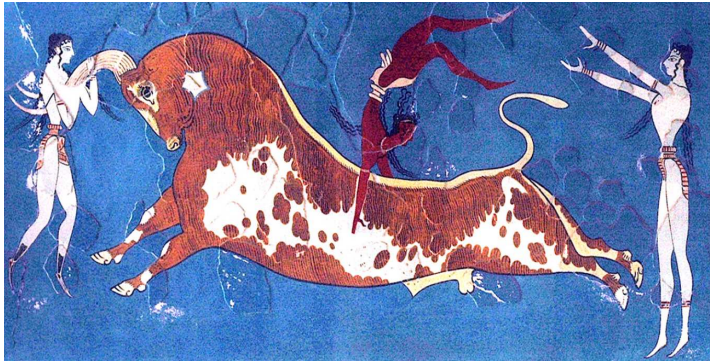


European Community on
Computational Methods in
Applied Sciences



25-27 May, Crete, Greece



COMPDYN 2015

5th International Conference on
Computational Methods in
Structural Dynamics and
Earthquake Engineering

PROGRAMME

UNCECOMP 2015

1st International Conference
on Uncertainty Quantification
in Computational Sciences and
Engineering



Conference Secretariat:
Institute of Structural Analysis and Antiseismic Research
National Technical University of Athens, Greece



COMPDYN 2015

**5th International Conference on
Computational Methods in Structural
Dynamics and Earthquake Engineering**

*An ECCOMAS Thematic Conference
An IACM Special Interest Conference*

UNCECOMP 2015

**1st International Conference on
Uncertainty Quantification in
Computational Sciences and Engineering**

*An ECCOMAS Thematic Conference
An IASSAR Special Interest Conference*

Crete, Greece, May 25-27, 2015

Programme



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

PROGRAMME OVERVIEW

SUNDAY, MAY 24								
17:00 – 19:00	REGISTRATION							
19:00 – 20:30	Welcome Reception: Veranda of the Creta Maris Conference Centre							
DAY 1 - MONDAY, MAY 25 (Rooms 1-8)								
Time	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8
08:00 – 08:45	REGISTRATION							
08:45 – 09:00	OPENING							
09:00 – 11:00	PLENARY LECTURES – I							
11:00 – 11:30	Coffee Break							
11:30 – 13:00	TECHNICAL SESSIONS							
	COMPdyn MS 12 ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - I	COMPdyn RS 18 CONCRETE STRUCTURES	COMPdyn RS 5 IMPACT DYNAMICS - I	COMPdyn RS 7 STRUCTURAL DYNAMICS - I	COMPdyn MS 23 NON-LINEAR DYNAMICS AND WAVE PROPAGATION - I	COMPdyn MS 24 SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES AND PIPELINES - I	UNCECOMP MS 11 INNOVATIVE SENSING SOLUTIONS FOR REDUCING UNCERTAINTY IN ENGINEERING SYSTEMS - I	UNCECOMP MS 13 NON PROBABILISTIC APPROACHES FOR UNCERTAINTY REPRESENTATION AND ANALYSIS IN ENGINEERING - I
13:00 – 14:30	Lunch Time							
14:30 – 16:30	TECHNICAL SESSIONS							
	COMPdyn MS 12 ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - II	COMPdyn MS 11 SOFTWARE DEVELOPMENT IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS	UNCECOMP MS 10 REDUCED ORDER MODELS FOR STOCHASTIC INVERSE PROBLEMS - I	COMPdyn RS 7 STRUCTURAL DYNAMICS - II	COMPdyn MS 23 NON-LINEAR DYNAMICS AND WAVE PROPAGATION - II	COMPdyn MS 24 SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES AND PIPELINES - II	UNCECOMP MS 11 INNOVATIVE SENSING SOLUTIONS FOR REDUCING UNCERTAINTY IN ENGINEERING SYSTEMS - II	UNCECOMP MS 13 NON PROBABILISTIC APPROACHES FOR UNCERTAINTY REPRESENTATION AND ANALYSIS IN ENGINEERING - II
16:30 – 17:00	Coffee Break							
17:00 – 19:00	TECHNICAL SESSIONS							
	COMPdyn MS 12 ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - III	UNCECOMP MS 2 UNCERTAINTY QUANTIFICATION IN COUPLED PROBLEMS AND STRUCTURAL DYNAMICS - I	UNCECOMP MS 10 REDUCED ORDER MODELS FOR STOCHASTIC INVERSE PROBLEMS - II	COMPdyn RS 7 STRUCTURAL DYNAMICS - III	COMPdyn MS 23 NON-LINEAR DYNAMICS AND WAVE PROPAGATION - III	UNCECOMP RS 4 SOLUTION OF STOCHASTIC PARTIAL DIFFERENTIAL EQUATIONS	COMPdyn RS 10 STEEL AND COMPOSITE STRUCTURES	COMPdyn RS 11 PERFORMANCE-BASED EARTHQUAKE ENGINEERING - I

DAY 1 - MONDAY, MAY 25 (Rooms 9-15)

Time	Room 9	Room 10	Room 11	Room 12	Room 13	Room 14	Room 15
08:00 – 08:45	REGISTRATION						
08:45 – 09:00	OPENING						
09:00 – 11:00							
11:00 – 11:30	Coffee Break						
11:30 – 13:00	TECHNICAL SESSIONS						
	COMPdyn MS 1 VIBRATIONS INDUCED BY RAIL AND ROAD TRAFFIC - I	COMPdyn MS 28 HUMAN INDUCED VIBRATIONS - I	COMPdyn RS 9 OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - I	COMPdyn MS 7 SEISMIC SAFETY ASSESSMENT OF STRUCTURES - I	COMPdyn RS 8 NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS - I	COMPdyn MS 8 PERIODICITY-INDUCED EFFECTS AND METHODS IN STRUCTURAL DYNAMICS - I	COMPdyn RS 14 SEISMIC RISK AND RELIABILITY ANALYSIS - I
13:00 – 14:30	Lunch Time						
14:30 – 16:30	TECHNICAL SESSIONS						
	COMPdyn MS 1 VIBRATIONS INDUCED BY RAIL AND ROAD TRAFFIC - II	COMPdyn MS 28 HUMAN INDUCED VIBRATIONS – II COMPdyn RS 1 ALGORITHMS FOR STRUCTURAL HEALTH MONITORING - I	COMPdyn RS 9 OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - II	COMPdyn MS 7 SEISMIC SAFETY ASSESSMENT OF STRUCTURES - II	COMPdyn RS 8 NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS – II	COMPdyn MS 8 PERIODICITY-INDUCED EFFECTS AND METHODS IN STRUCTURAL DYNAMICS - II	COMPdyn RS 14 SEISMIC RISK AND RELIABILITY ANALYSIS - II
16:30 – 17:00	Coffee Break						
17:00 – 19:00	TECHNICAL SESSIONS						
	COMPdyn MS 2 ADVANCES IN COMPUTATIONAL STRUCTURAL VIBRATIONS	COMPdyn MS 9 ADVANCES IN MODELING OF WAVE PROPAGATION AND APPLICATIONS - I	COMPdyn RS 9 OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - III	COMPdyn MS 7 SEISMIC SAFETY ASSESSMENT OF STRUCTURES - III	COMPdyn RS 8 NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS - III COMPdyn MS 16 LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - I	COMPdyn RS 15 SOFT COMPUTING APPLICATIONS	COMPdyn RS 3 DYNAMICS OF COUPLED AND MICRO-MACRO SYSTEMS

DAY 2 - TUESDAY, MAY 26 (Rooms 1-8)

Time	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8
08:30 – 10:30	TECHNICAL SESSIONS							
	COMPDYN MS 12 ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON- LINEAR DYNAMICS - IV	UNCECOMP MS 2 UNCERTAINTY QUANTIFICATION IN COUPLED PROBLEMS AND STRUCTURAL DYNAMICS - II	UNCECOMP MS 10 REDUCED ORDER MODELS FOR STOCHASTIC INVERSE PROBLEMS - III	COMPDYN MS 6 NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS - I	COMPDYN MS 15 REDUCED-ORDER MODELING OF AERO, CIVIL AND MECHANICAL DYNAMICAL SYSTEMS	COMPDYN MS 24 SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES AND PIPELINES - III	COMPDYN MS 3 PROGRESS AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING - I	COMPDYN RS 1 ALGORITHMS FOR STRUCTURAL HEALTH MONITORING - II
10:30 – 11:00	Coffee Break							
11:00 – 13:00	COMPDYN SEMI-PLENARY LECTURES - I	COMPDYN SEMI-PLENARY LECTURES - I	UNCECOMP SEMI-PLENARY LECTURES - I	UNCECOMP SEMI-PLENARY LECTURES - I				
13:00 – 14:30	Lunch Time							
14:30 – 16:30	SEMI-PLENARY LECTURES – II	SEMI-PLENARY LECTURES – II						
16:30 – 17:00	Coffee Break							
17:00 – 19:00	TECHNICAL SESSIONS							
	COMPDYN MS 12 ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON- LINEAR DYNAMICS - V COMPDYN MS 19 HIGH-PERFORMANCE COMPUTING FOR STRUCTURAL MECHANICS AND EARTHQUAKE / TSUNAMI ENGINEERING	UNCECOMP MS 2 UNCERTAINTY QUANTIFICATION IN COUPLED PROBLEMS AND STRUCTURAL DYNAMICS – III UNCECOMP MS 6 UNCERTAINTY PROPAGATION IN HETEROGENEOUS MATERIALS	UNCECOMP RS 6 UNCERTAINTY ANALYSIS OF STRUCTURES	COMPDYN MS 6 NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS - II	COMPDYN MS 13 RENEWABLE ENERGY STRUCTURES (WIND TURBINES, SOLAR IRRADIATION, HYDROPOWER) - I	COMPDYN RS 11 PERFORMANCE- BASED EARTHQUAKE ENGINEERING - II	COMPDYN MS 3 PROGRESS AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING – II COMPDYN RS 5 IMPACT DYNAMICS – II	COMPDYN RS 19 WAVE PROPAGATION AND SOIL DYNAMICS – I
20:30 – 23:30	Conference Dinner: Palladium Hall							

DAY 2 - TUESDAY, MAY 26 (Rooms 9-15)

Time	Room 9	Room 10	Room 11	Room 12	Room 13	Room 14	Room 15
08:30 – 10:30	TECHNICAL SESSIONS						
	COMPDYN MS 22 ACCURACY AND COMPUTATIONAL EFFICIENCY OF STRUCTURES DYNAMIC/SEISMIC ANALYSES - I	UNCECOMP RS 5 SYSTEM RELIABILITY ANALYSIS, DESIGN AND RISK ASSESSMENT AND VALIDATION - I	COMPDYN MS 16 LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - II	UNCECOMP RS 3 PHYSICALLY BASED UNCERTAINTY QUANTIFICATION - I	UNCECOMP RS 2 MULTISCALE METHODS INVOLVING UNCERTAINTIES - I	COMPDYN RS 12 REPAIR AND RETROFIT OF STRUCTURES - I	COMPDYN RS 9 OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - IV
10:30 – 11:00	Coffee Break						
11:00 – 13:00							
13:00 – 14:30	Lunch Time						
14:30 – 16:30							
16:30 – 17:00	Coffee Break						
17:00 – 19:00	TECHNICAL SESSIONS						
	UNCECOMP MS 4 COMPARISON OF UNCERTAINTY QUANTIFICATION METHODS IN COMPUTATIONAL SCIENCES - I	UNCECOMP RS 5 SYSTEM RELIABILITY ANALYSIS, DESIGN AND RISK ASSESSMENT AND VALIDATION - II	COMPDYN MS 16 LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - III	UNCECOMP RS 3 PHYSICALLY BASED UNCERTAINTY QUANTIFICATION - II	COMPDYN RS 9 OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - V	COMPDYN RS 12 REPAIR AND RETROFIT OF STRUCTURES - II	COMPDYN RS 16 SOIL-STRUCTURE INTERACTION - I
20:30 – 23:30	Conference Dinner: Palladium Hall						

DAY 3 - WEDNESDAY, MAY 27 (Rooms 1-8)

Time	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8
09:00 – 10:30	TECHNICAL SESSIONS							
	COMPDYN MS 25 MODELING AND VULNERABILITY ASSESSMENT OF MASONRY STRUCTURES - I	COMPDYN MS 27 CONDITION ASSESSMENT AND INTERVENTION ON MONUMENTS AND HISTORIC STRUCTURES - I	UNCECOMP MS 12 MULTISCALE ANALYSIS AND DESIGN UNDER UNCERTAINTY - I	UNCECOMP RS 5 SYSTEM RELIABILITY ANALYSIS, DESIGN AND RISK ASSESSMENT AND VALIDATION - III	COMPDYN MS 18 SEISMIC ANALYSIS METHODS FOR EXISTING BRIDGES PRIOR TO AND AFTER RETROFITTING - I	COMPDYN MS 17 DYNAMIC EFFECTS ON RAILWAY BRIDGES - I	COMPDYN RS 17 SOUND AND VIBRATION – I	UNCECOMP RS 1 NUMERICAL METHODS FOR LARGE-SCALE STOCHASTIC FINITE ELEMENT APPLICATIONS - I
10:30 – 11:00	Coffee Break							
11:00 – 13:00	COMPDYN PLENARY LECTURES – II	UNCECOMP PLENARY LECTURES – II						
13:00 – 14:30	Lunch Time							
14:30 – 16:30	TECHNICAL SESSIONS							
	COMPDYN MS 25 MODELING AND VULNERABILITY ASSESSMENT OF MASONRY STRUCTURES - II	COMPDYN MS 20 NEW TECHNOLOGIES AND METHODS FOR DAMAGE CONTROL AND SEISMIC RETROFIT OF HERITAGE STRUCTURES IN EARTHQUAKES: SIMULATION, DEVICES AND DIGITAL TECHNOLOGIES	UNCECOMP MS 12 MULTISCALE ANALYSIS AND DESIGN UNDER UNCERTAINTY – II UNCECOMP MS 5 BAYESIAN ANALYSIS OF NUMERICAL MODELS - I	COMPDYN MS 6 NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS - III	COMPDYN MS 18 SEISMIC ANALYSIS METHODS FOR EXISTING BRIDGES PRIOR TO AND AFTER RETROFITTING – II COMPDYN RS 2 CONSTITUTIVE MODELLING UNDER EARTHQUAKE LOADING	COMPDYN MS 10 CONTROL OF VIBRATIONS IN CIVIL ENGINEERING BY PASSIVE, ACTIVE AND SEMI-ACTIVE DEVICES COMPDYN RS 11 PERFORMANCE-BASED EARTHQUAKE ENGINEERING - III	COMPDYN RS 17 SOUND AND VIBRATION - II	UNCECOMP RS 1 NUMERICAL METHODS FOR LARGE-SCALE STOCHASTIC FINITE ELEMENT APPLICATIONS - II
16:30 – 17:00	Coffee Break							
17:00 – 19:00	TECHNICAL SESSIONS							
	COMPDYN MS 25 MODELING AND VULNERABILITY ASSESSMENT OF MASONRY STRUCTURES - III	UNCECOMP MS 5 BAYESIAN ANALYSIS OF NUMERICAL MODELS – II	COMPDYN RS 13 SEISMIC ISOLATION - II	COMPDYN MS 6 NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS - IV			UNCECOMP MS 3 UNCERTAINTY QUANTIFICATION AND MANAGEMENT IN STRUCTURAL DYNAMICS – II COMPDYN RS 17 SOUND AND VIBRATION - III	UNCECOMP RS 1 NUMERICAL METHODS FOR LARGE-SCALE STOCHASTIC FINITE ELEMENT APPLICATIONS - III

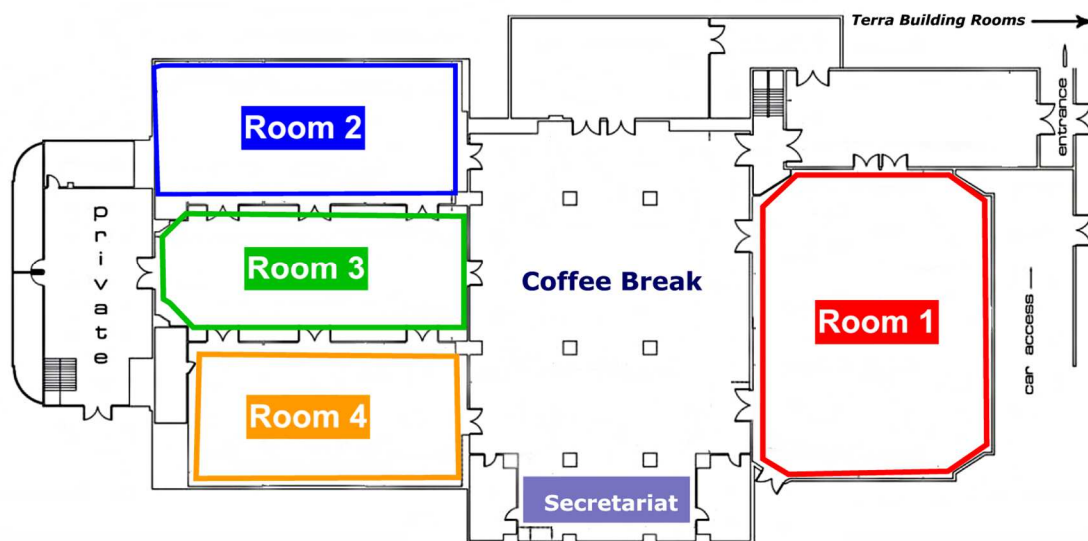
DAY 3 - WEDNESDAY, MAY 27 (Rooms 9-15)

Time	Room 9	Room 10	Room 11	Room 12	Room 13	Room 14	Room 15
09:00 – 10:30	TECHNICAL SESSIONS						
	COMPdyn RS 19 WAVE PROPAGATION AND SOIL DYNAMICS - II	COMPdyn MS 9 ADVANCES IN MODELING OF WAVE PROPAGATION AND APPLICATIONS - II	COMPdyn MS 16 LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - III	UNCECOMP MS 9 RELIABILITY OF STRUCTURES UNDER ENVIRONMENTAL LOADS: STOCHASTIC ANALYSIS AND DESIGN - I	UNCECOMP MS 1 HIGH DIMENSIONS AND PARAMETER ESTIMATION IN UNCERTAINTY QUANTIFICATION - I	COMPdyn RS 13 SEISMIC ISOLATION - I	COMPdyn RS 16 SOIL-STRUCTURE INTERACTION - II
10:30 – 11:00	Coffee Break						
11:00 – 13:00							
13:00 – 14:30	Lunch Time						
14:30 – 16:30	TECHNICAL SESSIONS						
	COMPdyn RS 19 WAVE PROPAGATION AND SOIL DYNAMICS - III	COMPdyn MS 22 ACCURACY AND COMPUTATIONAL EFFICIENCY OF STRUCTURES DYNAMIC/SEISMIC ANALYSES - II	COMPdyn MS 27 CONDITION ASSESSMENT AND INTERVENTION ON MONUMENTS AND HISTORIC STRUCTURES - II	COMPdyn MS 17 DYNAMIC EFFECTS ON RAILWAY BRIDGES - II	UNCECOMP MS 3 UNCERTAINTY QUANTIFICATION AND MANAGEMENT IN STRUCTURAL DYNAMICS - I	UNCECOMP MS 9 RELIABILITY OF STRUCTURES UNDER ENVIRONMENTAL LOADS: STOCHASTIC ANALYSIS AND DESIGN - II	COMPdyn RS 4 GEOTECHNICAL EARTHQUAKE ENGINEERING - I
16:30 – 17:00	Coffee Break						
17:00 – 19:00	TECHNICAL SESSIONS						
	UNCECOMP MS 4 COMPARISON OF UNCERTAINTY QUANTIFICATION METHODS IN COMPUTATIONAL SCIENCES – II COMPdyn RS 6 INVERSE PROBLEMS IN STRUCTURAL DYNAMICS	COMPdyn MS 13 RENEWABLE ENERGY STRUCTURES (WIND TURBINES, SOLAR IRRADIATION, HYDROPOWER) - II	COMPdyn MS 27 CONDITION ASSESSMENT AND INTERVENTION ON MONUMENTS AND HISTORIC STRUCTURES - III COMPdyn MS 4 INNOVATIVE SYSTEMS FOR SEISMIC RESISTANT STEEL BUILDINGS	UNCECOMP RS 2 MULTISCALE METHODS INVOLVING UNCERTAINTIES - II	UNCECOMP MS 1 HIGH DIMENSIONS AND PARAMETER ESTIMATION IN UNCERTAINTY QUANTIFICATION - II COMPdyn MS 5 MODERN METHODS IN CREATION OF SEISMIC ISOLATION SYSTEMS	UNCECOMP MS 9 RELIABILITY OF STRUCTURES UNDER ENVIRONMENTAL LOADS: STOCHASTIC ANALYSIS AND DESIGN - III	COMPdyn RS 4 GEOTECHNICAL EARTHQUAKE ENGINEERING - II

Conference Information Room Location

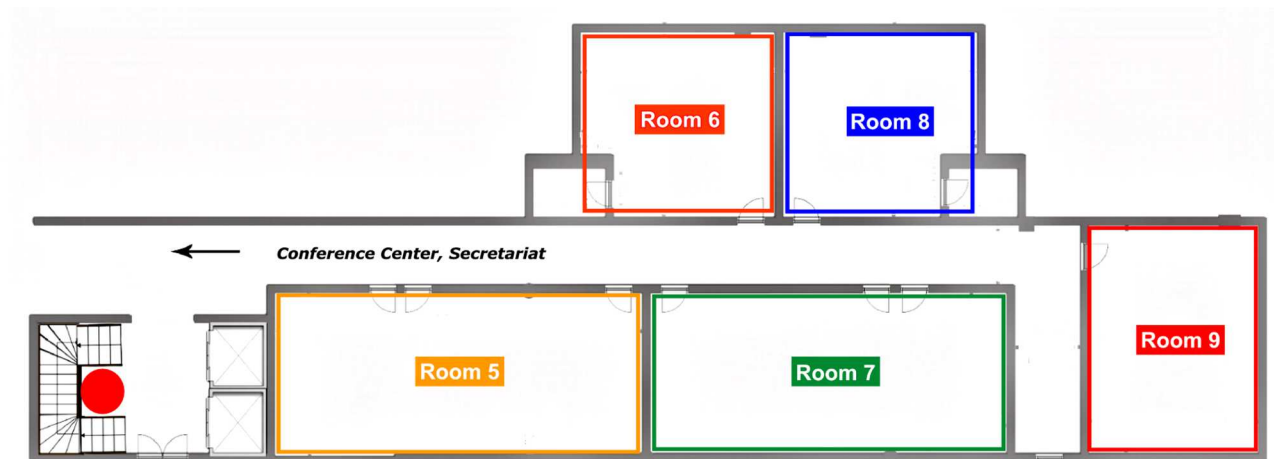


Conference Center Rooms (Level 0)



Conference Information Room Location

Terra Building Rooms – Level 0



Terra Building Rooms – Pool level (upstairs)



Greetings from the Co-Chairmen

Welcome to the joint 5th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering - **COMPDYN 2015** and the 1st International Conference on Uncertainty Quantification in Computational Sciences and Engineering - **UNCECOMP 2015**, in Hersonissos, Crete.

COMPDYN 2015, one of the Thematic Conferences of the European Community on Computational Methods in Applied Sciences (ECCOMAS), is a Special Interest Conference of the International Association for Computational Mechanics (IACM) and has been promoted by the European Committee on Computational Solid and Structural Mechanics (ECCSM) of ECCOMAS. The purpose of the Conference is to bring together the scientific communities of Computational Mechanics, Structural Dynamics and Earthquake Engineering in an effort to facilitate the exchange of ideas in topics of mutual interests and to serve as a platform for establishing links between research groups with complementary activities. We believe that the communities of Structural Dynamics and Earthquake Engineering will benefit from this interaction, acquainting them with advanced computational methods and software tools which can highly assist in tackling complex problems in dynamic/seismic analysis and design, while also giving the Computational Mechanics community the opportunity to become more familiar with very important application areas of great social interest. The COMPDYN 2015 Conference is supported by the National Technical University of Athens (NTUA), the European Association for Structural Dynamics (EASD), the European Association for Earthquake Engineering (EAEE), the Greek Association for Computational Mechanics (GRACM) and the John Argyris Foundation.

UNCECOMP 2015 is also a Thematic Conference of ECCOMAS. The objective of UNCECOMP 2015 Conference is to reflect the recent research efforts and progress towards analysis and design processes under uncertainty, with emphasis in multiscale analysis and design of complex systems. The aim of the conference is to bring together researchers seeking an interaction of stochastic methods and computational mechanics in order to obtain reliable predictions of the behavior of physical systems. The UNCECOMP conference series will serve as a forum for facilitating the exchange of ideas and as a platform for establishing links between research groups with complementary activities. The UNCECOMP 2015 Conference is supported by the National Technical University of Athens (NTUA), the European Committee on Computational Solids and Structural Mechanics of ECCOMAS (ECCSM), the International Association for Structural Safety & Reliability (IASSAR), the Greek Association for Computational Mechanics and the John Argyris Foundation.

Welcome to Crete, the largest Greek island and the fifth largest one in the Mediterranean. Crete has a very long and rich history dating several thousand years to the past, and is nowadays characterized by its high touristic appeal owed to the island's diverse landscape as well as its unique and colorful culture.

The organizers would like to thank the authors for submitting their contributions and for their respect of the deadlines. Special thanks go to the 80 colleagues who contributed to the organization of the Minisymposia and to the Referees who, with their work, contributed to the scientific quality of the conference. We want to express our gratitude to all of them and in particular, we want to thank the students of the Institute of Structural Analysis and Antiseismic Research at the NTUA for providing assistance in the lecture rooms.

The subject of the conferences and the idyllic location of the venue offer a perfect blend for scientific endeavor and recreation. Thus, we invite you to enjoy the conferences and the Island of Crete and to experience an unforgettable event.

Manolis Papadrakakis
Chairman of COMPDYN 2015
Co-Chairmen of UNCECOMP 2015

Vissarion Papadopoulos
George Stefanou
Co-Chairmen of UNCECOMP 2015

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COMPDYN 2015

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H. Jensen, Chile	K. Tamma, USA
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A. Kappos, Greece	W. Wall, Germany
S. Karamanos, Greece	M. Williams, UK
A. Kiremidjian, USA	Y. Yang, Taiwan
S. Krenk, Denmark	S. Yoshimura, Japan

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

Conference Guide

Programme Format

The Technical Programme consists of 9 plenary lectures, 18 semi-plenary lectures, 33 keynote lectures, 36 minisymposia with 638 presentations in total.

