

NOVEMBER, 21 - MONDAY - 14:00-16:00

ROOM CATARATAS DO IGUAÇÚ - Nonlinear analysis, stability and structural dynamics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10791	A COMPARISON OF THE EFFECTS OF NONLINEAR DAMPING ON THE FREE VIBRATION OF LAMINATED CIRCULAR CYLINDRICAL SHELLS	Ana L. D. P. Argenta // School of Engineering, Federal University of Catalão; Zenon J. G. N. del Prado // School of Civil and Environmental Engineering, Federal University of Goiás;
14:15-14:30	11009	A POSITION-BASED SPACE-TIME FORMULATION FOR GEOMETRICALLY NONLINEAR PROBLEMS	Wesley Camargo Lopes // Structural Engineering Department, São Carlos School of Engineering, University of São Paulo; Darcy H. F. R. Moreira // Structural Engineering Department, São Carlos School of Engineering, University of São Paulo; Rodolfo André Kuche Sanches // Structural Engineering Department, São Carlos School of Engineering, University of São Paulo;
14:30-14:45	11204	ANALYSIS OF LATERAL DISPLACEMENTS OF A REINFORCED CONCRETE TOWER OF TELECOMMUNICATION SYSTEMS UNDER WIND ACTION IN URBAN CONTEXTS.	Elizete da Silva Dantas // State University of Feira de Santana (UEFS), Graduate Program in Civil and Environmental Engineering (PGECEA), Avenida Transnordestina, s/n - Novo Horizonte, Feira de Santana, BA, CEP. 44036-900; GERALDO JOSÉ BELMONTE DOS SANTOS // State University of Feira de Santana (UEFS), Graduate Program in Civil and Environmental Engineering (PGECEA), Avenida Transnordestina, s/n - Novo Horizonte, Feira de Santana, BA, CEP. 44036-900; ALEXANDRE DE MACÊDO WAHRHFTIG // Federal University of Bahia (UFBA), Polytechnic School, Department of Construction and Structures, Rua Aristides Novis, 02, 5º andar, Federação, Salvador, BA, Brasil, CEP. 40210-910;
14:45-15:00	10600	ANALYSIS OF THE NONLINEAR VIBRATION OF A CLAMPED CYLINDRICAL SHELL CONSIDERING THE INFLUENCE OF THE INTERNAL FLUID AND OCEANIC WAVES	Roger Otávio Pires Montes // Universidade de Brasília; Lineu José Pedroso // Universidade de Brasília; Frederico Martins Alves da Silva // Universidade Federal de Goiás;
15:00-15:15	11096	BIODYNAMIC MODELING OF THE HUMAN ACTIONS IN THE DYNAMIC ANALYSIS OF FOOTBRIDGE	Vitor A. Gonçalves // Universidade Estadual de Feira de Santana; Geraldo J. B. dos Santos // Universidade Estadual de Feira de Santana; Anderson S. M. Gadêa // Universidade Estadual de Feira de Santana;
15:15-15:30	11014	COLLAPSE STRENGTH OF WORN CASING TUBES USING INSPECTION DATA OF OIL WELLS	Lucas P. de Gouveia // Laboratory of Scientific Computing and Visualization, Federal University of Alagoas; Gustavo Teixeira da Silva // Laboratory of Scientific Computing and Visualization, Federal University of Alagoas; Eduardo T. de Lima Junior // Laboratory of Scientific Computing and Visualization, Federal University of Alagoas;
15:30-15:45	10581	COMPARATIVE ANALYSIS BETWEEN DIFFERENT INTEGRATION METHODS FOR FRAMES SUBJECTED TO EARTHQUAKES	Patrick O. B. da Costa // Dept. of Civil Engineering, Federal University of Rio Grande do Sul; Letícia F. F. Miguel // Dept. of Mechanical Engineering, Federal University of Rio Grande do Sul;
15:45-16:00	11000	DESIGN, SIMULATION AND VALIDATION OF A VISCOELASTIC DAMPER FOR STRUCTURAL VIBRATION REDUCTION	Abner da Silveira Alves // Department of Mechanical Engineering, Federal University of Campina Grande; Márcio Diniz da Silva // Department of Mechanical Engineering, Federal University of Campina Grande; Antonio Almeida Silva // Department of Mechanical Engineering, Federal University of Campina Grande;

ROOM MAFIM I - Advanced Analysis of Steel and Steel-Concrete Composite Structures

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10617	A NUMERICAL STUDY OF DAMAGE EVALUATION IN JOINTED PLAIN SHCC PAVEMENTS USING NEW DAMAGE EVOLUTION LAWS	Edmir José dos Santos Júnior // Laboratório de Modelagem Estrutural, Instituto Tecnológico de Aeronáutica; Rafael Marques Lins // Laboratório de Estrutura, Instituto Tecnológico de Aeronáutica; Francisco Alex Correia Monteiro // Laboratório de Modelagem Estrutural, Instituto Tecnológico de Aeronáutica; Sérgio Gustavo Ferreira Cordeiro // Laboratório de Modelagem Estrutural, Instituto Tecnológico de Aeronáutica;
14:15-14:30	10902	A REFINED PLASTIC-HINGE-BASED FORMULATION FOR ADVANCED ANALYSIS OF CFST COLUMNS: A CO-ROTATIONAL PROPOSITION	Ígor J. M. Lemes // Dept. of Engineering, Federal University of Lavras; Pedro H. A. Lima // Dept. of Civil Engineering, Federal University of Ouro Preto; Ricardo A M. Silveira // Dept. of Civil Engineering, Federal University of Ouro Preto; Rafael C. Barros // Sereng Engenharia e Consultoria; Jéssica L. Silva // Brazilian Air Force, Ministry of Defense;
14:30-14:45	10767	ASSESSMENT OF HUMAN COMFORT ON A FOOTBRIDGE SUBJECT TO DYNAMIC LOADS	Carolina Mendes Lemos // UNIVERSIDADE DE BRASÍLIA; Graciela Nora Doz // UNIVERSIDADE DE BRASÍLIA;
14:45-15:00	10566	ASSESSMENT OF THE DISTORTION-INDUCED FATIGUE STRENGTH IN STEEL-CONCRETE COMPOSITE BRIDGES WELDED JOINTS	Vencislau Manuel Quissanga // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); Guilherme Santana Alencar // Civil and Environmental Engineering Department. University of Brasília (UnB); José Guilherme Santos da Silva // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ);

15:00-15:15	10657	BEAM TRANSVERSAL AREA DIMENSIONS OPTIMIZATION USING ARTIFICIAL NEURAL NETWORKS	Laís Brilhante da Cunha // Civil Engineering's Department (TEC) - Federal Fluminense University; Marco Aurélio Chaves Ferro // Civil Engineering's Department (TEC) - Federal Fluminense University; Mayra Soares Pereira Lima Perlingeiro // Civil Engineering's Department (TEC) - Federal Fluminense University;
15:15-15:30	10907	COMPARATIVE ANALYSIS OF COMPOSITE SLAB STEEL FORMWORK DESIGN BY DIRECT STRENGTH AND EFFECTIVE WIDTH METHODS	Mayane Cordeiro Loureiro // Department of Civil Engineering, Federal University of Espírito Santo; Élcio Cassimiro Alves // Department of Civil Engineering, Federal University of Espírito Santo; Adenílcia Fernanda Grobério Calenzani // Department of Civil Engineering, Federal University of Espírito Santo;
15:30-15:45	10961	COMPUTATIONAL TOOL FOR DESIGN OF STEEL ELEMENTS IN FIRE SITUATION WITH AND WITHOUT FIRE PROTECTION MATERIAL	Thayná Couto dos Santos Marcelino // Department of Civil Engineering, Federal University of Espírito Santo; Macksuel Soares de Azevedo // Department of Civil Engineering, Federal University of Espírito Santo; Adenílcia Fernanda Grobério Calenzani // Department of Civil Engineering, Federal University of Espírito Santo;
15:45-16:00	10953	DESIGN OF A COMPOSITE STEEL-CONCRETE MULTI-STOREY BUILDING WITH HIGH-STRENGTH STEELS AND BUILT-UP SECTIONS	DEBORAH S. FASSINI // Undergraduate student, Civil and Environmental Engineering Department (ENC), University of Brasília; ANDRÉ GOMES // ARCELORMITTAL; GUILHERME ALENCAR // Adjunct Professor, Civil and Environmental Engineering Department (ENC), University of Brasília;

ROOM MARFIM II - Numerical modeling of concrete structures (special edition Foz do Iguaçu/Itaipu)

