM-COM) ON THE QUANTIFICATION OF ALEATORY AND EPISTEMIC UNCERTAINTIES
Jianbing Chen, Zhiqiang Wan
- U 19074** LINEAR ALGEBRA OF LINEAR AND NONLINEAR BAYESIAN CALIBRATION
Michaël Baudin, Régis Lebrun
- U 19047** FEM SHAKEDOWN ANALYSIS OF KIRCHOFF-LOVE PLATES UNDER UNCERTAINTY OF STRENGTH
Ngọc Trình Trần, Manfred Staat

Tuesday, June 29
13:25-15:25

Zoom Room 8

COMPDYN MS 30 - I: DYNAMIC PROTECTION SYSTEMS AND DEVICES: EXPERIMENTAL TESTS, MATHEMATICAL MODELING AND DESIGN METHODS

MS Organizers: Nicolò Vaiana, Daniele Losanno, Salvatore Sessa

Chair: Daniele Losanno

-
- C 18626** SOME RECENT ADVANCES ON THE MODELING OF THE HYSTERETIC BEHAVIOR OF RATE-INDEPENDENT PASSIVE ENERGY DISSIPATION DEVICES
Nicolò Vaiana, Ciro Napolitano, Luciano Rosati
- C 18764** TUNING THE LATERAL RESPONSE OF UNBONDED FIBER REINFORCED ELASTOMERIC ISOLATORS (U-FREIS): EXPERIMENTAL-NUMERICAL FINDINGS
Simone Galano, Andrea Calabrese, Daniele Losanno
- C 18631** SEISMIC PROTECTION OF CULTURAL HERITAGE ARTEFACTS BY MEANS OF ELASTOMERIC ISOLATORS: A CASE STUDY
D. Pellecchia, S. Lo Feudo, N. Vaiana, J-L. Dion, L. Rosati
- C 19337** STIFF DYNAMIC ABSORBERS FOR THE VERTICAL SEISMIC PROTECTION OF STRUCTURES
Marina Kalogerakou, Konstantinos Kapasakalis, Ioannis Antoniadis, Evangelos Sapountzakis
- C 18867** DYNAMIC RESPONSE OF MULTIPLE ROCKING SYSTEMS USING OPTIMIZATION BASED FRAMEWORK
Ameer Marzok, Oren Lavan
- C 18940** A COMPARATIVE STUDY ON THE ACCURACY AND EFFICIENCY OF TWO BIAXIAL HYSTERETIC MODELS SUITABLE FOR ELASTOMERIC BEARINGS
Nagavinothini Ravichandran
- C 18969** LABORATORY CHARACTERIZATION OF A RECLAIMED RUBBER COMPOUND FOR LOW-COST ELASTOMERIC ISOLATORS
Fabrizia Cilento, Daniele Losanno, Luigi Piga
- C 19136** EFFECT OF EXTREMELY LOW TEMPERATURE ON MECHANICAL PROPERTIES OF A LARGE SIZE LRB
Gokhan Ozdemir, Esengul Cavdar, Volkan Karuk

Tuesday, June 29
13:25-15:25

Zoom Room 9

UNCECOMP MS 10 - I: SURROGATE MODELS FOR UNCERTAINTY QUANTIFICATION, RELIABILITY AND SENSITIVITY ANALYSIS

MS Organizers: Bruno Sudret, Jean-Marc Bourinet, Sankaran Mahadevan, Alexandros Taflanidis

Chair: Bruno Sudret

-
- U 18879** ADAPTIVE REDUCED-ORDER MODEL CONSTRUCTION FOR CONDITIONAL VALUE-AT-RISK ESTIMATION
Boris Kramer, Matthias Heinkenschloss, Timur Takhtaganov
- U 18875** POINT PROCESS-BASED APPROACHES FOR RELIABILITY ANALYSIS OF SYSTEMS MODELED BY EXPENSIVE SIMULATORS
Guillaume Perrin
- U 19000** ARBITRARY MULTI-RESOLUTION POLYNOMIAL CHAOS EXPANSION FOR UNCERTAINTY QUANTIFICATION AND SENSITIVITY ANALYSIS IN GEOSCIENTIFIC APPLICATIONS
Ilja Kröker, Sergey Oladyshkin
- U 19016** COUPLING CONSTRAINTS IN BAYESIAN OPTIMIZATION WITH UNCERTAINTIES
Reda El Amri, Julien Pelamatti, Rodolphe Le Riche, Céline Helbert, Christopette Blanchet-Scalliet
- U 19045** AN ACTIVE LEARNING RELIABILITY ALGORITHM BASED ON LOCAL SPECTRAL RESIDUAL EXPANSIONS OF THE LIMIT STATE FUNCTION
Paul-Remo Wagner, Stefano Marelli, Iason Papaioannou, Daniel Straub, Bruno Sudret
- U 19048** ROBUST INVERSION UNDER UNCERTAINTY FOR RISK ANALYSIS – APPLICATION TO THE FAILURE OF DEFENCES AGAINST FLOODING
Charlie Sire, Rodolphe Le Riche, Didier Rulliere, Lucie Pheulpin, Yann Richet, Jérémy Rohmer
- U 19062** SPARSE BAYESIAN LEARNING OF RATIONAL FUNCTION APPROXIMATIONS TO STRUCTURAL DYNAMIC MODELS
Felix Schneider, Iason Papaioannou, Daniel Straub, Gerhard Müller
- U 19111** A SENSITIVITY-ENHANCED GENERALIZED POLYNOMIAL CHAOS METHOD FOR EFFICIENTLY ESTIMATING UNCERTAINTIES AND HIGH ORDER MOMENTS
Kyriakos Dimitrios Kantarakias, George Papadakis

Tuesday, June 29
13:25-13:55

Zoom Room 10

UNCECOMP MS 1 - II: UNCERTAINTY QUANTIFICATION IN VIBRATION BASED MONITORING AND STRUCTURAL DYNAMICS SIMULATIONS

MS Organizers: Eleni Chatzi, Manolis Chatzis, Vasilis Dertimanis, Geert Lombaert, Costas Papadimitriou

Chair: Manolis Chatzis

U 19132 BAYESIAN GRAPH NETWORKS FOR LEARNING FARM WAKE INTERACTION MODELS
Charilaos Mylonas, Imad Abdallah, Chatzi Eleni

U 19153 OPTIMAL EXPERIMENTAL DESIGN FOR PARAMETER ESTIMATION OF NONLINEAR MODELS
Tulay Ercan, Costas Papadimitriou

Tuesday, June 29
13:55-14:25

Zoom Room 10

ROUND TABLE

UNCECOMP MS 1: UNCERTAINTY QUANTIFICATION IN VIBRATION BASED MONITORING AND STRUCTURAL DYNAMICS SIMULATIONS

Moderators: Manolis Chatzis, Vasilis Dertimanis

Panel: Alice Cicirello, Timothy Rogers, Alessandro Palmeri, Eleni Chatzi, Geert Lombaert, Costas Papadimitriou

Agenda:

- Characterisation and Propagation of uncertainties: open challenges
- Aspects of the identification of offshore structures under narrowband loading
- The challenge of non-stationarity in dynamics simulations

15:25-15:45

Break

TECHNICAL SESSIONS

Tuesday, June 29
15:45-17:45

Zoom Room 1

COMPDYN MS 4 - II: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

MS Organizers: Francesco Clementi, Nicola Cavalagli, Antonio Formisano, Gabriele Milani, Vagelis Plevris

Chair: Antonio Formisano

C 19270 DYNAMIC ANALYSIS OF MASONRY CHIMNEYS BY MEANS OF A SIMPLE RIGID BEAM MODEL
Daniele Baraldi, Gabriele Milani, Vasilis Sarhosis

C 19387 BEHAVIOUR FACTOR ASSESSMENT OF ANCIENT MASONRY TOWERS THROUGH AN INNOVATIVE SIMPLIFIED PUSHOVER METHOD
Alessandro De lasio, Peixuan Wang, Gabriele Milani, Bahman Ghiassi

C 19392 FE PUSHOVER ANALYSES OF A 20TH-CENTURY MASONRY CHIMNEY IN SPAIN: COLLAPSE BEHAVIOR AND NUMERICAL UNCERTAINTIES
Alessandro De lasio, Gabriele Milani, Jose M. Adam

C 18857 MODELING STRATEGIES FOR NON-LINEAR SEISMIC ANALYSES: COMPARISON AMONG EFM AND FEM RESULTS ON AN EXISTING URM CASE STUDY
Marco Pegoraro, Elisa Saler, Matteo Salvalaggio, Maria Rosa Valluzzi

C 19077 ON THE USE OF DIGITAL TWINS FOR SEISMIC STRUCTURAL HEALTH MONITORING OF A MONUMENTAL MASONRY TOWER
Alban Kita, Nicola Cavalagli, Ilaria Venzani, Filippo Ubertini

C 19358 “SCAGLIA ROSSA” EXPERIMENTAL CAMPAIGN AND MODEL UPDATING FOR NUMERICAL DAMAGE EVALUATION
Georgios Panagiotis Salachoris, Erica Magagnini, Francesco Clementi

C 19253 3D ADVANCED NUMERICAL MODELLING OF A CATALAN-LAYERED MASONRY VAULT UNREINFORCED AND REINFORCED WITH GLASS-TRM MATERIALS AND SUBJECTED TO VERTICAL SUPPORT MOVEMENTS
Elisa Bertolesi, Gabriele Milani, José M. Adam, Pedro A. Calderón

Tuesday, June 29
15:45-17:45

Zoom Room 2

COMPDYN MS 33 - III: EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

MS Organizers: George C. Manos, Konstantinos Katakalos

Chair: Milton Demosthenous, Konstantinos Katakalos

-
- C 20171** PSEUDO-DYNAMIC ANALYSES OF INFILLED REINFORCED CONCRETE FRAMED STRUCTURES WITH PRIOR DAMAGES AFTER ADVANCED RETROFIT
*Theodoros Rousakis, Evgenia Anagnostou, **Theodora Fanaradelli***
- C 19497** EXPERIMENTAL AND NUMERICAL INVESTIGATION OF THE OUT OF PLANE BEHAVIOR OF THERMAL INSULATED MASONRY WALLS
*George C. Manos, **Lazaros Melidis**, Konstantinos Katakalos, Anthimos Anastasiadis*
- C 19493** THE USE OF INTELLIGENT FACADES FOR UPGRADING ENERGY AND SEISMIC DEMANDS OF EXISTING R/C STRUCTURE
*Lazaros Melidis, **Efthymios A. Kechagias**, Konstantinos Katakalos, George C. Manos*
- C 19496** IN PLANE BEHAVIOR OF PARTIALLY GROUTED MASONRY WALLS USING A NEW CLAY UNIT. LABORATORY MEASUREMENTS AND NUMERICAL SIMULATIONS
*George C. Manos, **Lazaros Melidis**, Lampros Kotoulas, Konstantinos Katakalos*
- C 19495** THE BEHAVIOR OF PARTIALLY GROUTED MASONRY WALLS SUBJECTED TO OUT OF PLANE SEISMIC TYPE LOADS. LABORATORY MEASUREMENTS AND NUMERICAL SIMULATIONS
*George C. Manos, **Lazaros Melidis**, Lampros Kotoulas, Konstantinos Katakalos*
- C 19500** MECHANICAL PROPERTIES CHARACTERISATION OF FRPS UNDER ELEVATED TEMPERATURES
***Christina Papadimitriou**, Lambros Kotoulas, Nikolaos Makris, Lazaros Melidis, Konstantinos Katakalos*
- C 20507** EXPERIMENTAL AND NUMERICAL STUDY OF SELF-SUPPORTING DOUBLE SKIN METAL FACED MINERAL WOOL PANELS
***Sofia Gkaraklova**, Lazaros Melidis, George C. Manos, Konstantinos Katakalos*

Tuesday, June 29
15:45-17:45

Zoom Room 3

COMPDYN MS 6 - II: ADVANCES ON SEISMIC ASSESSMENT AND LOCAL COLLAPSE MECHANISMS OF RIGID BLOCKS IN STRUCTURES AND INFRASTRUCTURES

MS Organizers: Claudia Casapulla, Linda Giresini, Francesca Taddei, Ehsan Noroozinejad

Chair: Linda Giresini

C 18896 REDUCTION OF HOUSNER'S COEFFICIENT OF RESTITUTION FOR MASONRY WALLS UNDER ONE-SIDED ROCKING

Linda Giresini, Pietro Croce

C 20253 THE EFFECT OF FLEXIBILITY ON THE DYNAMIC RESPONSE OF ROCKING STRUCTURES

Spyridon Diamantopoulos, Michalis Fragiadakis

C 18634 PRELIMINARY DESIGN METHOD FOR ROCKING AND NEGATIVE STIFFNESS SYSTEMS

Natalia Reggiani Manzo, Michalis Vassiliou

COMPDYN MS 17 - I: RECENT DEVELOPMENTS IN ROCKING STRUCTURES

MS Organizers: Matt DeJong, Michalis Vassiliou

Chair: Michalis Vassiliou

C 18678 SEISMIC BEHAVIOR OF ARCHAEOLOGICAL MULTIDRUM COLUMNS AT THE POMPEII SITE

Francesca Autiero, Giuseppina De Martino, Marco Di Ludovico, Andrea Prota

C 18974 THE EFFECT OF IMPACT MODELING ON THE SEISMIC RESPONSE OF MULTI-STOREY PODIUM STRUCTURES

Ioannis E. Kavvadias, Kosmas E. Bantilas, Lazaros Vasiliadis, Anaxagoras Elenas

C 18962 QUANTIFYING SEISMIC RESILIENCE OF SINGLE-COLUMN ROCKING BRIDGES – A COMPARATIVE STUDY

Anastasios Giouvanidis, You Dong

C 18972 DYNAMIC RESPONSE OF MULTI-STOREY STRUCTURES SEISMICALLY ISOLATED USING KINEMATIC BEARINGS

Kosmas E. Bantilas, Ioannis E. Kavvadias, Lazaros Vasiliadis, Anaxagoras Elenas

Tuesday, June 29
15:45-17:45

Zoom Room 4

COMPDYN MS 32 - II: SIMPLIFIED METHODOLOGIES FOR PERFORMANCE AND LOSS ASSESSMENT AT BUILDING OR TERRITORIAL SCALE

MS Organizers: Maria Polese, Marco Gaetani d'Aragona

Chair: Maria Polese, Marco Gaetani d'Aragona

C 19382 PELL-SCHOOLS A STANDARDIZED AND INTEROPERABLE PLATFORM FOR THE SEISMIC VULNERABILITY AND ENERGY EFFICIENCY DATA MANAGEMENT OF ITALIAN SCHOOLS
*Laura Blaso, **Sonia Giovinnazzi**, Simona Bianchi, Livio Pedone, Chiara Ormando, Paolo Clemente, Stefano Pampanin, Nicoletta Gozo, Giuseppina Giuliani, Maurizio Pollino*

C 19002 A SEISMIC RISK ASSESSMENT FRAMEWORK FOR LOSS ESTIMATION OF CRITICAL INFRASTRUCTURE – HOSPITALS CASE
*Paolo Basso, Saimir Osmani, Matteo Scolari, **Ruben Valsecchi***

C 18567 DEVELOPMENT OF A PYTHON-BASED STOREY LOSS FUNCTION GENERATOR
***Davit Shahnazaryan**, Gerard O'Reilly, Ricardo Monteiro*

COMPDYN MS 36: METHODOLOGIES AND ADVANCED TOOLS FOR SEISMIC RISK ASSESSMENT, MANAGEMENT, AND MITIGATION: ADVANCES AND OPEN CHALLENGES

MS Organizers: Marco Vona, Donatello Cardone, Amedeo Flora, Chiara Iacovino

Chair: Amedeo Flora, Chiara Iacovino

C 18998 ON THE INFORMATION OF IN SITU MATERIAL PROPERTIES OF EXISTING R.C. STRUCTURES
Marco Vona

C 19404 SEISMIC ASSESSMENT OF MASONRY BUILDINGS AT TERRITORIAL SCALE
***Chiara Iacovino**, Amedeo Flora, Donatello Cardone, Marco Vona*

C 18672 A FRAMEWORK FOR THE ASSESSMENT OF SEISMIC DAMAGE SCENARIOS IN THE EMILIA-ROMAGNA REGION, ITALY
***Elena Simoni**, Nicola Buratti, Claudio Mazzotti*

C 18981 THE USE OF AN INTEGRATED APPROACH FOR BUILDING INVENTORY AND EFFECTS ON RISK ESTIMATIONS AT THE TERRITORIAL SCALE
*Maria Polese, Marco Di Ludovico, **Gabriella Tocchi**, Andrea Prota*

C 19474 INVESTIGATING GROUND-MOTION DURATION EFFECTS ON BUILDING PORTFOLIO LOSS ESTIMATES
***Kenneth Otárola**, Roberto Gentile, Luis Sousa, Carmine Galasso*

Tuesday, June 29
15:45-17:45

Zoom Room 5

EUROGEN MS 6: SOFT COMPUTING METHODS AND APPLICATIONS IN CIVIL AND STRUCTURAL ENGINEERING

MS Organizers: Vagelis Plevris, German Solorzano, Afaq Ahmad, Mohamed El Amine Ben Seghier

Chair: Vagelis Plevris

E 18448 DESIGN OF REINFORCED CONCRETE ISOLATED FOOTINGS UNDER AXIAL LOADING WITH ARTIFICIAL NEURAL NETWORKS

German Solorzano, Vagelis Plevris

E 18529 PREDICTION MODELS FOR LOAD CARRYING CAPACITY OF RC WALL THROUGH NEURAL NETWORK

Shaheera Sharib, Naveed Ahmad, Vagelis Plevris, Afaq Ahmad

E 18433 SOFT COMPUTING FRAMEWORK FOR THE UNCERTAINTY-BASED OPTIMIZATION OF THE LENGTH AND HEIGHT OF OGEE-CRESTED SPILLWAY

Jafar Jafari-Asl, Mohamed El Amine Ben Seghier, Sima Ohadi, Vagelis Plevris

E 18424 AN OPTIMIZATION ALGORITHM FOR THE DETECTION OF DAMAGE IN FRAME STRUCTURES

Annalisa Greco, Ilaria Fiore, Alessandro Pluchino

EUROGEN TS 2: AERONAUTICAL AEROSPACE AND SPACE ENGINEERING

Chair: Vagelis Plevris

E 18315 PROPELLER OPTIMIZATION - STRIVE TO PERFORMANCE / ACOUSTIC TRADE-OFF

Ohad Gur, Jonathan Silver, Radovan Dítě, Raam Sundhar

E 18334 EFFICIENT AND ACCURATE MODELING OF NON-PRISMATIC BEAMLIKE STRUCTURES

Giovanni Migliaccio

Tuesday, June 29
15:45-17:15

Zoom Room 6

COMPDYN MS 7 - II: NEW ADVANCES IN COMPUTATIONAL MODELLING AND EXPERIMENTAL TESTING OF INFILLED FRAMES (2ND EDITION)

MS Organizers: Fabio Di Trapani, Liborio Cavaleri, Guido Camata, P. Benson Shing

Chair: Fabio Di Trapani, Liborio Cavaleri, Guido Camata, P. Benson Shing

-
- C 19559** MECHANICAL VS EMPIRICAL MODELS FOR MODELS IN-PLANE RESPONSE OF INFILLED FRAMES: RELIABILITY COMPARISON AND VALIDATION OF A NEW DATA-DRIVEN MODEL
Fabio Di Trapani, Giovanni Tomaselli, Gabriele Bertagnoli
- C 19114** ASSESSMENT OF DAMAGE TO MODERN REINFORCED CONCRETE BUILDINGS – ENGINEERING ANALYSIS OF THE M6.4 ALBANIA EARTHQUAKE, 26TH OF NOV. 2019
Lars Abrahamczyk, Davorin Penava, Melad Haweyou, Filip Anić, Arturo E. Schultz, Jeff Rautenberg
- C 19421** LOCAL EFFECTS DUE TO THE SEISMIC INTERACTION BETWEEN INNOVATIVE DUCTILE MASONRY INFILLS AND RC ELEMENTS
Riccardo R. Milanesi, Valentino Bolis, Simone Pelucco, Paolo Morandi, Guido Magenes, Marco Preti
- C 18704** NUMERICAL MESO-MODEL FOR REINFORCED CONCRETE FRAMES WITH RETROFITTED MASONRY INFILL
Gianni Blasi, Daniele Perrone, Maria Antonietta Aiello
- C 18914** EXPERIMENTAL INVESTIGATION OF BEHAVIOUR OF MASONRY INFILLED RC FRAMES UNDER OUT-OF-PLANE LOADING
Aleksa Milijaš, Bogdan Šakić, Marko Marinković, Christoph Butenweg, Sven Klinkel
- C 19508** A DEGRADING BOUC-WEN DATA-DRIVEN MODEL FOR THE CYCLIC BEHAVIOR OF MASONRY INFILLED RC FRAMES
Matteo Pellicari, Stefano Sirotti, Fabio Di Trapani, Bruno Briseghella, Giuseppe Carlo Marano, Camillo Nuti, Angelo Marcello Tarantino