PLENARY LECTURERS

Alain Combescure, *Zhe Li, Nunez-Ramirez Jorge, Profizi Paul, Marongiu Jean-Christophe*

C 1804 NON INTRUSIVE FEM SPH CODE COUPLING FOR SIMULATION OF ACCIDENTAL SITUATIONS INVOLVING FLUID-STRUCTURE INTERACTION

Session: *Wed 11:00 – 13:00, Room 1*

C. Farhat, *T. Chapman, P. Avery*

C 3248 ECSW: AN ENERGY-BASED STRUCTURE-PRESERVING HYPER REDUCTION METHOD FOR THE REAL-TIME PROCESSING OF NONLINEAR FINITE ELEMENT DYNAMIC MODELS OF SOLIDS AND STRUCTURES

Session: *Wed 11:00 – 13:00, Room 1*

Mircea Grigoriu

U 838 PROBABILISTIC MODELS FOR MICROSTRUCTURES AND ESTIMATES OF EXTREME MATERIAL RESPONSE

Session: *Wed 11:00 – 13:00, Room 2*

George Karniadakis

U 916 FIFTEEN YEARS RESEARCH ON UNCERTAINTY QUANTIFICATION

Session: *Mon 09:00 – 11:00, Room 1*

Hermann G. Matthies

U 843 NON-INTRUSIVE SOLUTION OF STOCHASTIC AND PARAMETRIC EQUATIONS

Session: *Wed 11:00 – 13:00, Room 2*

James Ricles

C 1677 DEVELOPMENTS IN COMPUTATIONAL DYNAMICS TO ENABLE LARGE-SCALE REAL-TIME HYBRID SIMULATION FOR ADVANCING PERFORMANCE-BASED EARTHQUAKE ENGINEERING

Session: *Wed 11:00 – 13:00, Room 1*

C. Soize, *C. Desceliers, J. Guilleminot, T.T. Le, M.T. Nguyen, G. Perrin, J.M. Allain, H. Gharbi, D. Duhamel, C. Funfschilling*

U 527 STOCHASTIC REPRESENTATIONS AND STATISTICAL INVERSE IDENTIFICATION FOR UNCERTAINTY QUANTIFICATION IN COMPUTATIONAL MECHANICS

Session: *Wed 11:00 – 13:00, Room 2*

Shinobu Yoshimura, *Tomonori Yamada, Tomoshi Miyamura, Hiroshi Kawai*

C 1707 ROLE OF PETASCALE SIMULATION OF REAL WORLD'S COMPLEX STRUCTURE ATTACKED BY STRONG EARTHQUAKE

Session: *Mon 09:00 – 11:00, Room 1*

Nicholas Zabaras

U 899 GRAPH THEORETIC MODELS FOR THE SOLUTION OF STOCHASTIC MULTISCALE PROBLEMS

Session: *Mon 09:00 – 11:00, Room 1*

SEMI - PLENARY LECTURERS

Tanmoy Mukhopadhyay, Sondipon Adhikari

U 943 HOMOGENIZATION AND ERGODICITY OF RANDOM LATTICES - A PHYSICS BASED APPROACH

Session: Tue 11:00 – 13:00, Room 3

Domniki Asimaki, Kami Mohammadi, Seokho Jeong

C 1679 BEYOND HORIZONTALLY LAYERED SOILS: SITE EFFECTS IN THREE-DIMENSIONS

Session: Tue 11:00 – 13:00, Room 2

Siu-Kui Au

U 840 BAYESIAN OPERATIONAL MODAL ANALYSIS: THEORY, PRACTICE AND UNCERTAINTY LAWS

Session: Tue 11:00 – 13:00, Room 3

Sofia Efraimiadou, George Hatzigeorgiou, Dimitri Beskos

C 1763 SEISMIC POUNDING BETWEEN ADJACENT BUILDINGS: EFFECTS OF STRUCTURAL ARRANGEMENT AND MULTIPLE EARTHQUAKES

Session: Tue 11:00 – 13:00, Room 1

Christian Bucher

U 867 APPLICATION OF ASYMPTOTIC SAMPLING TO STRUCTURAL RELIABILITY PROBLEMS

Session: Tue 11:00 – 13:00, Room 4

Alexander Idesman

C 1768 ACCURATE MODELLING OF ELASTIC AND ACOUSTIC WAVE PROPAGATION IN HOMOGENEOUS AND HETEROGENEOUS MATERIALS

Session: Tue 11:00 – 13:00, Room 2

H.A. Jensen, A. Muñoz, E. Millas

C 1367 THE USE OF MODEL REDUCTION TECHNIQUES IN COMPLEX SIMULATION-BASED PROBLEMS INVOLVING FINITE ELEMENT MODELS

Session: Tue 14:30 – 16:30, Room 2

Boris Jeremić, Kallol Sett, Konstantinos Karapiperis, José Abell

C 3250 DYNAMICS OF SOILS AND STRUCTURES UNDER UNCERTAINTY

Session: Tue 14:30 – 16:30, Room 1

Andreas J. Kappos

C 1759 FULL-RANGE ANALYSIS OF THE INELASTIC RESPONSE OF REINFORCED CONCRETE STRUCTURES

Session: Tue 11:00 – 13:00, Room 1

Steen Krenk

C 1801 BEYOND SECOND-ORDER TIME INTEGRATION IN NON-LINEAR DYNAMICS

Session: Tue 14:30 – 16:30, Room 1

Olivier Le Maître

U 1494 VARIANCE DECOMPOSITION TECHNIQUES FOR SENSITIVITY ANALYSIS IN STOCHASTIC / NOISY MODELS WITH UNCERTAIN PARAMETERS

Session: Tue 11:00 – 13:00, Room 4

Jie Li

U 891 UNCERTAINTY PROPAGATION IN PHYSICAL SYSTEMS: RECENT DEVELOPMENTS OF PROBABILITY DENSITY EVOLUTION THEORY

Session: Tue 11:00 – 13:00, Room 4

Costas Papadimitriou

U 866 COMPUTATIONAL CHALLENGES IN BAYESIAN UNCERTAINTY QUANTIFICATION OF LARGE-ORDER MODELS

Session: Tue 14:30 – 16:30, Room 2

Daniel Rixen

C 3298 MODEL REDUCTION OF NON-LINEAR STRUCTURAL DYNAMIC MODEL: RECENT DEVELOPMENTS

Session: Tue 14:30 – 16:30, Room 1

Bruno Sudret

U 1427 SPARSE POLYNOMIAL CHAOS EXPANSIONS FOR SOLVING HIGH-DIMENSIONAL UQ PROBLEMS

Session: Tue 11:00 – 13:00, Room 3

Andy Vanaerschot, Stepan Lomov, David Moens, Dirk Vandepitte

U 869 IDENTIFICATION OF UNCERTAINTY AND QUANTIFICATION OF VARIABILITY IN WOVEN COMPOSITE MATERIALS BASED ON CARBON FIBRE WEAVES

Session: Tue 14:30 – 16:30, Room 2

Y. B. Yang

C 1710 A RIGID-BODY-QUALIFIED PLATE THEORY FOR NONLINEAR ANALYSIS OF STRUCTURES WITH TORSIONAL ACTIONS

Session: Tue 11:00 – 13:00, Room 1

Yong Yuan, Haitao Yu

C 3008 SEISMIC ANALYSIS OF LONG TUNNEL: SIMPLIFIED OR UNIFIED

Session: Tue 11:00 – 13:00, Room 2

KEYNOTE LECTURERS

Jean-Marc Bourinet

U 728 RELIABILITY ASSESSMENT WITH ADAPTIVE SURROGATES BASED ON SUPPORT VECTOR MACHINE REGRESSION

Session: Wed 09:00 – 10:30, Room 8

Marko Brozovič, Matjaž Dolšek

C 3129 RISK-BASED DESIGN CHECK FOR COLLAPSE SAFETY USING FEW GROUND MOTIONS

Session: Tue 08:30 – 10:30, Room 11

Michael Brun, Anthony Gravouil, Alain Combescure

C 640 ENERGY METHOD FOR COUPLING NEWMARK AND ALPHA-SCHEMES TIME INTEGRATORS WITH DIFFERENT TIME STEPS

Session: Mon 11:30 – 13:00, Room 1

Pieter Coulier, Vicente Cúellar, Geert Degrande, Geert Lombaert

C 765 EXPERIMENTAL AND NUMERICAL EVALUATION OF THE EFFICIENCY OF A STIFF WAVE BARRIER IN THE SOIL

Session: Mon 11:30 – 13:00, Room 9

Pedro Delgado, António Arêde, Nelson Vila Pouca, Aníbal Costa

C 1590 NUMERICAL SEISMIC SAFETY ASSESSMENT OF RC BRIDGES WITH HOLLOW PIERS

Session: Mon 11:30 – 13:00, Room 12

Qing Zeng, Elias Dimitrakopoulos, Themelina Paraskeva

C 743 SEISMIC RESPONSE ANALYSIS OF A COUPLED VEHICLE- BRIDGE SYSTEM

Session: Wed 09:00 – 10:30, Room 5

Andreas Fichtner, Michael Afanasiev, Korbinian Sager, Laura Ermert

C 396 MULTI-SCALE/MULTI-DATA INVERSION FOR ELASTIC EARTH STRUCTURE - A CONCEPT

Session: Mon 17:00 – 19:00, Room 10

A.M. (Nol) Gresnigt, Spyros A. Karamanos

C 1574 MODELLING OF BURIED PIPELINE RESPONSE UNDER SEVERE IMPOSED DEFORMATIONS

Session: Mon 11:30 – 13:00, Room 6

Muneo Hori, Seizo Tanaka, Tsuyoshi Ichimura, W.L.L.Wijerathne, J.A.S.C. Jayasinghe

C 1616 META-MODELING FOR CONSISTENT SEISMIC RESPONSE ANALYSIS

Session: Tue 17:00 – 19:00, Room 1

Gelacio Juárez-Luna, Arturo Tena-Colunga

C 1365 MODELLING OF DIAGONAL COMPRESSION MASONRY WALLS BY FINITE ELEMENTS WITH EMBEDDED DISCONTINUITIES

Session: Wed 09:00 – 10:30, Room 1

David Kampenhuber, Christoph Adam

C 403 SIMPLIFIED SEISMIC COLLAPSE ASSESSMENT OF GENERIC FRAME STRUCTURES SUBJECTED TO PDELTA AND MATERIAL DETERIORATION

Session: Mon 17:00 – 19:00, Room 8

Giorgos Mantzaras, Dimitris Karabalis

C 1611 THE ROLE OF SOIL-STRUCTURE INTERACTION IN THE REDISTRIBUTION OF INTERNAL FORCES IN CONCRETE BUILDINGS DUE TO SEISMIC EXCITATION

Session: Wed 09:00 – 10:30, Room 15

Vahid Sadeghian, Oh-Sung Kwon, Frank Vecchio

C 585 AN INTEGRATED FRAMEWORK FOR THE ANALYSIS OF MIXED-TYPE REINFORCED CONCRETE STRUCTURES

Session: Mon 14:30 – 16:30, Room 2

Simon Laflamme, Filippo Ubertini, Eleni Chatzi, Hussam Saleem, Gabriele Comanducci

U 701 DISTRIBUTED LARGE AREA ELECTRONICS FOR UNCERTAINTY REDUCTION IN MESOSURFACE STRAIN MEASUREMENTS

Session: Mon 11:30 – 13:00, Room 7

Didier Lucor, Lionel Mathelin, Olivier Le Maître

U 659 POSTERIOR ADAPTATION OF POLYNOMIAL SURROGATE FOR BAYESIAN INFERENCE IN ARTERIAL FLOW NETWORKS

Session: Mon 14:30 – 16:30, Room 3

Konstantin Lurie

C 1531 MATERIAL LAYOUTS IN SPACE-TIME AND FOCUSING OF MASS FLOWS DUE TO COLLISION OF CHARACTERISTICS

Session: Mon 11:30 – 13:00, Room 14

Brian Mace

C 2303 ENERGY FLOW THROUGH FINITE PERIODIC STRUCTURES.

Session: Mon 14:30 – 16:30, Room 14

G.C. Manos, V. Kourtides, K. Katakalos, L. Kotoulas, A. Nalmpantidou

C 795 STUDY OF THE LOADING ARRANGEMENT FOR THE STIFFNESS TESTS OF THE COLUMN HEAD ASSEMBLY AND ITS SPRINGS UTILIZED AT THE NIARCHOS CULTURAL CENTER AT ATHENS - GREECE.

Session: Tue 17:00 – 19:00, Room 4

Mohsen Ghafory-Ashtiany, Salar Arian Moghaddam

C 1656 EARTHQUAKE GROUND MOTIONS AS THE INPUT OF NONLINEAR TIME-HISTORY ANALYSIS ACCURACY AND LEGITIMACY

Session: Tue 08:30 – 10:30, Room 9

Alessandro Palmeri, Giorgio Barone

U 609 FLUTTER ANALYSIS OF BRIDGE DECK SECTIONS WITH UNCERTAIN INDICIAL FUNCTIONS

Session: Wed 09:00 – 10:30, Room 12

Stylianios Pardalopoulos, Stavroula Pantazopoulou

C 1579 VULNERABILITY OF TORSIONALLY SENSITIVE HISTORICAL BUILDINGS UNDER SEISMIC LOADS

Session: Wed 14:30 – 16:30, Room 2

Annamaria Pau, Fabrizio Vestroni

C 1107 NONLINEARITIES IN THE MODELLING OF GUIDED WAVES IN PRESTRESSED PLATES

Session: Mon 11:30 – 13:00, Room 5

Alin Radu, Mircea Grigoriu

C 1102 STOCHASTIC REDUCED-ORDER MODELS FOR CALCULATING RESPONSE STATISTICS OF STRUCTURAL SYSTEMS SUBJECTED TO RANDOM INPUT

Session: Tue 08:30 – 10:30, Room 5

Vaclav Sadilek, Miroslav Vorechovsky

U 721 IMPROVED GAUSSIAN APPROXIMATION OF THE BUNDLE STRENGTH OF DANIELS' MODEL WITH BRITTLE WEIBULL FIBERS

Session: Tue 17:00 – 19:00, Room 3

Ioannis Dikaros, Evangelos Sapountzakis, Amalia Argyridi, Dimitrios Papadopoulos

C 441 GENERALIZED WARPING EFFECT IN THE DYNAMIC ANALYSIS OF BEAMS OF ARBITRARY CROSS SECTION

Session: Mon 17:00 – 19:00, Room 9

Adil Siripatana, Talea Mayo, Ihab Sraji, Clint Dawson, Omar Knio, Olivier Le Maitre, Ibrahim Hoteit

U 649 EVALUATING ENSEMBLE KALMAN FILTERING FOR PARAMETER ESTIMATION IN THE COASTAL OCEAN VS. POLYNOMIAL CHAOS-BASED MCMC

Session: Wed 17:00 – 19:00, Room 9

Constantine C. Spyrakos

C 1895 SEISMIC RISK OF HISTORIC STRUCTURES AND MONUMENTS: A NEED FOR A UNIFIED POLICY

Session: Wed 09:00 – 10:30, Room 2

Amalia Moutsopoulou, Georgia Foutsitzi, Christos Gogos, Georgios Stavroulakis

C 1297 ROBUST CONTROL OF SMART STRUCTURES WITH OPTIMALLY PLACED ACTUATORS AND SENSORS

Session: Mon 11:30 – 13:00, Room 11

Ioanna V. Tzavara, Yiannis Tsompanakis, Varvara Zania, Prodromos N. Psarropoulos

C 1251 IMPACT OF FAULT RUPTURE ON REINFORCED EARTH STRUCTURES

Session: Tue 17:00 – 19:00, Room 7

Alberto Ferrarotti, Federica Tubino

C 800 EQUIVALENT SPECTRAL MODEL FOR PEDESTRIAN-INDUCED FORCES ON FOOTBRIDGES: A GENERALIZED FORMULATION

Session: Mon 11:30 – 13:00, Room 10

Jonas Biehler, Michael W. Gee, Wolfgang A. Wall

U 726 AN APPROACH FOR EFFICIENT UNCERTAINTY QUANTIFICATION OF COMPLEX AND LARGE-SCALE BIOMECHANICS PROBLEMS

Session: Mon 14:30 – 16:30, Room 7

Zenon Waszczyszyn, Piotr Nazarko, Pawel Packo, Lukasz Ambrozinski, Tadeusz Uhl

C 2883 DEVELOPMENT OF A HYBRID SYSTEM FOR IDENTIFICATION OF ELASTIC MATERIAL IN COMPOSITE LAMINA: APPLICATION OF LAMB WAVES AND NEURAL NETWORKS

Session: Mon 17:00 – 19:00, Room 14

Feng-Liang Zhang, Hai-Bei Xiong

U 740 BAYESIAN OPERATIONAL MODAL ANALYSIS AND UNCERTAINTY QUANTIFICATION OF A SUPER TALL BUILDING

Session: Wed 14:30 – 16:30, Room 13

Minisymposia

COMPDYN 2015

MS 1: VIBRATIONS INDUCED BY RAIL AND ROAD TRAFFIC

Pedro Costa Alves, Mohammed Hussein

MS 2: ADVANCES IN COMPUTATIONAL STRUCTURAL VIBRATIONS

Evangelos Sapountzakis, Ioannis Dikaros

MS 3: PROGRESS AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING

Castorina Vieira, John Tsompanakis

MS 4: INNOVATIVE SYSTEMS FOR SEISMIC RESISTANT STEEL BUILDINGS

Ioannis Vayas

MS 5: MODERN METHODS IN CREATION OF SEISMIC ISOLATION SYSTEMS

Mikayel Melkumyan

MS 6: NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

George Manos

MS 7: SEISMIC SAFETY ASSESSMENT OF STRUCTURES

Raimundo Delgado, António Arêde, Pedro Delgado

MS 8: PERIODICITY-INDUCED EFFECTS AND METHODS IN STRUCTURAL DYNAMICS

Sergey Sorokin

MS 9: ADVANCES IN MODELING OF WAVE PROPAGATION AND APPLICATIONS

Dan Givoli, Geza Seriani

MS 10: CONTROL OF VIBRATIONS IN CIVIL ENGINEERING BY PASSIVE, ACTIVE AND SEMI-ACTIVE DEVICES

Rui Barros, Alessandro Baratta

MS 11: SOFTWARE DEVELOPMENT IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

Tasos Sextos

MS 12: ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS

Alexander Idesman

MS 13: RENEWABLE ENERGY STRUCTURES (WIND TURBINES, SOLAR IRRADIATION, HYDROPOWER)

Álvaro Cunha, Elsa Caetano

MS 15: REDUCED-ORDER MODELING OF AERO, CIVIL AND MECHANICAL DYNAMICAL SYSTEMS

K-C. Park, Roger Ohayon, Hermann Matthies, Goran Sandberg

MS 16: LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES

Dimitris Vamvatsikos, Dimitris Lignos

MS 17: DYNAMIC EFFECTS ON RAILWAY BRIDGES

Rui Calcada, Raimundo Delgado, Jose Maria Goicolea

MS 18: SEISMIC ANALYSIS METHODS FOR EXISTING BRIDGES PRIOR TO AND AFTER RETROFITTING

Andreas Kappos

MS 19: HIGH-PERFORMANCE COMPUTING FOR STRUCTURAL MECHANICS AND EARTHQUAKE / TSUNAMI ENGINEERING

Shinobu Yoshimura, Muneo Hori, Mitsuteru Asai

MS 20: NEW TECHNOLOGIES AND METHODS FOR DAMAGE CONTROL AND SEISMIC RETROFIT OF HERITAGE STRUCTURES IN EARTHQUAKES: SIMULATION, DEVICES AND DIGITAL TECHNOLOGIES

Stavroula Pantazopoulou

MS 22: ACCURACY AND COMPUTATIONAL EFFICIENCY OF STRUCTURES DYNAMIC/SEISMIC ANALYSES

Aram Soroushian, Anthoula Panteli

MS 23: NON-LINEAR DYNAMICS AND WAVE PROPAGATION

Jiri Naprstek, Radek Kolman, K-C. Park

MS 24: SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES AND PIPELINES

Spyros A. Karamanos, Vissarion Papadopoulos

MS 25: MODELING AND VULNERABILITY ASSESSMENT OF MASONRY STRUCTURES

Vagelis Plevris, Panagiotis Asteris

MS 27: CONDITION ASSESSMENT AND INTERVENTION ON MONUMENTS AND HISTORIC STRUCTURES

Constantine Spyrakos

MS 28: HUMAN INDUCED VIBRATIONS

Guido De Roeck, Peter Van den Broeck, Katrien Van Nimmen

UNCECOMP 2015

MS 1: HIGH DIMENSIONS AND PARAMETER ESTIMATION IN UNCERTAINTY QUANTIFICATION

Guang Lin, George Karniadakis

MS 2: UNCERTAINTY QUANTIFICATION IN COUPLED PROBLEMS AND STRUCTURAL DYNAMICS

Christian Soize, Maarten Arnst

MS 3: UNCERTAINTY QUANTIFICATION AND MANAGEMENT IN STRUCTURAL DYNAMICS

Costas Papadimitriou, Feng-Liang Zhang, Siu-Kui Au

MS 4: COMPARISON OF UNCERTAINTY QUANTIFICATION METHODS IN COMPUTATIONAL SCIENCES

Jeroen A.S. Witteveen, Stefan Vandewalle

MS 5: BAYESIAN ANALYSIS OF NUMERICAL MODELS

Daniel Straub, Iason Papaioannou, Costas Papadimitriou

MS 6: UNCERTAINTY PROPAGATION IN HETEROGENEOUS MATERIALS

Hermann Matthies, Adnan Ibrahimbegovic

MS 9: RELIABILITY OF STRUCTURES UNDER ENVIRONMENTAL LOADS: STOCHASTIC ANALYSIS AND DESIGN

Mario Di Paola, Alba Sofi, Giuseppe Muscolino

MS 10: REDUCED ORDER MODELS FOR STOCHASTIC INVERSE PROBLEMS

Didier Lucor, Sophie Ricci, Mélanie Rochoux

MS 11: INNOVATIVE SENSING SOLUTIONS FOR REDUCING UNCERTAINTY IN ENGINEERING SYSTEMS

Eleni Chatzi, Filippo Ubertini, Simon Laflamme

MS 12: MULTISCALE ANALYSIS AND DESIGN UNDER UNCERTAINTY

George Stefanou, Vissarion Papadopoulos, X. Frank Xu, Manolis Papadrakakis

MS 13: NON PROBABILISTIC APPROACHES FOR UNCERTAINTY REPRESENTATION AND ANALYSIS IN ENGINEERING

David Moens, Dirk Vandepitte, Michael Beer, Michael Hanss

Social Programme

The Social Programme includes a Welcome Reception and Dinner. The Welcome Reception is scheduled for Sunday, May 24 at 19:00. It will take place at the Veranda of the Creta Maris Conference Centre. The Conference Dinner will be held on Tuesday, May 26 at 20:30 at the Palladium Hall. Shuttle bus service will be provided from the Creta Maris Conference Centre to the Palladium Hall.

Accompanying Persons Programme

The Accompanying Persons Programme includes the Welcome Reception and the Conference Dinner.

Tours & Excursions

- **Excursion to Knossos Archaeological site & to Archanes Traditional Village**
(Duration 7 hours approximately)
Price per person: 60 € (minimum participation: 20 persons)
- **Tour to Lassithi Plateau including visit to Dictaion Cave & to Kera Monastery**
(Duration 5 hours approximately)
Price per person: 45 € (minimum participation: 20 persons)
- **Tour to Aghios Nikolaos & Spinalonga**
(Duration 5 hours approximately)
Price per person: 55 € (minimum participation: 20 persons)
- **Full Day Tour to Rethymno and Chania (May 28/5/2015)**
(Duration 12 hours approximately)
Price per person: 95 € (minimum participation: 20 persons)
- **Full Day Tour to Samaria Gorge**
(Duration 13 hours approximately)
Price per person: 90 € (minimum participation: 20 persons)

Reservations can be made online through the Conference website and the appointed Travel Agent Erasmus Conferences Tours & Travel S.A. or via email: Mr. Spiros Lianos s.lianos@erasmus.gr.

Where to eat

Participants may have lunch at the Conference Center at the special price of 16 € per day, provided that the reservation is made online or via email at s.lianos@erasmus.gr until May 15 at the latest. Alternatively, participants may have lunch at the hotel restaurants or cafeterias that operate for the hotel tenants at lunch time.

Speakers Preparation

Each lecture room is equipped with an LCD projector. We recommend that you confirm the compatibility of your laptop with the provided projector well before the beginning of the session.

Internet Access

Wireless internet access will be available at the Creta Maris Conference Center during the conference.

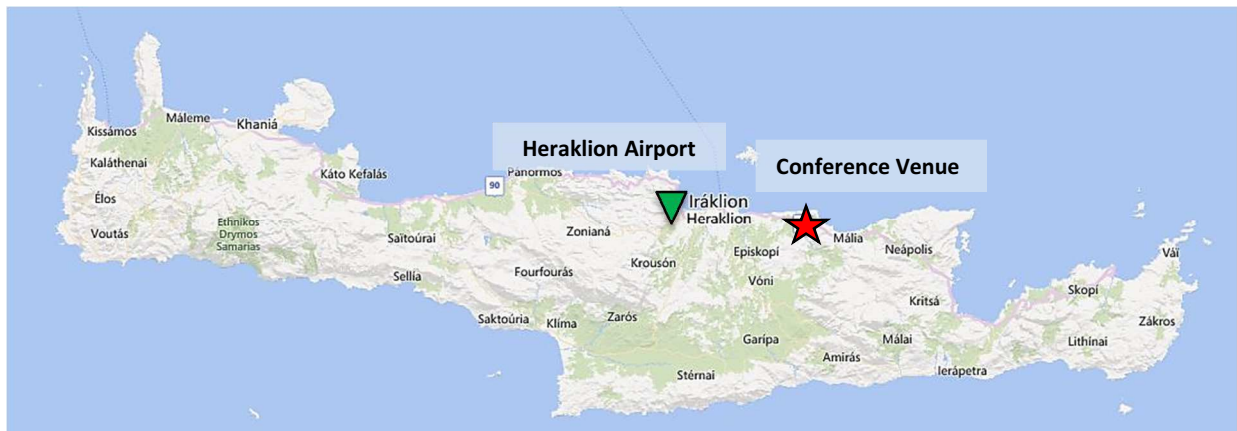
Transportation

Transfer from and to the Airport: “N. Kazantzakis” International Airport of Crete is situated 24 km west of Creta Maris Conference Center which is close to the town of Hersonissos.

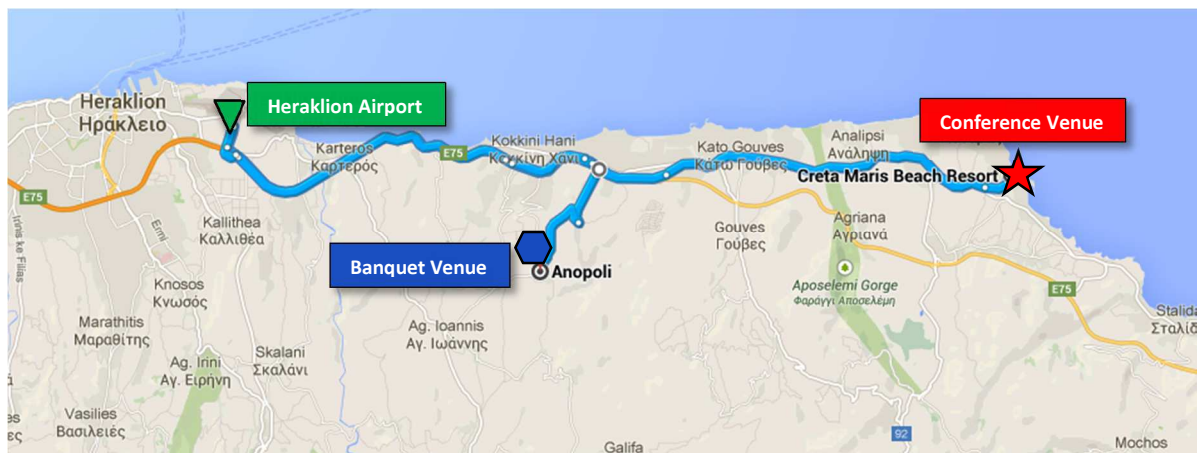
A shuttle service connecting the Airport to the Creta Maris and the official conference hotels and vice versa will be provided by the Conference Organizers at a cost of 10 € per person, per way. Travel time is approximately 20 minutes by deluxe, fully air conditioned coaches. Designated representatives, holding a distinctive sign of the conference will be waiting for the guests upon their arrival at the airport. Pre-booking of shuttle service is necessary and is possible until May 10. Onsite booking of shuttle service from the airport will not be available.