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10561	A CONTINUOUS-DISCONTINUOUS STRATEGY TO REPRESENT THE CRACK PROCESS IN CONCRETE STRUCTURES	Livia Ramos Santos Pereira // Dept. of Structural Engineering, Federal University of Minas Gerais; Samuel Silva Penna // Dept. of Structural Engineering, Federal University of Minas Gerais;
14:15-14:30	10976	A NUMERICAL MODEL WITH AN EXPLICIT REPRESENTATION OF STEEL FIBERS FOR MODELING SFRC BEAMS SUBJECTED TO TORSION	Giuliano Rosman Balsamo // Department of Structural and Geotechnical Engineering, Polytechnic School at the University of São Paulo; Luís Antônio Guimarães Bitencourt Júnior // Department of Structural and Geotechnical Engineering, Polytechnic School at the University of São Paulo;
14:30-14:45	11180	A STUDY OF THERMAL CRACKING IN THE BUTTRESSES BLOCKS IN ITAIPU DAM: THERMOCHEMICAL-MECHANICAL NUMERICAL ANALYSIS	Gabriella Pinto Valentim // Exercito brasileiro; Eduardo M. R. Fairbairn // COPPE/UFRJ - Prog. Eng. Civil; Ettore Funchal de Faria // Itaipu binacional;
14:45-15:00	11065	COMPUTATIONAL MODELING OF A MASS CONCRETE STRUCTURE USING A POST-COOLING SYSTEM	Igor A. Fraga // Programa de Engenharia Civil, Universidade Federal do Rio de Janeiro; Ana B. C. G. Silva // Programa de Engenharia Civil, Universidade Federal do Rio de Janeiro; Eduardo M. R. Fairbairn // Programa de Engenharia Civil, Universidade Federal do Rio de Janeiro;
15:00-15:15	11280	FORECAST OF TIME SERIES EARNED BY THE PIEZOMETER THROUGH METHOD MULTIPLE KERNEL SARIMA SUPPORT VECTOR REGRESSION WAVELET	Samuel Bellido Rodrigues // Federal University of Technology – Parana, Campuses Medianeira; Jairo Marlon Corrêa // Federal University of Technology – Parana, Campuses Medianeira; Tássia Hickmann // Federal University of Technology – Parana, Campuses Medianeira; Lucas da Silva Ribeiro // Federal University of Technology – Parana, Campuses Medianeira; Levi L. Teixeira // Federal University Of Technology – Paraná; Ettore F. Faria // Laboratory of Concrete Technology of Itaipu, Itaipu Binacional;
15:15-15:30	11278	HYBRID MODELS FOR TIME SERIES FORECASTING OF THE DAM MONITORING DATA	Eliete Nascimento da Silva // Federal University of Paraná; Cassius Tadeu Scarpin // Federal University of Paraná; Sheila Regina Oro // Federal University of Technology - Paraná, Francisco Beltrão; Ubirajara F. Moreno // Universidade Federal de Santa Catarina (UFSC); Nestor Roqueiro // Universidade Federal de Santa Catarina (UFSC);
15:30-15:45	10826	NON-LINEAR NUMERICAL MODELING OF REINFORCED CONCRETE STRUCTURES CONSIDERING BOND SLIP	Adrielle N. Marques // Dept. of Structural Engineering, São Carlos School of Engineering, University of São Paulo; Chiara P. Teodoro // Dept. of Structural Engineering, São Carlos School of Engineering, University of São Paulo; Rogério Carrazedo // Dept. of Structural Engineering, São Carlos School of Engineering, University of São Paulo;
15:45-16:00	11208	NONLINEAR MODELING OF A BAMBOO BIO-CONCRETE BEAM	Kaliel Gomes Andrade // Instituto de Pós-Graduação e Pesquisa da Universidade Federal do Rio de Janeiro (COPPE/UFRJ); Alfredo Quiroga Flores // Instituto de Pós-Graduação e Pesquisa da Universidade Federal do Rio de Janeiro (COPPE/UFRJ); Vanessa Maria Andreola // Instituto de Pós-Graduação e Pesquisa da Universidade Federal do Rio de Janeiro (COPPE/UFRJ); Romildo Dias Toledo Filho // Instituto de Pós-Graduação e Pesquisa da Universidade Federal do Rio de Janeiro (COPPE/UFRJ); Túlio Raunyr Cândido Felipe // Diretoria de Obras Civas da Marinha; Eduardo de Moraes Rego Fairbairn // Instituto de Pós-Graduação e Pesquisa da Universidade Federal do Rio de Janeiro (COPPE/UFRJ);

ROOM MARFIM III - Boundary Element and Mesh-Reduced Methods

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10642	A COMPARISON BETWEEN DUAL RECIPROCITY AND DIRECT INTERPOLATION TECHNIQUES FOR SOLVING THE HELMHOLTZ PROBLEM BY FREQUENCY SCANNING	Thiago Galdino Balista // Dept. de Pós Graduação, Universidade Federal do Espírito Santo UFES; Carlos Friedrich Loeffler Neto // Dept. de Pós Graduação, Universidade Federal do Espírito Santo UFES; Luciano de Oliveira Castro Lara // Dept. de Pós Graduação, Universidade Federal do Espírito Santo UFES;
14:15-14:30	10784	A COUPLED FINITE ELEMENT-MESHFREE SMOOTHED POINT INTERPOLATION METHOD FOR PHASE-FIELD MODELLING	Larissa Novelli // Dept. of Structural Engineering, Federal University of Minas Gerais; Samir S. Saliba // Dept. of Structural Engineering, Federal University of Minas Gerais; Lapo Gori // Dept. of Structural Engineering, Federal University of Minas Gerais; Roque L. S. Pitangueira // Dept. of Structural Engineering, Federal University of Minas Gerais;
14:30-14:45	10614	A DUAL BOUNDARY ELEMENT FORMULATION FOR COHESIVE CRACK PROPAGATION	Gustavo de Oliveira Dumas // Laboratório de Modelagem Estrutural, Instituto Tecnológico de Aeronáutica; Rafael Marques Lins // Laboratório de Estruturas, Instituto Tecnológico de Aeronáutica; Francisco Alex Correia Monteiro // Laboratório de Modelagem Estrutural, Instituto Tecnológico de Aeronáutica; Sérgio Gustavo Ferreira Cordeiro // Laboratório de Modelagem Estrutural, Instituto Tecnológico de Aeronáutica;
14:45-15:00	11070	A MESHFREE APPROACH FOR GEOMETRICALLY EXACT SHEAR DEFORMABLE BEAMS	Felipe P. dos Santos // Dept. of Structural Engineering, Federal University of Minas Gerais; Enzo Marino // Dept. of Civil and Environmental Engineering, University of Florence; Lapo Gori // Dept. of Structural Engineering, Federal University of Minas Gerais;
15:00-15:15	10631	AN EFFICIENCY STUDY OF THE RADIAL POLYNOMIAL EXPANSION METHOD FOR SOLVING SINGULAR INTEGRALS IN THE DUAL-BEM	Beatriz B. F. Fonseca // Dept. of Structural Engineering, Federal University of Minas Gerais; Rodrigo G. Peixoto // Dept. of Structural Engineering, Federal University of Minas Gerais;
15:15-15:30	10635	Bimoment loads on space frame elements	Maicon J. Hillesheim // Francisco C. de Araújo;
15:30-15:45	10810	EFFICACY OF AN ADAPTIVE INTEGRATION SCHEME ON THE NUMERICAL PERFORMANCE OF DIBEM APPLIED TO THE SOLUTION OF COMPRESSIBLE DIFFUSIVE-ADVECTIVE PROBLEMS	Carlos Friedrich Loeffler // Programa de Pós-Graduação em Engenharia Mecânica - PPGEM - UFES; Vitor Pancieri Pinheiro // Programa de Pós-Graduação em Engenharia Mecânica - PPGEM - UFES; Aquila de Jesus dos Santos // Programa de Pós-Graduação em Engenharia Mecânica - PPGEM - UFES; Gyslane Aparecida Romano dos Santos // Programa de Pós-Graduação em Engenharia Mecânica - PPGEM - UFES; Thiago Galdino Balista // Programa de Pós-Graduação em Engenharia Mecânica - PPGEM - UFES;
15:45-16:00	11220	ELASTIC-VISCOPLASTIC ANALYSIS OF REISSNER'S PLATES BY THE BOUNDARY ELEMENT METHOD	Jair Gonçalves de Oliveira Borges // Laboratório de Engenharia Civil, Universidade Estadual do Norte Fluminense Darcy Ribeiro; Vânia José Karam // Laboratório de Engenharia Civil, Universidade Estadual do Norte Fluminense Darcy Ribeiro;

ROOM MARFIM IV - Modeling, simulation and control of the dynamical behavior of aerospace structures

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10819	A MODIFIED SUPER-TWISTING ALGORITHM WITH SPECIFIED SETTLING-TIME: NUMERICAL INVESTIGATION	João F. Silva // Dept. of Mechatronics, Aeronautics Institute of Technology; Davi A. Santos // Dept. of Mechatronics, Aeronautics Institute of Technology;
14:15-14:30	10570	A THREE DEGREES OF FREEDOM MODEL OF THE SUPPORT STRUCTURE OF A NON-IDEAL MOTOR	Reyolando M. L. R. F. Brasil // CECS, UFABC; Robesrt Samuel Birch // University of Liverpool;
14:30-14:45	10535	INVESTIGATING SATELLITE ATTITUDE AND ORBIT CONTROL SYSTEM PERFORMANCE OF THE SDRE TECHNIQUE REGARDING PARAMETRIC UNCERTAINTY	Alessandro Gerlinger Romero // National Institute for Space Research; Luiz Carlos Gadelha de Souza // University of ABC;
14:45-15:00	10988	MODAL ANALYSIS OF A SIMPLY SUPPORTED BEAM SUBJECTED TO MOVING MASS	Baddyo K. S. P. da Silva // Polytechnical School, University of São Paulo; Reyolando M. L. R. F. Brasil // CECS, Federal University of ABC;
15:00-15:15	10583	MODE LOCALIZATION IN QUASI PERIODIC CYCLIC STRUCTURES	Reyolando M.L.R.F. Brasil // CECS - UFABC; Elizabete Oliveira Silva // UFA-BC; Henrique Costa Margon // UFABC;
15:15-15:30	10668	PANEL FLUTTER INVESTIGATION INCLUDING THERMAL EFFECTS THROUGH THE FEM	VICTOR SILVA DOS SANTOS // Dept of Mechanics, Federal University of Minas Gerais; HELIO DE ASSIS PEGADO // Dept of Mechanics, Federal University of Minas Gerais;
15:30-15:45	10801	POSITION GUIDANCE AND CONTROL FOR FULLY ACTUATED MULTIROTOR AERIAL VEHICLES IN DYNAMIC ENVIRONMENTS	Jorge A. Ricardo Jr // Department of Mechatronics, Aeronautics Institute of Technology; Davi A. Santos // Department of Mechatronics, Aeronautics Institute of Technology;
15:45-16:00	10883	THE EFFECT OF GEOMETRIC STIFFNESS ON VIBRATION FREQUENCIES OF BULKHEAD FRAMES OF PRESSURIZED AIRCRAFT FUSELAGES	Kaique M. M. Magalhães // Department of Structure and Geotechnics, University of São Paulo; Reyolando M. L. R. F. Brasil // Center for Engineering, Modeling and Applied Social Sciences, Federal University of ABC; Alexandre M. Wahrhaftig // Department of Construction and Structures, Federal University of Bahia;