Tuesday, June 29
17:15-17:45

Zoom Room 6

ROUND TABLE

COMPDYN MS 7: NEW ADVANCES IN COMPUTATIONAL MODELLING AND EXPERIMENTAL TESTING OF INFILLED FRAMES (2ND EDITION)

Moderator: Fabio Di Trapani

Agenda: Open discussion

Tuesday, June 29
15:45-17:45

Zoom Room 7

UNCECOMP TS 21 - II: UNCERTAINTY QUANTIFICATION, SYSTEM RELIABILITY ANALYSIS AND RISK ASSESSMENT

Chair: Evangelos Papoutsis-Kiachagias

-
- U 19104** ASSESSMENT OF VARIANTS OF THE METHOD OF MOMENTS AND POLYNOMIAL CHAOS APPROACHES TO AERODYNAMIC UNCERTAINTY QUANTIFICATION
Evangelos Papoutsis-Kiachagias, Varvara Asouti, Kyriakos Giannakoglou
- U 19142** ENSEMBLE APPROXIMATE CONTROL VARIATE ESTIMATORS: APPLICATIONS TO MULTI-FIDELITY IMPORTANCE SAMPLING
Trung Pham, Alex Gorodetsky
- U 18984** IDENTIFICATION OF BOLTED JOINT MODELS USING A STOCHASTIC THIN LAYER
Nidhal Jamia, Hassan Jalali, Michael I. Friswell, Hamed Haddad Khodaparast, Javad Taghipour
- U 19427** VARIABILITY ESTIMATION OF FAILURE OF SHALLOW FOUNDATION ON CLAYEY SOILS WITH A MODIFIED CAM CLAY YIELD CRITERION AND STOCHASTIC FEM
Ambrosios Antonios Savvides, Manolis Papadrakakis
- U 18920** SPACE-DEPENDENT BAYESIAN MODEL AVERAGING OF TURBULENCE MODELS FOR COMPRESSOR CASCADE FLOWS
Maximilien de Zordo-Banliat, Grégory Dergham, Paola Cinnella, Xavier Merle
- U 18925** A SEQUENTIAL MULTI-POINT SAMPLING PROCEDURE FOR SURROGATE MODELS
Matthias Fischer, Carsten Proppe
- U 18933** CALIBRATION OF MATERIAL MODEL PARAMETERS USING MIXED-EFFECTS MODEL
Clément Laboulfie, Matthieu Balesdent, Loïc Brevault, Sébastien Da Veiga, François-Xavier Irisarri, Rodolphe Le Riche, Jean-François Maire
- U 18955** ADAPTIVE SEQUENTIAL SAMPLING FOR POLYNOMIAL CHAOS EXPANSION
Lukáš Novák, Miroslav Vořechovský, Václav Sadílek

Tuesday, June 29
15:45-17:45

Zoom Room 8

COMPDYN MS 30 - II: DYNAMIC PROTECTION SYSTEMS AND DEVICES: EXPERIMENTAL TESTS, MATHEMATICAL MODELING AND DESIGN METHODS

MS Organizers: Nicolò Vaiana, Daniele Losanno, Salvatore Sessa

Chair: Nicolò Vaiana

C 18891 REAL-TIME HYBRID SIMULATION OF A STRUCTURE WITH CIRCULAR FIBER REINFORCED ISOLATORS
Carlos Riascos, Semion Klopov, Johannie Marulanda, Peter Thomson, Giorgio Serino

C 18813 ON THE VERTICAL RESPONSE OF FIBER REINFORCED ELASTOMERIC ISOLATORS (FREIS) UNDER COMBINED VERTICAL AND LATERAL LOADING
Simone Galano

C 18879 SEISMIC ISOLATION OF LIGHTWEIGHT STRUCTURES THROUGH WIRE ROPE DEVICES: PRELIMINARY EXPERIMENTAL RESULTS AND SIMULATION
Mariacristina Spizzuoco, Giorgio Serino

COMPDYN MS 38 - I: DYNAMIC SOIL-FOUNDATION-STRUCTURE INTERACTION: DEVELOPMENTS AND EMERGING ISSUES

MS Organizers: Emmanouil Rovithis, Raffaele Di Laora, Maria Iovino

Chair: Emmanouil Rovithis, Raffaele Di Laora, Maria Iovino

C 19487 KINEMATIC PILE-HEAD BENDING UNDER LARGE EARTHQUAKE-INDUCED SHEAR STRAINS
Stefano Stacul, Emmanouil Rovithis, Raffaele Di Laora

C 19332 INFLUENCE OF SCOUR ON DYNAMIC IMPEDANCES OF BRIDGE SHALLOW FOUNDATIONS
Christos Antonopoulos, Enrico Tubaldi, Sandro Carbonari, Fabrizio Gara, Francesca Dezi

C 19562 ASPECTS OF SEISMIC SOIL-PILE-STRUCTURE INTERACTION IN SOFT CLAY BY CENTRIFUGE TESTING
Maria Iovino, Emmanouil Rovithis, Raffaele Di Laora, Cristiano D'Alterio, Luca de Sanctis, Thejesh K. Garala, Stuart Haigh, Gopal S. Madabhushi

Tuesday, June 29
15:45-17:45

Zoom Room 9

UNCECOMP MS 10 - II: SURROGATE MODELS FOR UNCERTAINTY QUANTIFICATION, RELIABILITY AND SENSITIVITY ANALYSIS

MS Organizers: Bruno Sudret, Jean-Marc Bourinet, Sankaran Mahadevan, Alexandros Taflanidis

Chair: Stefano Marelli

-
- U 18903** AN ACTIVE LEARNING-BASED GAUSSIAN PROCESS METAMODELLING STRATEGY FOR ESTIMATING THE PROBABILITY DISTRIBUTION IN FORWARD UQ ANALYSIS
Marco Broccardo, Ziqi Wang
- U 18913** CONSTRUCTION OF SPARSE POLYNOMIAL CHAOS SURROGATE MODEL FOR SIMULATORS WITH MIXED CONTINUOUS AND CATEGORICAL VARIABLES
Xujia Zhu, Bruno Sudret
- U 19023** METAMODELING METHODS THAT INCORPORATE QUALITATIVE VARIABLES FOR IMPROVED DESIGN OF VEGETATIVE FILTER STRIPS
Claire Lauvernet, Céline Helbert, Bruno Sudret
- U 19029** HOW CAN WE QUANTIFY AND REDUCE THE UNCERTAINTY OF A WATERSHED-SCALE PESTICIDE TRANSFER MODEL? A COMPARISON OF SEVERAL APPROACHES
Emilie Rouzies, Claire Lauvernet, Bruno Sudret, Arthur Vidard
- U 19033** STRUCTURE EXPLOITING METHODS FOR FAST UNCERTAINTY QUANTIFICATION WITH APPLICATION TO MULTIPHASE FLOW THROUGH POROUS MEDIA
Helen Cleaves, Alen Alexanderian, Bilal Saad
- U 18859** KRIGING SURROGATE MODELING FOR APPROXIMATING EDP DISTRIBUTIONS UNDER STOCHASTIC GROUND MOTION
Aikaterini Kyprioti, Alexandros Taflanidis
- U 18902** STOCHASTIC PARAMETER ESTIMATION OF A GRADIENT-ENHANCED DAMAGE MATERIAL MODEL OF CONCRETE USING VARIATIONAL BAYESIAN INFERENCE
Abbas Jafari, Thomas Titscher, Tyler S. Oesch, Eleni Chatzi, Jörg F. Unger
- U 18938** SEQUENTIAL ACTIVE LEARNING OF LOW-DIMENSIONAL MODEL REPRESENTATIONS FOR RELIABILITY ANALYSIS
Max Ehre, Iason Papaioannou, Bruno Sudret, Daniel Straub

Tuesday, June 29
15:45-17:45

Zoom Room 10

UNCECOMP MS 6: MACHINE LEARNING AND UNCERTAINTY QUANTIFICATION IN BIOLOGICAL SYSTEMS

MS Organizers: Paris Perdikaris, Andrea Manzoni, Luca Dede

Chair: Paris Perdikaris

U 19348 DEEP LEARNING THE SOLUTION OPERATOR OF PARAMETRIC PARTIAL DIFFERENTIAL EQUATIONS

*Sifan Wang, Hanwen Wang, **Paris Perdikaris***

U 19123 LEARNING ATRIAL FIBER ORIENTATIONS AND CONDUCTIVITY TENSOR FROM INTRACARDIAC CONTACT RECORDINGS USING PHYSICS-INFORMED NEURAL NETWORKS

*Thomas Grandits, **Simone Pezzuto**, Francisco Sahli Costabal, Ulrich Schotten, Ali Gharaviri, Jolijn Lubrecht, Thomas Pock, Gernot Plank, Rolf Krause*

U 19124 MACHINE LEARNING BASED MODEL ORDER REDUCTION FOR FAST AND RELIABLE SOLUTION OF DIFFERENTIAL EQUATIONS: APPLICATION TO MULTISCALE CARDIAC MODELING

***Francesco Regazzoni**, Luca Dedè, Alfio Quarteroni*

U 19140 EFFICIENT SOLUTION TO INVERSE PROBLEMS IN CARDIAC NONLINEAR MECHANICS BY PHYSICS BASED AND DEEP-LEARNING BASED REDUCED-ORDER MODELS

***Ludovica C Ricci**, Stefania Fresca, Andrea Manzoni, Alfio Quarteroni*

U 19154 EMPIRICAL MODELS FOR BETWEEN/WITHIN -SUBJECT FLOW AND PRESSURE VARIABILITY IN HUMAN ARTERIES

***Toni Lassila**, Ali-Sarrami Foroushani, Imane Tarrahi, Suze-Anne A. Korteland, Marthe Vaessen, Frank J.H. Gijzen, Alejandro F. Frangi*

U 18942 UNCERTAINTY QUANTIFICATION FOR SOFT BIOLOGICAL TISSUES: STOCHASTIC MODELING AND IDENTIFICATION BASED ON PHYSICAL EXPERIMENTS

***Peiyi Chen**, Johann Guilleminot*

U 19119 NOISE IN 4D FLOW MRI VELOCITIES FROM UNDERSAMPLED ACQUISITION SEQUENCES: CHARACTERIZATION AND USE IN MACHINE LEARNING

***Lauren Partin**, Carlos A. Sing-Long Collao, Daniele E. Schiavazzi*

U 19122 FAST CHARACTERIZATION OF INDUCIBLE REGIONS OF ATRIAL FIBRILLATION MODELS WITH MULTI-FIDELITY GAUSSIAN PROCESS

***Lia Gander**, Simone Pezzuto, Ali Gharaviri, Rolf Krause, Paris Perdikaris, Francisco Sahli Costabal*

17:45-17:50

Break

SEMI-PLENARY LECTURES

Tuesday, June 29
17:50-19:10

Zoom Room 1

COMPDYN

Chair: Denis Duhamel

C 19566 A NEW NUMERICAL APPROACH TO SOLUTION OF PDES WITH OPTIMAL ACCURACY ON IRREGULAR DOMAINS AND INTERFACES USING CARTESIAN MESHES. APPLICATION TO THE WAVE, HEAT, HELMHOLTZ, POISSON AND ELASTICITY EQUATIONS
Alexander Idesman

C 19149 DYNAMIC ANALYSIS OF PERIODIC STRUCTURES AND METAMATERIALS VIA WAVE APPROACHES AND FINITE ELEMENT PROCEDURES
Jean-Mathieu Mencik, Denis Duhamel

Tuesday, June 29
17:50-19:10

Zoom Room 2

UNCECOMP

Chair: David Moens

U 19443 SCALABLE DESIGN OPTIMIZATION UNDER UNCERTAINTY: STOCHASTIC GRADIENT APPROACHES
Alireza Doostan

U 19436 A UNIFIED STOCHASTIC FRAMEWORK FOR RELIABILITY-BASED DESIGN OPTIMIZATION OF STRUCTURAL DYNAMICAL SYSTEMS
Hector Jensen

Tuesday, June 29
17:50-19:10

Zoom Room 3

EUROGEN

Chair: Gilbert Roge

E 18408 AUTOMATED DESIGN OPTIMIZATION OF TURBOMACHINERY WITH THE DISCRETE ADJOINT METHOD: STATE-OF-THE-ART AND FUTURE PERSPECTIVES
Matteo Pini

E 18345 POTENTIAL OF INTERACTIVE MULTIOBJECTIVE OPTIMIZATION IN DECISION ANALYTICS
Kaisa Miettinen

Tuesday, June 29
17:50-19:10

Zoom Room 4

EUROGEN

Chair: Kyriakos Giannakoglou

E 18531 GAME THEORY BASED EVOLUTIONARY ALGORITHMS: APPLICATION IN OPTIMIZATION OF SKELETAL STRUCTURES

David Greiner

E 18401 LARGE SCALE DENSITY-BASED TOPOLOGY OPTIMIZATION WITH APPLICATIONS IN MECHANICS, AND COUPLED MULTIPHYSICS PROBLEMS

Boyan Lazarov

Tuesday, June 29
17:50-19:10

Zoom Room 5

EUROGEN

Chair: Panos M. Pardalos

E 18560 DESIGN SPACE DIMENSIONALITY REDUCTION METHODS FOR LARGE-SCALE OPTIMIZATION PROBLEM

Emilio Fortunato Campana

E 18343 CHALLENGES IN DYNAMIC SYSTEM DESIGN USING LARGE-SCALE TOPOLOGY OPTIMIZATION: COMPUTATIONAL ASPECTS, MANUFACTURABILITY AND INTEGRATED CONTROLLER-STRUCTURE OPTIMIZATION

Matthijs Langelaar, Arnoud Delissen

19:10-19:15

Break

TECHNICAL SESSIONS

Tuesday, June 29
19:15-21:15

Zoom Room 1

COMPDYN MS 4 - III: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

MS Organizers: Francesco Clementi, Nicola Cavalagli, Antonio Formisano, Gabriele Milani, Vagelis Plevris

Chair: Francesco Clementi

C 19051 NUMERICAL MODELLING OF DIAGONAL COMPRESSION TESTS ON MASONRY PANELS STRENGTHENED BY FRCM

*Francesca Ferretti, Francesco Saverio Murgo, **Claudio Mazzotti***

C 19185 A NURBS-BASED NUMERICAL APPROACH FOR THE ASSESSMENT OF MASONRY VAULTS UNDERGOING DIFFERENTIAL SETTLEMENTS

***Andrea Chiozzi**, Nicola Grillanda, Gabriele Milani, Antonio Tralli*

C 19213 NUMERICAL MODELLING OF BONDED BRICKWORK UNDER CYCLIC COMPRESSION LOADING

***Mohammad Asad**, Tatheer Zahra, Julian Thamboo*

C 19400 FINITE ELEMENT ANALYSIS OF JUMA MOSQUE IN UZBEKISTAN BASED ON LASER SCANNING AND AMBIENT STUDIES

***Shakhzod Takhirov**, Bahodir Rakhmonov*

C 19628 SEISMIC RETROFITTING TECHNIQUES FOR EXISTING MASONRY BUILDINGS

*Ida Mascolo, Antonio Fortunato, **Carlo Olivieri**, Antonio Gesualdo*

C 18791 PRELIMINARY NONLINEAR STATIC AND DYNAMIC ANALYSIS OF THE MAIN PYRAMID OF HUACA DE LA LUNA, PERU

***Selman Tezcan**, Miguel a. Pando, Rafael Aguilar, Benjamin Castañeda, Carol Rojas, Renato Perucchio*

C 18680 NON-DESTRUCTIVE AND DESTRUCTIVE TESTS ON OPUS INCERTUM MASONRY PANELS

***Francesca Autiero**, Giuseppina De Martino, Marco Di Ludovico, Andrea Prota*

C 19290 TERRITORIAL ANALYSIS OF SEISMIC PERFORMANCE OF ANCIENT CHURCHES: METHODS AND APPLICATION TO CASE STUDIES

***Michele D'Amato**, R. Laguardia, Rosario Gigliotti, Antonio Formisano*

C 19179 ANALYTICAL AND NUMERICAL ANALYSIS OF S. MARTINO'S DEI GUALDESI CHURCH DAMAGED DURING THE 2016 CENTRAL ITALY SEISMIC SEQUENCE

***Elvis Cescatti**, Michol Rampado, Veronica Follador, Francesca da Porto, Claudio Modena*

Tuesday, June 29
19:15-20:45

Zoom Room 2

COMPDYN MS 33 - IV: EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

MS Organizers: George C. Manos, Konstantinos Katakalos

Chair: George C. Manos, George Manolis

-
- C 19522** STUDY OF THE INFLUENCE OF UNDERLYING SOFT-SOIL LAYERS ON THE DYNAMIC AND EARTHQUAKE RESPONSE OF BELL TOWERS
George C. Manos
- C 19669** PASSIVE CONTROL ISSUES ON THE LONGITUDINAL AND TRANSVERSE VIBRATIONS OF FLEXIBLE PYLONS
George Manolis, George Dadoulis
- C 19514** EXPERIMENTAL TESTING CAMPAIGN AND NUMERICAL MODELLING OF AN INNOVATIVE BASE-PLATE CONNECTION FOR PALLET RACKING SYSTEMS
Bonaventura Tagliaferro, Rosario Montuori, Ioannis Vayas, Sofia Antonodimitraki, Magdalini D. Titirla, Marco Simoncelli, Xenophon Lignos
- C 19159** DYNAMIC AND VIBROACOUSTIC RESPONSE OF TIMBER FLOOR PANELS. MEASUREMENTS AND NON-LINEAR NUMERICAL SIMULATIONS
Magdalini Titirla, Sarah Benakli, Walid Larbi
- C 19027** EXPERIMENTAL IDENTIFICATION OF MECHANICAL AND DYNAMIC CHARACTERISTICS OF 3D PRINTING SPECIMENS
Ioannis E. Kavvadias, Konstantinos Tsongas, Dimitrios Tzetzis, Kosmas E. Bantilas, Lazaros Vasiliadis, Anaxagoras Elenas
- C 19595** EXPERIMENTAL AND NUMERICAL INVESTIGATION OF THE STRENGTHENING OF TRADITIONAL TIMBER FRAMES
Ioannis Stavrou, Panayiotis Demosthenous, Stelios Papastilianou, Milton Demosthenous

Tuesday, June 29
20:45-21:30

Zoom Room 2

ROUND TABLE

COMPDYN MS 33: EXPERIMENTAL MEASUREMENTS AND NUMERICAL SIMULATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

Moderator: George C. Manos

Panel: George C. Manos, Lazaros Melidis, Konstantinos Katakalos, Milton Dimosthenous

- Agenda:*
- Seismic performance of energy efficient facades of multistorey buildings
 - Seismic performance of low rise houses built with innovative partially reinforced clay masonry
 - Retrofitting of Reinforced Concrete structural elements using FRP innovative techniques
 - The role of the water and the humidity to the mechanical properties of the materials, the loadings, the pathology and the capacity of the masonry structures

Tuesday, June 29
19:15-21:15

Zoom Room 3

COMPDYN MS 17 - II: RECENT DEVELOPMENTS IN ROCKING STRUCTURES

MS Organizers: Matt DeJong, Michalis Vassiliou

Chair: Michalis Vassiliou

C 18635 BASE VERSUS TOP ACTIVE CONTROL TO IMPROVE DYNAMIC AND SEISMIC PERFORMANCES OF RIGID BLOCKS

*Angelo Di Egidio, **Alessandro Contento**, Stefano Pagliaro*

C 18644 UNIFORM RISK SPECTRA FOR NEGATIVE STIFFNESS SYSTEMS

***Natalia Reggiani Manzo**, Christos Lachanas, Michalis Vassiliou, Dimitrios Vamvatsikos*

C 18977 3D ROCKING MOTION: BLIND PREDICTION CONTEST RESULTS AND INFLUENCE OF EVALUATION METRIC ON THE RANKINGS

***Michalis F. Vassiliou**, Marco Broccardo, Cihan Cengiz, Matt Dietz, Luiza Dihoru, Selim Gunay, Khalid M. Mosalam, George Mylonakis, Anastasios Sextos, Bozidar Stojadinovic*

