



SECED 2019 PROGRAMME

Monday 9 th September 2019						
08.30	Registration opens					MAIN FOYER
09.00-09.15	Opening of Conference					AUDITORIUM
09.15-09.50	<p align="center">Keynote speaker: Professor Ahmed Elghazouli <i>Towards improved seismic design procedures for steel structures</i> Chair: Ian Smith</p>					AUDITORIUM sponsored by  <small>Member of the SNC-Lavalin Group</small>
09.55-10.30	<p align="center">Keynote speaker: Professor Jack Baker <i>Advances in simulating post-earthquake recovery for performance-based engineering and resilience</i> Chair: Damian Grant</p>					AUDITORIUM
10.30-11.00	Coffee break, exhibition and poster viewing					1 st FLOOR
11.00-13.00	SYMPOSIUM SESSION 1 sponsored by					
Lecture Theatre 004	Seminar Room 2006	Seminar Room 2007	Seminar Room 2017	Seminar Room 2016	Seminar Room B006	Seminar Room 2014
Seismic design & analysis: Steel <i>Chairs: Fabio Freddi & Ahmed Elghazouli</i>	Seismic assessment & retrofitting <i>Chairs: Georgia Thermou & Iman Hajirasouliha</i>	Soil-structure interaction <i>Chairs: Andreas Nielsen & Andrew Thomson & George Mylonakis</i>	Fragility, vulnerability & infrastructure resilience <i>Chairs: Vitor Silva & Stergios Mitoulis</i>	Earthquake disaster risk reduction, reconnaissance & recovery <i>Chairs: Mark Scorer & Matthew Free</i>	Seismic protective devices <i>Chairs: Sinan Acikgoz & Enrico Tubaldi</i>	Induced seismicity <i>Chairs: Chris Browitt & Alice Walker</i>
<p>1.1 EUROPEAN PREQUALIFICATION OF JOINT SOLUTIONS FOR STEEL STRUCTURES SUBJECTED TO SEISMIC ACTIONS - BOLTED UNSTIFFENED EXTENDED END-PLATE BEAM-TO-COLUMN JOINTS <i>J F DEMONCEAU</i></p> <p>1.2 EC8 VS ASCE7 RULES ON P-DELTA EFFECTS: SOME APPLICATIONS TO STEEL MOMENT RESISTING FRAMES <i>R TARTAGLIA</i></p> <p>1.3 SEISMIC BEHAVIOUR AND DESIGN OF STEEL REDUCED BEAM SECTION CONNECTIONS <i>A ELGHAZOULI</i></p> <p>1.4 CYCLIC MODELLING OF COMPOSITE STEEL-CONCRETE MEMBERS <i>B SAHIN</i></p> <p>1.5 OPTIMIZED DESIGN OF MOMENT RESISTING FRAMES WITH SLENDER STEEL AND COMPOSITE SECTIONS IN MODERATE SEISMIC AREAS <i>H DEGEE</i></p> <p>1.6 TOWARDS MORE REALISTIC IDEALIZATIONS OF BRACE-TOFRAME CONNECTIONS FOR THE DESIGN OF STEEL CBFS TO EC8 <i>A SILVA</i></p>	<p>2.1 THE ROLE OF AGEING AND CORROSION DAMAGE IN THE RELEVANCE OF SEISMIC ASSESSMENT <i>S PANTAZOPOULOU</i></p> <p>2.2 EXPERIMENTAL AND NUMERICAL STUDY OF AN INNOVATIVE INTEGRATED SEISMIC AND ENERGY RETROFITTING SYSTEM FOR MASONRY WALLS USING TEXTILE REINFORCED MORTARS COMBINED WITH THERMAL INSULATION <i>K KARLOS</i></p> <p>2.3 A COMPARATIVE EXPERIMENTAL STUDY OF STRENGTHENED COLUMNS USING STEEL REINFORCED GROUT (SRG) JACKETING <i>A KATSAMAKAS</i></p> <p>2.6 SHEAR BOND BEHAVIOUR OF MULTI-PLY STEEL REINFORCED GROUT COMPOSITES FOR THE STRENGTHENING OF CONCRETE STRUCTURES <i>S ALOTAIBI</i></p> <p>2.5 SEISMIC RETROFIT OF BEAM COLUMN JOINTS FROM FRP SYSTEMS TO NOVEL FRCC JACKETING <i>C DEL VECCHIO</i></p> <p>23.1 EVALUATION OF SEISMIC PERFORMANCE OF EXISTING STEEL MOMENT-RESISTING FRAMES: A CASE STUDY <i>L DI SARNO</i></p>	<p>3.1 ACCOUNTING FOR GROUND