To get around Crete Island: Taxis, cars, motorbikes and bicycles are available for rent. Taxi service is available either at the receptions desk of the Conference Hotel or by phone to Taxi Telephone Center: (+30) 2897032006 & (+30) 8013003436.

Crete Island



Conference and Banquet Venues



DAY 1 - MONDAY, MAY 25

Mon 08:00 – 08:45	REGISTRATION	
Mon 08:45 – 09:00	OPENING	
Mon 09:00 – 11:00	PLENARY LECTURES - I	
	Chair: D. Beskos U 916 FIFTEEN YEARS RESEARCH ON UNCERTAINTY QUANTIFICATION <i>George Karniadakis</i> C 1707 ROLE OF PETASCALE SIMULATION OF REAL WORLD'S COMPLEX STRUCTURE ATTACKED BY STRONG EARTHQUAKE <i>Shinobu Yoshimura, Tomonori Yamada, Tomoshi Miyamura, Hiroshi Kawai</i> U 899 GRAPH THEORETIC MODELS FOR THE SOLUTION OF STOCHASTIC MULTISCALE PROBLEMS <i>Nicholas Zabaras</i>	Room 1
Mon 11:00 – 11:30	Coffee Break	
Mon 11:30 – 13:00	TECHNICAL SESSIONS	
Mon 11:30 – 13:00	COMPDYN MS 12: ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - I <i>Minisymposium Organizer: A. Idesman</i> <i>Chair: A. Idesman</i> C 640 KEYNOTE: ENERGY METHOD FOR COUPLING NEWMARK AND ALPHA-SCHEMES TIME INTEGRATORS WITH DIFFERENT TIME STEPS <i>Michael Brun, Anthony Gravouil, Alain Combescure</i> C 356 CRACKING AND FRACTURE OF HSS BRACES UNDER CYCLIC LOADING <i>Madhar Haddad, Robert Tremblay, Liang Chen, Lucea Tirca</i> C 381 CALCULATING THE FREQUENCY OF AN ACTUAL STRUCTURE USING THE RAYLEIGH TECHNIQUE <i>Alexandre De M. Wahrhaftig, Reyolando M. L. R. F. Brasil</i> C 410 EFFICIENT NONLINEAR DYNAMIC ANALYSIS OF FRAME STRUCTURES <i>Johannes Burtcher</i>	Room 1
Mon 11:30 – 13:00	COMPDYN RS 18: CONCRETE STRUCTURES <i>Chair: M. Fragiadakis</i> C 981 FEM SIMULATION OF THE EXPERIMENTAL RESPONSE OF AAC MASONRY INFILLS IN RC FRAMES <i>Riccardo Raimondo Milanesi, Paolo Morandi, Guido Magenes, Baris Binici</i> C 1247 DOUBLE-LAYER PLATFORM OF HIGH PERFORMANCE COMPUTING FOR DAMAGE PREDICTION OF RC BUILDINGS SUBJECT TO EARTHQUAKE AND SUBSEQUENT TSUNAMI IN A TARGET AREA <i>Panon Latcharote, Yoshiro Kai</i>	Room 2

DAY 1 - MONDAY, MAY 25

	C 1373 DETERMINATION OF THE PERIODS OF COUPLED SHEAR WALLS BY RECURSIVE DIFFERENTIATION METHOD <i>Duygu Ozturk, Kanat Burak Bozdogan</i> C 1426 MODELLING THE EFFECT OF SHORT LAP SPLICES ON REINFORCED CONCRETE WALLS WITH NONLINEAR SHELL AND BOND-SLIP ELEMENTS <i>Danilo Tarquini, João Almeida, Katrin Beyer</i> C 1451 SEISMIC BEHAVIOUR OF BRIDGE STRUCTURES MADE OF NATURAL FIBRE REINFORCED POLYMER-CONCRETE COMPOSITE <i>Jiaxin Chen, Nawawi Chouw</i>	
Mon 11:30 – 13:00	COMPDYN RS 5: IMPACT DYNAMICS - I Chair: E. Sapountzakis C 866 POUNDING BETWEEN BRIDGE DECKS: COMPUTATIONAL DETAILS AND RESULTS <i>Bharat Mandal, Vincenzo Bianco, Giorgio Monti</i> C 1135 NUMERICAL INVESTIGATION OF THE BEHAVIOUR OF RC WIDE BEAMS UNDER IMPACT LOADS <i>Ali Abbas, Demetris Cotsovos</i> C 1385 PERFORMANCE OF STEEL COLUMNS SUBJECTED TO VEHICLE IMPACT – EXPERIMENTAL AND NUMERICAL STUDIES <i>J. Korndörfer, B. Hoffmeister, M. Feldmann</i> C 1417 VALIDATION OF A NUMERICAL AND ANALYTICAL MODEL OF IMPACTED COLUMNS BY MEANS OF SMALL-SCALE DROP WEIGHT EXPERIMENTS <i>Carles Colomer Segura, Nils Horbach, Markus Feldmann</i> C 1602 VIBRATION ANALYSIS OF HIGH-SPEED RAIL SYSTEM USING THE MOVING ELEMENT METHOD <i>Reda Mezeh, Marwan Sadek, Fadi Hage Chehade</i>	Room 3
Mon 11:30 – 13:00	COMPDYN RS 7: STRUCTURAL DYNAMICS - I Chair: V. Plevris C 496 ELASTIC INVERTED PENDULUM UNDER HYSTERETIC NONLINEARITY IN SUSPENSION: STABILIZATION AND OPTIMAL CONTROL <i>Mikhail E. Semenov, Andrey M. Solovyov, Andrey M. Semenov, Vladimir A. Gorlov, Peter A. Meleshenko</i> C 538 SEISMIC ENERGY RESPONSE OF TEN-STORY STEEL ROCKING FRAMES WITH COLUMN MID-HEIGHT UPLIFT AT FIRST STORY <i>Mitsumasa Midorikawa, Naoto Kotani, Taichiro Okazaki, Tetsuhiro Asari, Tadashi Ishihara, Tatsuya Azuhata</i> C 607 GEOMETRICALLY NONLINEAR, STEADY STATE VIBRATION OF VISCOELASTIC BEAMS BY FEM <i>Roman Lewandowski, Przemyslaw Wielentejczyk</i>	Room 4

DAY 1 - MONDAY, MAY 25

	C 775 NONLINEARITY DETECTION AND IDENTIFICATION USING DISCRETE-TIME VOLTERRA SERIES: APPLICATION TO A SOLAR ARRAY STRUCTURE <i>Cristian Hansen, Samuel da Silva, Emmanuel Foltête, Scott Cogan</i> C 898 FREE VIBRATION ANALYSIS OF SANDWICH PANELS INCLUDING THE EFFECT OF IRREGULARITY IN HONEYCOMB CORE <i>Tanmoy Mukhopadhyay, Sondipon Adhikari</i>	
Mon 11:30 – 13:00	COMPDYN MS 23: NON-LINEAR DYNAMICS AND WAVE PROPAGATION - I Minisymposium Organizers: J. Naprstek, R. Kolman, K-C. Park Chair: R. Kolman C 1107 KEYNOTE: NONLINEARITIES IN THE MODELLING OF GUIDED WAVES IN PRESTRESSED PLATES <i>Annamaria Pau, Fabrizio Vestroni</i> C 625 PRESTRESS TUNING OF THE NONLINEAR DYNAMICS OF TENSEGRITY METAMATERIALS <i>F. Fraternali, A. Amendola, E. Hernández-Nava, R. Goodall, R.E. Skelton</i> C 560 DESTRUCTION OF THIN FILMS WITH A DAMAGED SUBSTRATE AS A RESULT OF WAVES LOCALIZATION CAUSED BY PERIODIC IMPACT <i>Andrei Abramian, Sergey Vakulenko</i> C 1046 BULK NONLINEAR WAVES OF DEFORMATION IN LENGTHY SHELLS <i>Alexander M. Samsonov, Galina V. Dreiden, Irina V. Semenova, Andrey G. Shvartz</i>	Room 5
Mon 11:30 – 13:00	COMPDYN MS 24: SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES AND PIPELINES - I Minisymposium Organizers: S. Karamanos, V. Papadopoulos Chair: S. Karamanos C 1574 KEYNOTE: MODELLING OF BURIED PIPELINE RESPONSE UNDER SEVERE IMPOSED DEFORMATIONS <i>A.M. (Nol) Gresnigt, Spyros A. Karamanos</i> C 1604 Comparison of the Turkish regulations and Eurocodes regarding the pipelines and earthquakes <i>Selcuk Toprak, A. Cem Koc, Engin Nacaroglu</i> C 1485 FULL SCALE EXPERIMENTAL STUDY OF BURIED PIPELINES SUBJECTED TO SEVERE SHEAR-TYPE DEFORMATION <i>Sjors Van Es, Nol Gresnigt</i> C 1045 PERFORMANCE CRITERIA FOR THE SEISMIC DESIGN OF LIQUID STORAGE TANKS AND PIPING SYSTEMS <i>Maria Vathi, Spyros A. Karamanos, John Kapogiannis, Konstantinos V. Spiliopoulos</i>	Room 6

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Mon 11:30 – 13:00	UNCECOMP MS 11: INNOVATIVE SENSING SOLUTIONS FOR REDUCING UNCERTAINTY IN ENGINEERING SYSTEMS - I Minisymposium Organizers: E. Chatzi, F. Ubertini, S. Laflamme Chair: E. Chatzi U 701 KEYNOTE: DISTRIBUTED LARGE AREA ELECTRONICS FOR UNCERTAINTY REDUCTION IN MESOSURFACE STRAIN MEASUREMENTS <i>Simon Laflamme, Filippo Ubertini, Eleni Chatzi, Hussam Saleem, Gabriele Comanducci</i> U 564 COMBINED EMPIRICAL AND ANALYTICAL VIRTUAL SENSING IN STRUCTURAL DYNAMICS FOR UNCERTAINTY REDUCTION <i>Jyrki Kullaa</i> U 723 OPTIMAL SENSOR PLACEMENT FOR THE MODAL IDENTIFICATION OF AN INNOVATIVE TIMBER STRUCTURE <i>C. Leyder, V. Ntertimanis, E. Chatzi, A. Frangi</i> U 729 SENSING HARDWARE OPTIMIZATION AND AUTOMATED CONDITION ASSESSMENT OF A MONUMENTAL MASONRY BELL-TOWER <i>Filippo Ubertini, Nicola Cavalagli, Gabriele Comanducci</i>	Room 7
Mon 11:30 – 13:00	UNCECOMP MS 13: NON PROBABILISTIC APPROACHES FOR UNCERTAINTY REPRESENTATION AND ANALYSIS IN ENGINEERING - I Minisymposium Organizers: D. Moens, D. Vandepitte, M. Beer, M. Hanss Chair: D. Moens U 568 AN EFFICIENT FORCED-BIASED MONTE CARLO METHOD FOR IMPRECISE PROBABILITY: APPLICATION TO ROBUST MAINTENANCE ACTIVITIES <i>Edoardo Patelli, Marco De Angelis</i> U 583 DERIVATION OF AN INPUT INTERVAL FIELD DECOMPOSITION BASED ON EXPERT KNOWLEDGE USING LOCALLY DEFINED BASIS FUNCTIONS <i>Maurice Imholz, Dirk Vandepitte, David Moens</i> U 603 A FUZZY MODEL UPDATING TECHNIQUE MOTIVATED BY BAYESIAN INFERENCE <i>A. Hanselowski, S. Ihrle, M. Hanss</i> U 606 INFLUENCE OF UNCERTAINTIES ON THE STABILITY OF A SELF-EXCITED ELASTIC MULTIBODY SYSTEM <i>Igor Iroz, Michael Hanss, Peter Eberhard</i>	Room 8
Mon 11:30 – 13:00	COMPDYN MS 1: VIBRATIONS INDUCED BY RAIL AND ROAD TRAFFIC - I Minisymposium Organizers: P-C. Alves, M. Hussein Chair: P-C. Alves C 765 KEYNOTE: EXPERIMENTAL AND NUMERICAL EVALUATION OF THE EFFICIENCY OF A STIFF WAVE BARRIER IN THE SOIL <i>Pieter Coulier, Vicente Cúellar, Geert Degrande, Geert Lombaert</i>	Room 9

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	C 582 RAILWAY-INDUCED GROUND VIBRATIONS IN THE PRESENCE OF LOCAL TRACK IRREGULARITIES AND WHEEL FLATS <i>Georges Kouroussis, Georgios Alexandrou, David Connolly, Konstantinos Vogiatzis, Olivier Verlinden</i> C 635 IMPACT RESPONSES OF PRESTRESSING TENDONS IN RAILWAY CONCRETE SLEEPERS IN HIGH SPEED RAIL ENVIRONMENTS <i>Sakdirat Kaewunruen, Alex Remennikov</i> C 650 STOCHASTIC HETEROGENEOUS CONTINUUM MODELING OF A GRANULAR MEDIUM. APPLICATION TO LARGE-SCALE WAVE PROPAGATION IN A BALLASTED RAILWAY TRACK. <i>Régis Cottureau, Lúcio De Abreu Corrêa, Juan Carlos Quezada, Sofia Costa d'Aguar, Charles Voivret</i>	
Mon 11:30 – 13:00	COMPDYN MS 28: HUMAN INDUCED VIBRATIONS - I <i>Minisymposium Organizers: G. De Roeck, P. Van den Broeck, K. Van Nimmen</i> <i>Chair: G. De Roeck</i> C 800 KEYNOTE: EQUIVALENT SPECTRAL MODEL FOR PEDESTRIAN-INDUCED FORCES ON FOOTBRIDGES: A GENERALIZED FORMULATION <i>Alberto Ferrarotti, Federica Tubino</i> C 712 THE IMPACT OF VERTICAL HUMAN-STRUCTURE INTERACTION FOR FOOTBRIDGES <i>Katrien Van Nimmen, Kristof Maes, Geert Lombaert, Guido De Roeck, Peter Van den Broeck</i> C 779 INFLUENCE OF HUMAN INDUCED FLOOR VIBRATIONS ON THE MEASUREMENT PRECISION OF FORCE PLATES IN A BIOMECHANICS LABORATORY <i>Horst Werkle, Wolfgang Francke, Andrei Firus</i> C 1088 EXPERIMENTAL INVESTIGATION ON COHERENCY FACTOR OF RHYTHMIC JUMPING AND ITS APPLICATION FOR SIMULATION OF CROWD JUMPING LOAD <i>Ziye Pan, Yonglei Zhao, Jun Chen</i>	Room 10
Mon 11:30 – 13:00	COMPDYN RS 9: OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - I <i>Chair: G. Stavroulakis</i> C 1297 KEYNOTE: ROBUST CONTROL OF SMART STRUCTURES WITH OPTIMALLY PLACED ACTUATORS AND SENSORS <i>Amalia Moutsopoulou, Georgia Foutsitzi, Christos Gogos, Georgios E. Stavroulakis</i> C 490 COMPARATIVE STUDY OF THE WIND AND EARTHQUAKE DYNAMIC RESPONSES OF FIRE EXPOSED STEEL FRAMED BUILDINGS <i>Fabio Mazza, Marco Fiore</i> C 819 SENSOR PLACEMENT OPTIMIZATION USING ENSEMBLE KALMAN FILTER AND GENETIC ALGORITHM <i>Dana Nasr, George Saad</i>	Room 11

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	C 867 TOPOLOGY OPTIMIZATION OF TWO-DIMENSIONAL WAVE BARRIERS FOR THE REDUCTION OF GROUND VIBRATION TRANSMISSION <i>Cédric Van Hoorickx, Ole Sigmund, Mattias Schevenels, Boyan S. Lazarov, Geert Lombaert</i>	
Mon 11:30 – 13:00	COMPDYN MS 7: SEISMIC SAFETY ASSESSMENT OF STRUCTURES - I <i>Minisymposium Organizers: R. Delgado, A. Arêde, P. Delgado</i> <i>Chair: P. Delgado</i> C 1590 KEYNOTE: NUMERICAL SEISMIC SAFETY ASSESSMENT OF RC BRIDGES WITH HOLLOW PIERS <i>Pedro Delgado, António Arêde, Nelson Vila Pouca, Aníbal Costa</i> C 440 SEISMIC PERFORMANCE OF HIGH-RISE STEEL MRFS WITH OUTRIGGER AND BELT TRUSSES THROUGH NONLINEAR DYNAMIC FE SIMULATIONS <i>Emanuele Brunesi, Roberto Nascimbene, Gian Andrea Rassati, Lorenzo Casagrande</i> C 659 EFFECT OF OPENINGS ON NONLINEAR DYNAMIC RESPONSES OF MASONRY INFILLED RC FRAMES <i>Y. P. Yuen, J. S. Kuang</i> C 755 A DESIGN PROCEDURE FOR SEISMIC RETROFITTING OF REINFORCED CONCRETE FRAME AND CONCENTRIC BRACED STEEL BUILDINGS WITH DISSIPATIVE BRACINGS <i>Alessandro Vittorio Bergami, Camillo Nuti</i>	Room 12
Mon 11:30 – 13:00	COMPDYN RS 8: NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS - I <i>Chair: V. Papadopoulos</i> C 782 BEHAVIOUR OF REINFORCED CONCRETE KNEE BEAM-COLUMN JOINT IN CASE OF GROUND CORNER COLUMN LOSS-NUMERICAL ANALYSIS <i>B. Abdelwahed, B. Belkassen, L. Pyl, J. Vantomme</i> C 1097 3-D DYNAMIC ANALYSIS OF BRIDGES WITH ROCKING ISOLATION UNDER EXTREME EARTHQUAKES <i>Tzu-Ying Lee, Kun-Jun Chung, Hung-Yuan Lee</i> C 1113 STRUCTURAL INTEGRITY ANALYSIS AND OPTIMIZATION OF AN ELEVATOR FRAME, THROUGH FE MODELING AND EXPERIMENTAL TESTS <i>Dimitrios Giagopoulos, Iraklis Chatziparasidis, Nikolas Sapidis</i> C 1163 SEISMIC ANALYSIS OF COUPLED BUILDINGS WITH MR DAMPER <i>Fangshu Lin, Xilin Lu</i>	Room 13

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Mon 11:30 – 13:00	COMPDYN MS 8: PERIODICITY-INDUCED EFFECTS AND METHODS IN STRUCTURAL DYNAMICS - I Minisymposium Organizer: S. Sorokin Chair: S. Sorokin C 1531 KEYNOTE: MATERIAL LAYOUTS IN SPACE-TIME AND FOCUSING OF MASS FLOWS DUE TO COLLISION OF CHARACTERISTICS Konstantin Lurie C 872 WEAKLY NONLINEAR DISPERSION AND STOP-BAND EFFECTS FOR PERIODIC STRUCTURES Vladislav Sorokin, Jon Juel Thomsen C 909 ON SOME PERIODICITY-INDUCED EFFECTS Sergey Sorokin C 1122 USING PERIODICITY TO MITIGATE GROUND VIBRATION Lars Vabbersgaard Andersen	Room 14
Mon 11:30 – 13:00	COMPDYN RS 14: SEISMIC RISK AND RELIABILITY ANALYSIS - I Chair: M. Tanganelli C 602 THE EFFECTS OF THE SEISMIC INPUT ON THE SEISMIC RESPONSE OF RC BUILDINGS Maria Pianigiani, Valentina Mariani, Marco Tanganelli, Stefania Viti C 603 BIDIRECTIONAL ANALYSIS OF A REAL RC BUILDING ACCORDING TO THE ITALIAN CODE PROVISIONS Stefania Viti, Valentina Mariani, Marco Tanganelli, Mario De Stefano C 604 THE EFFECTS OF THE AXIAL LOAD VARIATION ON THE SEISMIC PERFORMANCE OF EXISTING RC BUILDINGS Valentina Mariani, Marco Tanganelli, Stefania Viti, Mario De Stefano C 627 IMPROVED FRAGILITY FUNCTIONS FOR RC BRIDGE POPULATIONS C. Zelaschi, R. Monteiro, R. Pinho C 1231 MORE ACCURATE ESTIMATION OF CRACK DISCHARGE AND ITS EFFECT ON SEISMIC SERVICABILITY OF WATER SUPPLY NETWORKS Mahmood Hosseini, Aram Soroushian, Abdolreza Astaraki	Room 15
Mon 13:00 – 14:30	Lunch Time	

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Mon 14:30 – 16:30	TECHNICAL SESSIONS	
Mon 14:30 – 16:30	COMPDYN MS 12: ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - II Minisymposium Organizer: A. Idesman Chair: A. Idesman C 498 ADAPTIVE MESH REFINEMENT WITH COMBINED CRITERIA FOR FAST TRANSIENT FLUID-STRUCTURE DYNAMICS <i>Vincent Faucher, Folco Casadei</i> C 535 SCALABLE MODAL FREQUENCY RESPONSE SOLVER IN ABAQUS <i>Mikhail Belyi, Andrey Larionov</i> C 547 LONGITUDINAL IMPACT INTO PIEZOELECTRIC MEDIA <i>George Gazonas, Raymond Wildman, David Hopkins, Mike Scheidler</i> C 572 A NEW 3D CO-ROTATIONAL BEAM ELEMENT FOR NONLINEAR DYNAMIC ANALYSIS <i>Thanh-Nam Le, Jean-Marc Battini, Mohammed Hjiaj</i> C 761 ACCURATE SOLUTIONS OF WAVE PROPAGATION PROBLEMS UNDER IMPACT LOADING BY THE STANDARD, SPECTRAL AND ISOGEOMETRIC HIGH-ORDER FINITE ELEMENTS. COMPARISON AND PREDICTION OF ACCURACY OF DIFFERENT SPACE-DISCRETIZATION TECHNIQUES. <i>Alexander Idesman</i>	Room 1
Mon 14:30 – 16:30	COMPDYN MS 11: SOFTWARE DEVELOPMENT IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS Minisymposium Organizer: T. Sextos Chair: T. Sextos C 585 KEYNOTE: AN INTEGRATED FRAMEWORK FOR THE ANALYSIS OF MIXED-TYPE REINFORCED CONCRETE STRUCTURES <i>Vahid Sadeghian, Oh-Sung Kwon, Frank Vecchio</i> C 1423 AN INTEGRATED SYSTEM FOR THE SEISMIC RISK ASSESSMENT OF ROAD NETWORKS: METHODOLOGY AND SOFTWARE ASPECTS <i>Anastasios Sextos, Ioannis Kilanitis, Kalliopi Kyriakou, Andreas Kappos</i> C 970 NUMERICAL SEISMIC ASSESSMENT OF AN EXISTING BRIDGE WITH DIFFERENT SUPPORT CONFIGURATIONS <i>Ciro Del Vecchio, Maria C. Caruso, Luigi Di Sarno, Oh-Sung Kwon, Andrea Prota</i> C 1617 OBJECTIVE EVALUATION OF THE Q FACTOR OF IRREGULAR RC BUILDINGS DESIGNED ACCORDING TO EC8 - DESIGN AND ANALYSES PROCEDURES <i>Vasiliki Anagnostopoulou, Stratis Volakos, Christos Zeris</i> C 2854 BUILDING-WIZARD: AN EXPERT SYSTEM FOR NONLINEAR ANALYSIS OF BUILDINGS USING OPENSEES <i>Anastasios Sextos, Nicolaos Psiras, Nicolaos Lesgidis, Dionisios Panagiotopoulos, Nicolaos Gantsidis</i>	Room 2

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Mon 14:30 – 16:30	UNCECOMP MS 10: REDUCED ORDER MODELS FOR STOCHASTIC INVERSE PROBLEMS - I Minisymposium Organizers: D. Lucor, S. Ricci, M. Rochoux Chair: D. Lucor U 659 KEYNOTE: POSTERIOR ADAPTATION OF POLYNOMIAL SURROGATE FOR BAYESIAN INFERENCE IN ARTERIAL FLOW NETWORKS <i>Didier Lucor, Lionel Mathelin, Olivier Le Maître</i> U 558 EFFICIENT POLYNOMIAL CHAOS APPROXIMATION FOR BAYESIAN INFERENCE WITH A PARAMETRIZED PRIOR CORRELATION FUNCTION <i>Ihab Sraj, Olivier Le Maître, Omar Knio, Ibrahim Hoteit</i> U 572 CONSTRUCTION AND IDENTIFICATION OF A STOCHASTIC COMPUTATIONAL DYNAMICAL MODEL USING EXPERIMENTAL MODAL DATA <i>Anas Batou, Christian Soize, Sylvie Audebert</i> U 626 REDUCED-COST ENSEMBLE KALMAN FILTER FOR PARAMETER ESTIMATION - APPLICATION TO FRONT-TRACKING PROBLEMS <i>Mélanie Rochoux, Sophie Ricci, Didier Lucor, Bénédicte Cuenot, Arnaud Trouvé</i> U 633 A REDUCED-ORDER MODEL BASED ON STOCHASTIC MOMENT EQUATIONS FOR IDENTIFICATION OF HYDRAULIC CONDUCTIVITY <i>Damiano Pasetto, Mario Putti, Alberto Guadagnini</i> U 655 AN EFFICIENT NON-INTRUSIVE REDUCED BASIS APPROACH FOR UNCERTAINTY QUANTIFICATION IN CFD <i>Dinesh Kumar, Mehrdad Raisee, Chris Lacor</i>	Room 3
Mon 14:30 – 16:30	COMPDYN RS 7: STRUCTURAL DYNAMICS - II Chair: M. Fragiadakis C 983 A FAST SEMI-ANALYTICAL METHOD FOR COMPUTING THE RESPONSE OF RAILWAY TRACKS ON NONLINEAR FOUNDATIONS <i>T. Hoang, D. Duhamel, G. Foret, H. Yin, G. Cumunel, P. Joyez, R. Caby</i> C 998 VALIDITY DOMAIN OF AN ENERGETIC METHOD FOR THE ESTIMATION OF MODAL DAMPING IN THE CASE OF NON LINEAR LOCALIZED DISSIPATION <i>M. Krifa, N. Bouhaddi, G. Chevallier, S. Cogan</i> C 1048 NONLINEAR DYNAMICS OF A 2D ARRAY OF COUPLED PENDULUMS UNDER PARAMETRIC EXCITATION <i>Aymen Jallouli, Najib Kacem, Nouredine Bouhaddi</i> C 1089 FINITE ELEMENT SIMULATION OF A STEEL BRACED FRAME STRUCTURE DAMAGED BY THE 2011 TOHOKU EARTHQUAKE <i>Taichiro Okazaki, Yuriko Kato, Naoto Kotani, Mitsumasa Midorikawa, Tetsuhiro Asari</i> C 1100 INFLUENCE OF THE TRACK GEOMETRY VARIABILITY ON THE DYNAMICS OF HIGH SPEED TRAINS <i>Christine Funfschilling, Guillaume Perrin</i>	Room 4