C 18880 THE INFLUENCE OF IMPACT MODELLING ASSUMPTIONS ON THE DYNAMIC BEHAVIOUR OF FLEXIBLE ROCKING OSCILLATORS

***Huanian Zhu**, Manolis Chatzis, Sinan Acikgoz*

C 18523 REDUCTION OF LOCAL DAMAGES IN PRECAST POST-TENSIONED SEGMENTAL BRIDGE PIERS

*Parya Ahmadi, **Ehsan Ahmadi**, Mohammad M. Kashani*

C 19206 FINITE ELEMENT MODELLING OF A RC ROCKING WALL WITH ADDITIONAL STEEL REBARS

***Michele Egidio Bressanelli**, Andrea Belleri, Jose Ignacio Restrepo*

C 19547 CYCLIC TEST OF A PRECAST BRIDGE COLUMN FOR SUSTAINABLE BRIDGE DESIGN

***Natalia Reggiani Manzo**, Michalis Vassiliou*

C 19555 ROCKING OF A RIGID BLOCK ON A SIMPLY SUPPORTED BEAM SUBJECTED TO BASE EXCITATION: NSCD SIMULATION AND SMALL-SCALE EXPERIMENTAL VALIDATION

***Nina Čeh**, Teo Mudrić, Emina Smlatić, Gordan Jelenić, Stefan Hante, Martin Arnold*

Tuesday, June 29
19:15-21:15

Zoom Room 4

COMPDYN MS 16: DYNAMIC RESPONSE ASSESSMENT IN RAIL TRACK ENGINEERING

MS Organizers: Lukas Moschen, Grigorios Tsinidis, Christoph Adam, Anastasios Sextos

Chair: Anastasios Sextos

C 18641 APPLICATION AND ASSESSMENT OF A DYNAMIC SOIL-BRIDGE-TRAIN INTERACTION MODEL

Benjamin Hirzinger, Christoph Adam

C 19644 SEISMIC FRAGILITY ANALYSIS OF RAILWAY RC BRIDGES. ACCOUNTING FOR BRIDGE-TRAIN INTERACTION BASED ON A NOVEL FORMULATION FOR CONSTRAINED DYNAMICAL SYSTEMS AND A CO-SIMULATION TECHNIQUE

Sotiria Stefanidou, Elias Paraskevopoulos

C 19196 AN EXTENDED MODIFIED BRIDGE SYSTEM METHOD TO DECOUPLE THE VEHICLE-BRIDGE INTERACTION PROBLEM

Charikleia Stoura, Elias Dimitrakopoulos

C 18645 A SIMPLE VEHICLE-TRACK-BRIDGE-SOIL INTERACTION MODEL FOR ANALYZING THE DYNAMIC RESPONSE OF RAILWAY BRIDGES CROSSED BY HIGH-SPEED TRAINS

Paul König, Christoph Adam, Patrick Salcher, Benjamin Hirzinger

C 18860 A SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS TO SOLVE THE VEHICLE-BRIDGE INTERACTION PROBLEM

Charikleia Stoura, Elias Dimitrakopoulos, Elias Paraskevopoulos, Sotirios Natsiavas

COMPDYN MS 41 - I: SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES

MS Organizers: Enrico Tubaldi, Laura Ragni, Dario De Domenico, Hamid Ahmadi

Chair: Dario De Domenico

C 19239 MULTI-LEVEL OPTIMISATION OF NONLINEAR VISCOUS DAMPERS FOR SEISMIC RETROFIT OF SUBSTANDARD STEEL FRAMES

Dario De Domenico, Iman Hajirasouliha

C 18899 EFFECT OF LEAD RUBBER BEARING (LRB) MODELING TECHNIQUE ON THE SEISMIC RESPONSE OF BASE-ISOLATED BRIDGES

Vahid Aghaeidoost, Ahm Muntasir Billah

C 18551 SEISMIC PERFORMANCE OF STRUCTURES EQUIPPED WITH BRB

Paolo Castaldo, Enrico Tubaldi, Laura Gioiella

Tuesday, June 29
19:15-21:15

Zoom Room 5

EUROGEN TS 32: OPTIMIZATION UNDER UNCERTAINTY-HYBRID METHODS, METAHEURISTICS AND EVOLUTIONARY ALGORITHMS, MACHINE LEARNING

Chair: Domenico Quagliarella

E 18393 ROBUST AERODYNAMIC WING DESIGN USING GAUSSIAN PROCESSES

*Elisa Morales Tirado, **Domenico Quagliarella**, Renato Tognaccini*

E 18400 DEEP REINFORCEMENT LEARNING APPROACH TO STRUCTURAL INSPECTION AND MAINTENANCE POLICY OPTIMIZATION SUBJECT TO LIFE-CYCLE RELIABILITY CONSTRAINTS

***C.P. Andriotis**, K.G. Papakonstantinou*

E 18327 SOLVING PESSIMISTIC BILEVEL OPTIMISATION PROBLEMS WITH EVOLUTIONARY ALGORITHMS

***Margarita Antoniou**, Gregor Papa*

E 18357 IT'S THE JOURNEY NOT THE DESTINATION: BUILDING GENETIC ALGORITHMS PRACTITIONERS CAN TRUST

***Jakub Vincalek**, Sean Walton, Ben Evans*

E 18368 THE HYBRID GLOBAL OPTIMIZATION ALGORITHM ON THE BASIS OF A FIREWORKS ALGORITHM

***Paweł Paździor**, Mirosław Szczepanik*

E 18426 BRIDGES MONITORING: AN APPLICATION OF AI WITH GAUSSIAN PROCESSES

*Rebecca Asso, **Raffaele Cucuzza**, Marco M. Rosso, Davide Masera, Giuseppe Carlo Marano*

E 18422 RESPONSE SPECTRUM ANALYSIS OF MULTI-STOREY BUILDINGS USING DEEP NEURAL NETWORKS

*Manolis Georgioudakis, **George Papazafeiropoulos***

Tuesday, June 29
19:15-21:15

Zoom Room 6

COMPDYN MS 39: THE CONTRIBUTION OF DYNAMIC TESTS AND STRUCTURAL MONITORING ON THE SEISMIC RISK ASSESSMENT AND MITIGATION

MS Organizers: Davide Arezzo, Sandro Carbonari, Vanni Nicoletti

Chair: Sandro Carbonari

-
- C 19101** DEVELOPMENT OF LOW COST SENSORS FOR MONITORING OF STRUCTURES
Giuseppe Maddaloni, Alessandra De Angelis, Francesco Minicozzi, Claudio Martino, Maria Rosaria Pecce
- C 18961** THE TRACKING OF MODAL PARAMETERS FOR A REINFORCED CONCRETE BUILDING DURING LOW-MEDIUM INTENSITY EARTHQUAKES
Davide Arezzo, Vanni Nicoletti, Sandro Carbonari, Fabrizio Gara
- C 18839** MODAL ANALYSIS OF THE HISTORICAL SS FILIPPO E GIACOMO MASONRY ARCH BRIDGE IN ASCOLI PICENO (ITALY)
Fabrizio Gara, Graziano Leoni, Michele Morici
- C 18728** AMBIENT VIBRATION TEST ON AN EXISTING PRESTRESSED CONCRETE BRIDGE
Alessandra De Angelis, Giacomo Esposito, Giuseppe Maddaloni, Edoardo Cosenza, Maria Rosaria Pecce
- C 18444** LONG TERM MONITORING OF THE SANTA MARIA DI COLLEMAGGIO BASILICA
Angelo Aloisio, Riccardo Cirella, Antonacci Elena, Rocco Alaggio
- C 19033** FIRST RESULTS OF LONG-TERM MONITORING OF PORTICO VARANO IN THE CAMERINO DUCAL PALACE (ITALY)
Leonardo Cipriani, Andrea Dall'Asta, Graziano Leoni, Michele Morici, Alessandro Zona
- C 19251** CALIBRATION OF NUMERICAL MODELS TO SUPPORT SHM: THE CONSOLI PALACE OF GUBBIO, ITALY
Serena Cattari, Daniele Sivori, Sara Alfano, Laura Ierimonti, Nicola Cavalagli, Ilaria Venanzi, Filippo Ubertini

Tuesday, June 29
19:15-21:15

Zoom Room 7

UNCECOMP TS 21 - III: UNCERTAINTY QUANTIFICATION, SYSTEM RELIABILITY ANALYSIS AND RISK ASSESSMENT

Chair: Barbara Pintucchi

-
- U 19025** EFFECTIVENESS OF THE PROBABILITY DENSITY EVOLUTION METHOD FOR DYNAMIC AND RELIABILITY ANALYSES OF MASONRY STRUCTURES
*Massimiliano Lucchesi, **Barbara Pintucchi**, Nicola Zani*
- U 19131** SOFTWARE FOR UNCERTAINTY PROPOGATION AND RELIABILITY ASSESSMENT OF INELASTIC WIND EXCITED SYSTEMS
***Wei-Chu Chuang**, Seymour MJ Spence*
- U 18968** LEARNING A PROBABILISTIC APPROXIMATION OF DAMAGE LOCALIZATION STRATEGY IN THE PRESENCE OF UNCERTAINTY
***Ishan Khurjekar**, Joel Harley*
- U 18992** AN EXPERIMENTAL STUDY OF VARIABILITY IN DAMPING, FREQUENCY RESPONSE AND MODAL DATA
***Asish Kumar Panda**, Subodh V. Modak*
- U 18866** TRANSMISSION OF ELASTIC WAVES THROUGH A RANDOMLY-FLUCTUATING HORIZONTALLY-LAYERED MEDIUM
*Martin Colvez, **Régis Cottureau***

COMPDYN TS 28: STOCHASTIC DYNAMICS

Chair: Barbara Pintucchi

-
- C 18608** GAUSSIAN AND NON-GAUSSIAN WIND TUNNEL PROCESSES
***Marco Di Giovanni**, Piero D'Asdia*
- C 18627** RANDOM PROCESS PEAKS PREDICTION: A LITERATURE OVERVIEW
***Marco Di Giovanni**, Piero D'Asdia*
- C 19482** FATIGUE ANALYSIS OF FLOATING OFFSHORE WIND TURBINE (FOWT) CONSIDERING WIND AND WAVE JOINT EXCITATIONS
***Yupeng Song**, Jianbing Chen*

Tuesday, June 29
19:15-21:00

Zoom Room 8

COMPDYN MS 38 - II: DYNAMIC SOIL-FOUNDATION-STRUCTURE INTERACTION: DEVELOPMENTS AND EMERGING ISSUES

MS Organizers: Emmanouil Rovithis, Raffaele Di Laora, Maria Iovino

Chair: Emmanouil Rovithis, Raffaele Di Laora, Maria Iovino

C 18903 ON THE SITE-AMPLIFICATION AND SOIL-STRUCTURE INTERACTION IN URM STRUCTURES: USE OF FRAGILITY CURVES TO ASSESS THE SIMPLIFIED CODE-APPROACH

Andrea Brunelli, Filomena de Silva, Serena Cattari

C 18910 ELASTODYNAMIC ANALYSIS OF LATERALLY LOADED PILES: MODIFICATIONS TO A SIMPLIFIED ENERGY APPROACH

Jamie J. Crispin, George Mylonakis

C 18958 ON THE EFFECTIVENESS OF EXPERIMENTALLY-DERIVED FOUNDATION IMPEDANCE FUNCTIONS

Chiara Amendola, Filomena de Silva, Dimitrios Pitilakis, Francesco Silvestri

C 19138 NUMERICAL ANALYSIS ON THE INFLUENCE OF DYNAMIC SOIL-STRUCTURE INTERACTION IN SORIA ARCH DAM: A CASE STUDY

J.C. Galván, L.A. Padrón, J.J. Aznárez, O. Maeso

C 18894 DYNAMIC CROSS-INTERACTION BETWEEN TWO CLOSELY-SPACED SHALLOW FOUNDATIONS

Enza Zeolla, Filomena de Silva, Stefania Sica

C 19192 A NOVEL APPROACH FOR THE ASSESSMENT OF DYNAMIC SOIL-STRUCTURE INTERACTION OF STRUCTURES WITH MASSIVE FOUNDATIONS

Riccardo Conti, Raffaele Di Laora

Tuesday, June 29
21:00-21:30

Zoom Room 8

ROUND TABLE

COMPDYN MS 38: DYNAMIC SOIL-FOUNDATION-STRUCTURE INTERACTION: DEVELOPMENTS AND EMERGING ISSUES

Moderator: Emmanouil Rovithis, Raffaele Di Laora, Maria Iovino

Panel: Amir Kaynia, George Mylonakis, Scott Brandenburg

Agenda:

- Dynamics of foundations in offshore wind turbines
- Soil-structure interaction: Recent experimental and theoretical findings
- The role of SSI in earthquake-induced ground failure

Tuesday, June 29
19:15-21:15

Zoom Room 9

UNCECOMP MS 10 - III: SURROGATE MODELS FOR UNCERTAINTY QUANTIFICATION, RELIABILITY AND SENSITIVITY ANALYSIS

MS Organizers: Bruno Sudret, Jean-Marc Bourinet, Sankaran Mahadevan, Alexandros Taflanidis

Chair: Jean-Marc Bourinet

U 18951 MULTI-FIDELITY SURROGATE MODELING FOR TIME-SERIES OUTPUTS

Baptiste Kerleguer, Claire Cannamela, Josselin Garnier

U 18987 COMBINING SURROGATE MODELS BY ENSEMBLE LEARNING TECHNIQUES FOR UNCERTAINTY QUANTIFICATION

Pietro Parisi, Christos Lataniotis, Stefano Marelli, Bruno Sudret

U 18995 SURROGATING STOCHASTIC SIMULATORS USING KARHUNEN-LOÈVE EXPANSION, SPARSE PCE AND ADVANCED STATISTICAL MODELLING

Nora Lüthen, Stefano Marelli, Bruno Sudret

U 19003 ADAPTIVE APPROXIMATION OF HIGH-DIMENSIONAL FUNCTIONS WITH TREE TENSOR NETWORKS FOR UNCERTAINTY QUANTIFICATION

Cécile Haberstich, Anthony Nouy, Guillaume Perrin

U 19009 HIERARCHICAL B-SPLINES FOR ADAPTIVE NON-BOUNDARY SPARSE GRIDS

Michael Rehme, Dirk Pflüger

U 19010 TACKLING UNCERTAINTY IN FLOOD FORECASTING MODEL VIA A MACHINE-LEARNING BASED-SURROGATE MODEL

Siham El Garroussi, Sophie Ricci, Matthias De Lozzo, Nicole Goutal, Didier Lucor

U 19380 A DATA-DRIVEN SURROGATE FOR PARAMETRIZED TIME-DEPENDENT PDES BASED ON CONVOLUTIONAL AUTOENCODERS

Stefanos Nikolopoulos, Ioannis Kalogeris, Vissarion Papadopoulos

Tuesday, June 29
19:15-19:45

Zoom Room 10

ROUND TABLE

UNCECOMP MS 6: MACHINE LEARNING AND UNCERTAINTY QUANTIFICATION IN BIOLOGICAL SYSTEMS

Topic: Machine learning for uncertainty quantification

Moderator: *Paris Perdikaris*

Panel: *Petros Koumoutsakos, Fabio Nobile, Simone Pezzuto, Toni Lassila, Andrea Manzoni*

Agenda:

- How is machine learning aspiring to transform computational science and uncertainty quantification?
- What are the unmet needs?
- What are the most pressing open challenges and future opportunities?

TECHNICAL SESSIONS

Wednesday, June 30
12:00-14:00

Zoom Room 1

COMPDYN MS 4 - IV: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

MS Organizers: Francesco Clementi, Nicola Cavalagli, Antonio Formisano, Gabriele Milani, Vagelis Plevris

Chair: Nicola Cavalagli

C 19491 SEISMIC ANALYSIS OF A HISTORICAL MASONRY CHURCH WITH EMBEDDED IRON TIE-RODS
*Charalambia Zakou, Margarita Petrou, **Dimos Charnpis***

C 19053 EMPIRICAL AND MECHANICAL ANALYSIS METHODS FOR SEISMIC VULNERABILITY ASSESSMENT OF CLUSTERED BUILDINGS OF HISTORICAL CENTRES: A CASE STUDY
*Antonio Formisano, Giovanni Mochi, **Nicola Chieffo***

C 19581 NONLINEAR SIMULATION OF MASONRY VAULTS UNDER EARTHQUAKE LOADING
*Adam Plavsic, **Bartolomeo Pantò**, Corrado Chisari, Lorenzo Macorini, Bassam A. Izzuddin, Ingrid Boem, Natalino Gattesco*

C 18984 NONLINEAR STATIC ANALYSIS OF MASONRY BUILDINGS THROUGH FIBRE-BASED CAPACITY MODELLING
***Elia Acconcia**, Valentina Buonocunto, Fulvio Parisi*

C 19128 MICROMECHANICAL ANALYSIS OF UNREINFORCED AND REINFORCED MASONRY ARCHES
*Daniela Addessi, **Cristina Gatta**, Mariacarla Nocera, Domenico Liberatore*

C 19237 FULL 3D CAD PROCEDURE FOR THE LIMIT ANALYSIS OF LONGHU PAGODA IN CHINA
***Peixuan Wang**, Alessandro De lasio, Jacopo Scacco, Gabriele Milani, Shengcai Li*

C 19419 LATTICE DISCRETE MODELING OF OUT-OF-PLANE BEHAVIOR OF IRREGULAR MASONRY
*Micaela Mercuri, Madura Pathirage, **Amedeo Gregori**, Gianluca Cusatis*

Wednesday, June 30
12:00-14:00

Zoom Room 2

COMPDYN MS 27 - I: TIMBER-BASED ELEMENTS: RECENT ADVANCEMENTS FOR NEW AND EXISTING SEISMIC-RESISTANT STRUCTURES

MS Organizers: Antonio Sandoli, Bruno Calderoni, Beatrice Faggiano

Chair: Beatrice Faggiano

C 19339 POST-TENSIONED LOW DAMAGE CLT WALLS WITH REPLACEABLE HYSTERETIC DEVICES – CONCEPT, EXPERIMENTAL AND NUMERICAL CHARACTERIZATION

*Luca Pozza, Luca Benedetti, Valentina Tomei, Barbara Ferracuti, Maria Zucconi, **Claudio Mazzotti***

C 18809 MOMENT-CURVATURE DIAGRAMS FOR CLT PANELS ACCOUNTING FOR ORTOGONAL TO GRAIN COMPRESSION TIMBER PROPERTIES

***Antonio Sandoli**, Claudio D'Ambra, Maria Lippiello, Carla Ceraldi, Bruno Calderoni, Andrea Prota*

C 19109 POST-TENSIONED LOW DAMAGE TIMBER WALLS WITH DISSIPATIVE DEVICES BEHAVIOUR: NUMERICAL PREDICTION

***Valentina Tomei**, Maria Zucconi, Barbara Ferracuti*

C 18731 ANALYTICAL AND NUMERICAL MODELLING OF THE IN-PLANE RESPONSE OF TIMBER DIAPHRAGMS RETROFITTED WITH PLYWOOD PANELS

***Michele Mirra**, Marianthi Sousamli, Michele Longo, Geert Ravenshorst*

C 19231 MANSORY-INFILLED RC FRAMES STRENGTHENED WITH CROSS-LAMINATED TIMBER PANELS

*Zabih Mehdipour, Jorge Branco, Iztok Sustersic, **Leonardo Filipe Rodrigues**, Paulo Lourenço*

C 19287 INFLUENCE OF PERPENDICULAR WALLS ON THE LATERAL STIFFNESS OF CLT SHEAR WALLS

***Elisabetta Maria Ruggeri**, Giuseppe D'Arenzo, Marinella Fossetti, Werner Seim*

C 19445 A NUMERICAL STUDY ON A TIMBER-BASED SEISMIC RETROFIT INTERVENTION FOR MASONRY INFILLED CONCRETE FRAMES

***Francesco Smiroldo**, Davide Viel, Ivan Giongo, Maurizio Piazza*

Wednesday, June 30
12:00-14:00

Zoom Room 3

COMPDYN MS 37 - I: RISK ASSESSMENT OF BRIDGES AND ROAD NETWORKS SUBJECTED TO NATURAL HAZARDS

MS Organizers: Michele Morici, Fabrizio Scozzese, Lucia Minnucci

Chair: Fabrizio Scozzese

C 18783 PERFORMANCE-BASED EARTHQUAKE ENGINEERING ANALYSIS OF SHORT-MEDIUM SPAN STEEL-CONCRETE COMPOSITE BRIDGES

*Daniele Corritore, **Fabrizio Paolacci***

C 19414 REAL-TIME ASSESSMENT OF PERFORMANCE INDICATORS FOR BRIDGES TO SUPPORT ROAD NETWORK MANAGEMENT IN THE AFTERMATHS OF EARTHQUAKE EVENTS