ROOM MARFIM V - Analysis and design of offshore systems

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	11093	ANALYSIS OF THE CRITICAL CRACK SIZE AND OPERATIONAL FACTORS IN TENSILE ARMORS OF FLEXIBLE PIPES.	Waldy J. T. Zuniga // Dept. Civil Engineering Civil, Federal University of Rio de Janeiro; José R. M. de Sousa // Dept. Civil Engineering Civil, Federal University of Rio de Janeiro; Thiago Â. G. de Lacerda // Dept. Civil Engineering Civil, Federal University of Rio de Janeiro;
14:15-14:30	10839	COMPUTATIONAL TOOL FOR INFORMATION MANAGEMENT AND INTEGRITY ASSESSMENT OF SUBSEA RIGID PIPELINES	Henri S. N. Ndione // LAMCSO/PEC/COPPE, Federal University of Rio de Janeiro; Carlos L. P. de Souza // CENPES, PETROBRAS; Carlos de O. Cardoso // CENPES, PETROBRAS; Carl H. Albrecht // LAMCSO/PEC/COPPE, Federal University of Rio de Janeiro; Breno P. Jacob // LAMCSO/PEC/COPPE, Federal University of Rio de Janeiro;
14:30-14:45	11056	NEW STUDIES ON META-MODELING FOR LAZY-WAVE STEEL CATENARY RISERS	Edivaldo Ramos Delgado // Politecnical School, Federal University of Rio de Janeiro; Bruno da Fonseca Monteiro // Dept Expressão Gráfica - Politecnical School, Federal University of Rio de Janeiro; Carl Horst Albrecht // Dept Naval Engineering - Politecnical School, Federal University of Rio de Janeiro; Breno Pinheiro Jacob // Civil Engineering Program, Federal University of Rio de Janeiro;
14:45-15:00	10999	NUMERICAL MODELING OF A REDUCED SCALE MOORING LINE EXPERIMENTAL INVESTIGATION FOR LOAD ATTENUATION EVALUATION	Eduardo Gibbon Rosa // Programa de Pós-Graduação em Engenharia Civil – PPGEC/UFRGS; Marcelo Maia Rocha // Programa de Pós-Graduação em Engenharia Civil – PPGEC/UFRGS;
15:00-15:15	10944	NUMERICAL STUDY OF THE RELATIONSHIP BETWEEN BIT STICK-OUT AND DRILL BIT SIZE IN DEEPWATER JETTING DRILLING.	Natália de Carvalho Souza dos Santos // Center of Technology, Federal University of Alagoas; Beatriz Ramos Barboza // Laboratory of Scientific Computing and Visualization, Federal University of Alagoas; Eduardo M. A. Pacheco // Center of Technology, Federal University of Alagoas; João P. L. Santos // Center of Technology, Federal University of Alagoas; Delton Lustosa de Resende // Petrobras; Rafael Dias // Petrobras; Fábio Sawada // Petrobras;
15:15-15:30	11221	ON-BOTTOM ROUGHNESS ANALYSIS FOR REPURPOSING OF GAS EXPORT PIPELINES IN BRAZILIAN COAST	Rafael C. O. Góes // Petrobras S.A.; Ricardo R. Martins // Petrobras S.A.; Alexandre S. Hansen // Petrobras S.A.; Thiago L. A. dos Santos // Petrobras S.A.; Rafael F. Solano // Petrobras S.A.;
15:30-15:45	10909	SEMI-EMPIRICAL EQUATION FOR DETERMINATION OF STRESS CONCENTRATION FACTORS (SCF) IN TUBULAR JOINTS OF FIXED OFFSHORE PLATFORMS SUBJECTED TO AXIAL FORCES.	Leidiane A. Costa // Civil Engineering Program, Federal University of Rio de Janeiro; José Renato M. de Sousa // Civil Engineering Program, Federal University of Rio de Janeiro;
15:45-16:00	11064	SENSITIVITY ANALYSIS OF HYDRAULIC FRACTURES FOR WELL STIMULATION IN SHALE GAS RESERVOIRS	Felipe Ryuki Tiba // Universidade Federal do Rio de Janeiro; Juliana Souza Baioco // Universidade Federal do Rio de Janeiro;

ROOM MARFIM VI - Computational Methods for Image Processing and Analysis

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	11185	AN AS-BUILT DIGITAL TWIN VISUALIZATION AND GENERATION TOOL USING WITH THREE-DIMENSIONAL CAD MODELS AND 360° IMAGES OF INDUSTRIAL FACILITIES.	Anderson S. Fonseca // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Marcelo Gattass // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Paulo I. N. Santos // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio;
14:15-14:30	10692	APPLICATION OF A NEURAL ARCHITECTURE TO ESTIMATE THE WEAR OF DOWN AND UP THROATS IN RH DEGASSERS	Lucas M. Ayres // Master's program in control and automation engineering , Federal Institute of Espírito Santo; Pablo F. Salarolli // Master's program in control and automation engineering , Federal Institute of Espírito Santo; Leonardo G. Batista // Master's program in control and automation engineering , Federal Institute of Espírito Santo; Eric N.de Almeida // Master's program in control and automation engineering , Federal Institute of Espírito Santo; Gustavo M. de Almeida // Master's program in control and automation engineering , Federal Institute of Espírito Santo; Marco A. S. L. Cuadros // Master's program in control and automation engineering , Federal Institute of Espírito Santo;
14:30-14:45	10734	AUTOMATIC DETECTION OF ANOMALIES ON INDUSTRIAL ROOFING SYSTEMS BASED ON UAS AND ARTIFICIAL INTELLIGENCE	Rafael Lemos dos Santos // Department of Civil Engineering, School of Mines, Federal University of Ouro Preto; Rafael Cabral // CONSTRUCT-LESE, Faculty of Engineering, University of Porto, Porto, Portugal; Ricardo Santos // CONSTRUCT-LESE, School of Engineering, Polytechnic of Porto, Porto, Portugal; Vinicius Alves // Department of Civil Engineering, School of Mines, Federal University of Ouro Preto; André Dias // INESC TEC, School of Engineering, Polytechnic of Porto, Porto, Portugal; Diogo Ribeiro // CONSTRUCT-LESE, School of Engineering, Polytechnic of Porto, Porto, Portugal;
14:45-15:00	11110	AUTOMATIC SEGMENTATION OF BREAKOUTS IN ACOUSTIC BOREHOLE IMAGE LOGS USING CONVOLUTIONAL NEURAL NETWORKS	Gabrielle Brandenburg // Tecgraf Institute, PUC-Rio; Marcelo Gattass // Tecgraf Institute, PUC-Rio; Augusto I. Cunha // Tecgraf Institute, PUC-Rio; Candida M. de Jesus // Petrobras; Luiz Santos // Tecgraf Institute, PUC-Rio; Mayara Gomes // Tecgraf Institute, PUC-Rio; Nelia Reis // Tecgraf Institute, PUC-Rio; Raquel Guilhon // Tecgraf Institute, PUC-Rio; Renata Nascimento // Tecgraf Institute, PUC-Rio;
15:00-15:15	11125	CLASSIFICATION OF SEISMIC FACIES USING SEISMIC MULTI-ATTRIBUTE	Nelia Cantanhede Reis // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Luiz Fernando Santos // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Mayara Gomes Silva // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Marcelo Gattass // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Carlos Rodriguez // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio;
15:15-15:30	11142	IDENTIFICATION OF HORIZONS IN SEISMICS USING CONVOLUTIONAL NEURAL NETWORK	Mayara Gomes Silva // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Felipe Jordão P. de Andrade // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Nelia Cantanhede Reis // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio; Marcelo Gattass // Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro - PUC-Rio;
15:30-15:45	11143	IMAGE-BASED DETECTION AND CLASSIFICATION OF SCREWS AND NUTS USING DEEP LEARNING	Gizele P. do Nascimento // Programa de Pós-Graduação em Engenharia de Controle e Automação, Instituto Federal do Espírito Santo, Serra, Brasil. gizelepolt@gmail.com; Karin S. Komati // Programa de Pós-Graduação em Engenharia de Controle e Automação, Instituto Federal do Espírito Santo, Serra, Brasil. profkarin@gmail.com; Luiz A. Pinto // Programa de Pós-Graduação em Engenharia de Controle e Automação, Instituto Federal do Espírito Santo, Serra, Brasil. pintoluizalberto@gmail.com;
15:45-16:00	10670	MEASUREMENT OF CLASSIFIED POINTS USING STEREO VISION AND TECHNIQUES OF SEGMENTATION IN DISPARITY MAP FOR DETECTION OF OBSTACLES	Luiza Brsoeghini Pin // IFES - INSTITUTO FEDERAL DO ESPÍRITO SANTO; Rafael Vivacqua // IFES - INSTITUTO FEDERAL DO ESPÍRITO SANTO; Marco Antonio Quadros // IFES - INSTITUTO FEDERAL DO ESPÍRITO SANTO;