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	1193 NUMERICAL INVESTIGATION OF THE SEISMIC RESPONSE OF PRECAST BUILDINGS WITH INTEGRATED RC CLADDING WALLS <i>Ioannis Kalyviotis, Ioannis Psycharis</i> C 1427 EVALUATION OF THE APPLICABILITY OF THE LUGRE MODEL FOR MODELLING THE DYNAMIC BEHAVIOUR OF BOLT CONNECTED FRAMES <i>Sergio Sánchez Gómez, Mihai I.Badila, Andrei Metrikine</i>	
Mon 14:30 – 16:30	COMPDYN MS 23: NON-LINEAR DYNAMICS AND WAVE PROPAGATION - II <i>Minisymposium Organizers: J. Naprstek, R. Kolman, K-C. Park</i> <i>Chair: K-C. Park</i> C 1155 MULTISTEP TIME INTEGRATION FOR STRESS WAVE PROPAGATION IN HETEROGENEOUS SOLIDS: ONE DIMENSIONAL PROBLEM <i>K. C. Park, S. S. Cho</i> C 1146 MULTISTEP TIME INTEGRATION FOR STRESS WAVE PROPAGATION IN HETEROGENEOUS SOLIDS: MULTIDIMENSIONAL PROBLEM <i>S. S. Cho, K. C. Park</i> C 619 COMPONENT-WISE PARTITIONED EXPLICIT FINITE ELEMENT METHOD: NONLINEAR WAVE PROPAGATION AND DYNAMIC CONTACT PROBLEMS <i>Radek Kolman, Sang Soon Cho, K.C. Park</i> C 454 ALTERNATIVE MASS MATRICES AND INERTIA PATCH TESTS <i>Anton Tkachuk, Manfred Bischoff</i> C 544 VARIATIONAL MASS SCALING FOR ISOGEOMETRIC FINITE ELEMENTS <i>Anne-Kathrin Schäuble, Anton Tkachuk, Manfred Bischoff</i> C 1309 PROBLEM OF NON-STATIONARY WAVES IN VISCOELASTIC ORTHOTROPIC STRIP SOLVED USING ANALYTICAL METHOD <i>Vítězslav Adámek, František Valeš, Jan Červ</i>	Room 5
Mon 14:30 – 16:30	COMPDYN MS 24: SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES AND PIPELINES - II <i>Minisymposium Organizers: S. Karamanos, V. Papadopoulos</i> <i>Chair: S. Karamanos</i> C 612 PROBABILISTIC ASSESSMENT OF PIPELINE - FAULT CROSSING <i>Vasileios Melissianos, Dimitrios Vamvatsikos, Charis Gantes</i> C 1581 PERFORMANCE EVALUATION OF BURIED STEEL PIPES SUBJECT TO STRIKE SLIP FAULT OFFSETS <i>E. Uckan, B. Akbas, F. Cakir, J. Shen, M. O'Rourke, M. Caglar, F. Paolacci</i> C 1369 SOIL-PIPE INTERACTION MODELS FOR SIMULATING THE MECHANICAL RESPONSE OF BURIED STEEL PIPELINES CROSSING ACTIVE FAULTS <i>Polynikis Vazouras, Gregory Sarvanis, Spyros Karamanos, Panos Dakoulas, Jan Ferino</i> C 1405 BURIED PIPELINES SUBJECTED TO GROUND DEFORMATION CAUSED BY LANDSLIDE TRIGGERING <i>Angelos Tsatsis, Rallis Kourkoulis, George Gazetas</i>	Room 6

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	C 1486 MECHANICAL PERFORMANCE OF BURIED PIPELINE BENDS <i>Polynikis Vazouras, Spyros Karamanos, Panos Dakoulas</i> C 999 SEISMIC PERFORMANCE ASSESSMENT OF OIL & GAS PIPING SYSTEMS THROUGH NONLINEAR ANALYSIS <i>Oreste S. Bursi, Fabrizio Paolacci, Md Shahin Reza</i>	
Mon 14:30 – 16:30	UNCECOMP MS 11: INNOVATIVE SENSING SOLUTIONS FOR REDUCING UNCERTAINTY IN ENGINEERING SYSTEMS - II <i>Minisymposium Organizers: E. Chatzi, F. Ubertini, S. Laflamme</i> <i>Chair: E. Chatzi</i> U 726 KEYNOTE: AN APPROACH FOR EFFICIENT UNCERTAINTY QUANTIFICATION OF COMPLEX AND LARGE-SCALE BIOMECHANICS PROBLEMS <i>Jonas Biehler, Michael W. Gee, Wolfgang A. Wall</i> U 732 STRAIN-SENSING CARBON NANOTUBE CEMENT-BASED COMPOSITES FOR APPLICATIONS IN STRUCTURAL HEALTH MONITORING: PREPARATION AND MODELLING ISSUES <i>Filippo Ubertini, Antonella D'Alessandro, Marco Rallini, Simon Laflamme, Annibale L. Materazzi, Josè Kenny</i> U 753 OUTPUT-ONLY SCHEMES FOR JOINT INPUT-STATE-PARAMETER ESTIMATION OF LINEAR SYSTEMS <i>Saeed Eftekhar Azam, Vasilis Dertimanis, Eleni Chatzi, Costas Papadimitriou</i> U 821 HETEROGENEOUS SENSOR FUSION FOR REDUCING UNCERTAINTY IN STRUCTURAL HEALTH MONITORING <i>R. Ferrari, F. Pioldi, E. Rizzi, C. Gentile, E. Chatzi, R. Klis, E. Serantoni, A. Wieser</i>	Room 7
Mon 14:30 – 16:30	UNCECOMP MS 13: NON PROBABILISTIC APPROACHES FOR UNCERTAINTY REPRESENTATION AND ANALYSIS IN ENGINEERING - II <i>Minisymposium Organizers: D. Moens, D. Vandepitte, M. Beer, M. Hanss</i> <i>Chair: D. Vandepitte</i> U 613 NUMERICAL DESIGN OF STRUCTURES WITH FUNCTIONAL RESPONSES <i>Marco Götz, Wolfgang Graf, Martin Liebscher, Michael Kaliske</i> U 651 UNCERTAINTY QUANTIFICATION OF DYNAMIC CHARACTERISTICS OF COMPOSITES – A FUZZY APPROACH <i>S. Dey, T. Mukhopadhyay, H. Haddad Khodaparast, S. Adhikari</i> U 747 THE COMMON BASIS FOR PROBABILISTIC AND NON-PROBABILISTIC DESIGN OF STRUCTURES UNDER DIFFERENT DEGREES OF DATA AVAILABILITY <i>Farzad Farid, Rolf H. Lande, Arvid Næss</i> U 773 ANALYSIS OF TRUSS STRUCTURES WITH UNCERTAIN PARAMETERS DESCRIBED BY IMPRECISE PROBABILITY DENSITY FUNCTIONS <i>Giuseppe Muscolino, Alba Sofi</i> U 802 NEW CONTINUOUS CONTROL METHODOLOGY FOR NONLINEAR DYNAMICAL SYSTEMS WITH UNCERTAIN PARAMETERS <i>Hancheol Cho, Thanapat Wanichanon, Firdaus Udwadia</i>	Room 8

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	U 611 IDENTIFICATION OF INTERVAL UNCERTAINTY IN THE STATIC RESPONSE OF SELECTIVE LASER SINTERED COMPONENTS <i>Matthias Faes, Yueqi Wang, Pascal Lava, David Moens</i>	
Mon 14:30 – 16:30	COMPDYN MS 1: VIBRATIONS INDUCED BY RAIL AND ROAD TRAFFIC - II Minisymposium Organizers: P-C. Alves, M. Hussein Chair: P-C. Alves C 959 FAST COMPUTATION OF TRAIN-INDUCED VIBRATIONS IN HOMOGENEOUS AND LAYERED SOILS <i>Lutz Auersch</i> C 1344 THE INFLUENCE OF DEGRADATION OF SHEAR MODULUS OF SOIL ON PREDICTED RAILWAY VIBRATIONS IN TUNNELS EXCAVATED WITH TBM: A NUMERICAL ANALYSIS <i>J. Fernández Ruiz, P. Alves Costa, P. Lopes, L. Medina Rodríguez</i> C 1345 A MIXED SPACE-TIME AND WAVENUMBER DOMAIN MODEL FOR PREDICTING GROUND VIBRATION FROM SURFACE TRAINS <i>Samuel Koroma, David Thompson, Mohammed Hussein, Evangelos Ntotsios</i> C 1360 VIBRATIONS IN BUILDINGS DUE TO RAILWAY TRAFFIC IN TUNNELS: MODELLING STRATEGIES AND INFLUENCE OF SOIL STIFFNESS <i>P. Lopes, P. Alves Costa, R. Calçada, A. Cardoso</i> C 1618 PREDICTIONS OF THE DYNAMIC RESPONSE OF PILED FOUNDATIONS IN A MULTI-LAYERED HALF-SPACE DUE TO INERTIAL AND RAILWAY INDUCED LOADINGS <i>Evangelos Ntotsios, Waleed Hamad, David Thompson, Mohammed Hussein, Hugh Hunt, James Talbot</i> C 1434 THE DYNAMIC INTERACTION OF TWIN TUNNELS EMBEDDED IN A HOMOGENEOUS HALF-SPACE <i>Waleed I. Hamad, Hugh E.M. Hunt, James P. Talbot, Mohammed F.M. Hussein, David J. Thompson</i>	Room 9
Mon 14:30 – 16:30	COMPDYN MS 28: HUMAN INDUCED VIBRATIONS - II Minisymposium Organizers: G. De Roeck, P. Van den Broeck, K. Van Nimmen Chair: P. Van den Broeck C 1104 DYNAMIC ANALYSES OF A CURVED CABLE-STAYED FOOTBRIDGE UNDER HUMAN INDUCED VIBRATIONS: NUMERICAL MODELS AND EXPERIMENTAL TESTS <i>Elisa Bassoli, Paola Gambarelli, Laura Simonini, Loris Vincenzi</i> C 1192 ROBUST VIBRATION SERVICEABILITY DESIGN OF A TUNED MASS DAMPER FOR THE PHÉNIX FOOTBRIDGE <i>Klaus Lievens, Peter Van den Broeck, Guido De Roeck, Geert Lombaert</i> C 1295 WALKING-INDUCED VIBRATION OF A FOOTBRIDGE <i>Eleonora Lai, Maria Gabriella Mulas</i>	Room 10

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	C 590 PROBABILISTIC MODELS FOR PASSIVE PEOPLE IN HUMAN-STRUCTURE INTERACTION PROBLEMS <i>Albert R. Ortiz-Lasprilla, Juan M. Caicedo</i> COMPDYN RS 1: ALGORITHMS FOR STRUCTURAL HEALTH MONITORING - I C 1511 EXPERIMENTAL VERIFICATION OF DAMAGE LOCATION TECHNIQUES FOR FRAME STRUCTURES ASSEMBLED USING BOLTED CONNECTIONS <i>Bartłomiej Blachowski, Andrzej Swiercz, Nikos Pnevmatikos</i> C 1328 STRUCTURAL HEALTH MONITORING USING TIME-DELAY EMBEDDING AND PHASE-SPACE WARPING <i>Mohammad H. Alhamaydeh, Kenneth Wong, Ralston Fernandes, Jeongcheol Seok, Eihab M. Abdel-Rahman, Sami El-Borgi</i> C 1771 ANALYSIS OF THE VIBRATION LEVELS OF A SLENDER FOOTBRIDGE MEASURED BY A CONTINUOUS DYNAMIC MONITORING SYSTEM <i>Carlos Moutinho, Filipe Magalhães, Elsa Caetano</i>	
Mon 14:30 – 16:30	COMPDYN RS 9: OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - II Chair: G. Stavroulakis C 908 PARAMETRIC STUDY OF THE EFFECT OF VERTICAL GROUND MOTION ON SIMPLIFIED STRUCTURES <i>Siyun Kim, Sung Jig Kim, Chunho Chang, Jong Hee An</i> C 969 A CODE COMPATIBLE APPROACH TO JUSTIFY THE SEISMIC DESIGN OF SIMPLIFIED STRUCTURES <i>H.F. Karadogan, Y. Durgun, I.E. Bal, S. Z. Yuce, E. Yuksel, C. Soydan</i> C 973 DESIGN OF “DOG-BONE” CONNECTION: THE ROLE OF VERTICAL LOADS <i>Rosario Montuori</i> C 980 NON-LINEAR ANALYSES OF SEISMIC RESISTANT CONCRETE FRAME FOR THE VALIDATION OF A FAILURE MODE CONTROL METHODOLOGY <i>Roberta Muscati</i> C 1062 FEASIBILITY STUDY ON OFFSHORE SOLAR UPDRAFT TOWER POWER PLANT <i>Hayami Sato, Yasuo Suzuki, Kunitomo Sugiura</i> C 1195 IMPLEMENTATION OF ROBUST CONTROL THEORY IN SMART STRUCTURE DESIGN USING FREQUENCY DOMAIN DATA <i>A. J. Moutsopoulou, A. D. Pouliezios, G. E. Stavroulakis</i>	Room 11

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Mon 14:30 – 16:30	COMPDYN MS 7: SEISMIC SAFETY ASSESSMENT OF STRUCTURES - II Minisymposium Organizers: R. Delgado, A. Arêde, P. Delgado Chair: R. Delgado C 1178 ROCKING BEHAVIOUR OF SIMPLE UNREINFORCED LOAD-BEARING MASONRY WALLS INCLUDING SOUNDPROOFING RUBBER LAYERS C. Mordant, V. Denoël, H. Degée C 1245 INFLUENCE OF MODELLING PARAMETERS ON THE FRAGILITY ASSESSMENT OF PRE-1970 ITALIAN RC STRUCTURES Gerard O'Reilly, Timothy Sullivan C 1301 DEVELOPMENT OF A SIMPLIFIED DISPLACEMENT-BASED PROCEDURE FOR THE SEISMIC ASSESSMENT OF RC WALL BUILDINGS Timothy Sullivan, Matthew Fox C 1421 STRENGTH AND STABILITY ASSESSMENT OF EXISTING BUILDINGS IN ISRAEL Nicolae Gluck, Rina Farhat, Rami Eid, Uri Tzadka C 1544 PROBABILISTIC EVALUATION OF DAM BASE SLIDING Gabriele Fiorentino, Luca Furgani, Simone Magliano, Camillo Nuti C 1619 EFFICIENCY OF DIFFERENT RETROFITTING TECHNIQS FOR RC COLUMNS UNDER BIAXIAL LOADING: EXPERIMENTAL STUDY H. Rodrigues, A. Furtado, P. Rocha, A. Arêde	Room 12
Mon 14:30 – 16:30	COMPDYN RS 8: NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS – II Chair: V. Papadopoulos C 1169 NUMERICAL ASSESSMENT ON THE SEISMIC RESPONSE OF A BASE-ISOLATED BUILDING UNDER BI-DIRECTIONAL MOTION Marco Furinghetti, Alberto Pavese C 1211 DYNAMIC SENSITIVITY OF MULTI-BLOCK STACKS SUBJECTED TO BASE PULSE EXCITATION - EXPERIMENTAL EVIDENCE AND NON SMOOTH CONTACT DYNAMIC SIMULATIONS Nina Čeh, Antonio Pellegrino, Jean-Francois Camenen, Nik Petrinić, Gordan Jelenić, Tomasz Koziara, Nenad Bićanić C 1339 ADAPTIVE CONTROL OF THE ROCKING MOTION OF ART OBJECTS Rosario Ceravolo, Marica Leonarda Pecorelli, Luca Zanotti Fragonara C 1446 PARAMETRIC RESONANCES OF FRAMED STRUCTURES INDUCED BY A NORMAL RESONANCE Yuchun Li, Yanqing Yu C 1471 NUMERICAL SIMULATION OF OUT-OF-PLANE INSTABILITY OF REINFORCED CONCRETE THIN WALLS Angelica Rosso, João P. Almeida, Katrin Beyer	Room 13

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Mon 14:30 – 16:30	COMPDYN MS 8: PERIODICITY-INDUCED EFFECTS AND METHODS IN STRUCTURAL DYNAMICS - II Minisymposium Organizer: S. Sorokin Chair: S. Sorokin C 2303 KEYNOTE: ENERGY FLOW THROUGH FINITE PERIODIC STRUCTURES. <i>Brian Mace</i> C 2849 DYNAMIC BEHAVIOR OF A THIN ELASTIC ROD UNDER THE LONGTERM LONGITUDINAL COMPRESSION <i>Nikita Morozov, Alexandr Belyaev, Petr Tovstik, Tatiana P. Tovstik</i> C 2851 TWO-DIMENSIONAL LINEAR MODEL OF ELASTIC SHELL MADE OF ANISOTROPIC HETEROGENEOUS MATERIAL <i>Petr Tovstik, Tatiana P. Tovstik, Daniil Al'chibaev</i> C 2850 DYNAMIC MODEL OF ICE AND ELASTIC STRUCTURE INTERACTION IN THE ZONE OF ICE CRUSHING <i>Dmitry Indeitsev, Andrey Abramyan, Yulia Mochalova</i> C 1293 THE EFFECT OF A FLUID STRATIFICATION ON TRANSMISSION OF A FLEXURAL-GRAVITY WAVE THROUGH SEVERAL RECTILINEAR CLAMPS IN A FLOATING PLATE <i>Marina Zhuchkova, Daniil Kouzov</i>	Room 14
Mon 14:30 – 16:30	COMPDYN RS 14: SEISMIC RISK AND RELIABILITY ANALYSIS - II Chair: S. Viti C 893 SIMPLIFIED CLOSED-FORM SOLUTION FOR THE DETERMINATION OF THE MOMENT-CURVATURE RESPONSE OF A CIRCULAR RC SECTION <i>Domenico Raffaele, Roberto Gentile, Mauro Mezzina</i> C 1175 ENERGY DISSIPATION CHARACTERISTICS OF SLAB TYPE BUILDINGS WITH SPECIAL CONNECTORS <i>Erkan Şenol, Ahmet Anıl Dindar, Ercan Yüksel, Faruk Karadoğan</i> C 1199 SEISMIC FRAGILITY ANALYSIS OF EXISTING URM BUILDINGS: A STUDY ON KATHMANDU VALLEY <i>Sujan Shrestha, Lorenzo Colarusso, Domenico Liberatore, Daniela Addessi</i> C 1310 MAPPING HAZARD POTENTIALS IN SEISMIC ZONES BASED ON GEOTECHNICAL DATA FOR DESIGNING TRANSPORTATION NETWORKS INFRASTRUCTURE <i>Mohamed Elmasry, Tarek Abdelaziz, Amr Wagdy</i> C 1649 RELIABILITY-BASED METHOD FOR ASSESSING LIQUEFACTION POTENTIAL OF SOILS <i>M. Naghizaderokni, Dr. A. Janalizade, M. Naghizaderokni</i>	Room 15
Mon 16:30 – 17:00	Coffee Break	

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Mon 17:00 – 19:00	TECHNICAL SESSIONS	
Mon 17:00 – 19:00	COMPDYN MS 12: ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - III Minisymposium Organizer: A. Idesman Chair: A. Idesman C 810 MULTIGRID SOLVER WITH DOMAIN DECOMPOSITION SMOOTHING FOR STEADY-STATE INCOMPRESSIBLE FSI PROBLEMS <i>Eugenio Aulisa, Simone Bnà, Giorgio Borna</i> C 825 SOLUTION OF THE HELMHOLTZ EQUATION ON THE BASE OF COMBINATION OF NUMERICAL METHODS <i>Anastasiya Zaitseva, Vadim Lisitsa</i> C 870 OPTIMAL DESIGN FOR HIGH RESISTANT ROCKFALL BARRIERS <i>Juan Escallon, Perry Bartelt, Eleni Chatzi</i> C 918 SMOOTH AND NON-SMOOTH SOLUTIONS FOR GEOMETRICALLY EXACT BEAMS SUBJECTED TO IMPACT <i>Tien Long Nguyen, Mohammed Hjjaj, Carlo Sansour</i> C 1039 EXPLICIT CONTACT-IMPACT ALGORITHM BASED ON THE PRE-DISCRETIZATION BIPENALTY TECHNIQUE <i>Dusan Gabriel, Jan Kopacka, Radek Kolman, Jiri Plesek</i> C 1050 A VARIATIONAL FORMULATION OF DISCONTINUOUS-GALERKIN TIME INTEGRATORS <i>Pablo Mata Almonacid, Yongxing Shen, Vahid Ziaei-Rad</i>	Room 1
Mon 17:00 – 19:00	UNCECOMP MS 2: UNCERTAINTY QUANTIFICATION IN COUPLED PROBLEMS AND STRUCTURAL DYNAMICS - I Minisymposium Organizers: C. Soize, M. Arnst Chair: C. Soize U 791 A PRECONDITIONING TECHNIQUE FOR PARAMETERIZED PDES <i>Alessio Spantini, Lionel Mathelin, Youssef Marzouk</i> U 814 COUPLING 3D AND ROTATION INVARIANT PROBABILISTIC MODELS FOR TWO-PHASE FLOWS IN RANDOM MEDIA. <i>Tatiana Okhulkova, Didier Clouteau, Regis Cottureau, Regis Farret, Etienne De Rocquigny</i> U 856 STATISTICAL INVERSE PROBLEMS FOR NON-GAUSSIAN NON-STATIONARY STOCHASTIC PROCESSES DEFINED BY A SET OF REALIZATIONS <i>G. Perrin, C. Soize</i> U 636 SPARSE GENERALIZED POLYNOMIAL CHAOS EXPANSION FOR NON-INTRUSIVE UNCERTAINTY QUANTIFICATION IN AERODYNAMIC COMPUTATIONS <i>Eric Savin, Andrea Resmini, Jacques Peter</i>	Room 2

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	U 792 QUANTIFYING SAMPLING NOISE AND PARAMETRIC UNCERTAINTY IN ATOMISTIC-TO-CONTINUUM SIMULATIONS USING SURROGATE MODELS <i>Maher Salloum, Khachik Sargsyan, Reese Jones, Francesco Rizzi, Habib Najm, Bert Debusschere</i>	
Mon 17:00 – 19:00	UNCECOMP MS 10: REDUCED ORDER MODELS FOR STOCHASTIC INVERSE PROBLEMS - II Minisymposium Organizers: D. Lucor, S. Ricci, M. Rochoux Chair: M. Rochoux U 656 ACCELERATING MARKOV CHAIN MONTE CARLO WITH ACTIVE SUBSPACES <i>Paul Constantine, Carson Kent</i> U 457 ADDRESSING THE HIGH DIMENSIONALITY CHALLENGE IN UNCERTAINTY QUANTIFICATION <i>Habib Najm, Kenny Chowdhary</i> U 488 A DISCRETE METHOD FOR UNCERTAINTY PROPAGATION - FORWARD AND BACKWARD ANALYSIS <i>Dominic Kohler, Youssef Marzouk, Johannes Mueller, Utz Wever</i> U 504 CALIBRATION OF COMPUTER MODELS WITH SPHERICAL OUTPUTS USING SPHERICAL HARMONICS <i>Kai-Lan Chang, Serge Guillas</i> U 523 REDUCED ORDER MODEL FROM A NEW STOCHASTIC DECOMPOSITION OF FLUID FLOW <i>Valentin Resseguier, Etienne Mémin, Bertrand Chapron</i>	Room 3
Mon 17:00 – 19:00	COMPDYN RS 7: STRUCTURAL DYNAMICS - III Chair: S. Neumeyer C 1501 NONLINEAR DYNAMICS OF PARAMETRICALLY EXCITED CARBON NANOTUBES FOR MASS SENSING APPLICATIONS <i>S. Souayah, N. Kacem, F. Naja, E. Foltête</i> C 1513 A COMPUTATIONAL MODEL FOR LARGE-AMPLITUDE NONLINEAR VIBRATION OF CIRCULAR CMUTS UNDER PRIMARY RESONANCE <i>Aymen Jallouli, Najib Kacem, Patrice Lemoal, Gilles Bourbon, Joseph Lardies</i> C 1543 SEISMIC ASSESSMENT OF THE FULL SCALE FOUR STOREY E-DEFENSE ROCKING SHEAR WALL SHAKE TABLE TEST <i>Giorgio T. Proestos, Hossein Aghabeigi, Paolo M. Calvi</i> C 1552 OUT-OF-PLANE BEHAVIOUR OF SINGLE-BODY UNREINFORCED-MASONRY WALL RESTRAINED BY A FLEXIBLE DIAPHRAGM <i>Sanjeev Prajapati, Omar Alshawa, Luigi Sorrentino</i> C 2235 INVESTIGATION OF DYNAMIC RESPONSE OF ROCKING WALL STRUCTURES USING INELASTIC MODAL DECOMPOSITION TECHNIQUE <i>Irshad M. Qureshi, Pennung Warnitchai, Tahir Mehmood</i>	Room 4

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	C 847 FREQUENCY DETUNING EFFECTS FOR PARAMETRICALLY AND DIRECTLY EXCITED ELASTIC STRUCTURES <i>Stefan Neumeier, Matthijs H. M. Van Gastel, Vladislav S. Sorokin, Jon Juel Thomsen</i> C 375 ORIGINAL EXPRESSION OF THE TENSION OF A CABLE WITH APPLICATION TO THE OSCILLATIONS OF A MASS SUSPEND <i>Mathieu Babaz, Louis Jezequel, Patrick Perrard</i>	
Mon 17:00 – 19:00	COMPDYN MS 23: NON-LINEAR DYNAMICS AND WAVE PROPAGATION - III Minisymposium Organizers: J. Naprstek, R. Kolman, K-C. Park Chair: R. Kolman C 626 COMPARISON OF NUMERICAL AND SEMI-ANALYTICAL SOLUTION OF A SIMPLE NON-LINEAR SYSTEM IN STATE OF THE STOCHASTIC RESONANCE <i>Jiří Náprstek, Cyril Fischer, Radomil Král, Stanislav Pospíšil</i> C 1252 STABILITY IN VIBRATIONS EXCITED BY A NONIDEAL ENERGY SOURCE <i>Javier González Carbajal, Jaime Domínguez Abascal</i> C 537 ANALYSIS OF INFLUENCE OF SHORT MAGNETORHEOLOGICAL DAMPING ELEMENTS ON VIBRATIONS ATTENUATION OF RIGID ROTORS <i>Jaroslav Zapomel, Petr Ferfecki</i> C 1259 NONLINEAR VIBRATIONS OF NON-UNIFORM BEAMS <i>Stefano Lenci, Francesco Clementi, Lucio Demeio, Carlos E. N. Mazzilli</i> C 1299 TIME DOMAIN SIMULATION OF VORTEX-INDUCED VIBRATION OF A CURVED BEAM USING A WAKE OSCILLATOR MODEL <i>Yang Qu, Andrei Metrikine</i> U 634 EXPERIMENTAL INVESTIGATION OF WAVE DISPERSION IN CONCRETE <i>Marco Donà, Mariateresa Lombardo, Giorgio Barone</i>	Room 5
Mon 17:00 – 19:00	UNCECOMP RS 4: SOLUTION OF STOCHASTIC PARTIAL DIFFERENTIAL EQUATIONS Chair: G. Stefanou U 492 LINEAR ELASTIC SFEM ON A TWO PARAMETER MODEL <i>Alex Dridger, Ismail Caylak, Rolf Mahnken</i> U 584 SPECTRAL-BASED NUMERICAL METHOD FOR FOKKER-PLANCK-KOLMOGOROV EQUATIONS IN INFINITE DIMENSIONAL HILBERT SPACES. <i>Francisco Delgado-Vences, Franco Flandoli</i> U 654 UNCERTAINTY QUANTIFICATION FOR NON-LINEAR WAVES IN LIQUID CRYSTALS USING MULTI-LEVEL MONTE CARLO <i>Peder Aursand, Jonas Šukys</i> U 676 SOLUTION OF GENERALIZED DENSITY EVOLUTION EQUATION VIA A PHASE SPACE RECONSTRUCTION METHOD <i>Zhong-Ming Jiang, Jie Li</i>	Room 6