MOTION DURATION IN THE NONLINEAR SOIL-PILE-STRUCTURE INTERACTION ANALYSIS OF EXTENDED PILE-SHAFT-SUPPORTED BRIDGES <i>A TOMBARI</i></p> <p>3.2 ANALYSIS OF THE SEISMIC RESPONSE OF EARTH DAMS <i>M SPYRIDIS</i></p> <p>3.3 COUPLED SOIL-STRUCTURE INTERACTION ANALYSIS AT THE PORT OF NADOR WEST MED <i>H ABDULRAZAQ</i></p> <p>3.5 COUPLED APPROACH TO DSSI USING TIME DOMAIN AND FREQUENCY DOMAIN - AN EXAMPLE <i>B GHOSH</i></p> <p>3.6 SEISMIC RISK ASSESSMENT OF TYPICAL PORT RC FRAME BUILDINGS INCLUDING SSI AND SOIL LIQUEFACTION <i>S KARAFAGKA</i></p>	<p>4.1 GAUSSIAN PROCESS REGRESSION FOR SEISMIC FRAGILITY ASSESSMENT OF BUILDING PORTFOLIOS <i>R GENTILE</i></p> <p>4.2 FRACTURE RISK ASSESSMENT OF WELDED COLUMN SPLICES IN NEAR-FAULT REGIONS <i>B SONG</i></p> <p>4.3 ESTIMATING SEISMIC FRAGILITY OF A SEMI-BURIED SQUARE RC WATER TANK USING EXPERT JUDGMENT <i>I IOANNOU</i></p> <p>4.4 EXPLICIT COLLAPSE PREDICTION IN THE DEVELOPMENT OF FRAGILITY FUNCTIONS FOR AN UNREINFORCED MASONRY BUILDING WITH NON-LINEAR FINITE ELEMENT MODELS <i>J DENNIS</i></p> <p>4.5 SEISMIC VULNERABILITY OF NON-STRUCTURAL COMPONENTS: FROM TRADITIONAL SOLUTIONS TO INNOVATIVE LOW-DAMAGE SYSTEMS <i>S BIANCHI</i></p> <p>4.6 TIME-DEPENDENT SEISMIC RISK OF REGULAR HIGHWAY BRIDGES UNDER THE EFFECT OF STRUCTURAL DETERIORATION <i>T YILMAZ</i></p>	<p>5.1 A SEISMIC RISK REDUCTION STRATEGY FOR THE KYRGYZ REPUBLIC <i>K COATES</i></p> <p>5.2 THE ROAD TO RECOVERY – UNDERSTANDING CHALLENGES AFFECTING SCHOOL RECONSTRUCTION IN NEPAL <i>L WESTOBY</i></p> <p>5.3 IMPROVING THE SAFETY AND RESILIENCE OF SCHOOLS: A DIAGNOSTIC APPROACH <i>H GRVC</i></p> <p>5.4 INVESTIGATIONS ON THE RESTORATION AND SEISMIC ENHANCEMENT OPTIONS FOR THE JAISEDEWAL TEMPLE AFTER THE GORKHA EARTHQUAKE IN NEPAL <i>I E BAL</i></p> <p>5.5 THE APRIL 16 2016 MUISNE EARTHQUAKE (ECUADOR) - BEHAVIOUR OF RC FRAME WITH MASONRY INFILL, AND RECOMMENDATIONS FOR NEW CONSTRUCTION <i>S KAMINSKI</i></p> <p>5.6 OBSERVATIONS FROM THE EEFIT-TDMRC MISSION TO SULAWESI, INDONESIA TO INVESTIGATE THE 28TH SEPTEMBER 2018 CENTRAL SULAWESI EARTHQUAKE <i>T ROSSETTO</i></p>	<p>6.1 EXPERIENCE WITH FRICTION DAMPERS IN NEW AND EXISTING STRUCTURES <i>M ANGELEDIS</i></p> <p>17.2 ENHANCED OPTIMAL TUNED MASS-DAMPER-INERTER PERFORMANCE FOR SEISMIC PROTECTION OF MULTISTOREY BUILDINGS VIA TOP-STOREY SOFTENING <i>S SEDHAIN</i></p> <p>6.3 SEISMIC ISOLATION DESIGN FOR CONTINUED FUNCTIONALITY <i>A MOKHA</i></p> <p>6.4 DOWNTIME ASSESSMENT OF BASE-ISOLATED LIQUID STORAGE TANKS <i>K BAKALIS</i></p> <p>6.5 LEAD RUBBER BEARINGS: A SOLUTION FOR THE SEISMIC PROTECTION OF STRATEGIC BUILDINGS <i>G BRESAOLA</i></p> <p>6.6 BIAXIAL TESTING FACILITIES FOR ANTI-SEISMIC DEVICES <i>A MUHR</i></p>	<p>7.1 INDUCED SEISMICITY IN THE UK IS COMMONPLACE <i>C BROWITT</i></p> <p>7.2 SEISMICITY INDUCED BY HYDRAULIC FRACTURING OPERATIONS AT PRESTON NEW ROAD, LANCASHIRE, 2018. <i>B BAPTIE</i></p> <p>7.3 UNDERSTANDING INDUCED SEISMICITY HAZARD RELATED TO SHALE GAS EXPLORATION IN THE UK <i>G CREMEN</i></p> <p>7.4 FAULT REACTIVATION VIA PRE-EXISTING FRACTURE NETWORKS DURING HYDRAULIC FRACTURING <i>J VERDON</i></p> <p>7.5 THE 2018-2019 NEWDIGATE, SURREY, UK EARTHQUAKE SEQUENCE: INDUCED BY NEARBY OILFIELD DEVELOPMENT/PRODUCTION, OR NOT? <i>S HICKS</i></p> <p>7.6 HOW FREQUENTLY DO SMALL-TO-MEDIUM MAGNITUDE EARTHQUAKES CAUSE DAMAGE AND CASUALTIES? <i>C NIEVAS</i></p>