NOVEMBER, 21 - MONDAY - 17:30-18:45

ROOM CATARATAS DO IGUAÇÚ - Nonlinear analysis, stability and structural dynamics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10548	EFFECT OF THE CABLE SYSTEM ON THE STATIC AND DYNAMIC STABILITY OF GUYED TOWERS	ICARO RODRIGUES MARQUES // Pontifical Catholic University of Rio de Janeiro; Deane M. Roehl // Pontifical Catholic University of Rio de Janeiro; Paulo B. Gonçalves // Pontifical Catholic University of Rio de Janeiro;
17:45 - 18:00	10648	EVALUATION OF THE NONLINEAR BEHAVIOR OF CONCRETE STRUCTURES USING A FLAT SHELL FINITE ELEMENT	Danilo B. Oliveira // Dept. of Engineering Structures, Federal University of Minas Gerais; Samuel S. Penna // Dept. of Engineering Structures, Federal University of Minas Gerais;
18:00-18:15	10951	HUMAN-STRUCTURE INTERACTION DURING JUMPING ON RECTANGULAR PLATES	Phablo Veríssimo I. Dias // School of Civil and Environmental Engineering, Federal University of Goiás; Zenón J. Guzmán N. del Prado // School of Civil and Environmental Engineering, Federal University of Goiás;
18:15- 18:30	10769	INFLUENCE EVALUATION OF HIGH-ORDER TERMS IN THE STRAIN TENSOR FOR A COMPLETE GEOMETRIC NONLINEAR ANALYSIS WITH A TIMOSHENKO ELEMENT	Marcos A. C. Rodrigues // Dept. of Civil Engineering, University of Espírito Santo (UFES); Pedro H. A. Guimarães // Dept. of Civil Engineering, University of Espírito Santo (UFES); Rodrigo B. Burgos // Dept. of Structures and Foundations, State University of Rio de Janeiro (UERJ); Rafael L. Rangel // International Center for Numerical Methods in Engineering, Polytechnic University of Catalonia (UPC); Luiz F. Martha // Dept. of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro (PUC-Rio);

ROOM MARFIM I - Particle-based methods: advances and applications in DEM, PFEM, SPH, MPM, MPS and others

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10659	EXPERIMENTAL AND NUMERICAL STUDY OF HEAT GENERATION BY ENERGY DISSIPATION IN A ROTATING DRUM FILLED WITH PARTICULATE MATERIAL	Eugenio Oñate // International Centre for Numerical Methods in Engineering (CIMNE), Polytechnic University of Catalonia (UPC); Alessandro Franci // International Centre for Numerical Methods in Engineering (CIMNE), Polytechnic University of Catalonia (UPC); Catherine O'Sullivan // Dept. of Civil and Environmental Engineering, Imperial College London; Francisco Kisuka // Dept. of Chemical and Process Engineering, University of Surrey; Chuan-Yu Wu // Dept. of Chemical and Process Engineering, University of Surrey; Rafael L. Rangel // International Centre for Numerical Methods in Engineering (CIMNE), Polytechnic University of Catalonia (UPC);
17:45 - 18:00	10700	A THERMO-MECHANICAL DEM FRAMEWORK FOR THE SIMULATION OF SELECTIVE LASER SINTERING	Osvaldo D. Quintana-Ruiz // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Eduardo M.B. Campello // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo;
18:00-18:15	10923	FORMULATION FOR THE LOCAL CONTACT PROBLEM BETWEEN SMOOTH CONVEX NURBS PARTICLES	Marina Vendl Craveiro // Department of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Alfredo Gay Neto // Department of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo;
18:15- 18:30	11007	NUMERICAL SIMULATION OF THERMOCAPILLARY FLOW 2D AND 3D: A BI-PHASE SMOOTHED PARTICLE HYDRODYNAMICS APPROACH	Edgar A. Patiño-Nariño // Micromanufacturing Laboratory, Bionanomanufacturing Center, Institute for Technological Research of the São Paulo State; Andres F. Galvis // School of Mathematics and Physics, University of Portsmouth, Portsmouth; Renato Pavanello // Department of Computational Mechanics, School of Mechanical Engineering, University of Campinas; Mario R. Gongora-Rubio // Micromanufacturing Laboratory, Bionanomanufacturing Center, Institute for Technological Research of the São Paulo State;
18:30-18:45	11046	A STUDY ON USING AN IMMERSED BOUNDARY TECHNIQUE FOR MODELING 3D INCOMPRESSIBLE FLUIDS WITH INTERNAL FLUID-BODY INTERFACES	André S. Müller // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Eduardo M. B. Campello // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Henrique C. Gomes // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo;

17:45-18:00	10664	INTEGRATED SUBSEA LAYOUT CONSTRAINED OPTIMIZATION USING GENETIC ALGORITHM AND A* PATHFINDING	Murilo Fiorenzano Rapozo // Civil Engineering Dept., COPPE/UFRJ – Post-Graduate Institute of the Federal University of Rio de Janeiro; Philip Stape // Civil Engineering Dept., COPPE/UFRJ – Post-Graduate Institute of the Federal University of Rio de Janeiro; Juliana Souza Baioco // Civil Engineering Dept., COPPE/UFRJ – Post-Graduate Institute of the Federal University of Rio de Janeiro; Grasielle Regina Duarte // Civil Engineering Dept., COPPE/UFRJ – Post-Graduate Institute of the Federal University of Rio de Janeiro; Breno Pinheiro Jacob // Civil Engineering Dept., COPPE/UFRJ – Post-Graduate Institute of the Federal University of Rio de Janeiro; Djalene Maria Rocha // Petrobras – Petróleo Brasileiro S.A., CENPES – Research & Development Center;
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ROOM MARFIM VI - Computational Methods for Image Processing and Analysis

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10842	ON THE MANUFACTURING CONDITION ESTIMATION OF SPRAY NOZZLES VIA IMAGE PROCESSING AND EPICYCLE REPRESENTATION	Gabriel Alves Costa // Dept. of Mechanical Engineering, São Paulo State University - UNESP; Fabrício César Lobato de Almeida // Dept. of Mechanical Engineering, São Paulo State University - UNESP; Marcos Silveira // Dept. of Mechanical Engineering, São Paulo State University - UNESP; Paulo José Paupitz Gonçalves // Dept. of Mechanical Engineering, São Paulo State University - UNESP;
17:45 -18:00	10865	TOWARDS AN EFFECTIVE DRONE-BASED TECHNOLOGY TO COMBAT MOSQUITO BREEDING SITES	Rafael O. Cotrin // Universidade Nove de Julho (UNINOVE); Sergio V. D. Pamboukian // Universidade Presbiteriana Mackenzie; Cristiano C. Quaresma // Universidade Nove de Julho (UNINOVE); Sidnei A. de Araújo // Universidade Nove de Julho (UNINOVE);

NOVEMBER, 22 - TUESDAY - 09:30-11:30

ROOM CATARATAS DO IGUAÇÚ - Nonlinear analysis, stability and structural dynamics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10890	LINEAR AND NON-LINEAR ANALYSIS OF SPACE TRUSSES SUBJECTED TO WIND ACTIONS AND TEMPERATURE VARIATION	Lucas A. de Aguiar // Department of Civil Engineering, Federal University of Rio Grande do Sul.; Marcos B. Guimarães // Department of Civil Engineering, Federal University of Rio Grande do Sul.; Daniele K. Monteiro // Department of Civil Engineering, Federal University of Rio Grande do Sul.; Rodolfo S. da Conceição // Civil Engineering Coordination, Federal Institute of Sergipe.;
09:45-10:00	10649	NONLINEAR ANALYSIS OF INELASTIC FRAMES CONSIDERING A COROTATIONAL APPROACH AND PLASTICITY BY LAYERS: A DISCUSSION ABOUT COMPUTATIONAL IMPLEMENTATION	Danilo B. Cavalcanti // Dept. of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Rafael L. Rangel // International Center for Numerical Methods in Engineering (CIMNE), Polytechnic University of Catalonia; Luiz F. Martha // Dept. of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro;
10:00-10:15	10579	NONLINEAR RESONANCE CURVES OF A CYLINDRICAL PANEL WITH UNILATERAL CONTACT OF A DISCONTINUOUS ELASTIC BASE	Jordana L. Morais // School of Civil and Environmental Engineering, Federal University of Goiás, UFG; Frederico M. A. Silva // School of Civil and Environmental Engineering, Federal University of Goiás, UFG;
10:15-10:30	10645	NONLINEAR STATIC ANALYSIS OF THE GUYED TOWERS CONSIDERING UNILATERAL CONSTRAINTS OF STAYS	Fernanda N. da Silva // Escola de Engenharia Civil e Ambiental, Universidade Federal de Goiás; Frederico M. A. Silva // Escola de Engenharia Civil e Ambiental, Universidade Federal de Goiás;
10:30-10:45	10773	NONLINEAR STATIC AND DYNAMIC BEHAVIOR OF A MULTISTABLE STRUCTURE FORMED BY ELASTICALLY CONNECTED TRUSSES	Carlos H. L. de Castro // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Diego Orlando // Department of Mechanics and Energy – FAT, State University of Rio de Janeiro; Paulo B. Gonçalves // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro;
10:45-11:00	10596	NONLINEAR TRANSIENT VIBRATIONS OF AN ORTHOTROPIC SILOS LONGITUDINALLY STIFFENED CONSIDERING THE CHARGING/DISCHARGING OF THE GRAINS.	Henrique O. Pereira // Escola de Engenharia Civil e Ambiental, Universidade Federal de Goiás; Frederico M. A. Silva // Escola de Engenharia Civil e Ambiental, Universidade Federal de Goiás;
11:00-11:15	10640	NUMERICAL ANALYSIS OF OPTIMUM DESIGNED MODELS OF VISCOELASTIC SUPPORTS FOR ROTATING MACHINES	Bruno F. de A. Prado // Department of Mechanical Engineering, Federal University of Paraná; Carlos A. Bavastri // Department of Mechanical Engineering, Federal University of Paraná; Eduardo A. Ribeiro // Dyn Technologies;
11:15-11:30	10650	NUMERICAL EXPERIMENTS TO ASSESS THE PERFORMANCE OF DIFFERENT FORMULATIONS AND SOLUTION ALGORITHMS FOR GEOMETRICALLY NONLINEAR ANALYSIS OF TWO-DIMENSIONAL FRAMES	Danilo B. Cavalcanti // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro (PUC-Rio); Rafael L. Rangel // International Center for Numerical Methods in Engineering (CIMNE), Polytechnic University of Catalonia (UPC); Luiz F. Martha // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro (PUC-Rio);
11:30-11:45	11292	USE OF THE INERTER DEVICE IN AUTOMOTIVE SUSPENSIONS: PARAMETRIC STUDY	Marcos Paulo M. Costa // Faculdade do Gama, University of Brasília; Suzana Moreira Ávila // Faculdade do Gama, University of Brasília; Marcus Vinicius Girão de Moraes // Faculdade do Tecnologia, University of Brasília;