***Chiara Ormando**, Ugo Ianniruberto, Paolo Clemente, Sonia Giovinazzi, Maurizio Pollino, Vittorio Rosato*

C 18751 INFLUENCE OF THE PIERS' HEIGHT ON THE FRAGILITY ASSESSMENT OF ITALIAN R.C. LINK SLAB BRIDGES

***Lucia Minnucci**, Fabrizio Scozzese, Andrea Dall'Asta, Sandro Carbonari, Fabrizio Gara*

C 18748 SCOUR-INDUCED DYNAMIC PROPERTIES MODIFICATION OF MASONRY ARCH BRIDGES WITH DIFFERENT GEOMETRY

***Fabrizio Scozzese**, Laura Ragni, Enrico Tubaldi, Fabrizio Gara*

C 18736 SIMPLIFIED FRAGILITY ANALYSIS OF MULTI-SPAN ISOSTATIC RC-BRIDGES CONSIDERING AN INCOMPLETE KNOWLEDGE LEVEL

***Andrea Nettis**, Domenico Raffaele, Giuseppina Uva*

C 19551 DIAGNOSTICS OF HISTORICAL STEEL BRIDGES: THE CASE OF THE VALENCIAN RAILROAD NETWORK

***Valentino Sangiorgio**, Andrea Nettis, Giuseppina Uva, Juan A. García-Cerezo, Pedro A. Calderón, Humberto Varum, Jose M. Adam*

C 18911 ROC-BASED PERFORMANCE EVALUATION OF DATA CLEANSING TECHNIQUES FOR FALSE ALARM RISK REDUCTION IN CONTINUOUSLY MONITORED BRIDGES

***Valentina Giglioni**, Enrique García-Macías, Ilaria Venanzi, Laura Ierimonti, Filippo Ubertaini*

C 19010 RC TIED-ARCH BRIDGES: TYPOLOGICAL ANALYSIS FOR THE DEFINITION OF RETROFIT INTERVENTIONS

***Valentina Pernechele**, Elisa Saler, Francesca da Porto, Claudio Modena*

Wednesday, June 30
12:00-14:00

Zoom Room 4

COMPDYN MS 41 - II: SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES

MS Organizers: Enrico Tubaldi, Laura Ragni, Dario De Domenico, Hamid Ahmadi

Chair: Laura Ragni

-
- C 19032** THE NEW CAMERINO UNIVERSITY RESEARCH CENTER: DESIGN OF THE BASE-ISOLATED BUILDING AND DYNAMIC TESTING
*Andrea Dall'Asta, Graziano Leoni, Fabio Micozzi, Laura Gioiella, N. Ceccolini, **Laura Ragni***
- C 19492** INELASTIC RESPONSE MODES OF SEISMICALLY ISOLATED STRUCTURES: FAILURE OF THE ISOLATORS OR DAMAGE IN THE ISOLATED STRUCTURE?
***Anastasios Tsiafos**, Tomislav Markić, David Schlatter, Božidar Stojadinović*
- C 19307** METAMODELING CHOICES FOR SEISMIC VULNERABILITY ASSESSMENT OF BRB-RETROFITTED LOW-DUCTILITY RC FRAMES
***Jayadipta Ghosh**, Fabio Freddi*
- C 19344** NUMERICAL INVESTIGATION OF RUBBER BEARINGS WITH LOW SHAPE FACTOR UNDER SEISMIC EXCITATION
***Alessandra Orfeo**, Enrico Tubaldi, Alan Muhr, Daniele Losanno*
- C 19292** SEISMIC RETROFIT OF EXISTING PRECAST RC BUILDINGS WITH DISSIPATIVE DEVICES BASED ON CARBON WRAPPED STEEL TUBES
***Lucia Praticò**, Andrea Vittorio Pollini, Devis Sonda, Nicola Buratti*
- C 19225** SEISMIC PROTECTION OF MULTI-STORY STRUCTURES WITH NOVEL VIBRATION ABSORPTION DEVICES COMBINING NEGATIVE STIFFNESS AND INERTER
*Konstantinos Kapasakalis, **Georgios Florakis**, Ioannis Antoniadis, Evangelos Sapountzakis*
- C 19164** DAMAGE-FREE SELF-CENTRING LINK FOR SEISMIC-RESILIENT ECCENTRICALLY BRACED FRAMES
***Annarosa Lettieri**, Fabio Freddi, Massimo Latour*
- C 19139** VARIATION IN RESPONSE OF A BRIDGE SEISMICALLY ISOLATED WITH LRBS UNDER THE EFFECT OF LOW AMBIENT TEMPERATURE
***Esengul Cavdar**, Volkan Karuk, Gokhan Ozdemir*

Wednesday, June 30
12:00-14:00

Zoom Room 5

UNCECOMP MS 4: ADVANCES IN DATA-DRIVEN MODELING AND APPLICATIONS

MS Organizers: Ivi Tsantili, Evangelia Kalligiannaki, Dionissios Hristopoulos

Chair: Ivi Tsantili, Evangelia Kalligiannaki

U 19101 STATISTICAL INFERENCE OF STOCHASTIC DIFFERENTIAL EQUATIONS UNDER COLORED NOISE EXCITATION

Ivi C. Tsantili, Evangelia Kalligiannaki, Vagelis Harmandaris

U 19103 HIERARCHICAL COARSE-GRAINING OF MOLECULAR SYSTEMS: PHYSICS-BASED VS DATA-DRIVEN MODELS AND UNCERTAINTY QUANTIFICATION

Vagelis Harmandaris

U 19107 MODELING TRANSIENT DYNAMICS OF COARSE-GRAINED MOLECULAR SYSTEMS

Georgia Baxevasi, Evangelia Kalligiannaki, Vagelis Harmandaris

U 18971 BUCKLING STRENGTH OF BOLTED STEEL MEMBERS FROM PLAIN ANGLE SECTIONS WITH MULTI-VARIATE STOCHASTIC IMPERFECTIONS

Zacharias Fasoulakis, Dimitrios Vamvatsikos, Vissarion Papadopoulos

U 19067 EFFICIENT DISCRIMINATION BETWEEN BIOLOGICAL POPULATIONS VIA NEURAL-BASED ESTIMATION OF RÉNYI DIVERGENCE

Anastasios Tsourtis, Georgios Papoutsoglou, Yannis Pantazis

Wednesday, June 30
12:00-14:00

Zoom Room 6

COMPDYN MS 43: ANALYSES AND DESIGN OF STEEL JOINTS UNDER CYCLIC ACTION

MS Organizers: Roberto Tartaglia, Mario D'Aniello, Gian Andera Rassati, James Swanson

Chair: Roberto Tartaglia

C 19458 BEHAVIOUR OF T-STUB UNDER MODE 2 AND 3 WITH HV AND HR BOLTS

Roberto Tartaglia, Mario D'Aniello

C 19480 INFLUENCE OF THE JOINT BEHAVIOUR ON THE PERFORMANCE OF ORTHOGONAL EXOSKELETONS FOR SEISMIC RETROFIT

Roberto Tartaglia, Gianmaria Di Lorenzo, Antonio Formisano, Raffaele Landolfo

C 18777 DESIGN AND ANALYSIS OF FREEDAM FRAMES: COMPARISON WITH TRADITIONAL CONNECTIONS

*Maria Maglio, Camilla Naddei, Elide Nastri, Rosaria Russo, **Paolo Todisco***

C 18529 BEHAVIOR OF INNO3D JOINTS UNDER MONOTONIC LOADING

Arash Poursadrollah, A. De Martino

C 18525 BEHAVIOUR OF LAP SHEAR RIVETED CONNECTIONS WITH CONSTRUCTIONAL IMPERFECTIONS

Aldo Milone, A. De Martino

C 18825 COMPONENT MODELLING OF CONNECTIONS BETWEEN CIRCULAR-HOLLOW-SECTIONS AND THROUGH-ALL MEMBERS

*A. Saldutti, **Sabatino Di Benedetto**, Massimo Latour, Gianvittorio Rizzano*

C 19381 SEISMIC RESPONSE OF INNOVATIVE CFS WALLS BRACED WITH UHS STEEL BARS: EXPERIMENTAL INVESTIGATION

Alessia Campiche

C 19383 VALIDATION OF NOVEL SEISMIC DESIGN CRITERIA FOR LIGHTWEIGHT STEEL BUILDING IN EUROPE

*Sarmad Shakeel, Marica Navarra, **Alessia Campiche***

Wednesday, June 30
12:00-14:00

Zoom Room 7

UNCECOMP MS 12: SOFTWARE FOR UNCERTAINTY QUANTIFICATION AND METHODS FOR IMPROVING THE EFFICIENCY OF MONTE CARLO SIMULATION

MS Organizers: Stefano Marelli, Edoardo Patelli, Dirk Pflüger

Chair: Stefano Marelli

U 19035 RECENT DEVELOPMENTS OF THE ADAPTIVE SPARSE GRID CODE SG++ FOR UQ
Dirk Pflüger, Michael Rehme

U 19039 REDUCED ORDER METHODS FOR UNCERTAINTY QUANTIFICATION PROBLEMS: STATE OF THE ART AND ADVANCED APPLICATIONS IN FLUIDS DYNAMICS AND OPTIMAL FLOW CONTROL
Gianluigi Rozza, Maria Strazzullo, Francesco Ballarin

U 18990 UNCERTAINTY QUANTIFICATION IN THE CLOUD WITH UQCLOUD
Christos Lataniotis, Stefano Marelli, Bruno Sudret

U 18923 UQPY: AN OPEN-SOURCE PYTHON PACKAGE AND DEVELOPMENT ENVIRONMENT FOR UNCERTAINTY QUANTIFICATION
Dimitris Giovanis, Audrey Olivier, Aakash B.S, Mohit Chauhan, Lohit Vandanapu, Ketson M.R dos Santos, Katiana Kontolati, Michael Shields

U 18908 MOVING PARTICLES BASED MULTILEVEL LOCAL RELIABILITY BASED SENSITIVITY ANALYSIS
Carsten Proppe

U 18886 IMPROVING THE RATE OF CONVERGENCE OF THE QUASI-MONTE CARLO METHOD IN ESTIMATING EXPECTATIONS ON A GEOTECHNICAL SLOPE STABILITY PROBLEM
Philippe Blondeel, Pieterjan Robbe, Dirk Nuyens, Geert Lombaert, Stefan Vandewalle

U 19093 OTBENCHMARK: AN OPEN SOURCE PYTHON PACKAGE FOR BENCHMARKING AND VALIDATING UNCERTAINTY QUANTIFICATION ALGORITHMS
Elias Fekhari, Michaël Baudin, Vincent Chabridon, Youssef Jebroun

Wednesday, June 30
12:00-14:00

Zoom Room 8

COMPDYN MS 22: CONDITION BASED MAINTENANCE AND POST-PROGNOSTICS OF COMPOSITE STRUCTURES: AN ENHANCED PLATFORM

MS Organizers: Dimitrios Chronopoulos, Savvas Triantafyllou, Juan Chiachío Ruano, Manuel Chiachío Ruano

Chair: Manuel Chiachío Ruano

C 19030 RECONSTRUCTION OF MATERIAL STIFFNESS PROPERTIES FROM DISPERSION RELATIONS USING GENETIC ALGORITHMS

Victor Thierry, Wen Wu, Dimitrios Chronopoulos, Sergio Cantero-Chinchilla

C 19042 PARTICLE FILTER-BASED HYBRID DAMAGE PROGNOSIS CONSIDERING BIAS

Tianzhi Li, Francesco Cadini, Claudio Sbarufatti

C 20141 AN APPROXIMATE BAYESIAN APPROACH FOR COMPLEXITY REDUCTION OF PETRI NET MODELS

Ali Saleh, Manuel Chiachío, Susannah Naybour

COMPDYN MS 40 - I: ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN DESIGN AND ASSESSMENT OF STRUCTURES

MS Organizers: George Markou, Nikolaos P. Bakas

Chair: Nikolaos P. Bakas

C 18534 DEVELOPMENT OF A NEW FUNDAMENTAL PERIOD FORMULA BY CONSIDERING SOIL-STRUCTURE INTERACTION WITH THE USE OF MACHINE LEARNING ALGORITHMS

Vicky-Lee Taljaard, Dewald Z. Gravett, Christos Mourlas, George Markou, Nikolaos Bakas, Manolis Papadrakakis

C 19593 PERFORMANCE AND SCALABILITY OF DEEP LEARNING MODELS TRAINED ON A HYBRID SUPERCOMPUTER: APPLICATION IN THE PREDICTION OF THE SHEAR STRENGTH OF SLENDER RC BEAMS

Nikolaos Bakas, George Markou, Dimos Charmpis, Kyriakos Hadjiyiannakou

C 20415 PREDICTION OF THE EIGENPERIODS OF MDOF SHEAR BUILDINGS USING NEURAL NETWORKS

Vagelis Plevris, German Solorzano

C 19544 MACHINE LEARNING TECHNIQUES FOR THE ESTIMATION OF LIMIT STATE THRESHOLDS AND BRIDGE-SPECIFIC FRAGILITY ANALYSIS OF R/C BRIDGES

Sotiria Stefanidou, Vassilis Papanikolaou, Elias Paraskevopoulos, Andreas Kappos

C 18752 STRUCTURAL DAMAGE PREDICTION UNDER SEISMIC SEQUENCE USING NEURAL NETWORKS

Petros C. Lazaridis, Ioannis E. Kavvadias, Konstantinos Demertzis, Lazaros Iliadis, Antonios Papaleonidas, Lazaros K. Vasiliadis, Anaxagoras Elenas

Wednesday, June 30
12:00-14:00

Zoom Room 9

COMPDYN MS 19: ADVANCES IN THE OPTIMUM DESIGN AND CONTROL OF LARGE STRUCTURES UNDER DYNAMIC LOADS

MS Organizers: Fabrizio Mollaioli, Giulia Angelucci, Bruno Briseghella, Giuseppe Carlo Marano, Giuseppe Quaranta

Chair: Fabrizio Mollaioli

C 18759 OPTIMAL LATERAL RESISTING SYSTEMS FOR HIGH-RISE BUILDINGS UNDER SEISMIC EXCITATIONS
Giulia Angelucci, Giuseppe Quaranta, Fabrizio Mollaioli

C 19204 DIAGRID SYSTEM COUPLED WITH SHEAR WALLS: ANALYTICAL INVESTIGATION ON THE DYNAMICAL RESPONSE IN TALL BUILDINGS
Giuseppe Lacidogna, Giuseppe Nitti, Domenico Scaramozzino, Alberto Carpinteri

C 19338 VIBRATION CONTROL OF WIND TURBINE TOWERS WITH KDAMPER-BASED DESIGNS
Konstantinos Kapasakalis, Ioannis Antoniadis, Evangelos Sapountzakis

C 18909 NON-INVASIVE VIBRATING CONTROL OF THE ZOSER PYRAMID
Masoud Shadlou, Pierfrancesco Cacciola, Ashraf Ayoub, Youssef Rashed, Alessandro Tombari

C 18944 OPTIMUM DESIGN OF A HYBRID ISOLATION DEVICE FOR SERVER RACKS USING CONSTRAINED DIFFERENTIAL EVOLUTION ALGORITHM
Luca Aceto, Giuseppe Quaranta, Guido Camata, Bruno Briseghella, Enrico Spacone

C 18712 ASSESSMENT AND RETROFITTING OF A RC BUILDING THROUGH A MULTI-HAZARD APPROACH: SEISMIC RESISTANCE AND ROBUSTNESS
Martina Scalvenzi, Fabio Freddi, Fulvio Parisi

C 18959 INNOVATIVE MASS-DAMPING-BASED APPROACHES FOR SEISMIC DESIGN OF TALL BUILDINGS
Elena Mele, Diana Faiella, Mario Argenziano

Wednesday, June 30
12:00-14:00

Zoom Room 10

COMPDYN MS 25 - I: MONITORING, IDENTIFICATION AND VIBRATION CONTROL OF STRUCTURES

MS Organizers: Rui Carneiro Barros, Manuel Braz-César

Chair: Rui Carneiro Barros

C 20450 PARAMETRIC STUDY OF LATTICE TOWERS ON THE INFLUENCE OF WIND ACTION FOR DIFFERENT TYPOLOGIES OF BRACING
Rui Carneiro-Barros, Luís Barros

C 20280 SIMPLIFIED METHODS FOR FREQUENCY ESTIMATION OF SMALL WIND TURBINE TOWER
Anelise Dick, Rui Carneiro-Barros, Manuel Braz-César

C 18693 NUMERICAL INVESTIGATION ON THE PRINCIPAL STRESS ROTATION EFFECT UNDER EARTHQUAKE LOADINGS
Zhe Wang, Yunming Yang

C 19293 ENRICHED BEAM FINITE ELEMENT MODELS WITH TORSION AND SHEAR WARPING FOR DYNAMIC ANALYSIS OF FRAME STRUCTURES
Daniela Addessi, Paolo Di Re, Cristina Gatta

C 18589 APPLICATION OF WAVELET TRANSFORMS ON ACCELERATION RECORDS: PRACTICAL APPROACH
Vladimir Vukobratović, Trevor Yeow, Koichi Kusunoki

C 19433 EARTHQUAKE-INDUCED STRUCTURAL POUNDING BETWEEN TWO INELASTIC SDOF STRUCTURAL SYSTEMS
Pedro Folhento, Rui Barros, Manuel Braz-César

14:00-14:05

Break

TECHNICAL SESSIONS

Wednesday, June 30 14:05-15:35	Zoom Room 1
-----------------------------------	-------------

COMPDYN MS 4 - V: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

MS Organizers: Francesco Clementi, Nicola Cavalagli, Antonio Formisano, Gabriele Milani, Vagelis Plevris

Chair: Vagelis Plevris

C 18963 LOW-COST BASE ISOLATION SYSTEMS FOR UNREINFORCED MASONRY BUILDINGS IN DEVELOPING COUNTRIES

Nagavinothini Ravichandran, Daniele Losanno, Fulvio Parisi

C 19333 COMBINING OPERATIONAL MODAL ANALYSIS AND GENETIC ALGORITHMS TO UNDERSTAND THE ACTUAL STRUCTURAL BEHAVIOR OF HISTORICAL CONSTRUCTIONS

Gianluca Standoli, Georgios Panagiotis Salachoris, Maria Giovanna Masciotta, Francesco Clementi

C 19346 SEISMIC ASSESSMENT OF MASONRY CROSS VAULTS THROUGH NON-LINEAR STATIC ANALYSES

Marco Alforio, Alessia Monaco, Fiammetta Venuti, Chiara Calderini

C 19406 CONTINUOUS AND DISCONTINUOUS DESCRIPTIONS OF BLOCKED STRUCTURES: THE CASE STUDY OF SANTISSIMO CROCIFISSO CHURCHES IN PRETARE (ITALY)

Francesco Clementi, Angela Ferrante, Ersilia Giordano, Stefano Lenci

C 19449 OPTIMIZATION OF EMPIRICAL SEISMIC VULNERABILITY ASSESSMENT FOR MASONRY BUILDINGS FOLLOWING NONLINEAR ANALYSIS

Eugen Onescu, Iasmina Onescu, Marius Mosoarca

C 19447 NUMERICAL STUDY ON SEISMIC RETROFIT OF URM WALLS USING TIMBER PANELS

Daide Cassol, Ivan Giongo, Maurizio Piazza

Wednesday, June 30 15:35-16:05	Zoom Room 1
-----------------------------------	-------------

ROUND TABLE

COMPDYN MS 4: ADVANCEMENTS IN NUMERICAL MODELLING AND SEISMIC INTERVENTION TECHNIQUES OF HISTORICAL MASONRY STRUCTURES

Moderator: Antonio Formisano

Panel: Gabriele Milani, Francesco Clementi, Nicola Cavalagli, Vagelis Plevris

Agenda:

- Modelling approaches of masonry structures
- Seismic behaviour of historical and monumental masonry constructions
- Seismic isolation and retrofit interventions

Wednesday, June 30
14:05-16:05

Zoom Room 2

COMPDYN MS 27 - II: TIMBER-BASED ELEMENTS: RECENT ADVANCEMENTS FOR NEW AND EXISTING SEISMIC-RESISTANT STRUCTURES

MS Organizers: Antonio Sandoli, Bruno Calderoni, Beatrice Faggiano

Chair: Antonio Sandoli

-
- C 18821** REINFORCING STOP-SPLAYED SCARF JOINTS WITH TIMBER PEG: ROLE OF SLENDERNESS
Carla Ceraldi, Claudio D'Ambra, Maria Lippiello, Antonio Sandoli, Andrea Prota
- C 18865** SEISMIC STRENGTHENING OF EXISTING URM STRUCTURES THROUGH CLT ELEMENTS: NUMERICAL ANALYSIS OF THE APPLICATION OF A NOVEL INTERVENTION TECHNIQUE
Matteo Salvalaggio, Marco Pegoraro, Elisa Saler, Umberto Turrini, Maria Rosa Valluzzi
- C 18851** IMPACT OF RETROFIT OF RC FRAMES BY CLT PANELS AND FRICTION DAMPERS
Francesca Barbagallo, Giuseppe Margani, Edoardo M. Marino, A. Moretti, Carola Tardo
- C 19230** CYCLIC BEHAVIOR AND MODELLING OF SINGLE-DOWELLED DOUBLE SHEAR TIMBER CONNECTIONS
Leonardo Filipe Rodrigues, Jorge Branco, André Barbosa
- C 18620** OPTIMIZATION OF THE SLIP FORCE IN A NOVEL FRICTION-BASED CONNECTION FOR THE E-CLT TECHNOLOGY
Angelo Aloisio, Francesco Boggian, Roberto Tomasi
- C 18636** EXPERIMENTAL AND NUMERICAL INVESTIGATION OF INNOVATIVE DUCTILE AND REPLACEABLE ANCHORING SYSTEMS FOR WOOD SHEAR WALLS UNDER SEISMIC LOADS
Georgios Balaskas, Vera Wilden, Benno Hoffmeister
- C 19355** TIMBER BEAM-TO-COLUMN JOINT WITH STEEL LINK: DESIGN AND MECHANICAL CHARACTERIZATION THROUGH NUMERICAL INVESTIGATION
Giacomo Iovane, Beatrice Faggiano