13.00-14.00	Lunch					1 st FLOOR

14.00-14.35	Keynote speaker: Professor Eleni Chatzi <i>Towards self-aware infrastructure</i> Chair: Paul Doyle						AUDITORIUM
14.40-15.15	Keynote speaker: Ziggy Lubkowski <i>Performance based geotechnical earthquake engineering – How can we use it in practice?</i> Chair: Stavroula Kontoe						AUDITORIUM
15.15-15.45	Coffee break and poster viewing						1st FLOOR
15.45-17.45	SYMPOSIUM SESSION 2 sponsored by						JACOBS
Lecture Theatre 004	Seminar Room 2006	Seminar Room 2007	Seminar Room 2016	Seminar Room B006	Seminar Room 2017	Seminar Room 2014	
Seismic design & analysis: Steel <i>Chairs: Fabio Freddi & Ahmed Elghazouli</i>	Seismic design & analysis: General <i>Chairs: Paul Doyle & Damian Grant</i>	Seismic design & analysis: Bridges <i>Chairs: Andreas Kappos & Martin Williams</i>	Design for Nuclear Safety <i>Chairs: Tim Courtney & Richard Fowler</i>	Geotechnical earthquake engineering <i>Chairs: Paul Taylor & Stavroula Kontoe</i>	Catastrophe risk modelling for earthquakes <i>Chairs: Crescenzo Petrone & Tristan Lloyd</i>	Induced seismicity <i>Chairs: Alice Walker & Chris Browitt</i>	
<p>8.1 PROPOSALS FOR A MORE PRACTICAL SEISMIC DESIGN OF STEEL X-CBFS TO EC8 J CASTRO</p> <p>8.2 COLLAPSE AND DEMOLITION AFTERSHOCK ASSESSMENT OF POST-MAINSHOCK STEEL FRAMED BUILDINGS J RUIZ-GARCIA</p> <p>8.3 EXPOSED COLUMN BASE CONNECTIONS FOR MINIMIZING EARTHQUAKE-INDUCED RESIDUAL DEFORMATIONS IN STEEL MOMENT-RESISTING FRAMES H INAMASU</p> <p>8.4 EXTENDED END-PLATE RWS CONNECTIONS WITH PERFORATED BEAMS UNDER CYCLIC LADING C K LAU</p> <p>8.5 DESIGN AND ANALYSIS OF A STEEL SEISMIC RESILIENT FRAME EQUIPPED WITH SELF-CENTRING COLUMN BASES WITH FRICTION DEVICES E ELETTORE</p> <p>8.6 APPLICATION OF BUCKLING-ENABLED COMPOSITE BRACING (BECB) TO STEEL ROCKING FRAMES L KIBRIYA</p>	<p>9.1 ASSESSMENT OF POST-INSTALLED ANCHORS FOR SEISMIC STRENGTHENING OF RC FRAME STRUCTURES USING STEEL BRACING E STEHLE</p> <p>9.2 CRITICAL REVIEW OF THE LITERATURE AND STATE-OF-ART MODELS USED FOR THE ASSESSMENT OF THE DEGRADATION OF REINFORCED CONCRETE STRUCTURES EXPOSED TO CORROSION F PUGLIESE</p> <p>9.3 EXPERIMENTAL INVESTIGATION OF CYCLIC RESPONSE OF STAINLESS-STEEL REINFORCED CONCRETE COLUMNS S AFSHAN</p> <p>9.4 SEISMIC ASSESSMENT OF SUSPENDED CEILINGS THROUGH DYNAMIC NONLINEAR ANALYSES A PALMERI</p> <p>9.5 FRAGILITY FUNCTIONS FOR REINFORCED CONCRETE FRAMED BUILDINGS SUBJECTED TO EARTHQUAKE-INDUCED LANDSLIDE HAZARD G MILUCCIO</p> <p>9.6 DEFINITION OF DAMAGE LIMIT STATES FOR DEVELOPING ANALYTICAL TSUNAMI FRAGILITY FUNCTIONS M DEL ZOPPO</p>	<p>10.1 SEISMIC DESIGN OF BRIDGES: PRESENT AND FUTURE A KAPPOS</p> <p>10.2 DYNAMICS OF ASYMMETRIC ROCKING BRIDGES INCLUDING THE ABUTMENT CONTRIBUTION I THOMAIDIS</p> <p>10.3 ALIBEYKÖY AND KAGITHANE VIADUCTS: ADVANCED