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	U 693 A FIRST ORDER ASSEMBLE EVOLUTION METHOD FOR SOLVING GDEE <i>Jie Li, Wei-Feng Tao</i> U 830 A GALERKIN-BASED PROBABILITY DENSITY EVOLUTION FORMULATION FOR STATIC PROBLEMS <i>Vissarion Papadopoulos, Ioannis Kalogeris</i>	
Mon 17:00 – 19:00	COMPDYN RS 10: STEEL AND COMPOSITE STRUCTURES Chair: G. Karamis C 637 RENEWABLE ENERGY TENSEGRITY STRUCTURES <i>F. Fraternali, E. De Chiara, A. Fortunato, E. Sicignano, R. E. Skelton</i> C 485 SIMPLE FORMULAE FOR DAMAGE ESTIMATION OF COMPOSITE STEEL/CONCRETE MOMENT RESISTING FRAMES George Karamis, Konstantinos Skalomenos, George Hatzigeorgiou, Dimitri Beskos C 1129 SEISMIC PERFORMANCE OF INNOVATIVE STEEL AND CONCRETE HYBRID COUPLED SHEAR WALLS <i>Luca Tassotti, Alessandro Zona, Graziano Leoni, Andrea Dall'Asta</i> C 1159 DAMAGE DETECTION AND MONITORING OF COMPOSITE STRUCTURES WITH THE USE OF PIEZOELECTRIC SENSORS Piotr Kêdziora, Adam Stawiarski, Marek Barski C 1237 INFLUENCE OF CONNECTIONS MODELING ON THE SEISMIC BEHAVIOUR OF INDUSTRIAL BUILDINGS <i>Luca Tassotti, Mohammed Radi, Fabrizio Gara, Laura Ragni</i> C 1949 INELASTIC CYCLIC NUMERICAL ANALYSIS OF STEEL STRUTS USING DISTRIBUTED PLASTICITY APPROACH Alper Kanyilmaz	Room 7
Mon 17:00 – 19:00	COMPDYN RS 11: PERFORMANCE-BASED EARTHQUAKE ENGINEERING - I Chair: D. Kampenhuber C 403 KEYNOTE: SIMPLIFIED SEISMIC COLLAPSE ASSESSMENT OF GENERIC FRAME STRUCTURES SUBJECTED TO PDELTA AND MATERIAL DETERIORATION David Kampenhuber, Christoph Adam C 506 DISTRIBUTED AND CONCENTRATED INELASTICITY BEAM-COLUMN ELEMENTS: APPLICATION TO REINFORCED CONCRETE FRAMES AND VERIFICATION <i>Armin Gharakhanloo, Amir M. Kaynia, Gergios Tsionis</i> C 836 APPLICATION OF THE PUSHOVER-BASED PROCEDURE TO PREDICT THE LARGEST PEAK RESPONSE OF ASYMMETRIC BUILDINGS WITH BUCKLING-RESTRAINED BRACES Kenji Fujii C 1116 HOW CAN INSURERS GET PREPARED TO CATASTROPHES? ASSESSING EARTHQUAKE EXPECTED LOSSES FROM HISTORICAL CATALOGUE. Anna Bozza, Domenico Asprone, Fatemeh Jalayer, Gaetano Manfredi	Room 8

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	C 633 ADVANCED MODELS FOR THE LIMIT ANALYSIS OF MASONRY STRUCTURES <i>A. Fortunato, E. De Chiara, F. Fraternali, M. Angelillo</i> C 994 SEISMIC LOSS OPTIMIZATION OF FRAME BUILDINGS USING VISCOUS DAMPERS <i>Arun M. Puthanpurayil, Oren Lavan, Rajesh Dhakal</i>	
Mon 17:00 – 19:00	COMPDYN MS 2: ADVANCES IN COMPUTATIONAL STRUCTURAL VIBRATIONS <i>Minisymposium Organizers: E. Sapountzakis, I. Dikaros</i> <i>Chair: E. Sapountzakis</i> C 441 KEYNOTE: GENERALIZED WARPING EFFECT IN THE DYNAMIC ANALYSIS OF BEAMS OF ARBITRARY CROSS SECTION <i>Ioannis Dikaros, Evangelos Sapountzakis, Amalia Argyridi, Dimitrios Papadopoulos</i> C 384 REDUCING BREAK SQUEAL BY TUNED MASS DAMPERS <i>Rolf Steinbuch</i> C 387 MODELLING OF WARPING EIGENVIBRATION BY NON-UNIFORM TORSION <i>Justín Murín, Mehdi Aminbaghai, Juraj Hrabovský, Herbert Mang</i> C 752 MODAL AND FREQUENCY DOMAIN BASED TECHNIQUES FOR FINITE ELEMENT MODEL CORRELATION <i>Judith Mercer, Guglielmo Aglietti, Andrew Kiley</i> C 1515 TIME DOMAIN DYNAMIC ANALYSIS IN PRESENCE OF FREQUENCY-INDEPENDENT MATERIAL DAMPING: A FINITE ELEMENT FORMULATION <i>Anna Reggio, Maria Laura De Bellis</i> C 3213 ON THE FORCED VIBRATION TEST BY VIBRODYNE <i>Mariano Modano , Francesco Fabbrocino , Antonio Gesualdo , Giovanni Matrone, Ilenia Farina, Fernando Fraternali</i>	Room 9
Mon 17:00 – 19:00	COMPDYN MS 9: ADVANCES IN MODELING OF WAVE PROPAGATION AND APPLICATIONS - I <i>Minisymposium Organizers: D. Givoli, G. Seriani</i> <i>Chair: G. Seriani</i> C 396 KEYNOTE: MULTI-SCALE/MULTI-DATA INVERSION FOR ELASTIC EARTH STRUCTURE - A CONCEPT <i>Andreas Fichtner, Michael Afanasiev, Korbinian Sager, Laura Ermert</i> C 620 COMPONENT-WISE PARTITIONED EXPLICIT FINITE ELEMENT METHOD: BENCHMARK TESTS FOR LINEAR WAVE PROPAGATION IN SOLIDS <i>Radek Kolman, Sang Soon Cho, K.C. Park</i> C 676 DISCONTINUOUS GALERKIN METHODS FOR SYSTEMS OF ORDINARY DIFFERENTIAL EQUATIONS WITH APPLICATIONS TO THE ELASTODYNAMICS <i>Paola Antonietti, Niccolò Dal Santo, Ilario Mazzieri, Alfio Quarteroni</i> C 759 A FICTITIOUS DOMAIN APPROACH FOR WAVE PROPAGATION PROBLEMS IN UNBOUNDED DOMAINS <i>Silvia Falletta, Giovanni Monegato</i>	Room 10

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	C 823 SIMULATION OF SEISMIC WAVES IN PRESENCE OF FREE-SURFACE TOPOGRAPHY - COMBINATION OF FINITE DIFFERENCES WITH DISCONTINUOUS GALERKIN METHODS <i>Vadim Lisitsa, Vladimir Tcheverda</i> C 913 SIGNAL TO NOISE RATIO ANALYSIS IN VIRTUAL SOURCE ARRAY IMAGING <i>Josselin Garnier, George Papanicolaou, Adrien Semin, Chrysoula Tsogka</i>	
Mon 17:00 – 19:00	COMPDYN RS 9: OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - III Chair: F. Morelli C 1216 AN ENHANCED COMPONENT BASED MODEL FOR STEEL LINKS IN HYBRID STRUCTURES: DEVELOPMENT, CALIBRATION AND EXPERIMENTAL VALIDATION <i>M. Manfredi, F. Morelli, W. Salvatore</i> C 1322 OPTIMAL DESIGN OF STRUCTURAL INTERFACES BY A POWER FLOW MODE APPROACH <i>Thomas Weisser, Nouredine Bouhaddi</i> C 1406 HOW TO ACHIEVE REGULAR SEISMIC BEHAVIOR OF IRREGULAR BRIDGES WITH UNEQUAL HEIGHT PIERS? <i>Mena Ishak, Sameh Mehanny</i> C 1443 OPTIMIZATION OF QUATROPOD JACKET SUPPORT STRUCTURES FOR OFFSHORE WIND TURBINES SUBJECT TO SEISMIC LOADS USING GENETIC ALGORITHMS <i>Mohammad Alhamaydeh, Samer Barakat, Omar Nassif</i> C 966 MULTI-OBJECTIVE OPTIMIZATION UNDER UNCERTAINTY WITH REAL-TIME INTEGRATED DECISION MAKING APPLIED TO STRUCTURAL ENGINEERING <i>Mariapia Marchi, Mauro Munerato, Luca Rizzian, Stefano Costanzo</i> C 1491 EVALUATION OF SEISMIC RESPONSE OF BUILDINGS USING DYNAMIC ANALYSIS ON STICK MODELS <i>Marco Bovo, Marco Savoia</i>	Room 11
Mon 17:00 – 19:00	COMPDYN MS 7: SEISMIC SAFETY ASSESSMENT OF STRUCTURES - III Minisymposium Organizers: R. Delgado, A. Arède, P. Delgado Chair: P. Delgado C 1636 A MODEL FOR CARBON AND STAINLESS STEEL REINFORCING BARS INCLUDING INELASTIC BUCKLING FOR EVALUATION OF CAPACITY OF EXISTING STRUCTURES <i>Zhihao Zhou, Davide Lavorato, Camillo Nuti, Giuseppe Carlo Marano</i> C 1757 USING DIFFERENT UNCERTAINTY MODELS FOR SEISMIC ASSESSMENT OF RC BRIDGES <i>Ricardo Monteiro, Raimundo Delgado, Rui Pinho</i> C 1833 PERFORMANCE BASED EARTHQUAKE ENGINEERING APPROACH APPLIED TO BRIDGES IN A ROAD NETWORK <i>C. Zelaschi, G. De Angelis, F. Giardi, D. Forcellini, R. Monteiro</i>	Room 12

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	C 3128 DEMAND HAZARD ANALYSIS: A TOOL FOR ASSESSING THE ADEQUACY OF CAPACITY DESIGN APPROACH FOR DEFINITION OF THE DESIGN SHEAR FORCES IN THE FRAME BUILDINGS <i>Jure Žižmond, Matjaž Dolšek</i> C 1236 NUMERICAL MODELLING, ANALYSIS AND RETROFIT OF THE HISTORICAL MASONRY BUILDING "LA SAPIENZA" <i>Silvia Caprili, Federico Mangini, Walter Salvatore</i>	
Mon 17:00 – 19:00	COMPDYN RS 8: NUMERICAL SIMULATION METHODS FOR DYNAMIC PROBLEMS - III Chair: W. Gutkowski C 1504 REDUCED ORDER MODEL OF CIRCULAR FLANGE-BOLTED CONNECTION AND ITS APPLICATION TO DYNAMIC SUBSTRUCTURING OF TELECOMMUNICATION TOWERS <i>Bartłomiej D. Blachowski, Witold Gutkowski, Piotr Wisniewski</i> C 1606 TOWARD FULL DYNAMIC ANALYSIS OF PORTABLE FALLING WEIGHT DEFLECTOMETER TEST <i>Asli Cherif, Feng Zhi-Qiang, Porcher Gérard</i> C 488 EVALUATION OF THE DYNAMIC AMPLIFICATION FACTOR FOR RAILWAY BRIDGES SUBJECTED TO A SERIES OF MOVING MASS <i>Mehrdad Bisadi, Quincy Tsun Ming Ma, Sherif Beskhyroun</i> C 510 A MODE SELECTION ALGORITHM FOR THE FLEXIBILITY-BASED COMPONENT MODE SYNTHESIS <i>Jin-Gyun Kim, Phill-Seung Lee Kwang-Chun Park</i> COMPDYN MS 16: LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - I Minisymposium Organizers: D. Vamvatsikos, D. Lignos Chair: D. Vamvatsikos C 1288 RECORD-TO-RECORD VARIABILITY IN THE SEISMIC RESPONSE OF RC WALLS BUILDINGS SUBJECTED TO GROUND MOTIONS MATCHED TO THE CONDITIONAL SPECTRUM <i>Matthew Fox, Timothy Sullivan</i> C 1150 APPLICATION OF A DAMAGE STATE METHOD BASED ON PERIOD ELONGATION FOR TIME VARIANT VULNERABILITY OF DEGRADING REINFORCED CONCRETE BUILDINGS <i>Konstantinos Trevelopoulos, Philippe Guéguen</i>	Room 13
Mon 17:00 – 19:00	COMPDYN RS 15: SOFT COMPUTING APPLICATIONS Chair: Z. Waszczyszyn C 2883 KEYNOTE: DEVELOPMENT OF A HYBRID SYSTEM FOR IDENTIFICATION OF ELASTIC MATERIAL IN COMPOSITE LAMINA: APPLICATION OF LAMB WAVES AND NEURAL NETWORKS <i>Zenon Waszczyszyn, Piotr Nazarko, Pawel Packo, Lukasz Ambrozinski, Tadeusz Uhl</i>	Room 14

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	C 614 SEISMIC RESILIENCE OF A BRIDGE BASED ON FUZZY-PROBABILISTIC APPROACH <i>J. Andrić, D.G. Lü</i> C 1567 NEURAL NETWORKS FOR THE PREDICTION OF MINE-INDUCED VIBRATIONS TRANSMISSION FROM THE GROUND TO BUILDING FOUNDATION <i>Krystyna Kuzniar</i> C 2814 BAYESIAN IDENTIFICATION OF ELASTIC PARAMETERS IN COMPOSITE LAMINATES APPLYING LAMB WAVES MONITORING <i>Marek Slonski</i>	
Mon 17:00 – 19:00	COMPDYN RS 3: DYNAMICS OF COUPLED AND MICRO-MACRO SYSTEMS <i>Chair: D. Savvas</i> C 420 DYNAMIC ANALYSIS OF GRADIENT ELASTIC BEAMS BY FINITE ELEMENTS <i>Ioannis Pegios, Ioannis Dinopoulos, Sofia Papargyri-Beskou</i> C 851 VIBRATIONS OF SPORTS STADIUM GRANDSTAND STRUCTURE DUE TO CROWD-JUMPING LOADS <i>Tadeusz Tatara, Bartosz Ptasznik</i> C 1071 NATURAL FREQUENCY OF TRAFFIC FLOW-BRIDGE SYSTEM BASED ON CELLULAR AUTOMATON TECHNIQUE <i>Mao Ye, Shifan Huang, Baoxing Cao, Min Ren</i> C 1253 INFLUENCE OF FLOATER RESPONSE ON WIND TURBINE TOWER MOMENTS IN FLOATING WIND TURBINE SYSTEM <i>Muhammad Bilal Waris, Takeshi Ishihara</i> C 1449 A NEW APPROACH ON THE CALCULATION OF DYNAMIC LOAD FACTORS OF HUMAN INDUNCED LOAD <i>Lu Dai, Na Yang</i> C 1914 COMPUTATIONAL MODELING OF MULTI-SCALE FEATURES IN CEMENTITIOUS MATERIALS <i>Ram Mohan, Arunachalam Rajendran, Wayne Hodo</i>	Room 15

DAY 2 - TUESDAY, MAY 26

Tue 08:30 – 10:30	TECHNICAL SESSIONS	
Tue 08:30 – 10:30	COMPDYN MS 12: ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - IV Minisymposium Organizer: A. Idesman Chair: A. Idesman C 1064 SVD FAMILY FOR ANALYZING CAR CRASH BEHAVIOR <i>Thi-Thanh-Thuy Vuong, Louis Jezequel, Yves Tourbier</i> C 1099 PARALLEL NUMERICAL SIMULATION OF SONIC LOGGING IN ANISOTROPIC VISCOELASTIC MEDIA <i>Galina Reshetova, Vadim Lisitsa, Egor Lys, Vladimir Tcheverda</i> C 1205 FAST AND NUMERICALLY STABLE INCOMPATIBLE MODE FINITE ELEMENTS IN EXPLICIT TIME INTEGRATION <i>Christoph Schmied, Steffen Mattern, Karl Schweizerhof</i> C 1371 DE³: YET ANOTHER HIGH-ORDER INTEGRATION SCHEME FOR LINEAR STRUCTURAL DYNAMICS <i>Alexandre Depouhon, Emmanuel Detournay, Vincent Denoël</i> C 1390 A MESHLESS NEURAL NETWORK APPROACH FOR THE DYNAMIC ANALYSIS OF ELASTIC SYSTEMS <i>Luca Facchini, Michele Betti</i> C 1436 A DISCRETE ELEMENT MODEL OF A GEOMETRICALLY NON-LINEAR BEAM WHICH ALLOWS LARGE DISPLACEMENTS <i>Chris Keijden, Andrei Metrikine</i>	Room 1
Tue 08:30 – 10:30	UNCECOMP MS 2: UNCERTAINTY QUANTIFICATION IN COUPLED PROBLEMS AND STRUCTURAL DYNAMICS - II Minisymposium Organizers: C. Soize, M. Arnst Chair: M. Arnst U 458 A STOCHASTIC MECHANICAL MODEL TO GENERATE JITTER IN THE PRODUCTION OF VOICED SOUNDS <i>Edson Cataldo, Christian Soize</i> U 468 PARAMETRIC UNCERTAINTY QUANTIFICATION IN THE PRESENCE OF MODELING ERRORS: BAYESIAN APPROACH AND APPLICATION TO METAL FORMING <i>Maarten Arnst, Belen Abello Alvarez, Romain Boman, Jean-Philippe Ponthot</i> U 500 PROPAGATION OF UNCERTAINTIES IN THE MODELLING OF MEMS RESONATORS (USING A 3-SCALE PROBABILISTIC APPROACH) <i>Vincent Lucas, Ling Wu, Jean-Claude Golinval, Stéphane Paquay, Ludovic Noels</i> U 506 A POLYNOMIAL CHAOS METHOD FOR UNCERTAINTY QUANTIFICATION IN BLOOD PUMP SIMULATION <i>Michael Schick, Chen Song, Vincent Heuveline</i>	Room 2

DAY 2 - TUESDAY, MAY 26

	U 513 UNCERTAINTY QUANTIFICATION IN NONLINEAR STRUCTURAL DYNAMICS FOR MISTUNED BLADED DISKS <i>Evangeléline Capiez-Lernout, Christian Soize, Moustapha Mbaye</i> U 540 NONPARAMETRIC STOCHASTIC MODELING SATISFYING THE CAUSALITY PRINCIPLE FOR VISCOELASTIC STRUCTURES IN COMPUTATIONAL STRUCTURAL DYNAMICS <i>Rémi Capillon, Christophe Desceliers, Christian Soize</i>	
Tue 08:30 – 10:30	UNCECOMP MS 10: REDUCED ORDER MODELS FOR STOCHASTIC INVERSE PROBLEMS - III Minisymposium Organizers: D. Lucor, S. Ricci, M. Rochoux Chair: D. Lucor U 666 SYSTEM IDENTIFICATION FOR UNCERTAINTY QUANTIFICATION IN AEROELASTIC PROBLEMS <i>Rakesh Sarma, Richard P. Dwight</i> U 667 ACCURATE SOLUTION OF BAYESIAN INVERSE UQ PROBLEMS USING MODEL AND ERROR REDUCTION METHODS <i>Stefano Pagani, Andrea Manzoni, Alfio Quarteroni</i> U 669 PREDICTION OF POLLUTANT DISPERSION IN AN URBAN CANOPY USING AN INFLOW UNCERTAINTY QUANTIFICATION STUDY FOR RANS CFD SIMULATIONS <i>Catherine Gorle, Clara Garcia-Sanchez, Gianluca Iaccarino</i> U 754 ROUGHNESS AND DISCHARGE UNCERTAINTY PROPAGATION IN WATER LEVEL CALCULATIONS IN THE FRAMEWORK OF DATA ASSIMILATION <i>Nicole Goutal, Riadh Ata, Cédric Goeury, Nabil El Mocayd, Sophie Ricci, Sébastien Boyaval</i> U 815 A BAYESIAN SEQUENTIAL INVERSE APPROACH FOR QUANTIFYING MODEL INTRINSIC UNCERTAINTY IN SEISMIC INELASTIC TIME HISTORY ANALYSES <i>Pierre Jehel</i> U 788 BAYESIAN CALIBRATION AND UNCERTAINTY ANALYSIS FOR AIRFOIL FLUTTER PREDICTIONS <i>Christian Nitschke, Didier Lucor, Paola Cinnella, Jean-Camille Chassaing</i>	Room 3
Tue 08:30 – 10:30	COMPDYN MS 6: NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS - I Minisymposium Organizer: G. Manos Chair: G. Manos C 716 A NOVEL MECHANISM FOR RESTRAINING SEISMIC ACTIONS IN DUCTILE BRIDGES: ANALYTICAL MODELING AND EXPERIMENTAL VERIFICATION <i>Vasileios Pilitsis, Vassilis K. Papanikolaou, Ioannis Tegos, Kosmas-Athanasios Stylianidis</i> C 717 EXPERIMENTAL AND ANALYTICAL INVESTIGATION OF AN UNCONVENTIONAL, ROCKING TYPE RESPONSE MECHANISM FOR EARTHQUAKE-RESISTANT BRIDGES <i>Vasileios Pilitsis, Ioannis Tegos, Vassilis K. Papanikolaou, Kosmas-Athanasios Stylianidis</i>	Room 4

DAY 2 - TUESDAY, MAY 26

	C 786 IN-SITU MEASURED DYNAMIC RESPONSE OF THE BELL TOWER OF AGIOS GERASIMOS IN LIXOURI-KEFALONIA, GREECE AND ITS UTILIZATION IN THE NUMERICAL PREDICTIONS OF ITS EARTHQUAKE RESPONSE <i>G.C. Manos, E. Kozikopoulos</i> C 787 THE DYNAMIC AND EARTHQUAKE RESPONSE OF A TWO STORY OLD R/C BUILDING WITH MASONRY INFILLS IN LIXOURI-KEFALONIA, GREECE INCLUDING SOIL-FOUNDATION DEFORMABILITY. <i>George Manos, Dionisios Naxakis, Vasilios Soulis</i> C 788 THE DYNAMIC AND EARTHQUAKE RESPONSE OF BASILICA CHURCHES IN KEFALONIA, GREECE INCLUDING SOILFOUNDATION DEFORMABILITY AND WALL DETACHMENT. <i>George Manos, Evaggelos Kozikopoulos</i>	
Tue 08:30 – 10:30	COMPDYN MS 15: REDUCED-ORDER MODELING OF AERO, CIVIL AND MECHANICAL DYNAMICAL SYSTEMS <i>Minisymposium Organizers: K-C. Park, R. Ohayon, H. Matthies, G. Sandberg</i> <i>Chair: K-C. Park</i> C 1102 KEYNOTE: STOCHASTIC REDUCED-ORDER MODELS FOR CALCULATING RESPONSE STATISTICS OF STRUCTURAL SYSTEMS SUBJECTED TO RANDOM INPUT <i>Alin Radu, Mircea Grigoriu</i> C 880 A GLOBAL/LOCAL APPROACH FOR STOCHASTIC REDUCED-ORDER MODELING IN LOW- AND MID-FREQUENCY STRUCTURAL DYNAMICS <i>Olivier Ezvan, Anas Batou, Christian Soize</i> C 947 EFFICIENT NUMERICAL PROCEDURE FOR PREDICTING VIBRATIONS INDUCED BY PIPE SYSTEMS <i>Peter Persson, Kent Persson, Göran Sandberg</i> C 1191 SEMI-ANALYTICAL REDUCED-ORDER MODELS FOR THE UNSTEADY AERODYNAMIC LOADS OF SUBSONIC WINGS <i>Marco Berci</i> C 1298 REDUCED ORDER MODELLING OF ELASTOMERS USED FOR VIBRATION ISOLATION <i>Ola Flodén, Kent Persson, Göran Sandberg</i>	Room 5
Tue 08:30 – 10:30	COMPDYN MS 24: SEISMIC BEHAVIOR OF INDUSTRIAL FACILITIES AND PIPELINES - III <i>Minisymposium Organizers: S. Karamanos, V. Papadopoulos</i> <i>Chair: S. Karamanos</i> C 1612 EARTHQUAKE RESPONSE OF LIQUID STORAGE TANKS, ACCOUNTING FOR ROCKING EXCITATION, CAUSED BY BASININDUCED SURFACE WAVES <i>Kristel C. Meza Fajardo, Vissarion Papadopoulos, Apostolos Papageorgiou</i> C 944 SEISMIC PERFORMANCE OF INDUSTRIAL PRESSURE VESSELS: PARAMETRIC INVESTIGATIONS OF SIMPLIFIED MODELING APPROACHES FOR VULNERABILITY ASSESSMENT <i>Christos Z. Karakostas, Ioannis F. Moschonas, Vassilios A. Lekidis, Savvas P. Papadopoulos</i>	Room 6