Wednesday, June 30
14:05-16:05

Zoom Room 3

COMPDYN MS 37 - II: RISK ASSESSMENT OF BRIDGES AND ROAD NETWORKS SUBJECTED TO NATURAL HAZARDS

MS Organizers: Michele Morici, Fabrizio Scozzese, Lucia Minnucci

Chair: Michele Morici

-
- C 19090** ANALYTICAL PROBABILISTIC RESILIENCE ESTIMATION FOR BRIDGES UNDER NEAR-FAULT EARTHQUAKES
*Yang Liu, Da-Gang Lu, **Fabrizio Paolacci***
- C 18844** SEISMIC VULNERABILITY ANALYSIS OF THE HISTORICAL SS FILIPPO E GIACOMO MASONRY ARCH BRIDGE IN ASCOLI PICENO (ITALY)
*Graziano Leoni, Fabrizio Gara, **Michele Morici***
- C 19340** SIMPLIFIED ANALYTICAL-MECHANICAL METHODOLOGY FOR STRUCTURAL-SEISMIC SAFETY ASSESSMENT OVER TIME OF RC BRIDGES AFFECTED BY CORROSION PHENOMENA
*Matteo Gentile, Filippo Molaioni, **Stefano Pampanin***
- C 19015** APPLICATION TO AN URBAN BRIDGE STOCK OF A PRIORITIZATION PROCEDURE BASED ON DEGRADATION AND SEISMIC ASSESSMENT COMPARED WITH THE NOVEL ITALIAN GUIDELINES
Elisa Saler, Valentina Pernechele, Giovanni Tecchio, Francesca da Porto
- C 18601** RELIABILITY-BASED ASSESSMENT OF A MASONRY ARCH BRIDGE UNDER FLOOD EVENTS
***Carlos Andres Mendoza Cabanzo**, Monica Patricia Santamaria Ariza, Hélder S. Sousa, Jose Antonio Campos e Matos*
- C 19588** TOWARDS A UNIFIED SEISMIC- FLOOD HAZARD MODEL FOR RISK ASSESSMENT OF ROADWAY NETWORKS IN GREECE
*Anna Karatzetzou, Sotiria Stefanidou, Stefanos Stefanidis, **Grigorios Tsinidis**, Dimitrios Pitilakis*

Wednesday, June 30
14:05-15:35

Zoom Room 4

COMPDYN MS 41 - III: SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES

MS Organizers: Enrico Tubaldi, Laura Ragni, Dario De Domenico, Hamid Ahmadi

Chair: Enrico Tubaldi

C 19003 EXPERIMENTAL COMPARISON BETWEEN FLAT AND CURVED SLIDING CONDITIONS FOR THE RESPONSE EVALUATION OF CURVED SURFACE SLIDER DEVICES

Alberto Pavese, Marco Furinghetti

C 18946 AN ADVANCED MODEL FOR THE FLUID VISCOUS DAMPER BRITTLE FAILURE

Laura Gioiella, Fabrizio Scozzese, Enrico Tubaldi, Laura Ragni, Andrea Dall'Asta

C 18932 PERFORMANCE-BASED SEISMIC DESIGN OF FRAME STRUCTURES WITH FVDS USING FIRST-ORDER OPTIMIZATION

Ohad Idels, Oren Lavan

C 18979 SEISMIC PERFORMANCE OF STEEL MRFS RETROFITTED WITH BRBS: INFLUENCE OF THE DESIGN DECISIONS FOR THE DEVICES

Fernando Gutiérrez-Urzúa, Fabio Freddi

C 18982 EXPERIMENTAL INVESTIGATION OF SPHERICAL RUBBER SEISMIC ISOLATION BEARINGS

Antonios Katsamakas, Gabriel Belser, Michalis Vassiliou, M. Blondet, Bozidar Stojadinovic

C 18994 EXPERIMENTAL SEISMIC POST-TENSIONING PERFORMANCE AND LONG-TERM EFFECTS OF A POST-TENSIONED TIMBER FRAMED MODEL WITH DISSIPATIVE SYSTEMS

Antonio Di Cesare, Felice Carlo Ponzio, Nicla Lamarucciola, Domenico Nigro

Wednesday, June 30
15:35-16:05

Zoom Room 4

ROUND TABLE

COMPDYN MS 41: SEISMIC PERFORMANCE OF STRUCTURES WITH ISOLATION AND/OR ENERGY DISSIPATION DEVICES

Topic: Revision of the European Standard EN 15129 on anti-seismic devices

Moderator: Enrico Tubaldi

Panel: Virginio Quaglini, Alberto Pavese

- Agenda:*
- The revision of the European Standard EN 15129
 - Experimental assessment of devices for seismic isolation: new perspectives in the future version of EN15129
 - Discussion/Q&A

Wednesday, June 30
14:05-15:20

Zoom Room 5

COMPDYN MS 14: SEISMIC ASSESSMENT AND RETROFITTING OF EXISTING STEEL STRUCTURES

MS Organizers: Luigi Di Sarno, Fabio Freddi, Mario D'Aniello

Chair: Luigi Di Sarno

C 18872 NUMERICAL MODELLING OF MASONRY INFILL WALLS IN EXISTING STEEL FRAMES

Luigi Di Sarno, Jing-Ren Wu, Fabio Freddi, Mario D'Aniello, Stathis Bousias, Fernando Gutiérrez-Urzúa, Raffaele Landolfo, Nikolaos Stathas

C 19463 SEISMIC ASSESSMENT OF BEAM-TO-COLUMN JOINTS FOR A NON-CONFORMING MRF EXISTING STRUCTURE

Roberto Tartaglia, Mario D'Aniello, Aldo Milone, Raffaele Landolfo

C 19416 HYBRID COLD-FORMED/TUBULAR MODULAR STRUCTURAL SYSTEM WITH INNOVATIVE JOINTS

Luís Carlos Silva, Hélder David Craviero, Trayana Tankova, Rui Simões, Ricardo Costa, Mario D'Aniello, Raffaele Landolfo, Luís Simões da Silva

C 18584 A SIMPLIFIED APPROACH FOR THE ESTIMATION OF SEISMIC VULNERABILITY OF STEEL MOMENT RESISTING FRAMES

Rosario Montuori, Elide Nastri, Vincenzo Piluso, **Paolo Todisco**

C 18714 PRELIMINARY NUMERICAL ANALYSIS OF THE SEISMIC RESPONSE OF STEEL FRAMES WITH MASONRY INFILLS RETROFITTED BY BUCKLING RESTRAINED BRACES

Fernando Gutiérrez-Urzúa, **Fabio Freddi**, Luigi Di Sarno, Jing-Ren Wu, Mario D'Aniello, Raffaele Landolfo, Stathis Bousias

Wednesday, June 30
15:20-15:50

Zoom Room 5

ROUND TABLE

MS 14: SEISMIC ASSESSMENT AND RETROFITTING OF EXISTING STEEL STRUCTURES

Topic: Open discussion

Moderator: Luigi Di Sarno

Wednesday, June 30
14:05-16:05

Zoom Room 6

COMPDYN MS 23: ADVANCED MODELS AND NUMERICAL METHODS IN DYNAMICS, WAVE PROPAGATION AND COUPLED PROBLEMS

MS Organizers: José A. González, Radek Kolman, Anton Tkachuk, Jiří Náprstek, K. C. Park

Chair: José A. González

C 18566 VIBRATION DAMPING OF A STRUCTURE BY MEANS OF A BALL ROLLING INSIDE A SPHERICAL CAVITY
Jiří Náprstek, Cyril Fischer

C 18609 DISPERSION DESIGN OF 1D PERIODIC DISCRETE SYSTEMS USING LOG-DET HEURISTICS
Anton Tkachuk, Mykola Tkachuk

C 18922 PARTITIONED ANALYSIS OF DYNAMIC FLUID-STRUCTURE INTERACTION PROBLEMS WITH LOCALIZED LAGRANGE MULTIPLIERS
José A. González, K. C. Park

C 18991 DIRECT INVERSE MASS MATRIX FOR HIGHER-ORDER FINITE ELEMENT METHOD
Radek Kolman, Robert Cimrman, José González, Jan Kopačka, Sang-Soon Cho, K.C. Park

C 18518 DISPERSION ANALYSIS OF BULK ACOUSTIC WAVES IN PIEZOELECTRIC MEDIA DISCRETIZED BY ENERGY-ORTHOGONAL FINITE ELEMENTS
Francisco J. Brito Castro

C 18648 WAVE PROPAGATION IN ACOUSTIC DOMAINS WITH COMPLEX BOUNDARY CONDITIONS
Antonio Romero, António Tadeu, Pedro Galvín

C 18811 AN EFFICIENT PRECONDITIONER FOR MODAL FREQUENCY RESPONSE
Tobias Willerding

C 19427 A PARTITIONED FORMULATION OF THE STABILIZED EXPLICIT FINITE ELEMENT CONTACT-IMPACT ALGORITHM WITH RECIPROCAL MASS MATRICES
Ján Kopačka, José A. González, Radek Kolman, Kwang-Chun Park

C 19603 IDENTIFICATION OF INVISIBLE DAMAGE IN STRUCTURES BY INVERSE WAVE ANALYSIS
Fatin Kadmany, Dan Givoli, Oded Rabinovitch

Wednesday, June 30
14:05-16:05

Zoom Room 7

COMPDYN TS 31 - I: NUMERICAL SIMULATION OF GEOTECHNICAL PROBLEMS

Chair: Loukas C. Katsenis

C 18513 EFFECT OF SOIL PROFILE CHARACTERISTICS ON THE SEISMIC SLIDING DISPLACEMENT OF SLOPES

Loukas C. Katsenis, Constantine A. Stamatopoulos, Vassilis P. Panoskaltsis

C 18538 A PARAMETRIC STUDY OF “WEAK LAYER” EFFECTS ON THE SEISMIC RESPONSE OF LIQUEFIABLE SOIL PROFILES

Yannis Tsiapas, Maria Spanea, George Bouckovalas

C 18540 COUPLED ANALYSIS OF SEISMIC PILE-TENDON-PLATFORM INTERACTION IN LIQUEFIABLE SEABED

Yannis Chaloulos, Yannis Tsiapas, George Bouckovalas, Konstantinos Bazaios

C 18590 STATE-OF-THE-ART INVESTIGATION OF WIND TURBINE STRUCTURES BY CONSIDERING THE SOIL-STRUCTURE INTERACTION PHENOMENON

Dewald Gravett, George Markou

C 18527 EFFECT OF 1D VERTICAL VARIABILITY OF SHEAR MODULUS ON THE SEISMIC RESPONSE OF SITES

Mounia Menoun Hadj Brahim, Hamid Afra

C 18612 MODELLING THE IMPACT OF GAPPING BEHAVIOUR ON MONOPILE MOUNTED OFFSHORE WIND TURBINE DYNAMICS

Stephen Williams, Loizos Pelecanos, Antony Darby

C 18945 SOIL-STRUCTURE INTERACTION IN THE SEISMIC VULNERABILITY ANALYSIS OF RC BUILDINGS. APPLICATION TO A CASE STUDY BUILDING LOCATED IN SOUTHWESTERN SPAIN

Maria-Victoria Requena-Garcia-Cruz, Antonio Morales-Esteban, Percy Durand-Neyra, Emilio Romero-Sanchez

C 18976 FREE VIBRATION RESPONSE OF LONG MULTI-SPAN BRIDGES ACCOUNTING FOR SOIL-STRUCTURE INTERACTION

Pieter Reumers, Geert Lombaert, Geert Degrande

Wednesday, June 30
14:05-15:05

Zoom Room 8

COMPdyn MS 40 - II: ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN DESIGN AND ASSESSMENT OF STRUCTURES

MS Organizers: George Markou, Nikolaos P. Bakas

Chair: George Markou

C 18501 RAPID DESIGN OF R/C COLUMNS USING MACHINE LEARNING TECHNIQUES
Vassilis Papanikolaou, Aristotelis Charalampakis

C 18835 AUTOMATED ESTIMATION OF BUILDING HEIGHT THROUGH IMAGE PROCESSING
Pietro Carpanese, Marco Donà, Francesca da Porto

C 18602 PREDICTING THE SHEAR CAPACITY OF REINFORCED CONCRETE SLENDER BEAMS WITHOUT STIRRUPS BY APPLYING ARTIFICIAL INTELLIGENCE ALGORITHMS
Zelda Spijkerman, Nikolaos Bakas, George Markou, Manolis Papadrakakis

C 19575 LINKS OF AESTHETIC VALUE OF MULTI-CURVATURE ARTIFACTS, WITH THEIR STRUCTURAL BEHAVIOR, UTILIZING MACHINE LEARNING ALGORITHMS
Nikolaos Bakas, Neofytos Christofi, John Bellos, Dimitrios Antoniou, George Markou

Wednesday, June 30
15:05-15:35

Zoom Room 8

ROUND TABLE

COMPdyn MS 40: ARTIFICIAL INTELLIGENCE & MACHINE LEARNING IN DESIGN AND ASSESSMENT OF STRUCTURES

Topic: Open discussion on the future use of AI and ML algorithms in civil engineering

Moderator: George Markou

Wednesday, June 30
14:05-14:35

Zoom Room 9

ROUND TABLE

COMPDYN MS 19: ADVANCES IN THE OPTIMUM DESIGN AND CONTROL OF LARGE STRUCTURES UNDER DYNAMIC LOADS

Moderator: *Fabrizio Mollaioli*

Panel: *Jose Antonio Lozano Galant, Luigi Fenu, Nikos Lagaros, Giuseppe Carlo Marano*

- Agenda:
- Optimization of the tensioning process of cable stayed bridges
 - Form-finding of curved shell-supported footbridges under seismic loading
 - Opportunities and Challenges of Applying Structural Optimization in the Construction Industry
 - Computational strategies in large structures optimization problems

Wednesday, June 30
14:05-16:05

Zoom Room 10

COMPDYN MS 25 - II: MONITORING, IDENTIFICATION AND VIBRATION CONTROL OF STRUCTURES

MS Organizers: Rui Carneiro Barros, Manuel Braz-César

Chair: Manuel Braz-César

C 20281 FINITE ELEMENT MODEL CALIBRATION EFFECTS ON THE STATIC AND DYNAMIC RESPONSE OF A METALLIC HOLLOW TOWER

Anelise Dick, Rui Carneiro-Barros, Manuel Braz-César

C 19436 INFLUENCE OF STRUCTURAL INELASTIC BEHAVIOR IN THE STUDY OF COLLIDING SDOF STRUCTURES

Pedro Folhento, Rui Barros, Manuel Braz-César

C 18939 A CROWD-SENSING APPROACH FOR BRIDGE DAMAGE DETECTION USING MULTIPLE RESPONSES ON A PASSING VEHICLE

Robert Corbally, Abdollah Malekjafarian

C 19440 AN INNOVATIVE WIND FIELD OBSERVATION APPROACH FOR FLOATING WIND TURBINE MODAL TEST UNDER WIND AND WAVES

Jianbing Chen, Zenghui Liu, Yupeng Song, Yongbo Peng

C 19529 VIRTUAL SENSING AND STRAIN ESTIMATION ON AN OFFSHORE WIND TURBINE USING SUPERVISED LEARNING

Marius Tarpø, Sandro Amador, Evangelos Katsanos, Mattias Skog, Johan Gjødvad, Rune Brincker

16:05-16:25

Break

PLENARY LECTURES

Wednesday, June 30
16:25-18:25

Zoom Room 1

COMPDYN

Chair: Hector Jensen

C 20748 INVERSE DYNAMICS SIMULATION OF UNDERACTUATED MECHANICAL SYSTEMS
Peter Betsch

C 20128 STATE, INPUT, AND PARAMETER ESTIMATION FOR MONITORING OF CIVIL ENGINEERING STRUCTURES
Geert Lombaert, Kristof Maes

C 19570 SEISMIC VULNERABILITY OF MASONRY HISTORICAL STRUCTURES: A SIMPLE ADAPTIVE NURBS FE APPROACH FOR THE LIMIT AND THE SUBSEQUENT NON-LINEAR STATIC ANALYSIS WITH FEW DOFS
Nicola Grillanda, Gabriele Milani

Wednesday, June 30
16:25-18:25

Zoom Room 2

COMPDYN

Chair: Petros Koumoutsakos

C 20559 CHALLENGES FOR HIGH-FIDELITY NUMERICAL PREDICTIONS OF STRUCTURAL DAMAGE AND FRAGMENTATION SUBJECTED TO EXTREME DYNAMIC LOADING
Hong Hao

UNCECOMP

U 19564 MULTI-FIDELITY BAYESIAN NEURAL NETWORKS: ALGORITHMS AND APPLICATIONS
George Em Karniadakis

U 19437 RECENT DEVELOPMENTS ON SURROGATE MODELS FOR STOCHASTIC SIMULATORS
Bruno Sudret

Wednesday, June 30
16:25-18:25

Zoom Room 3

EUROGEN

Chair: Nicolas Gauger

E 18456 CUSTOMIZED OPTIMIZATION FOR ENGINEERING PROBLEM SOLVING
Kalyanmoy Deb

E 18350 ADJOINT OPTIMISATION OF MARITIME ENGINEERING TWO-PHASE FLOWS
Thomas Rung, Niklas Kühl

E 18528 ARTIFICIAL INTELLIGENCE, DATA SCIENCES, AND OPTIMIZATION IN ECONOMICS AND FINANCE
Panos M. Pardalos

18:25-18:30

Break

TECHNICAL SESSIONS

Wednesday, June 30
18:30-20:30

Zoom Room 1

COMPDYN TS 19: REPAIR AND RETROFIT OF STRUCTURES

Chair: Dimitra Achilopoulou

C 19454 INVESTIGATION OF THE RESPONSE OF INTERFACES OF CFRP SHEET STRENGTHENING SCHEMES ENHANCED WITH TOUGHENED EPOXY ADHESIVE LAYERS APPLIED IN CORRODED CONCRETE SUBSTRATES

Dimitra Achilopoulou

C 19430 DEBONDING ANALYSIS OF FRCM COMPOSITES FOR STRUCTURAL UPGRADING OF RC STRUCTURES

Maria Teresa Cristofaro, Angelo D'Ambrisi, Francesco Focacci, Raffaele Nudo, Gianfranco Stipo, Marco Tanganelli, Mario De Stefano

C 18724 A DISPLACEMENT-BASED DESIGN PROCEDURE OF VISCOUS DAMPED STEEL EXOSKELETONS FOR THE SEISMIC RETROFITTING OF RC FRAMED BUILDINGS