SEISMIC PROTECTION SOLUTIONS IN HIGH SEISMICITY REGION G BRESAOLA</p> <p>10.4 NUMERICAL ANALYSIS APPROACH BASED ON EFFECTIVE PIER STIFFNESS FOR BRIDGES WITH UNEQUAL PIER HEIGHTS N KARAMICHALIS</p> <p>10.5 SEISMIC RISK ASSESSMENT FOR STRUCTURAL UPGRADING OF RC BRIDGES IN INDONESIA M CRIPSTYANI</p> <p>10.6 FRAGILITY OF BRIDGES EXPOSED TO MULTIPLE HAZARDS AND IMPACT ON TRANSPORT NETWORK RESILIENCE S ARGYROUDIS</p>	<p>11.1 ASSESSING THE EFFECT OF EPISTEMIC UNCERTAINTY ON THE SURFACE RESPONSE FOR THE WYLFA NEWYDD NUCLEAR POWER PLANT IN ANGLESEY, UK A KOSKOSIDI</p> <p>11.2 OBJECTIVE QUANTIFICATION OF THE SEISMIC SOURCE MODEL FOR NUCLEAR SITES I MOSCA</p> <p>11.3 FRAGILITY ANALYSIS OF PRESTRESSED CONCRETE CONTAINMENT SUBJECTED TO SEVERE ACCIDENT CONDITIONS T LAN</p> <p>11.4 STRUCTURE PERFORMANCE ANALYSIS OF PRESTRESSED CONTAINMENT BY CONSIDERING TEMPERATURE AND SEISMIC EFFECT T LAN</p> <p>11.5 SEISMIC NON-LINEAR TIME HISTORY FINITE ELEMENT ANALYSIS OF GLOVEBOX TUNNEL SYSTEM S HORROCKS</p> <p>11.6 INCREASE OF SEISMIC RESISTANCE BY OPTIMIZATION OF THE SUPPORT CONCEPT S RIEDELMEIER</p>	<p>12.1 A CRITICAL COMPARISON BETWEEN STRESS AND ENERGY BASED METHODS FOR THE EVALUATION OF LIQUEFACTION POTENTIAL K LAU</p> <p>12.2 SOME STUDIES ON THE DESATURATION AND LIQUEFACTION RESISTANCE OF AIR DESATURATED SANDY SOIL D CHAVAN</p> <p>12.3 THE LRG SOFTWARE FOR ASSESSING RISKS RELATED TO EARTHQUAKE-INDUCED LIQUEFACTION, MITIGATION PLANNING, AND DECISION SUPPORT A MESLEM</p> <p>12.4 MONOTONIC AND CYCLIC RESPONSE OF TAILINGS SANDS D SOLANS ROA</p> <p>12.5 PHYSICAL MODELLING OF LATERAL SPREADING SOIL WITH AND WITHOUT PLANT ROOT ANALOGUES A BRENNAN</p> <p>12.6 SITE RESPONSE ANALYSIS FOR THE HISTORICAL PENINSULA OF ISTANBUL T TETIK</p>	<p>13.1 EARTHQUAKE CATASTROPHE MODELS: AN END USER PERSPECTIVE J WARDMAN</p> <p>13.2 USING EARTHQUAKE CATASTROPHE MODELS FOR REINSURANCE PRICING: CURRENT APPROACHES, CHALLENGES AND BENEFITS FROM CATASTROPHE MODEL EVALUATIONS A MOUYIANNOU</p> <p>13.3 BUILDING A BETTER CAT-TRAP: DEPLOYING FOOTPRINTS FROM 3D GROUND MOTION SIMULATIONS AND HARNESSING COULOMB STRESS TRANSFER IN CAT MODELS WILL PROFOUNDLY CHANGE (RE)INSURANCE DECISION MAKING M PAPASPILIOU</p> <p>13.4 VALIDATING PROBABILISTIC EARTHQUAKE RISK MODELS: TESTS THAT TELL YOU IF YOU'RE WRONG, BUT NOT IF YOU'RE RIGHT V SILVA</p> <p>13.5 THE SIGNIFICANCE OF ULTRA-LIQUEFACTION AS A DISTINCT DAMAGE MECHANISM FOR LOSS MODELLING AND FOR CONTAMINATING FIELD OBSERVATIONS OF EARTHQUAKE IMPACTS R MUIR-WOOD</p> <p>13.6 EMPIRICAL CONSEQUENCE CURVES FOR LONG-SPAN-BEAM BUILDINGS USING 2012 EMILIA-ROMAGNA EARTHQUAKE LOSS DATABASE L ROSSI</p>	<p>14.1 INDUCED SEISMICITY AT THE UNITED DOWNS DEEP GEOTHERMAL POWER PROJECT P LEDINGHAM</p> <p>14.2 SETTING UP TRAFFIC LIGHT SYSTEM THRESHOLDS FOR GEOTHERMAL STIMULATION IN HELSINKI, FINLAND T ADER</p> <p>14.3 WHY TRAFFIC LIGHT SYSTEMS ARE NOT GOOD ENOUGH FOR MANAGING INDUCED SEISMICITY S WIEMER</p> <p>14.4 COMPUTATIONAL MODELLING OF DAMAGE ACCUMULATION IN UNREINFORCED MASONRY DUTCH CONSTRUCTIONS SUBJECTED TO INDUCED SEISMICITY V SARHOSIS</p> <p>14.5 LIABILITY AND DAMAGE CLAIM ISSUES IN INDUCED EARTHQUAKES: CASE OF GRONINGEN I E BAL</p> <p>Discussion</p>	