ROOM MARFIM I - Advanced Analysis of Steel and Steel-Concrete Composite Structures

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10862	DESIGN OF A TWO DEGREE-OF-FREEDOM TUNED MASS DAMPER FOR A SUSPENSION BRIDGE MODEL	José Marcos de Araujo Silva Júnior // Civil Engineering Post-Graduation Program Student, Federal University of Technology - Parana; Dr. Paulo Rogério Novak // Civil Engineering Post-Graduation Program, Federal University of Technology - Parana; Dr. Giovanni Bratti // Department of Mechanical Engineering, Federal University of Technology - Parana; Dr. Francisco Augusto Aparecido Gomes // Civil Engineering Post-Graduation Program, Federal University of Technology - Parana;
09:45-10:00	10550	EXPERIMENTAL AND NUMERICAL DYNAMIC ANALYSIS OF BUILDINGS FLOORS WHEN SUBJECTED TO HUMAN-INDUCED LOADS	Felipe Almeida de Sousa // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); Gilvan Lunz Debona // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); José Guilherme Santos da Silva // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ);
10:00-10:15	10543	HUMAN COMFORT ASSESSMENT OF FLOORS SUBJECTED TO DYNAMIC LOADINGS INDUCED BY PEOPLE GROUPS	Elisângela Arêas Richter dos Santos // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); José Guilherme Santos da Silva // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ);
10:15-10:30	10547	INVESTIGATION ON THE NONDETERMINISTIC DYNAMIC STRUCTURAL RESPONSE OF TALL BUILDINGS	Leonardo Ferreira de Miranda // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); José Guilherme Santos da Silva // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ);
10:30-10:45	10545	NONDETERMINISTIC DYNAMIC ANALYSIS AND STRUCTURAL OPTIMIZATION OF THE STEEL TOWERS DESIGN FOR WIND TURBINES SUPPORT	André Victor da Silva Castilho // Mechanical Engineering Postgraduate Program (PPGEM/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); Francisco José da Cunha Pires Soeiro // Mechanical Engineering Postgraduate Program (PPGEM/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); José Guilherme Santos da Silva // Mechanical Engineering Postgraduate Program (PPGEM/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ);
10:45-11:00	10618	NONLINEAR DYNAMIC STRUCTURAL ANALYSIS OF TALL BUILDINGS CONSIDERING THE NONDETERMINISTIC WIND-INDUCED ACTIONS	Jean Carlos Mota Silva // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); José Guilherme Santos da Silva // Civil Engineering Postgraduate Program (PGE CIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ);
11:00-11:15	10571	NUMERICAL MODELING OF REINFORCED CONCRETE AND EPS CORE SANDWICH PANELS UNDER BENDING	Geovany Ferreira Barrozo // Dept. of Civil and Environmental Engineering, University of Brasília Brasília, Federal District, Brazil; William Taylor Matias Silva // Dept. of Civil and Environmental Engineering, University of Brasília Brasília, Federal District, Brazil; Luciano Mendes Bezerra // Dept. of Civil and Environmental Engineering, University of Brasília Brasília, Federal District, Brazil; J Jefferson Moura Lima // Dept. of Civil and Environmental Engineering, Federal University of Ceará Russas, Ceará, Brazil;
11:15-11:30	10899	STEEL SHUTTERING OPTIMUM GEOMETRY IN CONSTRUCTION STAGE FOR STEEL-CONCRETE COMPOSITE SLABS	Gabrielle Gonçalves de Oliveira da Silva // Department of Civil Engineering, Federal University of Espírito Santo; Mayane Cordeiro Loureiro // Department of Civil Engineering, Federal University of Espírito Santo; Elcio Cassimiro Alves // Department of Civil Engineering, Federal University of Espírito Santo; Adenilcia Fernanda Grobério Calenzani // Department of Civil Engineering, Federal University of Espírito Santo;

ROOM MARFIM II - Numerical modeling of concrete structures (special edition Foz do Iguaçu/Itaipu)

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10696	POST-CRACKING BEHAVIOR IN TENSILE FOR UHPFRC USING INVERSE ANALYSIS, FRACTURE ENERGY AND FINITE ELEMENT METHOD	Rosangel Rojas // Núcleo de Estruturas, Escola de Engenharia, Universidade Federal de Rio Grande-FURG; Jose R. Yopez A. // Núcleo de Estruturas, Escola de Engenharia, Universidade Federal de Rio Grande-FURG;

09:45-10:00	11175	RECENT ADVANCES IN NUMERICAL MODELING OF MASSIVE CONCRETE STRUCTURES	Eduardo M. R. Fairbairn // COPPE/UFRJ; Miguel Azenha // Structural Division in the Department of Civil Engineering, University of Minho; Fragkoulis Kanavaris // ARUP Group Limited;
10:00-10:15	11188	SOIL-STRUCTURE INTERACTION ANALYSIS OF A WIND TURBINE SPREAD FOUNDATION_A CASE STUDY	Daniel da Costa Figueiredo // Funas S.A.; Eduardo de Moraes Rego Fairbairn // Universidade Federal do Rio de Janeiro, CT - Centro de Tecnologia; Rodolfo Giacomim Mendes de Andrade // Instituto Federal do Espirito Santo;
10:15-10:30	11285	STATISTICAL METHODS FOR FORECAST OF TIME SERIES OF THERMOMETERS OF THE ITAIPU DAM	Larissa Martinello // Federal Technological University of Paraná; Jairo Marlon Correa // Federal University of Technology – Parana; Tássia Hickmann // Federal University of Technology – Parana; Samuel Bellido Rodrigues // Federal University of Technology – Parana; Lucas da Silva Ribeiro // Federal University of Technology – Parana; Etoe Funchal de Faria // Laboratory of Concrete Technology of Itaipu, Itaipu Binacional;
10:30-10:45	11282	APPLICATION OF A HYBRID METHOD TO FORECAST TIME SERIES IN CONCRETE DEFORMATION IN A COUNTERSTRUCT DAM	Samuel Bellido Rodrigues // Federal Technological University of Paraná, Campus Medianeira; Etoe Funchal de Faria // Laboratory of Concrete Technology of Itaipu, Itaipu Binacional; Jairo Marlon Correa // Federal Technological University of Paraná, Campus Medianeira; Lucas da Silva Ribeiro // Federal Technological University of Paraná, Campus Medianeira; Tásia Hickmann // Federal Technological University of Paraná, Campus Medianeira;