DAY 2 - TUESDAY, MAY 26

	C 1040 SEISMIC FRAGILITY ANALYSIS OF STEEL STORAGE TANKS <i>Fabrizio Paolacci, Hoang N. Phan, Daniele Corritore, Silvia Alessandri, Oreste S.Bursi, M. Shahin Reza</i> C 1207 MODELING OF UNANCHORED LIQUID STORAGE TANK SEISMIC RESPONSE USING A SIMPLIFIED MASS-SPRING MODEL Maria Vathi, Spyros Karamanos C 1375 SURROGATE MODELLING OF LIQUID STORAGE TANKS FOR SEISMIC PERFORMANCE DESIGN AND ASSESSMENT Konstantinos Bakalis, Michalis Fragiadakis, Dimitrios Vamvatsikos C 1760 QUICK SEISMIC RELIABILITY ASSESSMENT OF LIQUID STORAGE TANKS USING NEURAL NETWORKS Michalis Fragiadakis, Dimitrios Giovanis, Vissarion Papadopoulos	
Tue 08:30 – 10:30	COMPDYN MS 3: PROGRESS AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING - I Minisymposium Organizers: C. Vieira, J. Tsompanakis Chair: C. Vieira C 495 SOIL STRUCTURE INTERACTION ASSESSMENT WITH ADVANCED NUMERICAL SIMULATIONS Davide Forcellini, Stefania Gobbi C 524 UNDERSTANDING SHEAR WAVE VELOCITIES CORRELATIONS WITH N-SPT AND QC-CPT VALUES Muhsin Elie Rahhal, Farah Harake C 575 NUMERICAL SIMULATIONS OF LIQUEFACTION PHENOMENA AFTER EMILIA ROMAGNA (20 MAY 2012) EARTHQUAKE <i>Davide Forcellini, Laura Tonni, Cristina Osti, Guido Gottardi</i> C 634 SEISMIC EVALUATION OF EMBANKMENT-TYPE STRUCTURES WITH COUPLED HYDRO-MECHANICAL MODEL Ioanna Rapti, Fernando Lopez-Caballero, Arezou Modaressi-Farahmand-Razavi, Alexandre Foucault, Francois Voldoire C 725 SEISMIC RESPONSE ANALYSIS OF A GEOGRID REINFORCED WALL CONSTRUCTED WITH RECYCLED CONSTRUCTION AND DEMOLITION WASTE Castorina Silva Vieira	Room 7
Tue 08:30 – 10:30	COMPDYN RS 1: ALGORITHMS FOR STRUCTURAL HEALTH MONITORING - II Chair: K. Maes C 500 APPLICATION OF LASER MEASUREMENT TO THE DRIVE-BY INSPECTION OF BRIDGES Abdollah Malekjafarian, Eugene J Obrien C 803 ONLINE RESPONSE ESTIMATION USING VIBRATION DATA FROM A LIMITED NUMBER OF SENSORS FOR A COMPOSITE RAILWAY BRIDGE K. Maes, E. Lourens, K. Liu, C. Papadimitriou, G. De Roeck, G. Lombaert	Room 8

DAY 2 - TUESDAY, MAY 26

	C 1069 UNCERTAINTY OF BRIDGE VIBRATION PROPERTIES AND ITS CONSEQUENCE FOR DAMAGE IDENTIFICATION <i>Marian Ralbovsky, Maciej Kwapisz, Alois Vorwagner</i> C 1262 VIBRATION MEASUREMENT-BASED SIMPLE TECHNIQUE FOR STRUCTURAL APPRAISAL OF STEEL BRIDGES <i>W.A.Indika Priya Wijesooriya, Sudath C. Siriwardane, P.B. Ranjith Dissanayake</i> C 1338 SYSTEM IDENTIFICATION AND DAMAGE DETECTION OF R.C. STRUCTURE <i>Prodip K. Paul, Anjan Dutta, Sajal K. Deb</i>	
Tue 08:30 – 10:30	COMPDYN MS 22: ACCURACY AND COMPUTATIONAL EFFICIENCY OF STRUCTURES DYNAMIC/SEISMIC ANALYSES - I <i>Minisymposium Organizers: A. Soroushian, A. Panteli</i> <i>Chair: A. Soroushian, M. Hosseini</i> C 1656 KEYNOTE: EARTHQUAKE GROUND MOTIONS AS THE INPUT OF NONLINEAR TIME-HISTORY ANALYSIS ACCURACY AND LEGITIMACY <i>Mohsen Ghafory-Ashtiany, Salar Arian Moghaddam</i> C 665 THE DOUBLE ABSORBING BOUNDARY (DAB) METHOD <i>Dan Givoli, Daniel Baffet, Daniel Rabinovich, Thomas Hagstrom, Jacobo Bielak</i> C 653 FROM THE NOTIONS OF NONLINEARITY TOLERANCES TOWARDS A DEFICIENCY IN COMMERCIAL TRANSIENT ANALYSIS SOFTWARES AND ITS SOLUTION <i>Aram Soroushian, Peter Wriggers, Jamshid Farjoodi</i> C 1563 ON THE CONVENTIONAL FINITE ELEMENT SIZES IN PSEUDOSTATIC SEISMIC ANALYSES OF 2D FRAMES <i>Amir Hossein Pariz, Bahram Kordbagh, Kiyanoush Ghazvini, Seyed Mohsen Borghei Razavi, Abbas Ali Jalalabadi</i>	Room 9
Tue 08:30 – 10:30	UNCECOMP RS 5: SYSTEM RELIABILITY ANALYSIS, DESIGN AND RISK ASSESSMENT AND VALIDATION - I <i>Chair: O. Kokkinos</i> U 462 AN INVESTIGATION OF UNCERTAINTY DUE TO STOCHASTICALLY VARYING GEOMETRY: AN INITIAL STUDY <i>Markus Wahlsten, Jan Nordström</i> U 503 RANDOM PORE STRUCTURE AND FRACTURE PROCESS ZONE OF HETEROGENEOUS POROUS MATERIALS <i>Yunping Xi</i> U 546 A COMPUTATIONAL TOOL FOR BAYESIAN NETWORKS ENHANCED WITH RELIABILITY METHODS <i>Silvia Tolo, Edoardo Patelli, Michael Beer, Zhan Kang</i> U 575 RARE EVENT SIMULATION: A POINT PROCESS INTERPRETATION WITH APPLICATION IN PROBABILITY AND QUANTILE ESTIMATION <i>Clément Walter</i>	Room 10

DAY 2 - TUESDAY, MAY 26

	U 601 ANALYSIS OF RENEWABLE ENERGY INTEGRATION PERCENTAGE OF A GIVEN POWER SYSTEM <i>Ozcel Cangul, Edoardo Patelli, Michael Beer, Jan Wenzelburger, Murat Fahrioglu</i>	
Tue 08:30 – 10:30	COMPDYN MS 16: LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - II Minisymposium Organizers: D. Vamvatsikos, D. Lignos Chair: D. Lignos C 3129 KEYNOTE: RISK-BASED DESIGN CHECK FOR COLLAPSE SAFETY USING FEW GROUND MOTIONS <i>Marko Brozovič, Matjaž Dolšek</i> C 709 SEISMIC RELIABILITY ASSESSMENT OF ROCKING BEHAVIOUR UNDER NEAR-FAULT EXCITATIONS <i>Elias Dimitrakopoulos, Themelina Paraskeva</i> C 497 VERTICAL ACCELERATION DEMANDS ON NONSTRUCTURAL COMPONENTS IN BUILDINGS <i>Lukas Moschen, Ricardo A. Medina, Christoph Adam</i> C 641 INFLUENCE OF ROTATED GROUND MOTION COMPONENTS ON THE RESPONSE DISTRIBUTION OF INELASTIC OSCILLATORS <i>Dimitrios Giannopoulos, Dimitrios Vamvatsikos</i> C 670 A NEXT GENERATION SCALAR INTENSITY MEASURE FOR ANALYTICAL VULNERABILITY STUDIES <i>Athanasia Kazantzi, Dimitrios Vamvatsikos</i> C 704 NEAR -SOURCE PULSE-LIKE SEISMIC DEMAND FOR MULTI-LINEAR BACKBONE OSCILLATORS <i>Georgios Baltzopoulos, Dimitrios Vamvatsikos, Junio Iervolino</i>	Room 11
Tue 08:30 – 10:30	UNCECOMP RS 3: PHYSICALLY BASED UNCERTAINTY QUANTIFICATION - I Chair: H. Matthies U 487 UNCERTAINTY ESTIMATION OF GAS FLOW MODELLING IN VACUUM TECHNOLOGY <i>Volker Hauer, Christian Day, Cristian Gleason-González, Stelios Varoutis</i> U 512 EVALUATION AND UNCERTAINTY QUANTIFICATION OF BIFURCATION DIAGRAM: LANDING GEAR, A CASE STUDY <i>Irene Tartaruga, Jonathan Cooper, Mark Lowenberg, Pia Sartor, Yves Lemmens</i> U 672 PROBABILITY DENSITY EVOLUTION ANALYSIS OF SEISMIC RESPONSE OF NONLINEAR STRUCTURES WITH RANDOM PARAMETERS <i>Junyi Yang, Jianbing Chen, Jie Li</i> U 725 UNCERTAINTY QUANTIFICATION OF REDUCED ORDER MODELS OF THE FLOW AROUND A HIGH-LIFT CONFIGURATION <i>Noémi Friedman, Richard Semaan, Bernd Noack, Hermann G. Matthies</i>	Room 12

DAY 2 - TUESDAY, MAY 26

	U 781 HIERARCHICAL BAYESIAN MODELING FOR MOLECULAR DYNAMICS SIMULATIONS USING HETEROGENEOUS DATA <i>Stephen Wu, Panagiotis Angelikopoulos, Gerardo Tauriello, Petros Koumoutsakos</i> U 785 UNCERTAINTY QUANTIFICATION TECHNIQUES APPLIED TO PARAMETER ESTIMATION OF ELECTROPHYSIOLOGICAL MODELS <i>Elliott Tixier, Damiano Lombardi, Jean-Frédéric Gerbeau</i>	
Tue 08:30 – 10:30	UNCECOMP RS 2: MULTISCALE METHODS INVOLVING UNCERTAINTIES - I Chair: G. Stefanou U 472 RANDOM FIELD MODELING AND GENERATION FOR STOCHASTIC MULTISCALE ANALYSIS <i>Johann Guilleminot, Christian Soize</i> U 645 MATHEMATICAL MORPHOLOGY AND UNCERTAINTY QUANTIFICATION APPLIED TO THE STUDY OF DUAL PHASE STEEL FORMATION <i>Alessandra Micheletti, Junichi Nakagawa, Alessio A. Alessi, Vincenzo Capasso, Daniela Morale, Elena Villa</i> U 686 NUMERICAL ANALYSIS OF MASONRY STRUCTURES, TAKING INTO ACCOUNT MEASURED GEOMETRIC AND MATERIAL DATA <i>Georgios A. Drosopoulos, Panagiotis Koutsianitis, Maria E. Stavroulaki, Belen Riveiro, Georgios E. Stavroulakis</i> U 711 MULTISCALE ALGEBRAIC DOMAIN DECOMPOSITION SOLVER WITH APPLICATION TO UNCERTAINTY QUANTIFICATION IN HIGHLY HETEROGENEOUS DARCY FLOW <i>Davide Baroli, Luca Formaggia</i> U 653 DESIGN CONSIDERATION OF LARGE-DISPLACEMENT RF MEMS TUNERS UNDER FABRICATION UNCERTAINTIES <i>Juan Zeng, Dimitrios Peroulis</i>	Room 13
Tue 08:30 – 10:30	COMPDYN RS 12: REPAIR AND RETROFIT OF STRUCTURES - I Chair: K. Megalooikonomou C 400 NUMERICAL MODELING OF FRP - RETROFITTED CIRCULAR RC COLUMNS INCLUDING SHEAR <i>Konstantinos G. Megalooikonomou, Giorgio Monti</i> C 491 SEISMIC VULNERABILITY IN CASE OF FIRE OF EXISTING R.C. FRAMED BUILDINGS: MODELLING AND NONLINEAR DYNAMIC ANALYSIS <i>Fabio Mazza, Antonio De Luca</i> C 799 REHABILITATION OF AN EDIFIED BUILDING IN A SEISMIC ZONE IN ALGERIA ACCORDING TO THE EUROCODE 8-3 <i>Amar Kassoul, Abdelkader Zerrouk, Imane Djafar Henni</i> C 925 SEISMIC ANALYSIS AND RETROFIT OF A MID-RISE BUILDING <i>Fernando Saitta, Paolo Clemente, Giacomo Buffarini, Giovanni Bongiovanni</i>	Room 14

DAY 2 - TUESDAY, MAY 26

	C 991 ADVANCED NUMERICAL MODELLING FOR DAMAGE ANALYSIS OF RC STRUCTURES: A CASE STUDY ON BEAM-COLUMN JOINTS <i>C. Del Vecchio, M. Di Ludovico, A. Prota, G. Manfredi</i> C 1161 SEISMIC RETROFITTING EFFECT OF 10-STORY RESIDENTIAL BUILDING RETROFITTED USING PASSIVE SEISMIC CONTROL SYSTEM WITH AMPLIFIER MECHANISM <i>Y. Takase, T. Ikeda, T. Suzumura</i>	
Tue 08:30 – 10:30	COMPDYN RS 9: OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - IV Chair: V. Papadopoulos C 1541 A PROCEDURE FOR THE DETAILING DESIGN OF SIMPLY SUPPORTED R.C. BRIDGE DECKS SUBJECTED TO IN-PLANE ACTIONS <i>Fabrizio Palmisano, Angelo Elia</i> C 1599 MULTI-OBJECTIVE STRUCTURAL OPTIMIZATION UNDER STRESS CRITERIA BASED ON MIXED PLATE FEM AND GENETIC ALGORITHMS <i>Pierre Garambois, Sebastien Besset, Louis Jézéquel</i> C 1755 ASSESMENT OF OPTIMUM STRENGTHENING DESIGN OF A REINFORCED CONCRETE BUILDING WITH VULNERABILITY CRITERIA <i>Evangelia Skoulikari, Vissarion Papadopoulos, Nikos Lagaros</i> C 1767 ENERGY BASED OPTIMUM DESIGN OF TUNED MASS DAMPERS <i>Giuseppe Carlo Marano</i> C 1639 THE STUDY OF X-BRACING ON LIMIT STATE BEHAVIOR OF BUCKLING RESTRAINED BRACE (BRB) IN STEEL FRAMES USING PUSHOVER ANALYSIS <i>Peyman Shadman Heidari, Ali Golara, Pouya Shadman Heidari, Roohollah Ahmady Jazany</i> C 735 ESTIMATING OF OVERSTRENGTH FACTOR OF CONCENTRICALLY X-BRACED STEEL FRAMES <i>T. Branci, D. Yahmi</i>	Room 15
Tue 10:30 – 11:00	Coffee Break	

DAY 2 - TUESDAY, MAY 26

Tue 11:00 – 13:00	COMPDYN SEMI-PLenary LECTURES - I	
Tue 11:00 – 13:00	Chair: S. Yoshimura C 1763 SEISMIC POUNDING BETWEEN ADJACENT BUILDINGS:EFFECTS OF STRUCTURAL ARRANGEMENT AND MULTIPLE EARTHQUAKES <i>Sofia Efraimiadou, George Hatzigeorgiou, Dimitri Beskos</i> C 1710 A RIGID-BODY-QUALIFIED PLATE THEORY FOR NONLINEAR ANALYSIS OF STRUCTURES WITH TORSIONAL ACTIONS <i>Y. B. Yang</i> C 1759 FULL-RANGE ANALYSIS OF THE INELASTIC RESPONSE OF REINFORCED CONCRETE STRUCTURES <i>Andreas J. Kappos</i>	Room 1
Tue 11:00 – 13:00	Chair: S. Krenk C 1679 BEYOND HORIZONTALLY LAYERED SOILS: SITE EFFECTS IN THREE-DIMENSIONS <i>Domniki Asimaki, Kami Mohammadi, Seokho Jeong</i> C 1768 ACCURATE MODELLING OF ELASTIC AND ACOUSTIC WAVE PROPAGATION IN HOMOGENEOUS AND HETEROGENEOUS MATERIALS <i>Alexander Idesman</i> C 3008 SEISMIC ANALYSIS OF LONG TUNNEL: SIMPLIFIED OR UNIFIED <i>Yong Yuan, Haitao Yu</i>	Room 2
Tue 11:00 – 13:00	UNCECOMP SEMI-PLenary LECTURES - I	
Tue 11:00 – 13:00	Chair: N. Zabarar U 943 HOMOGENIZATION AND ERGODICITY OF RANDOM LATTICES - A PHYSICS BASED APPROACH <i>Tanmoy Mukhopadhyay, Sondipon Adhikari</i> U 840 BAYESIAN OPERATIONAL MODAL ANALYSIS: THEORY, PRACTICE AND UNCERTAINTY LAWS <i>Siu-Kui Au</i> U 1427 SPARSE POLYNOMIAL CHAOS EXPANSIONS FOR SOLVING HIGH-DIMENSIONAL UQ PROBLEMS <i>Bruno Sudret</i>	Room 3

DAY 2 - TUESDAY, MAY 26

Tue 11:00 – 13:00	Chair: G. Karniadakis U 867 APPLICATION OF ASYMPTOTIC SAMPLING TO STRUCTURAL RELIABILITY PROBLEMS <i>Christian Bucher</i> U 891 UNCERTAINTY PROPAGATION IN PHYSICAL SYSTEMS: RECENT DEVELOPMENTS OF PROBABILITY DENSITY EVOLUTION THEORY <i>Jie Li</i> U 1494 VARIANCE DECOMPOSITION TECHNIQUES FOR SENSITIVITY ANALYSIS IN STOCHASTIC / NOISY MODELS WITH UNCERTAIN PARAMETERS <i>Olivier Le Maître</i>	Room 4
Tue 13:00 – 14:30	Lunch Time	
Tue 14:30 – 16:30	SEMI-PLENARY LECTURES - II	
Tue 14:30 – 16:30	Chair: Y. B. Yang C 3298 MODEL REDUCTION OF NON-LINEAR STRUCTURAL DYNAMIC MODEL: RECENT DEVELOPMENTS <i>Daniel Rixen</i> C 3250 DYNAMICS OF SOILS AND STRUCTURES UNDER UNCERTAINTY <i>Boris Jeremić, Kallol Sett, Konstantinos Karapiperis, José Abell</i> C 1801 BEYOND SECOND-ORDER TIME INTEGRATION IN NON-LINEAR DYNAMICS <i>Steen Krenk</i>	Room 1
Tue 14:30 – 16:30	Chair: S. Adhikari C 1367 THE USE OF MODEL REDUCTION TECHNIQUES IN COMPLEX SIMULATION-BASED PROBLEMS INVOLVING FINITE ELEMENT MODELS <i>H.A. Jensen, A. Muñoz, E. Millas</i> U 866 COMPUTATIONAL CHALLENGES IN BAYESIAN UNCERTAINTY QUANTIFICATION OF LARGE-ORDER MODELS <i>Costas Papadimitriou</i> U 869 IDENTIFICATION OF UNCERTAINTY AND QUANTIFICATION OF VARIABILITY IN WOVEN COMPOSITE MATERIALS BASED ON CARBON FIBRE WEAVES <i>Andy Vanaerschot, Stepan Lomov, David Moens, Dirk Vandepitte</i>	Room 2
Tue 16:30 – 17:00	Coffee Break	

DAY 2 - TUESDAY, MAY 26

Tue 17:00 – 19:00	TECHNICAL SESSIONS	
Tue 17:00 – 19:00	COMPDYN MS 12: ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS - V Minisymposium Organizer: A. Idesman Chair: M. Hori C 1355 COMPARISON OF INTEGRATION ALGORITHMS FOR REAL-TIME HYBRID SIMULATION USING FREQUENCY DOMAIN-BASED ERROR INDICATORS <i>Reza Mirza Hessabi, Ali Ashasi-Sorkhabi, Yanhui Liu, Oya Mercan</i> C 450 DYNAMIC EFFECTS IN TWO- COMPONENT MEDIUM <i>Dmitry Indeitsev, Dmitry Skubov, Lev Shtukin, Dmitry Vavilov</i> COMPDYN MS 19: HIGH-PERFORMANCE COMPUTING FOR STRUCTURAL MECHANICS AND EARTHQUAKE / TSUNAMI ENGINEERING Minisymposium Organizers: S. Yoshimura, M. Hori, M. Asai C 1616 KEYNOTE: META-MODELING FOR CONSISTENT SEISMIC RESPONSE ANALYSIS <i>Muneo Hori, Seizo Tanaka, Tsuyoshi Ichimura, W.L.L.Wijerathne, J.A.S.C. Jayasinghe</i> C 1085 MULTI-LEVEL TSUNAMI DISASTER PREDICTION BY USING A LARGE SCALE PARTICLE SIMULATION <i>Mitsuteru Asai, Yoshiya Miyagawa, Shoichi Tanabe</i> C 1200 FINITE ELEMENT FRACTURE SIMULATION OF CONCRETE-STEEL FRAME JUNCTION WITH STUB BOLTS USING ADVENTURECLUSTER <i>Shinobu Yoshimura, Tomoshi Miyamura, Tomonori Yamada, Muneo Hori</i>	Room 1
Tue 17:00 – 19:00	UNCECOMP MS 2: UNCERTAINTY QUANTIFICATION IN COUPLED PROBLEMS AND STRUCTURAL DYNAMICS - III Minisymposium Organizers: C. Soize, M. Arnst Chair: C. Soize U 590 SAMPLING BASED MODEL REDUCTION METHOD FOR THE COMPUTATION OF A LOW FREQUENCY RANDOM VIBRO-ACOUSTIC PROBLEM <i>Mathilde Chevreuil, Cédric Leblond, Anthony Nouy, Yendoubouam Tampango, Jean-François Sigrist</i> U 664 A STOCHASTIC MULTISCALE ANALYSIS FOR MEMS STICTION FAILURE <i>Truong Vinh Hoang, Ling Wu, Jean-Claude Golinval, Stéphane Paquay, Ludovic Noels</i> U 694 STOCHASTIC FLUCTUATION ANALYSIS OF DYNAMIC YIELD OF MAGNETORHEOLOGICAL FLUID USING CHAINS-FRACTURE MODEL <i>Yongbo Peng, Ying Feng, Jianbing Chen, Jie Li</i> U 717 MULTISCALE METHOD WITH PATCHES FOR THE SOLUTION OF NON-LINEAR STOCHASTIC PROBLEMS WITH LOCALIZED UNCERTAINTIES AND NONLINEARITIES <i>Florent Pled, Mathilde Chevreuil, Anthony Nouy</i>	Room 2

DAY 2 - TUESDAY, MAY 26

	UNCECOMP MS 6: UNCERTAINTY PROPAGATION IN HETEROGENEOUS MATERIALS Minisymposium Organizers: H. Matthies, A. Ibrahimbegovic U 631 ESTIMATION OF RESIDUALS FOR THE HOMOGENIZED SOLUTION OF RANDOM TEXTURE <i>Federico Cluni, Vittorio Gusella</i> U 801 AN EFFICIENT MESHLESS SOLUTION FOR THE FOKKER-PLANCK-KOLMOGOROV EQUATIONS OF PROBABILISTIC ELASTOPLASTICITY <i>Konstantinos Karapiperis, Kallol Sett, Boris Jeremić</i>	
Tue 17:00 – 19:00	UNCECOMP RS 6: UNCERTAINTY ANALYSIS OF STRUCTURES Chair: H. Jensen U 721 KEYNOTE: IMPROVED GAUSSIAN APPROXIMATION OF THE BUNDLE STRENGTH OF DANIELS' MODEL WITH BRITTLE WEIBULL FIBERS <i>Vaclav Sadilek, Miroslav Vorechovsky</i> U 448 PROBABILITY OF BEARING FAILURE FOR A HIGH-SPEED THRUST BEARING INCLUDING RANDOM INPUT PARAMETERS <i>Nicola Bailey, Stephen Hibberd, Henry Power</i> U 522 PROBABILISTIC FINITE ELEMENT ANALYSIS OF NON LINEAR SYSTEMS: APPLICATION IN GEOMECHANICS <i>Paul Hauseux, Jean-Baptiste Colliat, Darius Seyed</i> U 610 NUMERICAL PREDICTION OF THE FLOW THROUGH DOUBLE BENDS WITH UNCERTAIN INFLOW PROFILES <i>Andreas Weissenbrunner, André Fiebach, Martin Straka, Sonja Schmelter</i> U 687 ESTIMATION OF A SPATIALLY DISTRIBUTED RESERVOIR COMPRESSIBILITY BY ASSIMILATION OF GROUND SURFACE DISPLACEMENT DATA <i>Claudia Zoccarato, Domenico Baù, Massimiliano Ferronato, Giuseppe Gambolati, Pietro Teatini</i> U 698 UNCERTAINTY ANALYSIS OF EARTH DAM <i>Jan Havelka, Jan Sykora, Anna Kucerová</i>	Room 3
Tue 17:00 – 19:00	COMPDYN MS 6: NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS - II Minisymposium Organizer: G. Manos Chair: G. Manos C 795 KEYNOTE: STUDY OF THE LOADING ARRANGEMENT FOR THE STIFFNESS TESTS OF THE COLUMN HEAD ASSEMBLY AND ITS SPRINGS UTILIZED AT THE NIARCHOS CULTURAL CENTER AT ATHENS - GREECE. <i>G.C. Manos, V. Kourtides, K. Katakalos, L. Kotoulas, A. Nalmpantidou</i> C 789 NUMERICAL SIMULATION OF THE LIMIT NON-LINEAR BEHAVIOUR OF UNREINFORCED STONE MASONRY UNDER IN-PLANE STATE OF STRESS FROM GRAVITATIONAL AND SEISMIC ACTIONS <i>G.C. Manos, L. Kotoulas, V. Soulis, O. Felekidou</i>	Room 4

DAY 2 - TUESDAY, MAY 26

	C 790 EXPERIMENTAL INVESTIGATION AND NUMERICAL SIMULATION OF SHEAR BEHAVIOUR OF RC T-BEAM SPECIMENS WITH OR WITHOUT SFRP-STRIPS UNDER CYCLIC LOADING <i>George Manos, Konstantinos Katakalos, Marios Theofanous</i> C 791 CYCLIC RESPONSE OF A STEEL BEAM-TO-COLUMN CONNECTIONS – AN EXPERIMENTAL AND NUMERICAL STUDY <i>G.C. Manos, A. Nalmpantidou, V. Kourtides, A. Anastasiadis</i> C 792 THE DYNAMIC RESPONSE OF A MOCK-UP OF THE RESTORED ANCIENT NORTH WALL SCHEME FOR THE MACEDONIAN PALACE AT VERGINA - GREECE. <i>George Manos, Konstantinos Katakalos, Lambros Kotoula, Olympia Felekidou</i> C 853 ANALYTICAL AND EXPERIMENTAL STUDY ON THE RESPONSE OF A SEISMIC RESTRAINER SYSTEM FOR BRIDGES <i>Olga Markogiannaki, Ioannis Tegos</i>	
Tue 17:00 – 19:00	COMPDYN MS 13: RENEWABLE ENERGY STRUCTURES (WIND TURBINES, SOLAR IRRADIATION, HYDROPOWER) - I <i>Minisymposium Organizers: Á. Cunha, E. Caetano</i> <i>Chair: Á. Cunha</i> C 589 GENETIC OPTIMIZATION OF TOWER VIBRATIONS WITH PENDULUM TMD UNDER THE INFLUENCE OF SEVERAL WIND SPECTRUMS <i>Gino B. Colherinhas, Maura A. M. Shzu, Suzana M. Avila, Marcus V. G. De Moraes</i> C 593 SEISMIC VIBRATION CONTROL SYSTEMS FOR WIND TURBINES <i>Okay Altay, Francesca Taddei, Nils Lange, Sven Klinkel</i> C 662 PRACTICAL RECOMMENDATIONS FOR THE FOUNDATION DESIGN OF ONSHORE WIND TURBINES INCLUDING SOIL-STRUCTURE INTERACTION <i>F. Taddei, M.F. Lozano Lara, P. Michel, C. Butenweg, S. Klinkel</i> C 663 SLENDER LARGE-SCALE PARABOLIC TROUGHS USING SHAPE-OPTIMIZED HOLLOW STRUCTURES MADE OF HIGH-STRENGTH CONCRETE <i>Christoph Kämper, Janna Krummenacker, Patrick Forman, Peter Mark, Jürgen Schnell</i> C 1049 PROPABILISTIC FATIGUE ANALYSIS OF OFFSHORE WIND TURBINES <i>Dimitrios V. Bilonis, Dimitrios Vamvatsikos</i> C 1120 ONE YEAR OF CONTINUOUS DYNAMIC MONITORING OF A WIND TURBINE. STRUCTURAL INTEGRITY AND FATIGUE ASSESSMENT <i>Gustavo Oliveira, Filipe Magalhães, Álvaro Cunha, Elsa Caetano</i>	Room 5