17.45	SESSIONS FINISH						
19.00-22.00	Conference dinner at Painted Hall						

SECED 2019 PROGRAMME – DAY 2

Tuesday 10th September 2019						
08.30	Registration opens					MAIN FOYER
09.00-09.35	Keynote speaker: Professor Dina D'Ayala <i>Cumulative damage to masonry structures due to repeated earthquakes and effectiveness of strengthening provisions</i> Chair: Robin Spence					AUDITORIUM
09.40-10.15	Keynote speaker: Professor Sinan Akkar <i>A ground motion model to estimate nonlinear deformation demands from a recent pan European strong motion database</i> Chair: Susanne Sargeant					AUDITORIUM
10.15-10.45	Coffee break and poster viewing					1 st FLOOR
10.45-12.45	SYMPOSIUM SESSION 3 sponsored by					
Lecture Theatre 004	Seminar Room 2016	Seminar Room B006	Seminar Room 2006	Seminar Room 2017	Seminar Room 2014	Seminar Room 2007
Seismic design & analysis: General Chairs: Paul Doyle & Damian Grant	Geotechnical earthquake engineering Chairs: Stavroula Kontoe, Susana Lopez-Querol	Seismic protective devices Chair: Enrico Tubaldi	Seismic design & analysis: concrete and codes Chairs: Edmund Booth & Panagiotis Mergos	Progress in urban and regional seismic risk assessment Chairs: Robin Spence & Luis Sousa	Seismic hazard & engineering seismology Chairs: Guillermo Aldama-Bustos & Karim Tarbali	EEFIT Session Chairs: Katherine Coates & Matthew Free
15.1 SEISMIC PERFORMANCE OF CYLINDRICAL LATTICE SHELLS A ELGHAZOULI 15.2 ULTIMATE SEISMIC PERFORMANCE OF DEGRADING STRUCTURES M BRAVO-HARO 15.3 INCORPORATING DURATION EFFECTS IN DESIGN COLLAPSE CAPACITY SPECTRA OF DUCTILE SYSTEMS M BRAVO-HARO 15.6 EFFECT OF HIGH-PASS CUT-OFF FREQUENCY ON STRUCTURAL RESPONSE UNDER THE STRONG GROUND MOTION F S MALCIOGLU 15.4 NON-DIMENSIONAL PARAMETRIC ANALYSIS FOR THE SEISMIC RESPONSE OF DUAL MOMENT-RESISTING AND BUCKLING-RESTRAINED BRACED FRAMES F FREDDI	16.1 NUMERICAL SIMULATION OF OBSERVED LIQUEFACTION PHENOMENA FROM THE 2011 CHRISTCHURCH (NEW ZEALAND) EVENT S BERTELLI 16.2 A NOVEL TECHNIQUE FOR DEEP SCPTS IN CHALLENGING GROUND CONDITIONS A LESSI CHEIMARIOU 16.3 EXPERIMENTAL AND NUMERICAL EVALUATION OF COMPLEX SITE EFFECTS IN ARQUATA DEL TRONTO AFTER THE 2016 CENTRAL ITALY EARTHQUAKE S GIALLINI 16.4 SEISMIC RESPONSE OF WIND TURBINES ON CAISSON-TYPE FOUNDATIONS IN SOFT CLAY A BRENNAN 16.5 BOUNDING SURFACE PLASTICITY MODEL (PM4SAND): VERIFICATION AGAINST CENTRIFUGE TESTS S MARINATOU	17.1 SEISMIC CONTROL OF POST-TENSIONED ROCKING WALLS WITH INERTERS C MALAGA 6.2 SEISMIC PROTECTION OF THE MESSINA CATHEDRAL BELL TOWER THROUGH VIBRATING BARRIERS P CACCIOLA 17.3 MODELLING OF MASONRY INFILL WALLS WITH RUBBER JOINTS E TUBALDI 17.4 BIAXIAL STRESS-STRAIN MODEL FOR RUBBER IN SIMPLE SHEAR A MUHR 17.5 SEISMIC RESPONSE OF A R.C. STRUCTURE ISOLATED BY HDNR BEARINGS BY USING ADVANCED AND SIMPLIFIED MODELS L RAGNI 17.6 IMPROVING THE STRUCTURAL RESPONSE OF RC STRUCTURE WITH THE IMPLEMENTATION OF PASSIVE SYSTEMS - DAMPERS T ZAFIROV	18.2 STEEL