ROOM MARFIM III - Advances in Solid and Structural Mechanics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10745	A LIMIT ANALYSIS APPROACH FOR PLANE STRESS PROBLEMS	Eric L. B. Cavalcante // Tribunal de Contas da União; Luca G. P. V. Lorenzini // Instituto Tecnológico de Aeronáutica; Eliseu Lucena Neto // Instituto Tecnológico de Aeronáutica;
09:45-10:00	10720	A TIMOSHENKO BEAM FORMULATION WITH 3D RESPONSE FOR LINEAR AND NONLINEAR MATERIALS	Mauro Schulz // Universidade Federal Fluminense;
10:00-10:15	11225	ANALYSIS OF THE MODAL RESPONSE OF A STRUCTURE CONSIDERING THE PERIODIC FOUNDATION EFFECT.	Jakeline Loureiro // Dept. of Civil Engineering, Federal Technological University of Paraná; Francisco Augusto Aparecido Gomes // Dept. of Mechanical Engineering, Federal Technological University of Paraná; Paulo Rogerio Novak // Dept. of Mechanical Engineering, Federal Technological University of Paraná; Rodrigo Borges Santos // Dept. of Mechanical Engineering, Federal University of Grande Dourados; Augusto Salomão Bornschlegell // Dept. of Mechanical Engineering, Federal University of Grande Dourados;
10:15-10:30	11149	COMPUTATIONAL MODELING AND NUMERICAL SIMULATION OF NEW WHEELCHAIR SEAT-BACK SYSTEMS TO IMPROVE COMFORT AND POSTURAL ADEQUACY FOR CHILDREN WITH MOTOR DISABILITIES	Lucas Duarte Vieira da Silva // Department of Mechanical Engineering, Federal University of Pernambuco; Nadège Bouchonneau // Department of Mechanical Engineering, Federal University of Pernambuco; Marcus Costa Araújo // Department of Mechanical Engineering, Federal University of Pernambuco; Juliana Fonsêca de Queiroz Marcelino // Department of Occupational Therapy, Federal University of Pernambuco;
10:30-10:45	10832	NONLINEAR KIRCHHOFF-LOVE SHELL FINITE ELEMENT: TWO SIMPLE TRIANGULAR SHELL ELEMENT	Cinthia A. G. Sousa // Dept. of Civil Engineering Polytechnic School at University of São Paulo; Gustavo C. Gomes // Dept. of Civil Engineering Polytechnic School at University of São Paulo; Matheus L. Sanchez // Dept. of Civil Engineering Polytechnic School at University of São Paulo; Paulo M. Pimenta // Dept. of Civil Engineering Polytechnic School at University of São Paulo;
10:45-11:00	10919	NUMERICAL EVALUATION OF THE STRENGTH OF GRAPHENE-REINFORCED METAL MATRIX COMPOSITES	Pedro F. M. Pires // Departamento de Engenharia Mecânica, Universidade Federal de Santa Maria; Eduardo T. Moos // Departamento de Engenharia Mecânica, Universidade Federal de Santa Maria; Rodrigo Rossi // Departamento de Engenharia Mecânica, Universidade Federal do Rio Grande do Sul; René Q. Rodríguez // Departamento de Engenharia Mecânica, Universidade Federal de Santa Maria; Tiago dos Santos // Departamento de Engenharia Mecânica, Universidade Federal de Santa Maria;
11:00-11:15	10719	NUMERICAL MODELING OF CONVENTIONAL STEEL, STAINLESS STEEL AND INCONEL ALLOY SOLID ELEMENTS THROUGH THE FINITE ELEMENT METHOD	Lukerman Douglas de Almeida // Department of Civil Engineering, Federal University of Ouro Preto; Paulo Anderson Santana Rocha // Department of Civil Engineering, Federal University of Ouro Preto;
11:15-11:30	11139	NUMERICAL SOLUTION OF AXISYMMETRIC SHELLS UNDER BILATERAL CONTACT CONSTRAINTS	McGlennon da Rocha Régis // Instituto Federal de Minas Gerais; Ricardo Azoubel da Mota Silveira // Universidade Federal de Ouro Preto; Christianne de Lyra Nogueira // Universidade Federal de Ouro Preto; Paulo B. Gonçalves // Pontifícia Universidade Católica do Rio de Janeiro;

ROOM MARFIM IV - Computational intelligence techniques for optimization and data modeling

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10721	IMPACTS OF THE HALT OF ITA FLIGHT OPERATIONS ON THE BRAZILIAN MULTIPLEX AIR TRANSPORTATION NETWORK	Fernanda Silva Toledo // Federal University of Rio de Janeiro; Nelson Francisco Favilla Ebecken // Federal University of Rio de Janeiro;
09:45-10:00	10785	A COMPUTATIONAL APPROACH TO PREDICT THE BOND STRENGTH OF THIN STEEL REBARS IN CONCRETE BY MEANS OF ARTIFICIAL NEURAL NETWORKS	Priscila F. S. Silva // CEFET-MG; Gray F. Moita // CEFET-MG; Eliene P. Carvalho // CEFET-MG; Vanderci F. Arruda // CEFET-MG;
10:00-10:15	10701	A METHODOLOGY TO PREDICT THE EFFECTIVE THERMAL CONDUCTIVITY OF A GRANULAR ASSEMBLY USING DEEP LEARNING	Osvaldo D. Quintana-Ruiz // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Eduardo M.B. Campello // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo;
10:15-10:30	10695	A SURVEY OF MACHINE LEARNING BASED TECHNIQUES FOR HATE SPEECH DETECTION ON TWITTER.	Felipe R. Oliveira // COPPE - Civil Engineering Program, Federal University of Rio de Janeiro; Victoria D. Reis // COPPE - Civil Engineering Program, Federal University of Rio de Janeiro; Nelson F. F. Ebecken // COPPE - Civil Engineering Program, Federal University of Rio de Janeiro;
10:30-10:45	10933	ARTIFICIAL NEURAL NETWORKS APPLIED TO ASSESS THE IMPACT OF PM2.5 ON HOSPITAL ADMISSIONS FOR CARDIOVASCULAR DISEASES	Jéssica Caroline dos Santos Silva // Federal University of Paraná; Yara de Souza Tadano // Federal University of Technology - Paraná; Hugo Valadares Siqueira // Federal University of Technology - Paraná; Sandra Helena Westrupp Medeiros // University of the Region of Joinville; Luiz Vitor da Silva // University of the Region of Joinville; Danielli Ventura Ferreira // University of the Region of Joinville; Thomas Siqueira Pereira // Federal University of Technology - Paraná; Carlos Itsuo Yamamoto // Federal University of Paraná; Ricardo Henrique Moreton Godoi // Federal University of Technology - Paraná;
10:45-11:00	11265	CONVOLUTIONAL NEURAL NETWORKS IMPLEMENTATION ON A NETWORK-ON-CHIP PLATFORM	Alexandre Nietupski Cardoso // UERJ;
11:00-11:15	11106	COOPERATIVE TRANSPORT OF OBJECTS BY MULTI-ROBOTS	Gustavo Bueno Ferreira // Departamento de Engenharia Eletrônica e Telecomunicações, Universidade do Estado do Rio de Janeiro; Nadia Nedjah // Departamento de Engenharia Eletrônica e Telecomunicações, Universidade do Estado do Rio de Janeiro; Luiza de Macedo Mourelle // Departamento de Engenharia de Sistemas e Computação, Universidade do Estado do Rio de Janeiro;
11:15-11:30	10713	DEVELOPMENT OF A REAL-TIME MONITORING SYSTEM FOR DETECT THE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) FROM MACHINE LEARNING	Gustavo G. F. Santos // Dept. Engenharia de Controle e Automação Instituto Federal do Espírito Santo - Serra, Brasil; Flávio Garcia Pereira // Dept. Engenharia de Controle e Automação Instituto Federal do Espírito Santo - Serra, Brasil; Adilson Ribeiro Prado // Dept. Engenharia de Controle e Automação Instituto Federal do Espírito Santo - Serra, Brasil;

ROOM MARFIM V - Advanced Discretization Techniques for the Simulation of Fluid Flow in Porous Media

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	11012	A MODIFIED FLUX CORRECTED TRANSPORT (FCT) METHOD COUPLED WITH A ROBUST MPFA-H FORMULATION FOR THE NUMERICAL SIMULATION OF TWO-PHASE FLOWS IN HETEROGENEOUS AND ANISOTROPIC PETROLEUM RESERVOIRS USING 2D UNSTRUCTURED MESHES	Gustavo L. S. S. Pacheco // Dept. of Mechanical Engineering, Federal University of Pernambuco; Paulo R. M. Lyra // Dept. of Mechanical Engineering, Federal University of Pernambuco; Phillipe C. G. da Silva // Dept. of Civil Engineering, Federal University of Pernambuco; Fernando R. L. Contreras // Technology Center of the Academic Center of Agreste, Federal University of Pernambuco; Márcio R. de A. Souza // Dept. of Renewable Energy Engineering, Federal University of Paraíba; Túlio de M. Cavalcante // Dept. of Civil Engineering, Federal University of Pernambuco; Darlan K. E. de Carvalho // Dept. of Mechanical Engineering, Federal University of Pernambuco;
09:45-10:00	10599	A NON-LINEAR FINITE VOLUME METHOD COUPLED WITH A HIGHER ORDER MUSCL-TYPE FORMULATION FOR THE NUMERICAL SIMULATION OF GROUNDWATER SOLUTE TRANSPORT	Fernando R. L. Contreras // Universidade Federal de Pernambuco; Jose T. G. Silva // Universidade Federal de Pernambuco; Uewerton A. O. Vaz // Universidade Federal de Pernambuco; Alessandro R. E. Antunes // Universidade Federal de Pernambuco; Paulo R. M. Lyra // Universidade Federal de Pernambuco; Darlan K. E. Carvalho // Universidade Federal de Pernambuco;
10:00-10:15	10748	FULLY IMPLICIT ALGEBRAIC DYNAMIC MULTILEVEL AND MULTISCALE METHOD WITH NON-UNIFORM RESOLUTION FOR THE SIMULATION OF TWO-PHASE FLOW IN HIGHLY HETEROGENEOUS POROUS MEDIA	José Cícero Araujo dos Santos // Dept. of Civil Engineering, Federal University of Pernambuco; Darlan Karlo Elisiário de Carvalho // Dept. of Mechanical Engineering, Federal University of Pernambuco; Paulo Roberto Maciel Lyra // Dept. of Mechanical Engineering, Federal University of Pernambuco;