Fabio Mazza, Egidio Mollo

C 18639 NUMERICAL MODELLING OF SHEAR BOND TESTS ON EXTERNALLY STRENGTHENED MASONRY SPECIMENS

Ottavio Tamborrino, Daniele Perrone, Marianovella Leone

C 18928 RC WALL-SLAB CONNECTION REINFORCED BY FRP: MECHANICAL BEHAVIOUR UNDER CYCLING LOADING

Antoine Chalot, Laurent Michel, Emmanuel Ferrier

C 19434 NODAL DISSIPATIVE DEVICES FOR SEISMIC PROTECTION OF PRECAST RC STRUCTURES

Fabrizio Comodini, Angelo D'Ambrisi, Marco Mezzi

C 19461 SEISMIC RETROFITTING OF SINGLE-STORY RC PRECAST BUILDINGS THROUGH A NOVEL METALLIC HYSTERETIC DEVICE

Chiara Di Salvatore, Gennaro Magliulo, Maria G. Castellano, Nicola Caterino

C 19521 COMPRESSIVE STRENGTH EVALUATION OF BLUE MOSQUE MINARET STONES WITH ULTRASONIC TESTING

Gulen Uncu, Şahin Dede, Eser Çaktı

C 19627 EXPERIMENTAL INVESTIGATION OF SHEAR STRENGTH OF SOLID BRICK URM WALLS RETROFITTED WITH TRM JACKET

Athanasia Thomoglou, Athanasios Karabinis

Wednesday, June 30
18:30-20:30

Zoom Room 2

COMPDYN TS 34: NONLINEAR AND IMPACT DYNAMICS

Chair: Samuel Quaegebeur

-
- C 19112** POWDER SNOW IMPACT OF TALL VIBRATING STRUCTURES
*Andrin Caviezel, Stefan Margreth, Kseniya Ivanova, Betty Sovilla, **Perry Bartelt***
- C 19501** FRAGILITY CURVES DEFINITION OF EXISTING REINFORCED CONCRETE BUILDINGS DESIGNED FOR GRAVITY LOADS
***Alberto Basaglia**, Marco Terrenzi, Enrico Spacone*
- C 19422** COMPARISON BETWEEN DYNAMIC NONLINEAR ANALYSIS WITH ASCE 7-10 AND ASCE 7-16 IN CONCRETE FRAMES WITH VISCOUS DAMPERS INCORPORATED
***Juan Sebastián Cundumí García**, Orlando Cundumí Sánchez*
- C 18544** GEOMETRICALLY NONLINEAR FORCED TRANSVER VIBRATIONS ANALYSIS OF TAPERED EULER-BERNOULLI BEAMS
***Issam El Hantati**, Ahmed Adri, Hatim Fakhreddine, Said Rifai, Rhali Benamar*
- C 19328** GEOMETRICALLY NONLINEAR FREE VIBRATIONS OF FULLY CLAMPED MULTI-STEPPED BEAMS CARRYING MULTIPLE MASSES
***Issam El Hantati**, Ahmed Adri, Hatim Fakhreddine, Said Rifai, Rhali Benamar*
- C 18904** MISTUNING SENSITIVITY ANALYSIS OF A HIGH-FIDELITY BLADED-DISK MODEL UNDERGOING FRICTION NONLINEARITIES
***Samuel Quaegebeur**, Benjamin Chouvion, Fabrice Thouverez*
- C 19317** EFFECT OF GEOMETRICAL AND MECHANICAL PARAMETERS ON RIBS BEHAVIOR, UNDER DYNAMIC LOADING. A NUMERICAL STUDY
***Jianbo Shen**, Sebastien Roth*

Wednesday, June 30
18:30-20:30

Zoom Room 3

COMPDYN TS 14: NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS

Chair: Yiannis Tsompanakis

- C 19386** ANALYTICAL/NUMERICAL SOLUTIONS TO THE PROBLEM OF THE DYNAMIC RESPONSE OF AN ELASTIC PLATE ON A CONTINUOUSLY NON-HOMOGENEOUS CROSS-ANISOTROPIC VISCOELASTIC SOIL TO A MOVING LOAD
*Niki D. Beskou, **Edmond V. Muho***
- C 18773** ENERGY HARVESTING FROM RAILWAY VIBRATIONS – A NUMERICAL STUDY BASED ON BEAM-ON-ELASTIC-FOUNDATION UNDER QUASI-STATIC LOADING
*Shahd Elshafei, **Mohammed Hussein**, Jamil Renno, Asan Mutalif*
- C 18586** NONLINEAR FINITE ELEMENT MODELS FOR EMBEDDED BASE CONNECTIONS
***Nicolas Mora Bowen**, Pablo Torres Rodas*
- C 18761** LOCAL SCALE DAMPING MODEL FOR REINFORCED CONCRETE ELEMENTS
***Clotilde Chambreuil**, Cédric Giry, Frédéric Ragueneau, Pierre Léger*
- C 18767** NUMERICAL STUDY ON THE DAMPING CHARACTERISTICS OF A SHOCK ABSORBER VALVE UTILIZING DIFFERENT VELOCITIES THROUGH CFD ANALYSIS
***Yousif Badri**, Thaer Syam, Sadok Sassi, Mohammed Hussein, Jamil Renno, Saud Ghani*
- C 18999** IMPACT FACTORS DERIVED FROM INTERNAL FORCES IN TIMOSHENKO BEAMS SUBJECTED TO CONCENTRATED MOVING LOADS
***Benjamín Pinazo**, Salvador Monleón, Carlos Lázaro, Pedro Museros*
- C 19137** ON THE DEVELOPMENT OF A NOVEL APPROACH FOR SIMULATING ELASTIC BEAMS IN DUALSPHYSICS WITH THE USE OF THE PROJECT CHRONO LIBRARY
***Salvatore Capasso**, Bonaventura Tagliafierro, Iván Martínez-Estévez, José M. Domínguez, Joe El Rahi, Vasiliki Stratigaki, Alejandro J.C. Crespo, Rosario Montuori, Peter Troch, Moncho Gómez-Gesteira, Giacomo Viggione*

Wednesday, June 30
18:30-20:30

Zoom Room 4

COMPDYN TS 15: OPTIMUM DESIGN AND CONTROL IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING

Chair: Vassilis Panoskaltsis

C 19036 CRITICAL ACCELERATION, SEISMIC SLIDING DISPLACEMENT AND SMART DESIGN OF CANTILEVER WALLS

Loukas C. Katsenis, Constantine A. Stamatopoulos, Vassilis P. Panoskaltsis

C 18548 A PARAMETRIC ANALYSIS OF THE SEISMIC PERFORMANCE OF BRIDGES AS A FUNCTION OF THE DCFP DEVICE PROPERTIES

Paolo Castaldo, Guglielmo Amendola

C 18549 SEISMIC PERFORMANCE OF BRIDGES ISOLATED WITH FPS

Paolo Castaldo, Guglielmo Amendola

C 19054 COMPARISON OF CONTROL ALGORITHMS APPLIED TO AN HYBRID MASS DAMPER ATTACHED TO AN WIND TURBINE TOWER

Pedro Rocha, Suzana Avila

C 19060 PRELIMINARY STUDY OF AN ARDUINO CONTROLLED SHAKE TABLE TO LOW-FREQUENCY TEST

Ledymar F. Moreno, Marcus V. G. de Moraes, Suzana M. Avila

C 19124 EFFICIENT DAMPER DESIGN METHOD FOR ELASTIC-PLASTIC MDOF STRUCTURES UNDER CONSECUTIVE-LEVEL EARTHQUAKES

Hiroki Akehashi, Izuru Takewaki

C 19966 IMPROVING ENERGY DISSIPATION CAPACITY OF NATURALLY BUCKLING BRACES UNDER LOW-CYCLE FATIGUE LOAD

Shadiya Jamshiyas, Kazuhiro Hayashi, Xiaopo Yang, Konstantinos Skalomenos

C 18482 OPTIMAL DESIGN OF TID-BASED SYSTEM FOR THE CONTROL OF WIND-INDUCED VIBRATION IN TALL BUILDINGS THROUGH CULTURAL ALGORITHM

Luis Lara-Valencia, Mateo Ramírez-Acevedo, Daniel Caicedo, José Brito, Yosef Farbiarz

Wednesday, June 30
18:30-20:30

Zoom Room 5

COMPDYN TS 33: AEROELASTICITY, SOUND AND VIBRATION AND BRIDGE DYNAMICS

Chair: George Markou

C 18480 ANALYSIS OF GEOMETRICALLY NON-LINEAR FREE VIBRATIONS OF FUNCTIONAL GRADED BEAMS IN A THERMAL ENVIRONMENT

Yassine El Khouddar, Ahmed Adri, Omar Outassafte, Issam El Hantati, Said Rifai, Rhali Benamar

C 18700 PERSPECTIVES ON THE ACCELERATION OF THE NUMERICAL ASSESSMENT OF FLUTTER AND BUFFETING RESPONSE OF BRIDGE DECKS

Julien Heremans, Anass Mayou, Vincent Denoël

C 18701 SIMULATING LOW FREQUENCY SOUND TRANSMISSION LOSS OF MOUNTED PANELS

Moris Kalderon, Andreas Paradeisiotis, Ioannis Antoniadis

C 18870 INVESTIGATION OF A METHODOLOGY FOR DESCRIBING FAN BLADE FLUTTER LIMITATIONS INDUCED BY NON-LINEAR FRICTION AT BLADE ROOTS

Nicolas Ombret, Maxime De Pret, Alain Dugeai, Fabrice Thouverez, Laurent Blanc, Thomas Berthelon

C 19255 GEOMETRICALLY NON-LINEAR FREE AND FORCED IN-PLANE VIBRATION OF STEPPED CIRCULAR ARCH

Omar Outassafte, Ahmed Adri, Yassine El Khouddar, Said Rifai, Rhali Benamar

C 19520 SIMPLE AND COMPLEX MODELLING OF SEAT-TYPE ABUTMENT-BACKFILL SYSTEMS

Ioannis G. Mikes, Andreas J. Kappos

C 19543 INFLUENCE OF THE CONTINUITY OF THE BALLASTED TRACK ON THE DYNAMIC RESPONSE OF A SIMPLY SUPPORTED HIGH SPEED RAILWAY BRIDGES

Said El Hankari, Rachid Dkiouak, Khalid Roky

C 19699 A FRAMEWORK ON THE DYNAMIC RESPONSE OF TALL STRUCTURES TO NON-STATIONARY WIND USING DESIGN SPECTRUM

Jing Song, Pedro Martinez-Vazquez, Konstantinos A. Skalomenos

C 18478 GEOMETRICALLY NON-LINEAR FREE IN-PLANE VIBRATION OF FUNCTIONALLY GRADED CIRCULAR ARCH WITH UNIFORM CROSS SECTION

Omar Outassafte, Ahmed Adri, Yassine El Khouddar, Said Rifai, Rhali Benamar

Wednesday, June 30
18:30-20:30

Zoom Room 6

COMPDYN MS 24: LIFE-CYCLE RISK-BASED STRUCTURAL ASSESSMENT AND COST ANALYSIS

MS Organizers: Ilaria Venanzi, Filippo Ubertini, Luca Caracoglia

Chair: Ilaria Venanzi, Luca Caracoglia

-
- C 18843** TOWARDS THE DEVELOPMENT OF A COMPREHENSIVE FRAMEWORK FOR LIFE CYCLE COST ANALYSIS OF BRIDGES SUBJECTED TO MULTIPLE HAZARDS
*Stefano Sacconi, Laura Ierimonti, **Ilaria Venanzi**, Filippo Ubertini*
- C 18866** APPLICATION OF BAYESIAN FE MODEL SELECTION FOR SHM OF A MONUMENTAL MASONRY PALACE THROUGH SEMI-SUPERVISED LEARNING
***Laura Ierimonti**, Nicola Cavalagli, Enrique García-Macías, Ilaria Venanzi, Filippo Ubertini*
- C 18816** FRAGILITY ASSESSMENT OF WIND-EXCITED VIDEO SCREEN ROOMS IN HIGH-RISE BUILDINGS
***Fabio Rizzo**, Laura Ierimonti, Stefano Sacconi, Ilaria Venanzi*
- C 18630** LIFE-CYCLE PERFORMANCE AND COST ANALYSIS OF SAND MITIGATION MEASURES: TOWARDS AN HYBRID EXPERIMENTAL-COMPUTATIONAL APPROACH
***Lorenzo Raffaele**, Sophia Buckingham, Nicolas Coste, Gertjan Glabeke, Andrea Lo Giudice, Jeroen van Beeck*
- C 18882** A NEURAL NETWORK-BASED APPROACH FOR SEISMIC-INDUCED DAMAGE ASSESSMENT OF STEEL LIQUID STORAGE TANKS
***Laura Micheli**, Mahmoud Faytarouni*
- C 18818** FRAGILITY OF EXISTING ITALIAN BRIDGES TO TRAFFIC LOADS
***Giacomo Miluccio**, Daniele Losanno, Fulvio Parisi, Edoardo Cosenza*
- C 18861** LIFE-CYCLE COST ANALYSIS OF TALL BUILDINGS IN SYNOPTIC, MIXED WIND LOAD CLIMATES BY LAYERED STOCHASTIC APPROXIMATION MONTE-CARLO METHOD
***Lei Zhang**, Luca Caracoglia*
- C 18953** INFLUENCE OF LOCAL HAZARD PARAMETERS AND BUILDING COST COMPOSITION ON THE MULTI-HAZARD OPTIMIZATION OF MTMDS FOR TALL BUILDINGS
***Shalom Kleingesinds**, Oren Lavan*

Wednesday, June 30
18:30-20:30

Zoom Room 7

COMPDYN TS 31 - II: NUMERICAL SIMULATION OF GEOTECHNICAL PROBLEMS

Chair: Konstantinos G. Megalooikonomou

C 19126 THREE DIMENSIONAL DYNAMIC INTERACTION OF ADJACENT FOUNDATIONS ON A HALFSpace WITH LOCAL INHOMOGENITY APPLYING A COUPLED ITM-FEM APPROACH

Julian Freisinger, Gerhard Müller

C 19221 NUMERICAL ANALYSIS ON SHALLOW FOUNDATIONS LATERAL DISCONNECTION

Fausto Somma, Alessandro Flora, Emilio Bilotta, Giulia Viggiani

C 19376 INFLUENCE OF THE DYNAMIC SOIL-STRUCTURE INTERACTION IN CONCRETE FRAMES WITH INCORPORATED VISCOUS DAMPERS

Andrés Mauricio Cortés Arias, Francisco Peña Ocampo, Orlando Cundumí Sánchez

C 19479 COMPUTATIONAL MODELING AND PARAMETRIC STUDY OF PILE GROUPS

Mariana Lazarini, Miguel Paula, Manuel Braz-César

COMPDYN MS 8: A MATTER OF SCALE: FROM REAL-TIME MONITORING TO AREA-WIDE SEISMIC RISK ASSESSMENT

MS Organizer: Konstantinos G. Megalooikonomou

Chair: Konstantinos G. Megalooikonomou

C 18855 EARTHQUAKE EARLY WARNING AND RAPID RESPONSE SYSTEM BASED ON SMART SEISMIC AND MONITORING SENSORS EMBEDDED IN A COMMUNICATION PLATFORM AND COUPLED WITH BIM MODELS

Georgios Balaskas, Benno Hoffmeister, Christoph Butenweg, Marco Pilz, Anna Bauer

C 19147 MONITORING OF A PRESTRESSED BRIDGE MODEL BY ULTRASONIC MEASUREMENT AND VIBRATION RECORDINGS

Chun-Man Liao, Falk Hille, Daniel Fontoura Barroso, Ernst Niederleithinger

C 19178 COMPARATIVE NON-STRUCTURAL VULNERABILITY ASSESSMENT METHODS FOR HISTORICAL RESIDENTIAL MASONRY BUILDINGS

Filippos Alogdianakis, Konstantinos G. Megalooikonomou, Georgios S. Papavasileiou

C 19667 SEISMIC RESILIENCE ANALYSIS OF URBAN TRANSPORTATION NETWORKS USING BAYESIAN NETWORK

Ji-Eun Byun, Dina D'Ayala

Wednesday, June 30
18:30-20:30

Zoom Room 8

UNCECOMP MS 11: SENSORS PLACEMENT UNDER UNCERTAIN INFORMATION

MS Organizers: Eliz-Mari Lourens, Alice Cicirello

Chair: Alice Cicirello

U 19011 SENSOR FAULT IDENTIFICATION FOR ROBUST STRUCTURAL HEALTH MONITORING

*Andreea-Maria Oncescu, **Alice Cicirello***

U 18904 OPTIMAL SELECTION OF BAYESIAN VIRTUAL SENSORS FOR DAMAGE DETECTION UNDER VARIABLE ENVIRONMENTAL CONDITIONS

Jyrki Kullaa

U 19088 VOLUMETRIC UNCERTAINTY BOUNDS AND OPTIMAL CONFIGURATIONS FOR CONVERGING BEAM TRIPLE LIDAR

***Anthony Brooms**, Theodore Holtom*

U 19050 SENSOR PLACEMENT IN NONLINEAR SYSTEMS UNDER INPUT AND PARAMETER UNCERTAINTY

***Amin Jabini**, Erik A. Johnson*

U 19059 ON THE INVESTIGATION OF THE EFFECT OF POPULATION UNCERTAINTY ON OPTIMAL SENSOR LOCATIONS

***Felipe Igea**, Manolis N. Chatzis, Alice Cicirello*

U 19135 OPTIMAL SENSOR PLACEMENT IN DISTRICT HEATING NETWORKS FOR BAYESIAN INFERENCE OF UNCERTAIN DEMANDS

*Alexander Matej, **Andreas Bott**, Lea Rehlich, Florian Steinke, Stefan Ulbrich*

U 19159 PARAMETER REDUCTION FOR EFFICIENT SENSOR SELECTION IN LINEAR BAYESIAN INVERSE PROBLEMS

*Ajay Mandyam Rangarajan, **Nicole Aretz**, Karen Veroy-Grepl*

UNCECOMP MS 15: BAYESIAN INFERENCE AND MACHINE LEARNING FOR CHALLENGING ENGINEERING APPLICATIONS

MS Organizers: George Arampatzis, Ioannis Kalogeris, Petros Koumoutsakos, Vissarion Papadopoulos

Chair: Alice Cicirello

U 19072 BAYESIAN MODEL UPDATING BY CROSS ENTROPY-BASED IMPORTANCE SAMPLING

***Oindrila Kanjilal**, Michael E. Engel, Iason Papaioannou, Daniel Straub*

U 19382 BAYESIAN INFERENCE ON MULTISCALE MODELS OF CARBON-REINFORCED POLYMERS ACCELERATED BY DEEP NEURAL NETWORKS

***Stefanos Pyrialakos**, Ioannis Kalogeris, Gerasimos Sotiropoulos, Vissarion Papadopoulos*

Wednesday, June 30
18:30-20:30

Zoom Room 9

COMPDYN MS 9: NONLINEAR MODELLING AND ASSESSMENT OF EXISTING REINFORCED CONCRETE ELEMENTS

MS Organizers: Mariano Di Domenico, Paolo Ricci, Gerardo M. Verderame

Chair: Mariano Di Domenico

C 19314 ASSESSMENT OF THE RESPONSE ENVELOPE OF REINFORCED CONCRETE MEMBERS WITH DIFFERENT FAILURE MODES

Mariano Di Domenico, Paolo Ricci, Gerardo M. Verderame

C 18650 STUDY OF BIAXIAL SHEAR FAILURE ENVELOPE OF REINFORCED CONCRETE COLUMNS

Beatrice Belletti, Simone Ravasini, Andrea Alberici

C 18692 EVALUATION OF THE SEISMIC VULNERABILITY OF EXISTING PRE-CODE RC CORE STRUCTURAL SYSTEMS THROUGH NON-LINEAR PUSHOVER ANALYSES

Beatrice Belletti, Enzo Martinelli, Elena Michelini, Francesca Vecchi

C 18730 CALIBRATION AND VALIDATION OF AN OVERDAMPED DISPLACEMENT ADAPTIVE PROCEDURE FOR SEISMIC ASSESSMENT OF INFILLED RC FRAMES

Francesca Barbagallo, Melina Bosco, Aurelio Ghersi, Edoardo Michele Marino, Pier Paolo Rossi

C 19299 CALIBRATION AND NUMERICAL MODELING OF RC BEAM-COLUMN JOINTS DESIGNED FOR GRAVITY LOADS

Marcello Sabene, Maria Zucconi, Stefano Pampanin, Barbara Ferracuti

C 18965 CYCLIC TESTING OF 1:40 SCALE CANTILEVER RC ELEMENTS WITH DIGITALLY MANUFACTURED REINFORCEMENT

Lorenzo Del Giudice, Rafal Wrobel, Antonios Katsamakas, Christian Leinenbach, Michalis Vassiliou

C 19349 SEISMIC ASSESSMENT OF AN EXISTING RC BUILDING AFFECTED BY SLOW-MOVING LANDSLIDES INDUCED DISPLACEMENTS MONITORED BY REMOTE SENSING TECHNIQUE

Annalisa Mele, Andrea Miano, Diego Di Martire, Donato Infante, Andrea Prota, Massimo Ramondini

C 19438 NOVEL MULTI-AXIAL LUMPED-PLASTICITY COMPUTATIONAL MODEL CAPTURING ALL SALIENT STRENGTH DEGRADATION MODES IN CONCRETE COLUMNS SUBJECTED TO EARTHQUAKE LOADING