AND CONCRETE HYBRID STRUCTURES: RECENT ADVANCEMENTS AND THEIR IMPLICATIONS FOR SEISMIC DESIGN F FREDDI 18.3 EVALUATION AND COMPARISON THE RISK AND UNIFORM PROBABILITY OF CONCRETE HIGH-RISE BUILDING WITH SHEAR WALLS COLLAPSE IN THE NEAR AND FAR FIELDS S ABDI-WITHDRAWN 18.4 PREPARING EUROCODE 8 FOR MID-21ST CENTURY SEISMIC ENGINEERS E BOOTH 18.5 FEASIBILITY STUDY OF LOW-DAMAGE TECHNOLOGY FOR HIGH-RISE PRECAST CONCRETE BUILDINGS J CIURLANTI 18.6 SUSTAINABLE SEISMIC DESIGN OF RC FRAMES WITH STRUCTURAL OPTIMIZATION TECHNIQUES P MERGOS	19.1 UNDERSTANDING EARTHQUAKE RESILIENCE IN CHILE: THE PROS AND CONS OF SAFE BUILDINGS F RIVERA 19.2 RE-THINKING THE REGION: SYSTEMATIC EVALUATION OF RESIDENTIAL LOCATION CHOICE UNDER DISASTER RISK K VALECKAITE 19.3 EARTHQUAKE DAMAGE AND LOSS MODEL FOR THE CITY OF GUWAHATI, ASSAM, INDIA J PATHAK 19.4 VULNERABILITY OF CASE-STUDY REINFORCED CONCRETE FRAMES TO MAINSHOCK-AFTERSHOCK SEQUENCES C GALASSO 19.5 IMPACT OF TIME-DEPENDENT HAZARD MODELLING ON PORTFOLIO LOSS ASSESSMENT C FORTUNO 19.6 MESHED-BASED SCENARIO SIMULATION TO EVALUATE THE SEISMIC RESISTANT CAPACITY SUBJECTED TO VARIOUS LEVELS OF EXCITATIONS FOR METROPOLITAN CITIES B WU	20.1 EVALUATING GROUND MOTION PREDICTION EQUATIONS FOR THE NORTH SEA, WITH CONSIDERATION OF INDUCED SEISMICITY C BROOKS 20.2 SEISMIC HAZARD ASSESSMENT FOR THE WYLFA NEWYDD NUCLEAR POWER PLANT Z LUBKOWSKI 20.3 ON THE GROUND-MOTION DURATION OF UK EARTHQUAKES G ALDAMA-BUSTOS 20.4 REVISING THE SEISMIC HAZARD MAPS FOR THE UK I MOSCA 20.5 ESTIMATION OF KAPPA-SITE FOR THE WYLFA NEWYDD PSHA M VILLANI 20.6 FACILITATING A GROUND MOTION RECORD SELECTION APPROACH BASED ON MULTIOBJECTIVE OPTIMIZATION K Tsalouchidis	28.1 A REVIEW OF EEFIT MISSIONS OVER TIME 1983 TO 2019 M FREE 28.2 LESSONS FROM EARTHQUAKE FIELDWORK FOR SEISMIC RETROFIT DESIGN K COATES 28.3 THE REWARDS OF EARTHQUAKE ENGINEERING – DIFFERENCES BETWEEN CHRISTCHURCH AND GORKHA EARTHQUAKES S WILKINSON 28.4 LESSONS LEARNED FROM POST TSUNAMI FIELDWORK BY EEFIT J MACABUAG 28.5 THE BENEFIT OF RETURN MISSIONS FOR A BETTER UNDERSTANDING OF BUILDING'S BEHAVIOUR UNDER REPEATED SHAKINGS: THE CASE OF NORCIA - ITALY V PUTRINO 28.6 POST-EARTHQUAKE BUILDING SURVEYS TO DERIVE FRAGILITY FUNCTIONS FOR USE IN SEISMIC RISK ASSESSMENTS V NOVELLI

12.45-13.45	Lunch					1st FLOOR
13.45-14.20	Keynote speaker: Professor Ioannis Anastasopoulos <i>Widening of existing motorway bridges: can pilegroup retrofit be avoided?</i> Chair: Barnali Ghosh					AUDITORIUM
14.20-15.00	Coffee break and poster viewing					1st FLOOR
15.00-17.30	SYMPOSIUM SESSION 4					
Lecture Theatre 004	Seminar Room B006	Seminar Room 2017	Seminar Room 2016	Seminar Room 2007	Seminar Room 2006	Seminar Room 2014
Seismic design & analysis: Timber, Masonry & Heritage Chairs: Christian Malaga & Laura Hulme	Blast, Impact and Vibration Chairs: Piroozan Aminosehe & Andrew Morrison	Seismic assessment & retrofitting Chairs: Georgia Thermou & Maurizio Guadagnini	Fragility, vulnerability & infrastructure resilience Chairs: Sean Wilkinson, Stergios Mitoulis & Vitor Silva	Vibration serviceability Chairs: Ian G Smith & Dave Cotton	Risk assessment in developing countries Chairs: Carmine Galasso, Flavia De Luca & Ricardo Monteiro	Seismic hazard & engineering seismology Chairs: Susanne Sargeant & Angeliki Lessi-Cheimariou