DAY 2 - TUESDAY, MAY 26

Tue 17:00 – 19:00	COMPDYN RS 11: PERFORMANCE-BASED EARTHQUAKE ENGINEERING - II Chair: V. Papadopoulos C 1119 APPLICATION OF INCREMENTAL DYNAMIC ANALYSIS TO SEISMIC EVALUATION OF UNDERGROUND STRUCTURE <i>Tong Liu, Yong Yuan, Zhiyi Chen</i> C 1411 BEHAVIOR OF NON-CONFORMING R.C. MEMBERS UNDER COMPRESSIVE AXIAL LOAD AND BIAXIAL BENDING <i>Marta Del Zoppo, Marco Di Ludovico, Aurelio Ghersi</i> C 1495 STIFFNESS MODELING OF RC COLUMNS REINFORCED WITH PLAIN REBARS <i>Okan Ozcan</i> C 1778 CORRELATION BETWEEN THE PROBABILISTIC SEISMIC ASSESSMENT OF FRAME STRUCTURES WITHOUT AND WITH ADDED DAMPERS <i>Luca Landi, Cristina Vorabbi, Pier Paolo Diotallevi</i> C 677 DYNAMIC RESPONSE OF A GOTHIC CATHEDRAL IN CYPRUS <i>Zehra Cagnan, Christis Chrysostomou, Nicholas Kyriakides, Renos Votsis</i>	Room 6
Tue 17:00 – 19:00	COMPDYN MS 3: PROGRESS AND CHALLENGES IN GEOTECHNICAL EARTHQUAKE ENGINEERING - II Minisymposium Organizers: C. Vieira, J. Tsompanakis Chair: J. Tsompanakis C 1251 KEYNOTE: IMPACT OF FAULT RUPTURE ON REINFORCED EARTH STRUCTURES <i>Ioanna V. Tzavara, Yiannis Tsompanakis, Varvara Zania, Prodromos N. Psarropoulos</i> C 1350 THREE DIMENSIONAL ANALYSIS OF A CFRD DAM USING THE MATERIAL POINT METHOD <i>F. Zabala, R. D. Rodari, L. O. Oldecop</i> C 929 SEISMIC GROUND RESPONSE AT LOTUNG (TAIWAN) <i>Dimitrios Karofyllakis, Gaetano Elia, Mohamed Rouainia</i> COMPDYN RS 5: IMPACT DYNAMICS – II C 385 CREATION OF A NEW EQUATION OF MOTION TO CALCULATE DISSIPATED ENERGY BETWEEN TWO ADJACENT BUILDINGS <i>Hosein Naderpour, Seyed Mohammad Khatami, Rui Carneiro Barros</i> C 1158 STRUCTURE RESPONSE UNDER BLAST WAVE LOAD <i>D. Makovička, D. Makovička Jr.</i> C 806 PRELIMINARY INVESTIGATIONS OF THE LOW-VELOCITY IMPACT RESPONSE OF A SMART TRIMORPH PLATE FOR ACTIVE DAMAGE MITIGATION <i>Akuro Big-Alabo, Philip Harrison, Matthew Cartmell</i>	Room 7

DAY 2 - TUESDAY, MAY 26

Tue 17:00 – 19:00	COMPDYN RS 19: WAVE PROPAGATION AND SOIL DYNAMICS – I Chair: N. Beskou C 390 FINITE ELEMENT ELASTIC ANALYSIS OF 3-D FLEXIBLE PAVEMENTS UNDER MOVING LOADS <i>Niki Beskou, Stefanos Tsinopoulos, Dimitrios Theodorakopoulos</i> C 1177 DAMAGE CHARACTERIZATION IN WAVEGUIDES WITH ULTRASONIC SHEAR WAVES <i>Dimitra Achillopoulou, Annamaria Pau, Fabrizio Vestroni</i> C 864 A PERFECTLY MATCHED LAYER FOR SEISMIC WAVE PROPAGATION IN UNBOUNDED DOMAIN BY USING HETEROGENEOUS MULTI-TIME STEP SUBDOMAIN METHODS. <i>Eliass Zafati, Michaël Brun, Irini Djeran-Maigre</i> C 1067 LONGITUDINAL SEISMIC VIBRATIONS OF A SEGMENTED PIPELINE CONSIDERED AS THE PERIODICALLY INHOMOGENEOUS ROD <i>Mukhady Israilov</i>	Room 8
Tue 17:00 – 19:00	UNCECOMP MS 4: COMPARISON OF UNCERTAINTY QUANTIFICATION METHODS IN COMPUTATIONAL SCIENCES - I Minisymposium Organizers: J. Witteveen, S. Vandewalle Chair: J. Witteveen U 510 NATURAL CONVECTION WITH RANDOM BOUNDARY DATA: A COMPARISON OF TECHNIQUES <i>Sebastian Ullmann, Jens Lang</i> U 544 STOCHASTIC COLLOCATION FOR CORRELATED INPUTS <i>Maria Navarro, Jeroen Witteveen, Joke Blom</i> U 553 ITERATIVE SOLVERS FOR A SPECTRAL GALERKIN APPROACH TO ELLIPTIC PARTIAL DIFFERENTIAL EQUATIONS WITH RANDOM OR FUZZY COEFFICIENTS <i>Stefan Vandewalle</i> U 556 UNCERTAINTY QUANTIFICATION BY WORST AND BEST CASES - COMPARISON OF MONTE CARLO SIMULATION AND INTERVAL ANALYSIS <i>Hans Schjær-Jacobsen</i> U 574 ESSENTIALLY NON-OSCILLATORY STOCHASTIC COLLOCATION FOR PROBABILITY SPACES WITH DISCONTINUITIES <i>Huiqing Wang, Jeroen A.S. Witteveen</i> U 587 ROBUST DESIGN IN THE CONTEXT OF DETERMINISTIC MULTI-OBJECTIVE OPTIMIZATION <i>Lisa Kusch, Nicolas R. Gauger</i>	Room 9

DAY 2 - TUESDAY, MAY 26

Tue 17:00 – 19:00	UNCECOMP RS 5: SYSTEM RELIABILITY ANALYSIS, DESIGN AND RISK ASSESSMENT AND VALIDATION - II Chair: A. Marrel U 699 RELIABILITY SENSITIVITY ANALYSIS WITH SEQUENTIAL IMPORTANCE SAMPLING <i>Iason Papaioannou, Daniel Straub</i> U 619 UNCERTAINTY PROPAGATION FOR RELIABILITY ANALYSIS: APPLICATION TO SODIUM FAST REACTOR SAFETY STUDIES <i>Amandine Marrel, Nathalie Marie, Matthias De Lozzo</i> U 690 SPATIAL DEGRADATION IN RELIABILITY ASSESSMENT OF AGEING CONCRETE STRUCTURES <i>Jan Podroužek, Alfred Strauss, Drahomír Novák</i> U 712 IDENTIFICATION OF RELEVANT BUT STOCHASTIC INPUT PARAMETERS FOR FATIGUE ASSESSMENT OF PRE-STRESSED CONCRETE BRIDGES BY MONITORING <i>David Sanio, Mark Alexander Ahrens</i> U 738 AN ADAPTIVE KRIGING METHOD FOR SOLVING STOCHASTIC INVERSE PROBLEMS <i>Shuai Fu, Mathieu Couplet, Nicolas Bousquet</i> U 770 THE TOOL SUSAN 4 FOR PROBABILISTIC UNCERTAINTY AND SENSITIVITY ANALYSES <i>Martina Kloos</i>	Room 10
Tue 17:00 – 19:00	COMPDYN MS 16: LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - III Minisymposium Organizers: D. Vamvatsikos, D. Lignos Chair: D. Vamvatsikos C 869 POST-EARTHQUAKE RECOVERY OF A COMMUNITY AND ITS ELECTRICAL POWER SUPPLY SYSTEM <i>Max Didier, Li Sun, Siddhartha Ghosh, Bozidar Stojadinovic</i> C 887 ESTIMATION OF CUMULATIVE SEISMIC DAMAGE TO URM BUILDINGS DURING EARTHQUAKE SEQUENCES <i>Amaryllis Mouyiannou, Maria Rota, Andrea Penna</i> C 1078 RELATIONSHIP BETWEEN THE VARIATION OF SEISMIC CAPACITY AFTER DAMAGING EARTHQUAKES, COLLAPSE PROBABILITY AND REPAIR COSTS: DETAILED EVALUATION FOR A NON-DUCTILE BUILDING <i>M. Gaetani D'Aragona, M. Polese, A. Prota</i> C 1090 SYSTEMATIC VALIDATION AS A KEY TO MOVING FORWARD: PROTOCOLS FOR CONSTITUTIVE MODELING OF LIQUEFACTION <i>Katerina Ziotopoulou</i> C 1092 EARTHQUAKE LOSS ASSESSMENT OF STEEL FRAME BUILDINGS DESIGNED IN HIGHLY SEISMIC REGIONS <i>Seong-Hoon Hwang, Ahmed Elkady, Samy Al.Bardaweel, Dimitrios G. Lignos</i>	Room 11

DAY 2 - TUESDAY, MAY 26

	C 1114 CATASTROPHE RESILIENCE RELATED TO URBAN NETWORK SHAPE: PRELIMINARY ANALYSIS. Anna Bozza, <i>Domenico Asprone, Alessandro Fiasconaro, Vito Latora, Gaetano Manfredi</i>	
Tue 17:00 – 19:00	UNCECOMP RS 3: PHYSICALLY BASED UNCERTAINTY QUANTIFICATION - II Chair: N. Zabaras U 529 VARIATIONAL REFORMULATION OF BAYESIAN INVERSE PROBLEMS <i>Panagiotis Tsilifis, Ilias Bilionis, Ioannis Katsounaros, Nicholas Zabaras</i> U 622 QUANTIFICATION OF THE INFLUENCE OF WELDING UNCERTAINTIES ON PERMANENT MAGNET SYNCHRONOUS MACHINES Zeger Bontinck, <i>Herbert De Gersem, Sebastian Schöps</i> U 808 UNCERTAINTY QUANTIFICATION ANALYSIS OF THE DISPERSION OF A TOXIC GAS IN A CITY USING AN LBM CODE AND THE C-APK METHOD Luca Margheri, <i>Pierre Sagaut</i> U 823 PROBABILISTIC CONDITION MONITORING COUNTING WITH INFORMATION UNCERTAINTY Pavel Ettler, <i>Kamil Dedecius</i> U 716 ANALYSIS AND VALIDATION OF EXPERIMENTALLY-INDUCED UNCERTAINTIES IN ELECTROMAGNETIC ENERGY HARVESTING DEVICES <i>Manuel Gutierrez, Dimitrios Peroulis</i> U 1379 DETERMINISTIC SHAPE UNCERTAINTY QUANTIFICATION FOR SCATTERING TRANSMISSION PROBLEM Laura Scarabosio U 835 TWO DIMENSIONAL RANDOM FIELD OF CONCRETE COMPRESSIVE STRENGTH FOR RC FRAMES Chao-Lie Ning, <i>Jie Li</i>	Room 12
Tue 17:00 – 19:00	COMPDYN RS 9: OPTIMUM DESIGN IN STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING - V Chair: I. Iliadis C 1651 OPTIMIZED RETROFIT OF SEISMICALLY DESIGNED STRUCTURES TO WITHSTAND PROGRESSIVE COLLAPSE Georgios S. Papavasileiou, <i>Dimos C. Charmpis</i> C 1950 A PRELIMINARY ASSESSMENT OF SLENDERNESS AND OVERSTRENGTH HOMOGENEITY CRITERIA USED IN THE DESIGN OF CONCENTRICALLY BRACED STEEL FRAMES IN MODERATE SEISMICITY Alper Kanyilmaz, <i>C.A Castiglioni, Hervé Degève, Pierre-Olivier Martin</i> C 3600 OPTIMUM DESIGN OF 2D TRUSS STRUCTURES WITH PSO AND SAP2000 Ioannis Iliadis, <i>Vagelis Plevris, Manolis Papadrakakis</i> C 1325 A STRATEGY FOR REDUCING VERTICAL ACCELERATION DEMANDS IN MULTI-STORY BASE-ISOLATED BUILDINGS INSPIRED BY THE HUMAN SPINE Mehmet Unal, <i>Gordon P. Warn</i>	Room 13

DAY 2 - TUESDAY, MAY 26

	C 1348 CONTROL METHOD FOR ADJACENT BUILDINGS CONSIDERING SOIL-STRUCTURE INTERACTION <i>Luis Pérez, Suzana Avila, Graciela Doz</i>	
Tue 17:00 – 19:00	COMPDYN RS 12: REPAIR AND RETROFIT OF STRUCTURES - II Chair: G. Thermou C 1176 VERIFICATION OF THE TOGGLE DAMPING SYSTEM FOR THE SRC BUILDING DURING THE 2011 OFF THE PACIFIC COAST OF TOHOKU EARTHQUAKE <i>Takaaki Ikeda, Yuya Takase, Yoshiaki Senoo</i> C 1223 SEISMIC RESPONSE VERIFICATION AND RETROFITTING OF RC BUILDING SUBJECTED TO 2014, CEPHALONIA EARTHQUAKES <i>Ioannis Kavvadias, Ifigeneia Litina, Varvara Kyriakidou, Fani Mamatsopoulou, Lazaros Vasiliadis</i> C 1244 DESIGN METHODOLOGY FOR SEISMIC UPGRADING OF TORSIONALLY UNBALANCED EXISTING R.C. BUILDINGS <i>Georgia Thermou, Manousos Psaltakis</i> C 1290 A COMPUTATIONAL INVESTIGATION FOR THE SEISMIC RESPONSE OF RC STRUCTURES STRENGTHENED BY CABLE ELEMENTS <i>Angelos A. Liolios</i> C 618 THE EFFECT OF STEEL SLIT PANELS IN RETROFITTING WEAK BUILDINGS <i>Fatemeh Jamshidzadeh, Benjamin Mohebi</i>	Room 14
Tue 17:00 – 19:00	COMPDYN RS 16: SOIL-STRUCTURE INTERACTION - I Chair: A. Nieto-Ferro C 584 ACCOUNTING FOR NONLINEAR SOIL WITHIN DYNAMIC SOIL-STRUCTURE INTERACTION CALCULATIONS IN EARTHQUAKE ENGINEERING <i>Alex Nieto-Ferro, Georges Dévesa, Nicolas Greffet, Matthieu Caudron</i> C 742 SIMPLIFIED MODEL FOR COUPLED VIBRATION OF ADJACENT STRIP FOOTINGS <i>Jue Wang, Ding Zhou, Weiqing Liu</i> C 780 CALIBRATION AND VALIDATION OF A SIMPLIFIED MODEL OF NONLINEAR SOIL-STRUCTURE INTERACTION FOR SHALLOW FOUNDATIONS <i>Simon Lambert, Charisis Chatzigogos, Andrea Godoy</i> C 885 OPTIMIZATION OF WIND TURBINE FOUNDATIONS FOR POOR SOIL <i>Wael Mohamed, Per-Erik Austrell</i> C 2830 SOIL-PILE-STRUCTURE-INTERACTION: EXPERIMENTAL RESULTS AND NUMERICAL SIMULATIONS <i>Maria Giovanna Durante, Luigi Di Sarno, Colin A Taylor, George Mylonakis, Armando Lucio Simonelli</i>	Room 15

DAY 3 - WEDNESDAY, MAY 27

Wed 09:00 – 10:30	TECHNICAL SESSIONS	
Wed 09:00 – 10:30	COMPDYN MS 25: MODELING AND VULNERABILITY ASSESSMENT OF MASONRY STRUCTURES - I Minisymposium Organizers: V. Plevris, P. Asteris Chair: V. Plevris C 1365 KEYNOTE: MODELLING OF DIAGONAL COMPRESSION MASONRY WALLETTS BY FINITE ELEMENTS WITH EMBEDDED DISCONTINUITIES <i>Gelacio Juárez-Luna, Arturo Tena-Colunga</i> C 1351 EVALUATION OF SEISMIC VULNERABILITY ASSESSMENT PARAMETERS FOR PORTUGUESE VERNACULAR CONSTRUCTIONS WITH NONLINEAR NUMERICAL ANALYSIS <i>Javier Ortega, Graça Vasconcelos, Mariana Correia, Hugo Rodrigues, Paulo B. Lourenço, Humberto Varum</i> C 722 3D FE PUSHOVER AND NON-LINEAR DYNAMIC ANALYSES OF A MASONRY CHIMNEY BEFORE AND AFTER SHORTENING <i>Elisa Bertolesi, Antonio Del Grosso, Gabriele Milani, Fabio Minghini, Antonio Tralli</i> C 968 SEISMIC PERFORMANCE OF HOLLOW BRICK INTERNAL PARTITIONS <i>Crescenzo Petrone, Gennaro Magliulo, Marco Russo, Gaetano Manfredi</i>	Room 1
Wed 09:00 – 10:30	COMPDYN MS 27: CONDITION ASSESSMENT AND INTERVENTION ON MONUMENTS AND HISTORIC STRUCTURES - I Minisymposium Organizer: C. Spyrakos Chair: C. Spyrakos C 1895 KEYNOTE: SEISMIC RISK OF HISTORIC STRUCTURES AND MONUMENTS: A NEED FOR A UNIFIED POLICY <i>Constantine C. Spyrakos</i> C 473 EVALUATION OF THE SEISMIC VULNERABILITY OF THE “ANCIEN HÔPITAL DE SION” USING APPLIED ELEMENT MODELLING (AEM) AND LOCAL MECHANISM ANALYSIS <i>Angelo Garofano, Pierino Lestuzzi</i> C 683 NONLINEAR ANALYSIS AND SEISMIC STRENGTHENING OF MASONRY ARCHES: THE BLOCK-JOINT AND BLOCK-BLOCK FEM MODELS <i>Francesco Pugi, Alessio Francioso</i> C 871 SEISMIC PROTECTION OF HEAVY NON-STRUCTURAL MONOLITHIC OBJECTS AT THE TOP OF A HISTORICAL MASONRY CONSTRUCTION THROUGH BASE ISOLATION <i>Andrea Chiozzi, Michele Simoni, Antonio Tralli</i>	Room 2

DAY 3 - WEDNESDAY, MAY 27

Wed 09:00 – 10:30	UNCECOMP MS 12: MULTISCALE ANALYSIS AND DESIGN UNDER UNCERTAINTY - I Minisymposium Organizers: G. Stefanou, V. Papadopoulos, X-F. Xu, M. Papadrakakis Chair: G. Stefanou U 479 STOCHASTIC MULTISCALE MODELING OF RANDOM INTERPHASES IN NANOREINFORCED POLYMERS <i>Tien Thinh Le, Johann Guilleminot, Christian Soize</i> U 502 MULTI-FIDELITY MODELING OF RESPONSE SURFACES <i>Paris Perdikaris, Daniele Venturi, George Em. Karniadakis, Lucia Parrussini, Johannes O. Royset</i> U 720 STATISTICALLY-BASED MULTISCALE PROCEDURE FOR PARTICULATE RANDOM COMPOSITES AS MICROPOLAR CONTINUA <i>Patrizia Trovalusci, Maria Laura De Bellis, Martin Ostoja-Starzewski</i> U 797 APPLICATION OF STATISTICAL DISTRIBUTIONS TO FULL NETWORK POLYMER AND RUBBER MODELS <i>Mikhail Itskov</i>	Room 3
Wed 09:00 – 10:30	UNCECOMP RS 5: SYSTEM RELIABILITY ANALYSIS, DESIGN AND RISK ASSESSMENT AND VALIDATION - III Chair: O. Kokkinos U 849 STOCHASTIC OPTIMIZATION WITH VARIABILITY RESPONSE FUNCTIONS <i>Odyseas Kokkinos, Vissarion Papadopoulos</i> U 811 HOW - AND HOW NOT - TO USE UNCERTAINTY QUANTIFICATION FOR ENGINEERING DECISION MAKING <i>Daniel Straub</i> U 778 INTRODUCTION OF THE HUMAN FACTOR INTO THE RISK ASSESSMENT USING MONTE CARLO SIMULATION <i>J.R. González Dan, A. Guix, V. Martí, Josep Arnaldos, R.M. Darbra</i> U 614 TOLERANCE ANALYSIS OF A WIPING SYSTEM USING THE PROBABILISTIC APPROACH <i>Pierre Beaurepaire, Roxane Fepeussi-Tumchou, Nicolas Gayton, Gilles Petitot, Jean-Yves Dantan</i>	Room 4
Wed 09:00 – 10:30	COMPDYN MS 18: SEISMIC ANALYSIS METHODS FOR EXISTING BRIDGES PRIOR TO AND AFTER RETROFITTING - I Minisymposium Organizer: A. Kappos Chair: A. Kappos C 743 KEYNOTE: SEISMIC RESPONSE ANALYSIS OF A COUPLED VEHICLE- BRIDGE SYSTEM <i>Qing Zeng, Elias Dimitrakopoulos, Themelina Paraskeva</i>	Room 5

DAY 3 - WEDNESDAY, MAY 27

	C 632 OPTIMAL DESIGN AND DYNAMICS OF TRUSS BRIDGES <i>G. Carpentieri, M. Modano, F. Fabbrocino, F. Fraternali</i> C 948 A STRUCTURAL HEALTH MONITORING DATA MANAGING SCHEME WITH RESILIENCY TO SEISMIC EVENTS: IMPLEMENTATION ON A ROAD NETWORK BRIDGE <i>George Sergiadis, Stelios Hadjidimitriou, Vasileios Charisis, Panagiotis Panetsos, Theodoros Chrysanidis</i> C 1060 EVALUATION OF THE STIFFNESS AND DAMPING OF ABUTMENTS TO EXTEND DIRECT DISPLACEMENT-BASED DESIGN TO THE DESIGN OF INTEGRAL BRIDGES <i>Stergios Mitoulis, Sotiris Argyroudis, Mervyn Kowalsky</i>	
Wed 09:00 – 10:30	COMPDYN MS 17: DYNAMIC EFFECTS ON RAILWAY BRIDGES - I <i>Minisymposium Organizers: R. Calçada, R. Delgado, J-M. Goicolea</i> <i>Chair: R. Calçada</i> C 945 TRANSVERSAL VIBRATION CONTROL FOR CATENARY POLES ON A HIGH SPEED RAILWAY BRIDGE <i>Celine Anicotte, Dominique Botton</i> C 1111 MODAL PROPERTIES OF SIMPLY SUPPORTED RAILWAY BRIDGES DUE TO SOIL-STRUCTURE INTERACTION <i>Christoffer Svedholm, Costin Pacoste, Raid Karoumi</i> C 1160 SAFETY ASSESSMENT OF A SMALL SPAN HIGH-SPEED RAILWAY BRIDGE USING AN EFFICIENT PROBABILISTIC METHODOLOGY <i>João M. Rocha, António A. Henriques, Rui Calçada</i> C 1083 SEISMIC RESPONSE OF CABLE-STAYED BRIDGE STEEL TOWER PROVIDED WITH BRACING SYSTEM <i>Mohamed Omar</i>	Room 6
Wed 09:00 – 10:30	COMPDYN RS 17: SOUND AND VIBRATION - I <i>Chair: J-M. Mencik</i> C 638 A 2D WAVE FINITE ELEMENT-BASED SUPERELEMENT FORMULATION FOR ACOUSTIC ANALYSIS OF CAVITIES OF ARBITRARY SHAPES <i>Jean-Mathieu Mencik, Denis Duhamel, Marie-Laure Gobert</i> C 764 ON THE IMPLEMENTATION OF BOUNDARY CONDITIONS IN RBF-PS METHOD APPLIED TO VIBRATION ANALYSIS OF KIRCHHOFF PLATES <i>Artur Krowiak</i> C 861 THE FIRST AND THE SECOND ORDER DESIGN SENSITIVITY ANALYSIS OF DYNAMIC CHARACTERISTICS OF FRAME WITH VISCOELASTIC DAMPERS <i>Magdalena Lasecka-Plura</i>	Room 7

DAY 3 - WEDNESDAY, MAY 27

	C 1337 MODELLING OF THE VIBRO-ACOUSTIC TRANSMISSION ON MULTI-PLATE PERFORATED PANELS USING TWO-SCALE HOMOGENIZATION <i>Eduard Rohan, Vladimír Lukeš</i>	
Wed 09:00 – 10:30	UNCECOMP RS 1: NUMERICAL METHODS FOR LARGE-SCALE STOCHASTIC FINITE ELEMENT APPLICATIONS - I Chair: J-M. Bourinet U 728 KEYNOTE: RELIABILITY ASSESSMENT WITH ADAPTIVE SURROGATES BASED ON SUPPORT VECTOR MACHINE REGRESSION <i>Jean-Marc Bourinet</i> U 464 ANCHORED ANOVA PETROV-GALERKIN PROJECTION SCHEMES FOR SOLVING LINEAR STOCHASTIC STRUCTURAL DYNAMICS PROBLEMS <i>Lin Gao, Christophe Audouze, Prasanth B. Nair</i> U 650 THE ANCHORED SEPARATION OF VARIABLES: AN APPLICATION TO RANDOMLY PARAMETRIZED LINEAR ALGEBRAIC EQUATIONS <i>Matthew Li, Christophe Audouze, Prasanth Nair</i> U 662 STOCHASTIC GALERKIN APPROXIMATIONS OF RANDOMLY PARAMETRIZED SYMMETRIC LINEAR SYSTEMS <i>Christophe Audouze, Prasanth Nair, Par Hakansson</i>	Room 8
Wed 09:00 – 10:30	COMPDYN RS 19: WAVE PROPAGATION AND SOIL DYNAMICS - II Chair: M. P. Santisi D'Avila C 430 1-DIRECTION 3-COMPONENT WAVE PROPAGATION VS NON-STATIONARY SYNTHETIC SIGNALS <i>Maria Paola Santisi D'Avila, Pierfrancesco Cacciola</i> C 471 NUMERICAL ANALYSIS OF THE PLANE WAVES SCATTERING BY SEMI-SPHERICAL ALLUVIAL VALLEY <i>S. L. Chen, X. J. Zhu</i> C 472 PLANE WAVE AT THE INTERFACE BETWEEN WATER AND A GASSY POROELASTIC LAYER WITH UNDERLYING ELASTIC SEABED <i>Weiyun Chen, Guoxing Chen</i> C 520 A WAVE-BASED REDUCTION TECHNIQUE FOR THE DYNAMIC BEHAVIOR OF PERIODIC STRUCTURES <i>Denis Duhamel, Jean-Mathieu Mencik</i>	Room 9