Wassim Ghannoum, Adolfo Matamoros, Ariel Suselo, Rasool Ghorbani

Wednesday, June 30
18:30-20:30

Zoom Room 10

COMPDYN MS 26: SEISMIC SAFETY ASSESSMENT OF STRUCTURES

MS Organizers: Pedro Delgado, António Arêde

Chair: Pedro Delgado

C 19262 ASSESSMENT OF RC HOLLOW-PIERS FOR SEISMIC LIMIT STATE OF DAMAGE - DIRECT REPAIR COSTS

Pedro Delgado, Naiara Silva, Mário Marques, António Arêde

C 18996 EXPERIMENTAL IN-PLANE LATERAL RESPONSE OF A FULL-SCALE ADOBE MASONRY WALL WITH OPENING

Paolino Cassese, Luigi Fenu, Domenico Asprone, Antonio Occhiuzzi, Fulvio Parisi

C 19176 INFLUENCE OF BEAM-TO-COLUMN CONNECTIONS IN SEISMIC VULNERABILITY ASSESSMENT OF STEEL STRUCTURES

Giammaria Gabbianelli, Daniele Perrone, Emanuele Brunesi

AUTHOR INDEX

A

Abbate V.	42
Abdallah I.	74
Abe Y.	36
Abrahamczyk L.	80
Abrahamson N.	58
Abu-Zurayk M.	69
Acconcia E.	44, 97
Aceto L.	105
Achillopoulou D.	47, 119
Acikgoz S.	89
Adam C.	90
Adam J.	75, 99
Addessi D.	97, 106
Adhikari S.	31
Adri A.	120, 123
Afra H.	113
Agante M.	39, 53
Aghaeidoost V.	90
Aguilar R.	87
Ahmad A.	79
Ahmad N.	79
Ahmadi E.	89
Ahmadi P.	89
Aiello M-A.	68, 80
Akehashi H.	122
Akhtar S.	53
Alaggio R.	92
Alam M.	42
Alberici A.	127
Alexander N.	32
Alexanderian A.	83
Alfano S.	44, 92
Alforno M.	107
Aliotta A.	60
Alix-Williams D.	38
Aljawhari K.	39
Alogdianakis F.	125
Aloisio A.	92, 108
Alves Costa P.	35
Amador S.	116
Amarante dos Santos F.	42
Amendola A.	42
Amendola C.	94
Amendola G.	58, 122
Anagnostou E.	76
Anastasiadis A.	76
Andriotis C. P.	91
Angelucci G.	105
Anić F.	80
Antonau I.	69

Antoniadis I.	72, 100, 105, 123
Antoniou D.	114
Antoniou M.	91
Antonodimitraki S.	88
Antonopoulos C.	82
Arai Y.	48
Arède A.	39, 53, 128
Aretz N.	126
Arezzo D.	70, 92
Argenziano M.	105
Argiento L-U.	67
Arnold M.	89
Artioli E.	42
Asad M.	87
Asakura D.	48
Asouti V.	46, 69, 81
Asprone D.	32, 128
Asso R.	91
Autiero F.	77, 87
Avila S.	122
Avşar Ö.	33
Ayoub A.	105
Ayoub N.	41
Aznárez J.	94

B

B.S. A.	103
Babilio E.	42
Badri Y.	121
Bakas N.	104, 114
Balaskas G.	108, 125
Balesdent M.	81
Ballarin F.	103
Bantilas K.	77, 88
Baraldi D.	75
Barbagallo F.	108, 127
Barbosa A.	42, 108
Barros L.	106, 116
Barros R.	106
Barroso D-F.	125
Bartelt P.	120
Basaglia A.	45, 120
Basso P.	78
Basu A.	53
Battaglia L.	55
Baudin M.	71, 103
Bauer A.	125
Bäumchen A.	59
Baxevani G.	101
Bazaios K.	113
Beer M.	50
Bekdas G.	57

Belleri A.	54, 89
Belletti B.	127
Bellos J.	114
Belser G.	110
Ben Seghier M.	79
Benakli S.	88
Benamar R.	120, 123
Benedetti L.	98
Benenato A.	67
Bento R.	39
Bergami A-V.	70
Berikov V.	38
Bernardi E.	60
Bertagnoli G.	80
Berthelon T.	123
Bertolesi E.	75
Bertrand D.	58
Bestle D.	46
Betsch P.	117
Bhaduri A.	51
Bhattacharya T.	71
Bianchi S.	39, 47, 78
Billah A-M.	49, 90
Bilotta E.	35, 125
Biondi G.	41
Bisegna P.	42
Blanc L.	123
Blanchet-Scalliet C.	73
Blasi G.	80
Blaso L.	78
Blasone V.	45
Bletsos G.	56
Bletzinger K-U.	69
Blondeel P.	103
Blondet M.	110
Boem I.	97
Boggian F.	108
Bolay L.	48
Bolis V.	80
Bonney M.	41
Bosco M.	127
Bott A.	126
Bouckaert I.	53
Bouckovalas G.	113
Bousias S.	111
Branco J.	98, 108
Braun C.	60
Braz-César M.	106, 116, 125
Bredow R.	50
Bressanelli M-E.	89
Brevault L.	81
Brincker R.	116
Brink A.	33

Briseghella B.	70, 80, 105
Brito Castro F.	112
Brito J.	122
Broccardo M.	83, 89
Brooms A.	126
Brunelli A.	94
Brunesi E.	42, 128
Bruschi E.	60
Buckingham S.	124
Buonocunto V.	97
Buratti G.	67
Buratti N.	55, 78, 100
Butenweg C.	70, 80, 125
Byun J-E.	125

C

Caballero-Garatachea O.	54
Cacciola P.	105
Cademartori M.	60
Cadini F.	104
Caicedo D.	122
Cakiroglu C.	57
Çaktı E.	119
Calabrese A.	72
Calderini C.	107
Calderón P.	75, 99
Calderoni B.	98
Caliò I.	67
Callens R.	50
Camarda G.	32
Camata G.	105
Campana E-F.	86
Campiche A.	102
Campos e Matos J-A.	109
Campos L.	49
Candia G.	58
Cannamela C.	95
Cantero-Chinchilla S.	104
Cantisani G.	33
Canuti C.	68
Capanna I.	35
Capasso S.	121
Caracoglia L.	124
Carbonari S.	70, 82, 92, 99
Cardone D.	78
Carneiro-Barros R.	106, 116
Carofilis W.	39
Carpanese P.	44, 55, 68, 114
Carpinteri A.	105
Casapulla C.	67
Cascini L.	66
Cascone E.	41
Cassese P.	32, 128
Cassol D.	107

Castaldo P.	58, 90, 122
Castañeda B.	87
Castellano A.	65
Castellano M.	119
Castro J-M.	39
Caterino N.	119
Cattari S.	44, 92, 94
Cavalagli N.	33, 75, 92, 124
Cavaleri L.	32, 70
Cavdar E.	72, 100
Caviezel A.	120
Ceccarelli C.	39
Ceccolini N.	100
Čeh N.	89
Cengiz C.	89
Ceraldi C.	98, 108
Ceravolo R.	65
Ceriana Mayneri E.	68
Ceroni F.	33, 67
Cescatti E.	55, 87
Chabridon V.	103
Chae S-W.	34
Chalioris C.	33
Chalot A.	119
Chaloulos Y.	113
Chambreuil C.	121
Chang S.	34
Charalampakis A.	114
Charmpis D.	97, 104
Chatzi E.	34, 35, 62, 83
Chatzidakis D.	35
Chatzis M.	62, 89, 126
Chauhan M.	103
Chen J.	71, 93, 116
Chen J-B.	71
Chen P.	84
Chen S.	31
Chen Y.	36
Chesnais C.	68
Chiachio M.	104
Chiappini M.	45
Chieffo N.	97
Chiozzi A.	87
Chisari C.	97
Cho M.	34
Cho S-S.	112
Choi H-S.	34
Choi J.	34
Choi J-H.	34
Chouvion B.	120
Christofi N.	114
Chronopoulos D.	104
Chrysanidis T.	43
Chu S.	48
Chuang W-C.	41, 93

Cicci L.	84
Cicirello A.	60, 126
Cilento F.	72
Cimellaro G-P.	66
Cimrman R.	112
Cinnella P.	81
Cipriani L.	92
Cirella R.	92
Ciuffreda A-L.	66
Ciurlanti J.	47
Claudet B.	63
Cleaves H.	83
Clemente P.	78, 99
Clementi F.	75, 107
Clemett N.	39
Cluni F.	33, 66
Coccimiglio S.	65
Colajanni P.	32
Coli M.	66
Colombo C.	67
Colvez M.	93
Comodini F.	119
Contento A.	37, 89
Conti R.	94
Corbally R.	116
Corritore D.	99
Cortés Arias A-M.	125
Cosenza E.	92, 124
Costa R.	111
Coste N.	124
Cottureau R.	93
Couto R.	39
Craviero H-D.	111
Crespi P.	53
Crespi P-G.	53
Crespo A.	121
Crisci G.	33
Crispin J.	94
Cristofaro M-T.	119
Croce P.	67, 77
Cross E.	62
Crowley H.	68
Cucuzza R.	46, 91
Cundumí García J-S.	120
Cundumí Sánchez O.	120, 125
Cusatis G.	97
Cusmano V.	67

D

D. Beskou N.	121
D. Shields M.	38
D'Aniello M.	111
da Porto F.	44, 55, 60, 68, 87, 99, 109, 114

Da Veiga S.	81
Dadoulis G.	88
Dall'Asta A.	68, 92, 99, 100, 110
D'Alterio C.	82
D'Amato M.	87
D'Ambra C.	98, 108
D'Ambrisi A.	119
D'Ambrosio A.	42
D'Aniello M.	102, 111
Dannert M.	61
Darby A.	113
D'Arenzo G.	98
D'Asdia P.	93
Date S.	36
D'Ayala D.	125
De Angelis A.	92
De Bellis M-L.	48
De Domenico D.	90
De Gregorio D.	68
De Iasio A.	75, 97
de la Llera J-C.	58
De Lozzo M.	95
De Luca F.	45
De Martino A.	102
De Martino G.	77, 87
de Morais M.	122
De Paola D.	67
De Pret M.	123
De Risi M-T.	39
De Risi R.	45
de Sanctis L.	82
De Silva F.	35
De Stefano M.	119
de Zordo-Banliat M.	81
Deb K.	117
Deckelnick K.	56
Dedè L.	84
Dede Ş.	119
Degrande G.	113
Del Gaudio C.	39
Del Giudice L.	127
Del Vecchio C.	33
Delgado P.	128
Delissen A.	86
Della Corte G.	33
Dellacasagrande S.	60
Demertzis K.	104
Demir U.	33
Demosthenous M.	43, 54, 88
Demosthenous P.	88
Demosthenous S.	54
Denoël V.	123
Dergham G.	81
Desceliers C.	51
Desprez C.	68

Deu J-F.	41
Dexl F.	46
Dezi F.	82
Di Benedetto S.	102
Di Cesare A.	110
Di Domenico M.	53, 127
Di Egidio A.	37, 89
Di Fabio F.	35
Di Giovanni M.	93
Di Laora R.	82, 94
Di Lorenzo G.	102
Di Ludovico M.	33, 60, 67, 68, 77, 78, 87
Di Martire D.	127
Di Re P.	106
Di Salvatore C.	119
Di Sarno L.	45, 58, 111
Di Trapani F.	32, 70, 80
Diamantopoulos S.	37, 77
Dick A.	106, 116
Diebels S.	59
Dietz M.	89
Digrisolo A.	33, 55
Dihoru L.	89
Dimakopoulou V.	47
Dimitrakopoulos E.	90
Dimitriou D.	41
Dion J-L.	72
Distl J.	60
Ditë R.	79
Dkiouak R.	123
Doksanovic T.	70
Domaneschi M.	66
Domínguez J.	121
Donà M.	44, 60, 114
Dong Y.	77
Donigaglia T.	66
Doostan A.	85
Doškář M.	48
Duddeck F.	61
Dugeai A.	123
Duhamel D.	63, 85
Durand-Neyra P.	113
Düster A.	56

E

Edler P.	40, 50
Ehre M.	83
El Amri R.	73
El Garroussi S.	95
El Hankari S.	123
El Hantati I.	120, 123
El Khouddar Y.	123
El Rahi J.	121

Elena A.	92
Elenas A.	77, 88, 104
Eleni C.	74
Elia I.	65
El-Maissi A-M.	35
Elshafei S.	121
Engel M.	126
Ercan T.	74
Ernst O.	38
Esposito G.	92
Eteme Minkada M.	54
Evans B.	91
Evrard F.	46
Ezvan O.	34

F

Fabozzi S.	35
Faes M.	50, 61
Faggella M.	42
Faggiano B.	108
Faiella D.	105
Failla G.	42
Fakhari A.	46
Fakhreddine H.	120
Faleri F.	65
Fanaradelli T.	76
Faralli F.	66
Farbiarz Y.	122
Farhikhteh M.	69
Fasoulakis Z.	101
Fatahi B.	61
Fatnassi A.	60
Faytarouni M.	124
Fekhari E.	103
Feldwisch J.	69
Fenu L.	32, 128
Fernandes C.	46
Fernandes P.	39, 53
Fernández-Ruiz J.	35
Ferracuti B.	42, 67, 68, 98, 127
Ferrante A.	107
Ferretti F.	55, 87
Ferrier E.	119
Ferrotto M-F.	32, 70
Finocchio G.	45
Fiore I.	79
Fiore S.	45
Fiorillo A.	60
Fischer C.	112
Fischer M.	81
Flora Al.	125
Flora Am.	78
Florakis G.	100
Focacci F.	119

Folhento P. 106, 116
 Follador V. 44, 55, 68, 87
 Foret G. 63
 Formisano A. 65, 87, 97, 102
 Foroushani A-S. 84
 Fortunato A. 65, 87
 Fossetti M. 98
 Fotopoulou S. 35
 Fragiaco M. 35
 Fragiadakis M. 37, 47, 77
 Fragkoulis V. 50
 Franco C. 68
 Frangi A. 84
 Fraternali F. 42, 63
 Freddi F. 100, 105, 110, 111
 Freisinger J. 125
 Freitag S. 40, 50
 Fresca S. 84
 Friswell M. 81
 Fu J. 59
 Fukuda K. 59
 Funfschilling C. 62
 Furinghetti M. 60, 110
 Furtado A. 39, 53

G

Gabbianelli G. 39, 128
 Gaetani d'Aragona M. 68
 Gagliardo R. 66
 Galano S. 72, 82
 Galanos N. 69
 Galassi S. 66
 Galasso C. 39, 78
 Galván J.C. 94
 Galvín P. 112
 Gandeli E. 60
 Gandelli E. 60
 Gander L. 84
 Gandomi A. 51
 Gao W. 50
 Gara F. 70, 82, 92, 99, 109
 Garala T. 82
 García-Cardona C. 71
 García-Cerezo J. 99
 García-Macias E. 99, 124
 Gardner P. 41
 Garnier J. 61, 95
 Gatta C. 97, 106
 Gattesco N. 97
 Gatuingt F. 32
 Geiser A. 69
 Gencturk B. 34
 Genovese F. 41, 50, 62
 Gentile M. 109

Gentile R. 39, 78
 Gentili F. 47
 Georgioudakis M. 91
 Gesualdo A. 87
 Ghanem R. 34
 Ghani S. 121
 Ghannoum W. 127
 Gharaviri A. 84
 Gherzi A. 127
 Ghiassi B. 75
 Ghorbani R. 127
 Ghosh J. 100
 Giannakoglou K. 46, 69, 81
 Giglioni V. 99
 Gigliotti R. 87
 Gijzen F. 84
 Gino D. 58
 Giofrè M. 33
 Gioiella L. 90, 100, 110
 Giongo I. 98, 107
 Giordano E. 107
 Giordano L. 58
 Giouvanidis A. 67, 77
 Giovanis D. 103
 Giovinazzi S. 78, 99
 Giresini L. 67, 77
 Giry C. 32, 68, 121
 Giuliani G. 78
 Givoli D. 112
 Gjødvd J. 116
 Gkaragkounis K. 46
 Gkaraklova S. 54, 76
 Gkatzogiannis S. 49
 Glabeke G. 124
 Göbel L. 48
 Godio M. 53, 66
 Golias E. 33
 Gómez-Gesteira M. 121
 González J. 112
 González-Gallardo S. 46
 Gornov A. 56
 Gorodetsky A. 81
 Goutal N. 95
 Gozo N. 78
 Graf W. 40
 Graham-Brady L. 51
 Grandits T. 84
 Grange S. 58
 Gravett D. 34, 104, 113
 Greco A. 79
 Greco R. 46
 Gregori A. 97
 Greiner D. 86
 Grillanda N. 65, 87, 117
 Guadagnini M. 33

Guilleminot J. 48, 51, 84
 Gunay S. 89
 Guo X. 64
 Gupta A. 51
 Gur O. 79
 Gusella V. 33, 66
 Gutiérrez-Urzuá F. 110, 111

H

H. Rycroft C. 38
 Haberstick C. 95
 Hadj Brahimi M-M. 113
 Hadjiyiannakou K. 104
 Haigh S. 82
 Hajirasouliha I. 90
 Han S. 34
 Hante S. 89
 Hao H. 117
 Harley J. 93
 Harmandaris V. 101
 Hauffe A. 46
 Häufner J. 61
 Haweyou M. 80
 Hayashi K. 122
 Heinkenschloss M. 73
 Helbert C. 73, 83
 Henning C. 40
 Heremans J. 123
 Hille F. 125
 Hinze M. 56
 Hirzinger B. 90
 Hoang T. 63
 Hoang T-V. 38
 Hoffmeister B. 108, 125
 Holland C. 42
 Holtom T. 126
 Hori M. 63
 Horstmann B. 48, 50
 Hosono E. 48
 Houpt C. 61
 Huber P. 60
 Humbert P. 61
 Hussein M. 121

I

Iacovino C. 78
 Ianniruberto U. 99
 Ickstadt K. 40
 Idels O. 110
 Idesman A. 85
 Ierimonti L. 92, 99, 124
 Igea F. 126
 Iida A. 31

Iliadis L.	104
Ilic C.	56, 69
Ilki A.	33
Imperatore S.	67
Infante D.	127
Intrigila C.	42
Iovane G.	108
Iovino M.	82
Irisarri F-X.	81
Ivanova K.	120
Izzuddin B.	97

J

Jabini A.	126
Jaeschke A.	46
Jafari A.	83
Jafari-Asl J.	79
Jain A.	47
Jalali H.	81
Jamia N.	81
Jamshiyas S.	122
Jebroun Y.	103
Jelenić G.	89
Jensen H.	62, 85
Jeremic B.	52
Jerez D.	50, 62
Jia X.	62
Jiang C.	63
Johnson E.	126
Juarez-Luna G.	54
Julisson S.	31

K

Kaatsız K.	47
Kabir Md A-B.	49
Kadmany F.	112
Kalapodis N.	53
Kalderon M.	123
Kalikse M.	40
Kalligiannaki E.	101
Kalogerakou M.	72
Kalogeris I.	95, 126
Kamiński M.	50
Kampas G.	53
Kang Z.	31
Kanjilal O.	126
Kantarakias K-D.	73
Kapasakalis K.	72, 100, 105
Kappos A.	104, 123
Karabinis A.	119
Karafagka S.	35
Karaferis N.	49
Karagiannakis G.	58

Karatzetzou A.	35, 109
Karayannis C.	33
Karniadakis G.	117
Karuk V.	72, 100
Kashani M.	32, 89
Kassem M-M.	35
Kastian S.	40
Kastiza P.	43
Katakalos K.	43, 54, 76
Kato C.	31
Katsamakas A.	37, 110, 127
Katsanos E.	116
Katsenis L.	113, 122
Katsimene S.	33
Kaup J.	40
Kavvadias I.	45, 77, 88, 104
Kayabekir A-E.	57
Kazashi Y.	38
Kechagias E.	76
Kerleguer B.	95
Khabbaz H.	61
Khan N-A.	70
Khan W.	53
Khodaparast H-H.	81
Khurjekar I.	93
Kikuchi R.	64
Kim J-G.	34
Kim S-M.	34
Kim Y-M.	53
Kirtsonis K.	33
Kita A.	75
Kleingesinds S.	124
Kleinveld S.	31
Klinkel S.	70, 80
Klopov S.	82
Knoedel P.	49
Kolman R.	112
König P.	90
Könke C.	40, 48
Kontolati K.	38, 103
Kopačka J.	112
Korteland S-A.	84
Kosheleva O.	50
Kotoulas L.	54, 76
Koumoutsakos P.	52, 117
Kouroufexis N.	43
Kramer B.	73
Krause R.	84
Kreinovich V.	50
Kriemann R.	38
Kröker I.	73
Krumscheid S.	38
Kühl N.	56, 117
Kuhn Y.	50
Kullaa J.	126

Kusunoki K.	106
Kyprioti A.	83

L

L. Falk M.	38
Labò S.	54
Laboulfie C.	81
Labri W.	41
Lachanas C.	89
Lacidogna G.	105
Laguardia R.	87
Lahmer T.	40, 48
Lamarucciola N.	110
Landolfo R.	66, 102, 111
Langelaar M.	86
Langlade T.	58
Lara-Valencia L.	122
Larbi W.	88
Lassila T.	84
Lataniotis C.	95, 103
Latour M.	100, 102
Latz A.	48, 50
Lauvernet C.	83
Lavan O.	72, 110, 124
Law K.	38
Lazaridis P.	104
Lazarini M.	125
Lázaro C.	121
Lazarov B.	86
Le Riche R.	73, 81
Lebrun R.	71
Léger P.	121
Leichsenring F.	40
Leinenbach C.	127
Lenci S.	107
Lenticchia E.	65
Leone M.	119
Leoni G.	68, 92, 100, 109
Lettieri A.	100
Li B.	41
Li C.	59
Li J.	63
Li L.	47, 58
Li S.	97
Li T.	104
Liao C-M.	125
Liberatore D.	97
Liberatore L.	70
Liberotti R.	33, 66
Lignola G-P.	33, 67
Lignos X.	88
Limnaiou T.	35
Lin Y-T.	71
Lippiello M.	98, 108