<p>21.1 REHABILITATION OF 20TH CENTURY CONCRETE HERITAGE BUILDINGS: THE CASE STUDY OF THE MUNICIPAL MARKET IN NICOSIA, CYPRUS A GEORGIOU</p> <p>21.2 ARCHAEOSEISMOLOGY OF ARCHITECTURE: A NEW TOOL FOR SEISMIC RISK MITIGATION? M GANZ</p> <p>21.3 SEISMIC DEMANDS IN MULTI-STORY CROSS-LAMINATED TIMBER (CLT) STRUCTURES C DEMIRCI</p> <p>21.4 SIMULATING THE DYNAMIC PERFORMANCE OF TYPICAL URM CAVITY-WALL SYSTEMS BY THE APPLIED ELEMENT METHOD A PENNA</p> <p>21.5 ASSESSING THE RELIABILITY OF THE EQUIVALENT-FRAME IDEALISATION OF URM FAÇADES WITH IRREGULAR OPENING LAYOUTS BY COMPARISON WITH DISCRETE MICRO-MODELS A PENNA</p> <p>21.6 PERFORMANCE BASED DESIGN FOR POST-TENSIONED TIMBER FRAMES A MILIZIANO</p> <p>21.7 PARAMETRIC STUDY FOR SHEAR AND FLEXURAL SIMPLIFIED FORMULATIONS FOR SPANDRELS IN UNREINFORCED MASONRY (URM) ELEMENTS H AYOUBY</p>	<p>22.1 USE OF SHAPE MEMORY ALLOYS TO IMPROVE STRUCTURAL RESILIENCE FOR EXTREME LOADING CONDITIONS S GUPTA</p> <p>22.2 MEASURED CHANGES IN THE NATURAL FREQUENCY OF OFFSHORE WIND TURBINES WITH MONOPILE FOUNDATIONS N HUCKER</p> <p>22.3 BENDING CAPACITY OF CRACKED LAMINATED GLASS PANELS UNDER BLAST LOADING S C ANGELIDES</p> <p>22.4 DEVELOPING FINITE ELEMENT MODELS FOR REINFORCED CONCRETE IMPACT ASSESSMENT IN UK ABWR NUCLEAR POWER PLANT W LI</p> <p>22.5 GAS EXPLOSION PROTECTION FOR AEROSOL FILLING ROOMS - FULL SCALE TESTING AND ANALYTICAL VALIDATION A NELSON</p> <p>22.6 HONEYCOMB IMPACT ENERGY ABSORBER - ASSESSMENT AND VALIDATION E STODDART</p> <p>22.7 TRANSMISSION OF FOUNDATION VIBRATIONS H SU</p> <p>22.8 THE RESPONSE OF PLATES UNDER NON-UNIFORM IMPULSIVE LOADS S RIGBY</p>	<p>2.4 STEEL-REINFORCED GROUT SPIRAL (SRGS) CONFINEMENT OF CONCRETE G THERMOU</p> <p>23.3 ASSESSMENT OF CONFINED MASONRY SCHOOL BUILDINGS IN GUWAHATI, INDIA A PARAMMAL VATTERI</p> <p>23.4 TIMBER-MASONRY COMPOSITE SYSTEMS FOR RETROFIT OF UNREINFORCED MASONRY WALL O IURIORIO</p> <p>23.6 ASSESSMENT OF EXISTING UNREINFORCED LOW-PERFORMANCE CONCRETE (LPC) WALLS TOWARDS THEIR RETROFIT R EID</p> <p>23.7 COMPARATIVE ANALYSIS AND SEISMIC ASSESSMENT OF A TYPICAL SIX STORY RC STRUCTURE FOR THE SEISMIC CONDITIONS OF SKOPJE - WITHDRAWN J TRAJCHEVSKI</p> <p>23.8 OPTIMIZATION OF MODAL RESPONSE SPECTRUM ANALYSIS METHOD FOR EXISTING BUILDING ASSESSMENT OF UNREINFORCED MASONRY BUILDINGS IN GRONINGEN J MUNOZ-BARRANTES</p>	<p>24.1 SEISMIC CERTIFICATION OF UNANCHORED COMPONENTS: RELIABILITY ASSESSMENT OF THE ICC-ES AC156 PROTOCOL D D'ANGELA</p> <p>24.2 EMPIRICAL FRAGILITY CURVES OF MARCHE REGION CHURCHES FROM THE CENTRAL ITALY SEISMIC SEQUENCE 2016 C CANUTI</p> <p>24.3 A NONLINEAR STATIC PROCEDURE FOR THE TSUNAMI DESIGN OF A REINFORCED CONCRETE BUILDING TO THE ASCE 7 STANDARD M BAIGUERA</p> <p>24.4 MIXED PROBABILISTIC SEISMIC DEMAND MODELS FOR FRAGILITY ASSESSMENT A CHATZIDAKI</p> <p>24.5 VULNERABILITY ASSESSMENT