DAY 3 - WEDNESDAY, MAY 27

Wed 09:00 – 10:30	COMPDYN MS 9: ADVANCES IN MODELING OF WAVE PROPAGATION AND APPLICATIONS - II Minisymposium Organizers: D. Givoli, G. Seriani Chair: D. Givoli C 985 WAVE MODELING BY POLY-GRID SPECTRAL ELEMENT METHOD: AN ERROR ANALYSIS <i>Géza Seriani, Saulo P. Oliveira</i> C 1093 ITERATIVE 3D SOLVER FOR HETEROGENEOUS HELMHOLTZ EQUATION WITH SEMI-ANALYTICAL PRECONDITIONER <i>Vladimir Tcheverda, Dmitry Neklyudov, Mikhail Belonosov, Maksim Dmitriev</i> C 1242 NX2D MODELLING OF ACOUSTIC PROPAGATION IN 3-D SHALLOW WATER ENVIRONMENTS <i>Michael Taroudakis</i> C 1282 A COMPACT QUASI OPTIMAL FINITE DIFFERENCE METHOD FOR TIME-HARMONIC ELASTIC WAVES <i>Abimael Loula, Alan Amad</i> C 1356 ASSESSMENT OF ENRICHED AND HIGH-ORDER-POLYNOMIAL FINITE ELEMENTS FOR THE SOLUTION OF HELMHOLTZ PROBLEMS AT HIGH FREQUENCY <i>K. Christodoulou, Ms. Mohamed, O. Laghrouche, J. Trevelyan</i> C 1681 COUPLING OF FINITE ELEMENT AND BOUNDARY ELEMENT METHODS FOR TRANSIENT ELASTODYNAMICS <i>Stijn Francois, Pieter Coulier, Geert Degrande</i>	Room 10
Wed 09:00 – 10:30	COMPDYN MS 16: LOSS, RISK, UNCERTAINTY AND MODELING FOR SEISMIC PERFORMANCE ASSESSMENT OF STRUCTURES - III Minisymposium Organizers: D. Vamvatsikos, D. Lignos Chair: D. Lignos C 1340 INFLUENCE OF JOINT RESPONSE IN THE ASSESSMENT OF SEISMIC PERFORMANCE OF EXISTING REINFORCED CONCRETE FRAMES <i>Maria Teresa De Risi, Paolo Ricci, Gerardo Mario Verderame</i> C 1517 ASSESSMENT OF MULTISTORY RC BUILDINGS SUFFERING INTER-STORY POUNDING <i>Maria Favvata, Sofia Mochla, Maria Naoum, Chris Karayannis</i> C 1587 MODEL PREDICTIVE ACCURACY ASSESSMENT IN SEISMIC INELASTIC TIME HISTORY ANALYSES <i>Pierre Jehel</i> C 1626 SEISMIC RETROFIT DECISION-MAKING OF BRIDGES BASED ON LIFE-CYCLE COST CRITERIA <i>Hossein Ebrahimian, Fatemeh Jalayer, Gaetano Manfredi</i>	Room 11

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	C 2166 GENERATION OF ARTIFICIAL ACCELEROGRAMS USING STOCHASTIC METHODS <i>George Stefanou</i>	
Wed 09:00 – 10:30	UNCECOMP MS 9: RELIABILITY OF STRUCTURES UNDER ENVIRONMENTAL LOADS: STOCHASTIC ANALYSIS AND DESIGN - I Minisymposium Organizers: M. Di Paola, A. Sofi, G. Muscolino Chair: M. Di Paola U 609 KEYNOTE: FLUTTER ANALYSIS OF BRIDGE DECK SECTIONS WITH UNCERTAIN INDICIAL FUNCTIONS <i>Alessandro Palmeri, Giorgio Barone</i> U 660 FIRST TIME PASSAGE PROBLEM OF A MARINE CRANE PAYLOAD MOTION <i>Daniil Yurchenko, Panagiotis Alevras, Arvid Naess</i> U 551 STOCHASTIC OPTIMISATION OF THE INITIAL PRESTRESS FOR A TENSILE MEMBRANE STRUCTURE SUBJECTED TO UNCERTAIN WIND FORCES <i>Subhrajit Dutta, Siddhartha Ghosh, Mandar M. Inamdar</i> U 768 LIFE-CYCLE DESIGN OF BRIDGES IN SEISMIC REGIONS BASED ON LESSONS FROM THE 2011 GREAT EAST JAPAN EARTHQUAKE <i>Mitsuyoshi Akiyama, Dan Frangopol</i>	Room 12
Wed 09:00 – 10:30	UNCECOMP MS 1: HIGH DIMENSIONS AND PARAMETER ESTIMATION IN UNCERTAINTY QUANTIFICATION - I Minisymposium Organizers: G. Lin, G. Karniadakis Chair: G. Lin U 507 UNCERTAINTY QUANTIFICATION IN HIGH-DIMENSIONAL SPACES WITH LOW-RANK TENSOR APPROXIMATIONS <i>Katerina Konakli, Bruno Sudret</i> U 517 HIERARCHICAL ADAPTIVE POLYNOMIAL CHAOS EXPANSIONS <i>Chu V. Mai, Bruno Sudret</i> U 657 STOCHASTIC LOCAL INTERACTION MODELS FOR SPATIAL DATA MODELLING <i>Dionissios Hristopulos</i> U 561 SPARSE SURROGATE CONSTRUCTION VIA BAYESIAN COMPRESSIVE SENSING <i>Khachik Sargsyan, Cosmin Safta, Habib Najm, Bert Debusschere, Daniel Ricciuto, Peter Thornton</i>	Room 13

DAY 3 - WEDNESDAY, MAY 27

Wed 09:00 – 10:30	COMPDYN RS 13: SEISMIC ISOLATION - I Chair: F. Mazza C 492 INCREMENTAL DYNAMIC ANALYSIS OF FIRE-EXPOSED BASE-ISOLATED R.C. FRAMED BUILDINGS SUBJECTED TO NEAR-FAULT GROUND MOTIONS <i>Fabio Mazza, Fabio Alesina</i> C 567 ROLLING-BALL RUBBER-LAYER ISOLATION SYSTEM: STATE OF THE ART, PERFORMANCE AND DESIGN PROCEDURE <i>Marco Donà, Giovanni Tecchio, Claudio Modena, Alan H. Muhr</i> C 992 THE EFFECT OF MODIFIED LINEAR VISCOELASTIC IMPACT MODELS ON THE POUNDING RESPONSE OF A BASE-ISOLATED BUILDING WITH ADJACENT STRUCTURES <i>Eftychia A. Mavronicola, Panayiotis C. Polycarpou, Petros Komodromos</i> C 1095 ANALYSIS AND EXPERIMENT OF ISOLATED BRIDGES USING POLYNOMIAL ROCKING BEARINGS <i>Tzu-Ying Lee, Lyan-Ywan Lu, Jing-Hung Tzeng, Kun-Jun Chung</i> C 1109 FINITE ELEMENT INVESTIGATION OF A NEW SEISMIC ENERGY ABSORPTION DEVICE THROUGH SIMOULTANEOUSLY YIELD AND FRICTION <i>Magdalini Titirla, Panikos Papadopoulos</i>	Room 14
Wed 09:00 – 10:30	COMPDYN RS 16: SOIL-STRUCTURE INTERACTION - II Chair: D. Karabalis C 1611 KEYNOTE: THE ROLE OF SOIL-STRUCTURE INTERACTION IN THE REDISTRIBUTION OF INTERNAL FORCES IN CONCRETE BUILDINGS DUE TO SEISMIC EXCITATION <i>Giorgos Mantzaras, Dimitris Karabalis</i> C 3026 A NEW SEISMIC DESIGN METHOD FOR DEEPLY EMBEDDED FOUNDATIONS ACCOUNTING FOR SSI EFFECTS <i>Nikos Gerolymos, Athanasios Zafeirakos</i> C 1306 IMPROVING COMPRESSIBLE SOIL RESPONSE UNDER VIBRATIONS FROM LARGE WIND MILL ROTARIES USING STONE PIERS <i>Mohamed Elmasry, Tarek Abdelaziz, Hend Koheil</i> C 934 A SSI NUMERICAL MODEL FOR LAYERED SOILS USING A BEM-FEM FORMULATION IN TIME DOMAIN <i>A. Romero, P. Galvín</i>	Room 15
Wed 10:30 – 11:00	Coffee Break	

DAY 3 - WEDNESDAY, MAY 27

Wed 11:00 – 13:00	COMPDYN PLENARY LECTURES – II	
Wed 11:00 – 13:00	Chair: D. Rixen C 3248 ECSW: AN ENERGY-BASED STRUCTURE-PRESERVING HYPER REDUCTION METHOD FOR THE REAL-TIME PROCESSING OF NONLINEAR FINITE ELEMENT DYNAMIC MODELS OF SOLIDS AND STRUCTURES <i>C. Farhat, T. Chapman, P. Avery</i> C 1677 DEVELOPMENTS IN COMPUTATIONAL DYNAMICS TO ENABLE LARGE-SCALE REAL-TIME HYBRID SIMULATION FOR ADVANCING PERFORMANCE-BASED EARTHQUAKE ENGINEERING <i>James Ricles</i> C 1804 NON INTRUSIVE FEM SPH CODE COUPLING FOR SIMULATION OF ACCIDENTAL SITUATIONS INVOLVING FLUID-STRUCTURE INTERACTION <i>Alain Combescure, Zhe Li, Nunez-Ramirez Jorge, Profizi Paul, Marongiu Jean-Christophe</i>	Room 1
Wed 11:00 – 13:00	UNCECOMP PLENARY LECTURES – II	
Wed 11:00 – 13:00	Chair: G. Karniadakis U 838 PROBABILISTIC MODELS FOR MICROSTRUCTURES AND ESTIMATES OF EXTREME MATERIAL RESPONSE <i>Mircea Grigoriu</i> U 843 NON-INTRUSIVE SOLUTION OF STOCHASTIC AND PARAMETRIC EQUATIONS <i>Hermann G. Matthies</i> U 527 STOCHASTIC REPRESENTATIONS AND STATISTICAL INVERSE IDENTIFICATION FOR UNCERTAINTY QUANTIFICATION IN COMPUTATIONAL MECHANICS <i>C. Soize, C. Desceliers, J. Guilleminot, T.T. Le, M.T. Nguyen, G. Perrin, J.M. Allain, H. Gharbi, D. Duhamel, C. Funfschilling</i>	Room 2
Wed 13:00 – 14:30	Lunch Time	

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Wed 14:30 – 16:30	TECHNICAL SESSIONS	
Wed 14:30 – 16:30	COMPDYN MS 25: MODELING AND VULNERABILITY ASSESSMENT OF MASONRY STRUCTURES - II Minisymposium Organizers: V. Plevris, P. Asteris Chair: V. Plevris C 1034 ADVANCED FINITE ELEMENT MODELLING OF HETEROGENEOUS STRUCTURES WITH MASONRY COMPONENTS <i>Eleni Minga, Lorenzo Macorini, Bassam A. Izzuddin</i> C 1172 DEFINITION OF MECHANICAL PROPERTIES OF EXISTING MASONRY ACCOUNTING FOR EXPERIMENTAL KNOWLEDGE BY BAYESIAN UPDATING <i>Stefano Bracchi, Maria Rota, Andrea Penna, Guido Magenes</i> C 1241 SEISMIC ANALYSIS OF MASONRY BUILDING AGGREGATES IN HISTORICAL CENTERS: TWO CASE STUDIES <i>Siro Casolo, Sanjust Carlo Alberto, Giuseppina Uva</i> C 1086 EFFECTS OF NORMAL SURCHARGE PRESSURE AND TENSILE STRENGTH OF MASONRY PANEL ON IN-PLANE SEISMIC BEHAVIOR OF A CONFINED MASONRY WALL <i>Sassan Eshghi, Khashaiar Pourazin</i> C 1589 SENSITIVITY ANALYSIS OF THE SEISMIC RESPONSE OF BRITTLE STRUCTURAL ELEMENTS UNDER NEAR-FIELD SEISMIC INPUT EFFECTS <i>Paloma Pineda, Jorge D Navarro-Rubio, Miguel Ángel Gil-Martí</i> C 673 SHEAR STRENGTH AND DEFORMATION MECHANISMS OF COMBINED AND CONFINED MASONRY WALLS SUBJECTED TO CYCLIC LOADING <i>Arturo Tena-Colunga, Artemio Juárez-Ángeles, Víctor Hugo Salinas-Vallejo</i>	Room 1
Wed 14:30 – 16:30	COMPDYN MS 20: NEW TECHNOLOGIES AND METHODS FOR DAMAGE CONTROL AND SEISMIC RETROFIT OF HERITAGE STRUCTURES IN EARTHQUAKES: SIMULATION, DEVICES AND DIGITAL TECHNOLOGIES Minisymposium Organizer: S. Pantazopoulou Chair: S. Pantazopoulou C 1579 KEYNOTE: VULNERABILITY OF TORSIONALLY SENSITIVE HISTORICAL BUILDINGS UNDER SEISMIC LOADS <i>Stylianios Pardalopoulos, Stavroula Pantazopoulou</i> C 588 PARAMETRIC NUMERICAL STUDY OF THE SEISMIC RESPONSE OF CLASSICAL COLUMNS <i>Ioannis Kavvadias, Lazaros Vasiliadis</i> C 771 ASSESSMENT OF SEISMIC VULNERABILITY OF HISTORICAL DEFENSIVE WALLS <i>Graziano Leoni, Alessandro Zona, Quintilio Piattoni, Alessandra Meschini, Enrica Petrucci, Andrea Dall'Asta, Luigino Dezi</i>	Room 2

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	C 1632 ASSESSMENT OF STONE MASONRY WALLS WITH DETERIORATION AT THEIR BASE USING NON-LINEAR FINITE ELEMENT ANALYSES <i>Georgios Papadopoulos , Dimos Charmpis , Rogiros Illampas</i>	
Wed 14:30 – 16:30	UNCECOMP MS 12: MULTISCALE ANALYSIS AND DESIGN UNDER UNCERTAINTY - II Minisymposium Organizers: G. Stefanou, V. Papadopoulos, X-F. Xu, M. Papadrakakis Chair: G. Stefanou U 722 THE VARIABILITY RESPONSE FUNCTION APPROACH TO MATERIAL HETEROGENEITY: APPLICATION TO DISCRETE PHASE MATERIALS <i>Sanjay R. Arwade, Massimiliano Gioffrè</i> U 832 INFLUENCE OF THE INTERFACE ON THE MACROSCOPIC BEHAVIOR OF CARBON-NANOTUBE REINFORCED COMPOSITES USING A MULTISCALE TECHNIQUE <i>Vissarion Papadopoulos, Maria Tavlaki</i> U 837 EFFECTIVE PROPERTIES OF RANDOM MICROSTRUCTURES AS A BASIS FOR STOCHASTIC FINITE ELEMENT ANALYSIS <i>George Stefanou, Dimitris Savvas, Manolis Papadrakakis</i> UNCECOMP MS 5: BAYESIAN ANALYSIS OF NUMERICAL MODELS - I Minisymposium Organizers: D. Straub, I. Papaioannou, C. Papadimitriou U 552 BAYESIAN SELECTION OF REGRESSION MODEL FOR PROBABILISTIC CHARACTERIZATION OF ROCK UNIAXIAL COMPRESSIVE STRENGTH <i>Adeyemi Emman Aladejare, Yu Wang</i> U 598 BAYESIAN UPDATING AND MODEL SELECTION USING SUBSET SIMULATION <i>S.K. Au, F.A. DiazDelaO, I. Yoshida</i> U 519 SAMPLING FREE APPROACH TO A BAYESIAN ESTIMATION OF MECHANICAL MODELS <i>Bojana Rosic</i>	Room 3

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Wed 14:30 – 16:30	COMPDYN MS 6: NUMERICAL SIMULATION AND EXPERIMENTAL VERIFICATION ON PROBLEMS IN THE FIELD OF EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS - III Minisymposium Organizer: G. Manos Chair: G. Manos C 1399 CONCRETE-TO-CONCRETE INTERFACES UNDER CYCLIC LOADING: FINITE ELEMENT ANALYSIS TOWARDS EXPERIMENTAL VERIFICATION <i>Vassilis Papanikolaou, Georgia Thermou</i> C 865 ANALYTICAL AND EXPERIMENTAL INVESTIGATION ON EXPLOITING PREFABRICATION IN PIER CONSTRUCTION OF PRECAST BRIDGES <i>Nikolaos G. Orologopoulos, Vasileios G. Pilitsis, Konstantinos Katirtzoglou, Ioannis A. Tegos, Kosmas-Athanasios Stylianidis</i> C 941 MODELING AND IDENTIFICATION OF THE DYNAMIC RESPONSE OF AN EXISTING THREE-STORY STEEL STAIRWAY <i>Triantafyllos Makarios, George Manolis, Ioanna Karetsou, Michael Papanicolaou, Vasiliki Terzi</i> C 971 INVESTIGATION OF NOVEL ANCHORING DEVICES FOR OPEN HOOP CFRP STRIPS BONDED ON R/C ELEMENTS UNDER MONOTONIC AND CYCLIC LOADING-UNLOADING CONDITIONS <i>Konstantinos B. Katakalos, George C. Manos</i> C 1280 MULTIPLE SUPPORT EXCITATION OF A BRIDGE BASED ON BEM ANALYSIS OF THE SUBSOIL-STRUCTURE-INTERACTION PHENOMENON <i>Ioanna-Kleoniki Fontara, Magdalini Titirla, Frank Wuttke, Asimina Athanatopoulou, George Manolis, Anastasios Sextos</i>	Room 4
Wed 14:30 – 16:30	COMPDYN MS 18: SEISMIC ANALYSIS METHODS FOR EXISTING BRIDGES PRIOR TO AND AFTER RETROFITTING - II Minisymposium Organizer: A. Kappos Chair: P. Delgado C 1072 METHODOLOGY FOR THE DEVELOPMENT OF STRUCTURE SPECIFIC FRAGILITY CURVES FOR BRIDGES IN A ROADWAY NETWORK <i>Sotiria Stefanidou, Andreas Kappos</i> C 1559 SEISMIC RETROFITTING OF R/C BRIDGES WITH THE USE OF UNBONDED TENDONS <i>Olga Markogiannaki, Ioannis Tegos</i> C 1605 EXPERIMENTAL AND NUMERICAL ANALYSIS ON THE CYCLIC BEHAVIOR OF BRIDGE PIERS WITH AND WITHOUT CFRP RETROFIT <i>Pedro Delgado, Frutuoso Sousa, Patrício Rocha, António Arêde, Nelson Vila Pouca, Aníbal Costa, Raimundo Delgado</i>	Room 5

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	COMPDYN RS 2: CONSTITUTIVE MODELLING UNDER EARTHQUAKE LOADING C 756 CYCLIC BEHAVIOR OF MASONRY IN FILLED R.C. FRAMES: GLOBAL MODELING OF MASONRY <i>Alessandro Vittorio Bergami, Camillo Nuti</i> C 1052 A MULTISCALE APPROACH FOR MODELING OF INFILLED FRAMES <i>Andrea Fiore, Francesco Porco</i> C 1136 MACRO-MODEL CALIBRATION OF A STRONG CLAY MASONRY INFILL TO IN-PLANE CYCLIC TESTS <i>Milad Oliae, Paolo Morandi, Guido Magenes</i> C 1184 SHEAR HYSTERESIS MODEL FOR REINFORCED CONCRETE ELEMENTS INCLUDING THE POST-PEAK RANGE <i>Dimitrios K. Zimos, Panagiotis E. Mergos, Andreas J. Kappos</i>	
Wed 14:30 – 16:30	COMPDYN MS 10: CONTROL OF VIBRATIONS IN CIVIL ENGINEERING BY PASSIVE, ACTIVE AND SEMI-ACTIVE DEVICES <i>Minisymposium Organizers: R. Barros, A. Baratta</i> <i>Chair: R. Barros</i> C 3112 SEISMIC RESPONSE REDUCTION OF BUILDING STRUCTURES USING A SEMI-ACTIVE CONTROL SYSTEM BASED ON A BRAIN EMOTIONAL LEARNING CONTROLLER <i>Manuel T. Braz-César, Rui C. Barros</i> C 3111 NEURO-FUZZY MODELING OF A SPONGE-TYPE MR DAMPER <i>Manuel T. Braz-César, Rui C. Barros</i> C 878 EFFECTIVENESS OF TUNED MASS DAMPER IN DAMAGE REDUCTION OF BUILDING UNDER FAR-FIELD GROUND MOTIONS <i>Chayut Ngamkhanong, Tospol Pinkaew</i> COMPDYN RS 11: PERFORMANCE-BASED EARTHQUAKE ENGINEERING - III C 548 A GROUPED MAXIMAL CONDITIONED SPECTRAL ORDINATE METHOD (MCSO) FOR GROUND MOTION SELECTION <i>Ahmad Nicknam, Ehsan Yousefi Dadras, Mohammad Javad Asgari</i> C 1316 GRAPHICAL DYNAMIC TRENDS FOR EARTHQUAKE INCIDENCE RESPONSE OF PLAN-ASYMMETRIC SYSTEMS <i>M. Faggella, R. Gigliotti, G. Mezzacapo, E. Spacone</i> C 1317 SIGNIFICANCE OF EARTHQUAKE INCIDENCE ON RESPONSE OF PLAN-IRREGULAR INFILLED R/C BUILDINGS <i>M. Faggella, G. Mezzacapo, R. Gigliotti, E. Spacone</i>	Room 6

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Wed 14:30 – 16:30	COMPDYN RS 17: SOUND AND VIBRATION - II Chair: D. Chronopoulos C 480 WAVE BASED DESIGN OPTIMISATION OF COMPOSITE STRUCTURES OPERATING IN DYNAMIC ENVIRONMENTS <i>Dimitrios Chronopoulos, Manuel Collet, Mohamed Ichchou, Ioannis Antoniadis</i> C 1465 DRY FRICTION INFLUENCE ON STRUCTURE DYNAMICS <i>Marco Claudio De Simone, Domenico Guida</i> C 1545 ANALYSIS OF VIBRO-ACOUSTIC PROPAGATION IN A MOBILE SCREW COMPRESSOR FOR THE DETERMINATION OF EMITTED ACOUSTIC POWER RADIATED OUTSIDE ITS HOUSING <i>Jan Dupal, Jan Vimmer, Vítězslav Adámek, Ondřej Bublík</i> C 1601 INTERNAL PARAMETRIC RESONANCE AND AEROELASTIC EFFECTS FOR LONG-SPAN SUSPENSION BRIDGES <i>Raffaele Ardito, Antonio Capsoni, Andrea Guerrieri</i> C 461 DISPERSION ANALYSIS OF ACOUSTIC WAVES IN FLUID MEDIA DISCRETIZED BY ENERGY-ORTHOGONAL FINITE ELEMENTS <i>Francisco José Brito Castro</i>	Room 7
Wed 14:30 – 16:30	UNCECOMP RS 1: NUMERICAL METHODS FOR LARGE-SCALE STOCHASTIC FINITE ELEMENT APPLICATIONS - II Chair: D. Giagopoulos U 689 FINITE ELEMENT MODEL UPDATING OF GEOMETRICALLY COMPLEX STRUCTURE THROUGH MEASUREMENT OF ITS DYNAMIC RESPONSE <i>Dimitrios Giagopoulos, Alexandros Arailopoulos</i> U 735 GREEDY ANCHORED DECOMPOSITION STRATEGIES FOR A CLASS OF HIGH-DIMENSIONAL PROBLEMS IN UNCERTAINTY QUANTIFICATION <i>Prasanth Nair, Christophe Audouze, Mathew Li</i> U 806 SURROGATE MODEL WITH CONSERVATIVE ERROR MEASURE FOR THE STAGNATION HEAT FLUX IN ATMOSPHERIC ENTRY FLOWS <i>Andrea Cortesi, Thierry Magin, Pietro Marco Congedo</i> U 850 A CONCEPT FOR SENSITIVITY ANALYSIS AND PARAMETER CALIBRATION OF COUPLED NONLINEAR PDES AND ITS APPLICATION TO AN INDUSTRIAL GLASS FORMING MODEL <i>Chettapong Janya-Anurak, Thomas Bernard, Jürgen Beyerer</i>	Room 8

DAY 3 - WEDNESDAY, MAY 27

Wed 14:30 – 16:30	COMPDYN RS 19: WAVE PROPAGATION AND SOIL DYNAMICS - III Chair: T. Manitaras C 1266 APPLICATION OF NEW DAMAGE INDICATOR-BASED SEQUENTIAL LAW TO ESTIMATE FATIGUE LIFE OF OFFSHORE JACKET STRUCTURES <i>Redion Kajolli, Sudath C. Siriwardane, Ove T. Gudmestad</i> C 760 ANALYSIS OF GROUND MOTION ALONG A TOPOGRAPHIC RELIEF: THE CERRETO DI SPOLETO CASE-HISTORY (CENTRAL ITALY). Dario Rinaldis, <i>Salomon Hailemikael, Antonella Paciello, Guido Martini</i> C 1094 EXAMINING THE INITIATION MECHANISMS OF STATIC AND DYNAMIC LIQUEFACTION USING THREE DIMENSIONAL DEM SIMULATIONS Zitao Zhang, <i>Yu-Hsing Wang</i> C 2076 FINITE ELEMENT SIMULATION OF WAVE PROPAGATION IN NONLINEAR SOILS Theofilos Manitaras, <i>Manolis Papadrakakis</i>	Room 9
Wed 14:30 – 16:30	COMPDYN MS 22: ACCURACY AND COMPUTATIONAL EFFICIENCY OF STRUCTURES DYNAMIC/SEISMIC ANALYSES - II Minisymposium Organizers: A. Soroushian, A. Panteli Chair: A. Soroushian, G. Stavroulakis C 3582 ENHANCING THE PERFORMANCE OF ITERATIVE SOLVERS IN THE CONTEXT OF STRUCTURAL DYNAMICS G. Stavroulakis, <i>A. Karatarakis, M. Papadrakakis</i> C 1645 USING RIGID BLOCK MODEL WITH MASS ECCENTRICITY IN DYNAMIC ANALYSIS OF HOSPITALS - EQUIPMENT UNDER SIMULTANEOUS EFFECT OF HORIZONTAL AND VERTICAL GROUND EXCITATIONS <i>Mahmood Hosseini, Amir Mahmoudzadeh, Kaveh Nezamisavojbolaghi</i> C 3505 A NEW EXCITATION STEP SIZE ENLARGEMENT TECHNIQUE FOR SEISMIC ANALYSES Aram Soroushian C 1647 USING ENERGY - BASED PUSHOVER METHODS IN SEISMIC EVALUATION OF STEEL BRACING STRUCTURES Kaveh Nezamisavojbolaghi C 1144 IMPLEMENTATION OF A SIMPLE RELIABLE ERROR EVALUATION METHOD IN STATIC/DYNAMIC FINITE ELEMENT ANALYSIS OF FRAMES <i>Goodarz Ahmadi, Aram Soroushian, Bahador Ziaemehr</i> C 1580 ON THE PERFORMANCE OF A TECHNIQUE TO ACCELERATE TIME INTEGRATION WHEN APPLIED TO SPACE STRUCTURES ANALYSES Alireza Garakaninezhad, <i>Reza Kamyab Moghadas</i>	Room 10

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