Litvinenko A.	38
Liu P.	31
Liu Y.	47, 58, 109
Liu Ze.	116
Liu Zh.	61
Lo Feudo S.	72
Lo Giudice A.	124
Lockan M.	46
Lombaert G.	63, 103, 113, 117
Longarini N.	53
Longbottom J.	62
Longo M.	47, 98
Losanno D.	45, 72, 100, 107, 124
Lourenço P.	65, 67, 98
Lu Da-G.	109
Lubrecht J.	84
Lucchesi M.	93
Lucor D.	95
Lüleci M-C.	33
Luque M.	46
Lüthen N.	95
Lyu M-Z.	71

M

M.R dos Santos K.	103
Macorini L.	97
Madabhushi G.	82
Maddaloni G.	92
Madera Sierra I.	45
Maes K.	117
Maeso O.	94
Magagnini E.	75
Magenes G.	70, 80
Magisano D.	45
Maglio M.	102
Magliulo G.	119
Maione A.	67
Maire J-F.	81
Makris N.	54, 76
Malaga-Chuquitaype C.	53
Malekjafarian A.	116
Malliotakis G.	35
Manfredi G.	33
Manfredi V.	33, 55
Manolis G.	88
Manos G.	43, 54, 76, 88
Manzoni A.	84
Marano G-C.	32, 46, 80, 91
Maranos J.	43
Marasli M.	33
Marelli S.	73, 95, 103
Margani G.	108
Margellos K.	62
Margetis A-S.	46

Margreth S.	120
Mari L.	60
Marini A.	54
Marinković M.	70, 80
Marino E.	108
Marino E-M.	127
Marino L.	60
Mariotti P.	66
Markić T.	100
Markmiller J.	46
Markou G.	34, 104, 113, 114
Markulak D.	70
Marques M.	128
Martakis P.	35, 62
Martin L.	31
Martinelli E.	127
Martínez-Estévez I.	121
Martinez-Vazquez P.	123
Martino C.	92
Martins L.	68
Marulanda J.	82
Marzok A.	72
Masciotta M-G.	107
Mascolo I.	65, 87
Masera D.	91
Masi A.	33, 55
Matamoras A.	127
Matei A.	126
Matheou M.	42
Matsuda H.	48
Mayorga F.	62
Mayou A.	123
Mazza F.	58, 119
Mazzotti C.	55, 78, 87, 98
Mazzotti M.	42
McLean T.	53
Megalookonomou K.	58, 125
Mehdipour Z.	98
Meheut M.	69
Mehrotra A.	67
Mele A.	127
Mele E.	105
Melidis L.	43, 54, 76
Mencik J-M.	63, 85
Mendoza Cabanzo C-A.	109
Mendoza-Hernandez O.	48
Mengesha M.	40
Mercuri M.	97
Merle A.	69
Merle X.	81
Meschke G.	40, 50
Messali F.	47
Metsis P.	59
Mezzi M.	119
Miano A.	60, 127

Miceli E.	58
Michel L.	119
Micheletti A.	42
Micheli L.	124
Michelini E.	127
Micozzi F.	100
Miettinen K.	85
Migliaccio G.	79
Mikes I.	123
Milanesi R.	70, 80
Milani G.	65, 75, 87, 97, 117
Milijaš A.	70, 80
Mills R.	41
Milone A.	102, 111
Miluccio G.	124
Minafò G.	32
Miniaci M.	42
Minicozzi F.	92
Minnucci L.	99
Miraglia G.	65
Mirra M.	98
Misaka T.	64
Mistretta F.	67
Mochi G.	97
Modak S.	93
Modena C.	87, 99
Moens D.	50, 61, 63
Mohamed Nazri F.	35
Molaioni F.	109
Molitierno C.	33
Mollaioli F.	105
Möller M.	46
Mollo E.	119
Monaco A.	107
Monfaredi M.	69
Monleón S.	121
Monteiro R.	39, 42, 78
Monti G.	70
Montuori R.	42, 45, 88, 111, 121
Mora Bowen N.	121
Morales Tirad E.	91
Morales-Esteban A.	113
Morandi P.	70, 80
Moreno L.	122
Moretti A.	108
Morici M.	68, 92, 109
Mosalam K.	89
Moscatelli M.	35
Mosoarca M.	107
Mostaghim S.	46
Motoyama H.	63
Mourlas C.	104
Mousavian E.	67
Mucedero G.	42
Mudrić T.	89

Muho E.....	121
Muhr A.....	100
Müller G.....	73, 125
Müller P-M.....	56
Murgo F-S.....	87
Muscolino G.....	41, 50, 62, 63
Museros P.....	121
Mutalif A.....	121
Mylonakis G.....	89, 94
Mylonas C.....	74

N

Nackenhorst U.....	61
Naddei C.....	102
Nafeh Al M-B.....	68
Nalmpantidou A.....	43
Napolitano C.....	72
Náprstek J.....	112
Nardone S.....	68
Nastos C.....	41
Nastri E.....	42, 102, 111
Natsiavas S.....	90
Navarra M.....	102
Naybour S.....	104
Nespoulous J.....	62
Nettis A.....	99
Neuhaus S.....	59
Ni B.....	63
Ni P.....	50
Nicodemo G.....	55
Nicoletti V.....	70, 92
Niederleithinger E.....	125
Nigdeli S-M.....	57
Nigro D.....	110
Nikolopoulos S.....	95
Nitti G.....	105
Nobile F.....	38, 63
Nocentini M.....	35
Nocera M.....	97
Nodargi N.....	42
Nouy A.....	95
Novák J.....	48
Novák L.....	81
Nudo R.....	119
Nuti C.....	70, 80
Nuyens D.....	103

O

O'Reilly G.....	39
Obayashi S.....	36, 64
Ocak A.....	57
Occhiuzzi A.....	32, 128
Oesch T.....	83

Oh S.....	34
Ohadi S.....	79
Okabe T.....	36
Oladyshkin S.....	73
Olivier A.....	103
Olivieri C.....	65, 87
Ombret N.....	123
Oncescu A-M.....	126
Onescu E.....	107
Onescu I.....	107
O'Reilly G.....	68, 78
Orfeo A.....	100
Orlando C.....	78, 99
Ortega Escobar L.....	45
Ortiz Lasprilla A.....	45
Osmani S.....	78
Otárola K.....	78
Ottonelli D.....	44
Outassafte O.....	123
Ozdemir G.....	72, 100

P

Pacheco de Almeida J.....	53
Paderno A.....	39
Padrón L.A.....	94
Pagliaro S.....	37, 89
Pagnotta S.....	32
Pais J.....	41
Palmeri A.....	62
Pampanin S.....	39, 47, 78, 109, 127
Panda A-K.....	93
Pando M.....	87
Panoskaltis V.....	43, 113, 122
Pantazis Y.....	101
Pantò B.....	67, 97
Paolacci F.....	99, 109
Papa G.....	91
Papadakis G.....	73
Papadimitriou A.....	35
Papadimitriou Ch.....	76
Papadimitriou Co.....	62, 74
Papadopoulos V.....	95, 101, 126
Papadarakakis M.....	71, 81, 104, 114
Papaioannou I.....	48, 73, 83, 126
Papakonstantinou K.G.....	91
Papaleonidas A.....	104
Papanikolaou V.....	104, 114
Papastilianou S.....	88
Papavasileiou G.....	125
Papazafeiropoulos G.....	91
Papoutsis-Kiachagias E.....	46, 69, 81
Papoutsoglou G.....	101
Paradeisiotis A.....	123
Paraskevopoulos E.....	90, 104

Pardalos P.....	117
Parisi F.....	32, 44, 97, 105, 107, 124, 128
Parisi P.....	95
Park K.C.....	34, 112
Park K-C.....	112
Partin L.....	84
Pasceri C.....	58
Pastorelli D.....	60
Pathirage M.....	97
Paula M.....	125
Pavese A.....	60, 110
Paździor P.....	91
Pecce M-R.....	92
Pedone L.....	39, 78
Pegoraro M.....	75, 108
Pelamatti J.....	73
Pelecanos L.....	113
Pellecchia D.....	72
Pellicciari M.....	80
Pelucco S.....	39, 80
Peña Ocampo F.....	125
Penava D.....	80
Peng Y.....	116
Pepi C.....	33
Perdikaris P.....	84
Pereira N.....	68
Perelli F-L.....	68
Peres R.....	39
Périaux J.....	36
Pernechele V.....	99, 109
Peronace E.....	35
Perrin G.....	62, 73, 95
Perrone D.....	42, 68, 80, 119, 128
Perucchio R.....	65, 87
Petrou M.....	97
Pettoruso C.....	60
Pettorosso C.....	60
Pezzuto S.....	84
Pflüger D.....	95, 103
Pham T.....	81
Pheulpin L.....	73
Piazza M.....	98, 107
Pichler A.....	38
Pieniak D.....	56
Piga L.....	72
Piliava S.....	54
Piluso V.....	111
Pilz M.....	125
Pinazo B.....	121
Pingaro M.....	48
Pini M.....	85
Pintucchi B.....	93
Pirrotta A.....	42
Pitilakis D.....	35, 94, 109

Pivovarov D.	48
Plank G.	84
Plavsic A.	97
Pled F.	51
Plevris V.	79, 104
Pluchino A.	79
Pock T.	84
Polese M.	68, 78
Pollini A-V.	100
Pollino M.	78, 99
Ponzo F-C.	110
Portioli F.	66
Poursadrollah A.	102
Pozza L.	98
Pradhan B.	32, 70
Praticò L.	100
Preti M.	39, 80
Proppe C.	40, 81, 103
Prota A.	33, 60, 67, 68, 77, 78, 87, 98, 108, 127
Prudhomme S.	38
Psarropoulos P.	35
Pugliese F.	45
Puppio M-L.	67
Pyrialakos S.	126

Q

Quaegebeur S.	120
Quagliarella D.	91
Quaglioni V.	60
Quaranta G.	105
Quarteroni A.	84
Quinde P.	49
Quinn D.	34

R

Rabinovitch O.	112
Radic I.	70
Radtke L.	56
Raffaele D.	99
Raffaele L.	124
Ragni L.	99, 100, 110
Ragueneau F.	121
Rakhmonov B.	87
Ramírez-Acevedo M.	122
Ramondini M.	127
Rampado M.	87
Rangarajan A-M.	126
Rashed Y.	105
Rautenberg J.	80
Ravasini S.	127
Ravenshorst G.	98
Ravichandran N.	72, 107

Rawat A.	53
Reese S.	40
Regazzoni F.	84
Reggiani Manzo N.	77, 89
Rehlich L.	126
Rehme M.	95, 103
Renno J.	121
Requena-Garcia-Cruz M-V.	113
Restrepo J-I.	89
Reuland Y.	35, 62
Reumers P.	113
Reuter J.	46
Riascos C.	82
Riaz M-R.	63
Riccardi F.	32
Ricci P.	53, 127
Ricci S.	95
Richet Y.	73
Ricken T.	40
Rifai S.	120, 123
Rizzano G.	102
Rizzo F.	124
Robbe P.	103
Rocha P.	122
Rodenburg C.	42
Rodontini E.	33
Rodrigues H.	39, 53
Rodrigues L-F.	98, 108
Rogé G.	31
Rogers T.	62
Rohmer J.	73
Rojas C.	87
Rojas Cabrera C.	45
Roky K.	123
Romano F.	42, 68
Romão X.	68
Romero A.	112
Romero-Sanchez E.	113
Rosati L.	72
Rosato V.	99
Roscini F.	33
Roskosch S.	40, 50
Rossi A.	70
Rossi P-P.	127
Rosso M.	46, 91
Roth S.	120
Rouleau L.	41
Rousakis T.	76
Řoutil L.	33
Rouzies E.	83
Rovithis E.	82
Rozza G.	103
Ruggeri E-M.	98
Ruggieri S.	44, 68
Ruiz A.	46

Ruiz-Sandoval M.	54
Rulliere D.	73
Rung T.	56, 117
Russillo A-F.	42
Russo R.	102

S

Saad B.	83
Sabene M.	127
Saborido R.	46
Sacconi S.	124
Sadílek V.	81
Sahli Costabal F.	84
Sakata S-I.	48, 59
Šakić B.	70, 80
Salachoris G-P.	75, 107
Salamida G.	55
Salcher P.	90
Saldutti A.	102
Saleh A.	104
Saler E.	44, 55, 68, 75, 99, 108, 109
Salvalaggio M.	75, 108
Salvatici T.	66
Sandoli A.	98, 108
Sangiorgio V.	99
Santamaria Ariza M-P.	109
Santarsiero G.	33
Santos F.	42
Sapountzakis E.	72, 100, 105
Saravanos D.	41
Sardone L.	46
Sarhosis V.	70, 75
Sari B.	33
Sarrar J.	46
Sassi S.	121
Sassu M.	67
Savalle N.	67
Savvas D.	48, 59
Savvides A-A.	71, 81
Sbarufatti C.	104
Sberna A-P.	32
Scacco J.	65, 97
Scala S-A.	39
Scalvenzi M.	105
Scaramozzino D.	105
Schiavazzi D.	84
Schietzold F-N.	40
Schlatter D.	100
Schmidt A.	40, 48
Schneider F.	73
Scholl S.	59
Schotten U.	84
Schultz A.	80
Schulze M.	69

Scolari M.	78	Sousa I.	39	Tan P.	60
Scozzese F.	99, 110	Sousa L.	78	Tang Z.	36
Seim W.	98	Sousamli M.	98	Tanganelli M.	66, 119
Semblat J-F.	68	Sovilla B.	120	Tankova T.	111
Serino G.	82	Spacone E.	45, 105, 120	Tarantino A-M.	80
Sextos A.	32, 89	Spanea M.	113	Tardo C.	108
Shadlou M.	105	Spence S.	41, 93	Tarpø M.	116
Shahnazaryan D.	78	Spijkerman Z.	114	Tarrahi I.	84
Shakeel S.	102	Spizzuoco M.	82	Tartaglia R.	102, 111
Sharib S.	79	Sprungk B.	38	Tatsis K.	34
Shen J.	120	Srivastava K.	59	Tavus A.	47
Sheng D.	61	Staat M.	71	Tecchio G.	109
Shields M.	103	Stacul S.	82	Tempone R.	38, 63
Shing P-B.	70	Stamataki N.	47	Terrenzi M.	120
Shirasu K.	36	Stamatopoulos C.	113, 122	Tezcan S.	65, 87
Sica S.	94	Standoli G.	107	Thamboo J.	87
Siebenborn M.	56	Stathas N.	111	Thierry V.	104
Sikora J.	56	Stavridis A.	32	Thomoglou A.	119
Silva L.	65, 111	Stavrou I.	88	Thomson P.	82
Silva N.	128	Stefanidis S.	109	Thouverez F.	120, 123
Silva V.	68	Stefanidou S.	90, 104, 109	Titirla M.	88
Silver J.	79	Stefanou G.	48, 59	Titscher T.	83
Silvestri F.	94	Steinke F.	126	Tkachuk A.	112
Simões da Silva L.	111	Steinmann P.	48	Tkachuk M.	112
Simões R.	111	Stipo G.	119	Tocchi G.	78
Simoncelli M.	45, 88	Stochino F.	67	Todisco P.	102, 111
Simoni E.	55, 78	Stojadinovic B.	89, 110	Tognaccini R.	91
Simoni G.	66	Stojadinović B.	100	Tomaselli G.	70, 80
Simos N.	54	Stoura C.	90	Tomasi R.	108
Singh N.	42	Stratigaki V.	121	Tombari A.	105
Singla A.	47	Straub D.	73, 83, 126	Tomei V.	98
Sing-Long Collao C.	84	Strazzullo M.	103	Torres-Rodas P.	49, 121
Sire C.	73	Sucuoglu H.	47	Tosto C.	68
Sirotti S.	80	Sudret B.	73, 83, 95, 103, 117	Tralli A.	87
Sivori D.	92	Sun X.	62	Trần N-T.	71
Skalomenos K.	58, 122, 123	Sundhar R.	79	Troch P.	121
Skamagkis T.	46, 69	Surana M.	47	Trompoukis X.	69
Skog M.	116	Suselo A.	127	Trovalusci P.	48
Smiroldo F.	98	Sustersic I.	98	Tsantili I.	101
Smlatić E.	89	Syam T.	121	Tsiakas K.	69
Sofi A.	50	Szczepanik M.	91	Tsiapas Y.	113
Soize C.	62			Tsiavos A.	32, 100
Sokic D.	70			Tsinidis G.	109
Solarino F.	67			Tsompanakis Y.	35
Solorzano G.	79, 104			Tsongas K.	88
Somma F.	125			Tsourtis A.	101
Sonda D.	100			Tubaldi E.	82, 90, 99, 100, 110
Sone Y.	48			Tuković Ž.	46
Song J.	123			Turrini U.	108
Song Y.	93, 116			Tzetzis D.	88
Sorokovikov P.	56				
Soroshian A.	41				
Sotiropoulos G.	126				
Sousa Carneiro O.	46				
Sousa H.	109				

T	
Tadeu A.	112
Taflampas I.	47
Taflanidis A.	83
Taghipour J.	81
Tagliaferro B.	45, 88, 121
Takami H.	36
Takewaki I.	122
Takhirov S.	87
Takhtaganov T.	73
Taljaard V-L.	104
Tamborrino O.	119

U	
Ubertini F.	75, 92, 99, 124
Ulbrich S.	126

Umeda M.	48
Ummenhofer T.	49
Uncu G.	119
Unger J.	83
Uva G.	44, 68, 99

V

Vaessen M.	84
Vaiana N.	72
Vaiano G.	65
Vailati M.	70
Valdebenito M.	50
Valente M.	53
Valluzzi M-R.	75, 108
Valsamis A.	35
Valsecchi R.	78
Vamvatsikos D.	49, 89, 101
van Beeck J.	124
van Meegen C.	40
van Mierlo C.	61
van Wachem B.	46
Vandanapu L.	103
Vandewalle S.	103
Varum H.	39, 53, 99
Vasconcelos G.	65
Vasiliadis L.	77, 88, 104
Vassiliou M.	37, 77, 89, 110, 127
Vayas I.	88
Vecchi F.	127
Venanzi I.	75, 92, 99, 124
Ventura G.	33
Venuti F.	107
Verderame G-M.	33, 39, 53, 127
Veroy-Grepl K.	126
Viccione G.	121
Vidard A.	83
Vidlickova E.	38
Viel D.	98
Viggiani G.	125
Vincalek J.	91
Viti S.	66

Vizzino A.	70
Vlachakis G.	67
Vlachas K.	34
Vona M.	78
Vořechovský M.	71, 81
Vukobratović V.	106

W

Wagg D.	41
Wagner P-R.	73
Walton S.	91
Wan Z.	71
Wang F.	52
Wang Ha.	84
Wang He.	52
Wang P.	75, 97
Wang S.	84
Wang T.	58
Wang Y.	31
Wang Zh.	106
Wang Zi.	83
Whittall T.	58
Wilden V.	108
Willerding T.	112
Williams M.	62
Williams S.	113
Willner K.	48
Wondafrash M.	48
Worden K.	62
Wrobel R.	127
Wu D.	50, 61
Wu H.	47, 58
Wu J-R.	111
Wu W.	104

X

Xu W.	47
------------	----

Y

Yakeno A.	64
Yamada Ta.	64
Yamada To.	31
Yamade Y.	31
Yang H.	52
Yang X.	122
Yang Y.	106
Yao Y.	50
Yeow T.	106
Yopez F.	49
Yoon G-H.	64
Yoshimura S.	31
Yotov V.	34
Yu Q.	47, 58
Yücel M.	57
Yurdakul Ö.	33
Yusa Y.	31

Z

Zahra T.	87
Zakou C.	97
Zani N.	93
Zeman J.	48
Zeng X.	34
Zengin E.	58
Zeolla E.	94
Zhang H.	51
Zhang L.	124
Zhang T.	51
Zhang X.	47, 58
Zhou J.	47
Zhu H.	89
Zhu X.	83
Ziavra E.	33
Zille H.	46
Zona A.	92
Zucca M.	53
Zuccaro G.	68
Zucconi M.	42, 68, 98, 127

Supporting Organizations



European Community on Computational Methods in Applied Sciences (ECCOMAS)



International Association for Computational Mechanics (IACM)



International Centre for Numerical Methods in Engineering (CIMNE)



European Research Community On Flow, Turbulence and Combustion (ERCOFTAC)



National Technical University of Athens (NTUA)



European Association for Structural Dynamics (EASD)



European Association for Earthquake Engineering (EAEE)



Greek Association for Computational Mechanics (GRACM)



Hellenic Society of Earthquake Engineering (HSEE)