OF RC STRUCTURES INCLUDING NONLINEAR SOIL-STRUCTURE INTERACTION EFFECTS C PETRIDIS</p> <p>24.6 DEVELOPMENT OF ANALYTICAL FRAGILITY AND VULNERABILITY FUNCTIONS OF LARGE-PANEL RESIDENTIAL BUILDINGS TYPICAL OF BULGARIA A ANDONOV</p> <p>24.7 DECISION SUPPORT FOR ROAD INFRASTRUCTURE RESILIENCE: THE PANOPTIS PERSPECTIVE D VAMATSIKOS</p> <p>24.8 ENHANCING THE RESILIENCE OF LOW-RISE BUILDINGS: A NEW ZEALAND PERSPECTIVE G GRANELLO</p>	<p>25.1 PARAMETRIC ANALYSIS OF COMPOSITE FLOOR SYSTEMS UNDER FOOTFALL-INDUCED VIBRATIONS I NUZZO</p> <p>25.2 A NOVEL APPROACH FOR THE CALCULATION AND PRESENTATION OF SECONDARY RESPONSE SPECTRA C PEARCE</p> <p>25.3 OPEN-SOURCE LOW-COST SENSORS FOR VIBRATION MONITORING M BRAVO-HARO</p> <p>25.4 VSIMULATORS: HUMAN FACTORS SIMULATION FOR MOTION AND SERVICEABILITY IN THE BUILT ENVIRONMENT J BROWNJOHN</p> <p>25.5 DYNAMIC PERFORMANCE OF ROCK LIGHTHOUSES DUE TO EXTREME BREAKING WAVE LOADS J BROWNJOHN</p> <p>25.6 MANAGING UNCERTAINTY IN MODAL PARAMETER ESTIMATION FROM AMBIENT VIBRATION MEASUREMENTS J BROWNJOHN</p> <p>25.7 RESULTS OF ISTRUCTURE 2015 SURVEY OF PRACTITIONERS ON VIBRATION SERVICEABILITY A PAVIC</p>	<p>26.1 POUNDING IN NEPALESE SCHOOL BUILDINGS T CROSS</p> <p>26.2 N. MACEDONIAN BRIDGE EXPOSURE DATABASE AND ITS RELATION TO THE SEISMIC HAZARD ESTIMATES V SESOV</p> <p>26.3 EARTHQUAKE AND TSUNAMI RISK PRIORITISATION OF INDONESIAN SCHOOLS THROUGH RAPID VISUAL SURVEY C GALASSO</p> <p>26.4 ON THE USE OF OPEN-SOURCE LOW-COST VIBRATION SENSING TECHNOLOGIES FOR SEISMIC ASSESSMENT IN URBAN AREAS T LEE-LEWIS</p> <p>26.5 SHEDDING SOME LIGHT ON MULTI-CRITERIA DECISION MAKING FOR SEISMIC RETROFITTING OF RC BUILDINGS R GENTILE</p> <p>26.6 NUMERICAL SEISMIC PERFORMANCE ASSESSMENT OF PREEARTHQUAKE STONE MASONRY RESIDENTIAL BUILDING TYPOLOGY IN LIGHT OF 2015 NEPAL EARTHQUAKE R K ADHIKARI</p> <p>26.7 SEISMIC RISK MITIGATION PLAN FOR COUNTRIES IN THE EAST AFRICAN RIFT. CASE STUDY: SALIMA, MALAWI V NOVELLI</p> <p>26.8 DETERMINISTIC ASSESSMENT OF SEISMIC RISK IN CONSTANTINE CITY, NORTHEAST ALGERIA H MOULOUD</p>	<p>27.1 PROBABILISTIC SEISMIC HAZARD ANALYSIS IN NEW ZEALAND USING PHYSICS-BASED GROUND MOTION SIMULATION METHODOLOGY K TARBALI</p> <p>27.2 SELECTION AND MODIFICATION OF REAL ACCELERATION TIME HISTORIES FOR NON-LINEAR SEISMIC EVALUATION IN THE UK NUCLEAR INDUSTRY F STRASSER</p> <p>27.3 PROBABILISTIC SEISMIC HAZARD ASSESSMENT BASED ON MONTE CARLO SIMULATIONS FOR MARMARA REGION, TURKEY I SIANKO</p> <p>27.4 CORRELATION MODELS FOR SIGNIFICANT DURATION OF ITALIAN STRONG-MOTION RECORDS C HUANG</p> <p>27.5 SPATIAL CORRELATION OF GROUND MOTIONS IN THE 2016-2017 CENTRAL ITALY SEISMIC SEQUENCE E SCHIAPPAPIETRA</p> <p>27.6 RECONSIDERING TYPICAL VALUES OF K0 FOR STABLE CONTINENTAL HARD ROCK O J KTENIDOU</p> <p>27.7 PRACTICALITIES, DECISIONS AND COMPROMISES IN THE DEVELOPMENT OF MODIFIED REAL TIME HISTORIES D NEWBY</p> <p>27.8 PROBABILISTIC SEISMIC HAZARD ANALYSIS OF A CO2 STORAGE PROSPECT USING THE NGA EAST GROUND MOTION MODELS B CARLTON</p>
17.30-17.45	Closing of Conference and presentation of awards					AUDITORIUM