10:15-10:30	10677	NUMERICAL RESOLUTION OF THE ONE-DIMENSIONAL SHALLOW WATER EQUATIONS BY THE DISCONTINUOUS GALERKIN METHOD	Robson Carlos de Moura Junior // Instituto de Matemática, Estatística e Computação Científica, Universidade Estadual de Campinas; Maicon Ribeiro Correa // Instituto de Matemática, Estatística e Computação Científica, Universidade Estadual de Campinas; Thiago Felipe Castro Carrenho // Instituto de Matemática, Estatística e Computação Científica, Universidade Estadual de Campinas; Ana Claudia dos Reis Valentim // Instituto de Matemática, Estatística e Computação Científica, Universidade Estadual de Campinas;
10:30-10:45	11030	Numerical Simulation of Multiphase and Multicomponent Fluid Flow in Petroleum Reservoirs Using a Fully Implicit Formulation	Igor V. de Lacerda // Department of Civil Engineering, Federal University of Pernambuco; Maria E. S. Galindo // Department of Civil Engineering, Federal University of Pernambuco; Paulo R. M. Lyra // Department of Mechanical Engineering, Federal University of Pernambuco; Darlan K. E. de Carvalho // Department of Mechanical Engineering, Federal University of Pernambuco;
10:45-11:00	10831	NUMERICAL SOLUTION OF NON-ISOTHERMAL FLOW IN HEAVY OIL RESERVOIRS USING PARALLEL COMPUTING	Ralph A. B. da S. Almeida // LABTRAN, State University of Rio de Janeiro (UERJ); Helio P. A. Souto // Department of Computer Modeling, State University of Rio de Janeiro (UERJ); Grazione de Souza // Department of Computer Modeling, State University of Rio de Janeiro (UERJ);
11:00-11:15	10632	RECENT ADVANCES IN A MULTISCALE FLUX-BASED METHOD FOR SIMULATING FLOW IN FRACTURED POROUS MEDIA	Nathan Shauer // Faculty of Civil Engineering, Unicamp (State University of Campinas); Philippe R. B. Devloo // Faculty of Civil Engineering, Unicamp (State University of Campinas); Sônia M. Gomes // Inst. of Math., Statistics, & Scientific Computing, Unicamp (State University of Campinas); Jose Villegas // Faculty of Mechanical Engineering, Unicamp (State University of Campinas);

ROOM MARFIM VI - Applications of Computational Thermo Fluid-Dynamics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	11011	ANALYSIS OF THE EXPERIMENTAL AND NUMERICAL PERFORMANCE OF A GROUND-AIR HEAT EXCHANGER (EAHE)	Carlos Henrique Diedrich // Programa de pós graduação em Engenharia Mecânica, Universidade Tecnológica Federal do Paraná; Douglas Pereira Vasconcellos // Programa de Pós graduação em Engenharia Mecânica da Pontifícia Universidade Católica do Paraná; Gerson Henrique dos Santos // Programa de pós graduação em Engenharia Mecânica, Universidade Tecnológica Federal do Paraná; Thiago Antonini Alves // Programa de pós graduação em Engenharia Mecânica, Universidade Tecnológica Federal do Paraná;
09:45-10:00	10792	NUMERICAL ANALYSIS OF THE COLD START OF A DISTRIBUTION TRANSFORMER FILLED WITH BIODEGRADABLE OIL	Luciano Garelli // Centro de Investigación de Métodos Computacionales, CIMEC (UNL - CONICET); Gustavo Ríos Rodriguez // Centro de Investigación de Métodos Computacionales, CIMEC (UNL - CONICET); Mario A. Storti // Centro de Investigación de Métodos Computacionales, CIMEC (UNL - CONICET); Alfredo Ortiz // Universidad de Cantabria, Santander, España; Mauro Amadei // Tadeo Czerweny S.A;
10:00-10:15	10611	NUMERICAL ANALYSIS ON POLLUTANT DISPERSION IN NATURALLY VENTILATED BUILDINGS: NONISOTHERMAL CONDITIONS	Gabriela P. Bianchin // Programa de Pós-Graduação em Engenharia Civil, Universidade Federal do Rio Grande do Sul; Alexandre Luis Braun // Programa de Pós-Graduação em Engenharia Civil, Universidade Federal do Rio Grande do Sul;
10:15-10:30	11047	NUMERICAL INVESTIGATION ON TORNADO-LIKE FLOWS AND IMMERSSED BODIES USING VORTEX MODELS	Miguel A. Aguirre // Centro de Mecânica Aplicada e Computacional (CEMACOM), Programa de Pós-Graduação em Engenharia Civil (PPGEC), Universidade Federal do Rio Grande do Sul (UFRGS); Alexandre L. Braun // Centro de Mecânica Aplicada e Computacional (CEMACOM), Programa de Pós-Graduação em Engenharia Civil (PPGEC), Universidade Federal do Rio Grande do Sul (UFRGS); Armando M. Awruch // Centro de Mecânica Aplicada e Computacional (CEMACOM), Programa de Pós-Graduação em Engenharia Civil (PPGEC), Universidade Federal do Rio Grande do Sul (UFRGS);
10:30-10:45	11091	STUDY OF BALLISTIC PARAMETERS FOR PROJECTILE RANGE EXTENSION	Wallace Ramos Rosendo da Silva // Department of Mechanical Engineering, Millitary Institute of Engineering (IME); André Luiz Tenório Rezende // Department of Mechanical Engineering, Millitary Institute of Engineering (IME);
10:45-11:00	10799	THERMAL REGULATION OF A PHOTOVOLTAIC PANEL BY PIN FINS: A NUMERICAL AND EXPERIMENTAL ANALYSIS	Vinicius Marson // UNESP – São Paulo State University, Campus of Ilha Solteira; Domisley Dutra Silva // UNESP – São Paulo State University, Campus of Ilha Solteira; Luis Henrique Custodio Da Fonseca // UNESP – São Paulo State University, Campus of São João da Boa Vista; João Batista Campos Silva // UNESP – São Paulo State University, Campus of Ilha Solteira; Elaine Maria Cardoso // UNESP – São Paulo State University, Campus of São João da Boa Vista;

NOVEMBER, 22 - TUESDAY - 14:00-16:00

ROOM CATARATAS DO IGUAÇÚ - Nonlinear analysis, stability and structural dynamics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	11262	PARAMETRIC OPTIMIZATION OF QUARTER VEHICLE SUSPENSION MODEL BY RESPONSE MAP TECHNIQUE	Leonardo da Costa Rodrigues Ferreira // University of Brasilia; Suzana Moreira Avila // University of Brasilia;
14:15-14:30	11191	PASSIVE CONTROL OF PLATE VIBRATIONS: DIMENSIONAL OPTIMIZATION OF CONSTRAINED LAYERS BY USING KRIGING SURROGATE	Sandmara Lanhi // Laboratory of Computacional Solid Mechanics, Postgraduate Program in Mechanical Engineering (PG-Mec), Federal University of Paraná, Polytechnic Center, 100 Cel. Francisco H. dos Santos, Curitiba-PR 81530-000; Gabriela Wessling Oening Dicati // Laboratory of Computacional Solid Mechanics, Postgraduate Program in Mechanical Engineering (PG-Mec), Federal University of Paraná, Polytechnic Center, 100 Cel. Francisco H. dos Santos, Curitiba-PR 81530-000; José Eduardo Gubaua // Laboratory of Computacional Solid Mechanics, Postgraduate Program in Mechanical Engineering (PG-Mec), Federal University of Paraná, Polytechnic Center, 100 Cel. Francisco H. dos Santos, Curitiba-PR 81530-000; Jucélio Tomás Pereira // Laboratory of Computacional Solid Mechanics, Postgraduate Program in Mechanical Engineering (PG-Mec), Federal University of Paraná, Polytechnic Center, 100 Cel. Francisco H. dos Santos, Curitiba-PR 81530-000, Dept. Mechanical Engineering.;
14:30-14:45	10795	STUDY OF A ROLLER SEISMIC ISOLATION BEARING COUPLED WITH AN EDDY CURRENT DAMPING SYSTEM.	Laura N. Sánchez-Nieto // Civil engineering student at Universidad Militar Nueva Granada, Cajicá, Colombia.; David F. Jején-Rodríguez // Civil engineering student at Universidad Militar Nueva Granada, Cajicá, Colombia.; Nelson A. Ortiz-Cano // Associate Professor at the Universidad Militar Nueva Granada, Cajicá, Colombia.;
14:45-15:00	11290	TUNED LIQUID COLUMN DAMPER MODELED BY PRESSURE BASED EULERIAN APPROACH USING ISOPARAMETRIC QUADRILATERAL FINITE ELEMENT	Marcus V. G. de Moraes // University of Brasilia (UnB); Suzana M. Avila // University of Brasilia (UnB); Juliano F. Martins // University of Brasilia (UnB); Agnaldo A. M. T. da Silva // University of Brasilia (UnB);
15:00-15:15	10626	TWO-DIMENSIONAL NONLINEAR ANALYSIS OF ELASTIC COLUMNS STABILITY USING THE CONVEXIFIED PARTICLE DOMAIN MATERIAL POINT METHOD	Lucas Peres de Souza // Postgraduate Program in Civil Engineering, Federal University of Paraná; Marco André Argenta // Postgraduate Program in Civil Engineering, Federal University of Paraná;
15:15-15:30	11277	VIBRATION CORRELATION TECHNIQUE APPLIED TO CYLINDRICAL AND CONICAL SHELLS—AN OVERVIEW OF THE RECENT DEVELOPMENTS	Adrian Gliszczynski // Lodz University of Technology, Department of Strength of Materials, Lodz, Poland; Felipe Franzoni // DLR, Institute of Composite Structures and Adaptive Systems, Braunschweig, Germany; Richard Degenhardt // DLR, Institute of Composite Structures and Adaptive Systems, Braunschweig, Germany; Theodor Dan Baciu // DLR, Institute of Composite Structures and Adaptive Systems, Braunschweig, Germany;
15:30-15:45	10712	ON THE NON-LINEAR VIBRATIONS OF CLAMPED-FREE CYLINDRICAL SHELLS SUBJECTED TO COMBINED LOADS	Zenon J. Guzman N. del Prado // Federal University of Goiás; Lamartine Brasil Alves Santos Junior // Federal University of Goiás;
15:45-16:00	10987	GLOBAL BUCKLING OF THIN-WALLED LAMINATED COMPOSITE COLUMNS	Jonas Aguiar Junior // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Evandro Parente Junior // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Marcelo Silva Medeiros Junior // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Luiz Antônio Taumaturgo Mororó // Instituto Federal de Educação, Ciência e Tecnologia do Ceará;

ROOM MARFIM I - Advanced Analysis of Steel and Steel-Concrete Composite Structures

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10620	STEEL-CONCRETE COMPOSITE FLOORS DYNAMIC ASSESSMENT WHEN SUBJECTED TO HUMAN WALKING LOADS	Jefferson Viana Aguiar // Civil Engineering Postgraduate Program (PGECIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ); Bárbara Elisa Ferreira // Structural Engineering Department. Federal University of Minas Gerais (UFMG); Hermes Carvalho // Structural Engineering Department. Federal University of Minas Gerais (UFMG); José Guilherme Santos da Silva // Civil Engineering Postgraduate Program (PGECIV/FEN/UERJ). Faculty of Engineering (FEN). State University of Rio de Janeiro (UERJ);
14:15-14:30	11068	THERMAL ANALYSIS OF TIMBER CROSS SECTIONS VIA CS-ASA/FA	Jackson da Silva Rocha Segundo // Programa de Pós-Graduação em Engenharia Civil, Departamento de Engenharia Civil, Universidade Federal de Ouro Preto; Rafael Cesário Barros // Programa de Pós-Graduação em Engenharia Civil, Departamento de Engenharia Civil, Universidade Federal de Ouro Preto; Ricardo Azoubel da Mota Silveira // Programa de Pós-Graduação em Engenharia Civil, Departamento de Engenharia Civil, Universidade Federal de Ouro Preto; Dalilah Pires // Universidade Federal de São João Del-Rei; Ígor José Mendes Lemes // Universidade Federal de Lavras; Jackson da Silva Rocha Segundo // Programa de Pós-Graduação em Engenharia Civil, Departamento de Engenharia Civil, Universidade Federal de Ouro Preto; Rafael Cesário Barros // Programa de Pós-Graduação em Engenharia Civil, Departamento de Engenharia Civil, Universidade Federal de Ouro Preto; Ricardo Azoubel da Mota Silveira // Programa de Pós-Graduação em Engenharia Civil, Departamento de Engenharia Civil, Universidade Federal de Ouro Preto; Dalilah Pires // Universidade Federal de São João Del-Rei; Ígor José Mendes Lemes // Universidade Federal de Lavras;
14:30-14:45	10604	WIND LOAD EFFECTS ON PHOTOVOLTAIC MODULES	Juan M. Podesta // Laboratorio de Mecánica Computacional (IMIT-CONICET), Universidad Nacional del Nordeste; Javier L. Mroginski // Laboratorio de Mecánica Computacional (IMIT-CONICET), Universidad Nacional del Nordeste; Hugo G. Castro // Laboratorio de Mecánica Computacional (IMIT-CONICET), Universidad Nacional del Nordeste; Adrián R. Wittwer // Laboratorio de Aerodinámica, Facultad de Ingeniería, Universidad Nacional del Nordeste;
14:45-15:00	11089	A NEURAL NETWORK MODEL WITH FINITE ELEMENT METHOD FOR STEEL BEAMS DESIGN	Nicolas Pedrosa Macedo // PPGEC, Federal University of Paraná; Marco André Argenta // PPGEC, Federal University of Paraná;
15:00-15:15	11195	INFLUENCE OF LENGTH ON THE RESISTANT CAPACITY OF COLD BENDED SHEET PROFILES UNDER DISTORTIONAL BUCKLE	Leonardo Pereira Silva // Programa de Pós-Graduação em Engenharia Civil e Ambiental – PPGCEA; Patrícia dos Santos Andrade // Programa de Pós-Graduação em Engenharia Civil e Ambiental – PPGCEA; Tailanne Souza Mendes Silva // Programa de Pós-Graduação em Engenharia Civil e Ambiental – PPGCEA; Anderson de Souza Matos Gadêa // Programa de Pós-Graduação em Engenharia Civil e Ambiental – PPGCEA; Koji de Jesus Nagahama // Programa de Pós-Graduação em Engenharia Civil e Ambiental – PPGCEA;

ROOM MARFIM II - Applied Mathematics and Mathematical Modeling

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10586	A MATHEMATICAL AND RHEOLOGICAL STUDY OF THE PASTES THAT MAKE UP OBTURADOR ENDODONTIC CEMENT FROM MTA BASE	Mariana E. Nunes // Applied and Computational Mathematics Postgraduate Degree Programme, State University of Londrina; Eliandro R. Cirilo // Mathematics Department, State University of Londrina; Neyva M. L. Romeiro // Mathematics Department, State University of Londrina; Paulo L. Natti // Mathematics Department, State University of Londrina;
14:15-14:30	11192	ASSESSMENT OF NUMERICAL RESOLUTION OF THE TWO-PHASE FLOW BY MEANS OF THE TWO-FLUID MODEL AND DIFFERENT ORDERS SCHEMES	Anderson V. do Nascimento // Programa de Pós-Graduação em Engenharia Civil, CTG – Universidade Federal de Pernambuco; Kaio C. D. Brasil // Curso de Graduação em Engenharia Civil, CAA – Universidade Federal de Pernambuco; Alessandro R. E. Antunes // Núcleo de Tecnologia, CAA – Universidade Federal de Pernambuco; Darlan K. E. de Carvalho // Departamento de Engenharia Mecânica, CTG – Universidade Federal de Pernambuco;
14:30-14:45	10755	COMPARISON BETWEEN NEWTON AND PICARD METHODS FOR THE NONLINEAR HEAT TRANSFER MODELING	Priscila Dombrowski Zen // Universidade Federal do Paraná; Marcio Augusto Villela Pinto // Universidade Federal do Paraná; Sebastião Romero Franco // Universidade Estadual do Centro-Oeste;
14:45-15:00	10963	DESIGN OF INJECTOR PLATES FOR HYBRID ROCKET MOTORS TEST BENCH WITH GASEOUS OXYGEN	Paulo Gabriel Cunha Martins // LTF, Aeronautics Institute of Technology; Kesiany Máxima de Souza // LCFT, Aeronautics Institute of Technology; Rene Gonçalves // Dept. of Chemistry, Aeronautics Institute of Technology; Leonardo Henrique Gouvêa // LTF, Aeronautics Institute of Technology; Cristiane Aparecida Martins // LCPE, Aeronautics Institute of Technology;
15:00-15:15	10555	FLUID-STRUCTURE INTERACTION BETWEEN BROAD CRESTED AND HYDRODYNAMICS EFFECTS UNDER SAND BED SEDIMENTS	Vitor R. Albernaz // Universidade Federal do Rio de Janeiro; Renato N. Elias // Universidade Federal do Rio de Janeiro;
15:15-15:30	11123	INCREASING THE OVERALL EFFICIENCY OF HYDROPOWER PLANTS BY USING VIRTUAL PROTOTYPING IN THE DESIGN OF HIGH PERFORMANCE HYDROMECHANICAL ASSETS	Rodrigo Canestraro Quadros // Research, Development and Innovation, Institute of Technology for Development - LACTEC; Lucas Gomes Fonçatti // Research, Development and Innovation, Institute of Technology for Development - LACTEC;

15:30-15:45	10730	INFLUENCE OF FIRE RESISTANT STEEL BARS ON THE FIRE DESIGN OF SIMPLY SUPPORTED REINFORCED CONCRETE BEAMS	Valdir Pignatta e Silva // Dept. of Structural and Geotechnical Engineering, University of São Paulo; Giulianna Thereza Alves Listo // Dept. of Structural and Geotechnical Engineering, University of São Paulo;
15:45-16:00	10655	MODELLING THE GRAIN MASS AERATION PROCESS USING THE THORPE MODEL WITH THE FINITE VOLUME METHOD.	Jotair Elio Kwiatkowski Junior // Programa de Pós-Graduação em Métodos Numéricos em Engenharia - PPGMNE, Universidade Federal do Paraná - UFPR / Departamento de Ciência da Computação - DeCOMP, Universidade Estadual do Centro-Oeste - UNICENTRO; Luciano Kiyoshi Araki // Departamento de Engenharia Mecânica - DeMEC, Universidade Federal do Paraná - UFPR; Marcio Augusto Villela Pinto // Departamento de Engenharia Mecânica - DeMEC, Universidade Federal do Paraná - UFPR; Daniel Rigoni // Programa de Pós-Graduação em Métodos Numéricos em Engenharia - PPG-MNE, Universidade Federal do Paraná - UFPR;

ROOM MARFIM III - Advances in Solid and Structural Mechanics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10637	ON A KINEMATICALLY EXACT ROD MODEL FOR THIN-WALLED OPEN SECTION MEMBERS: INCORPORATING POLYCONVEX CONSTITUTIVE EQUATION	Marcos P. Kassab // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Eduardo M. B. Campello // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Paulo M. Pimenta // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo;
14:15-14:30	10757	ON THE APPLICATION OF A GLOBAL POST-PROCESSING STRATEGY FOR STRESS RECOVERY IN NEARLY-INCOMPRESSIBLE ELASTICITY PROBLEMS	Giovanni Taraschi // Departamento de Matemática Aplicada, Universidade Estadual de Campinas (UNICAMP); Maicon Ribeiro Correa // Departamento de Matemática Aplicada, Universidade Estadual de Campinas (UNICAMP); Alisson da Silva Pinto // Instituto de Matemática e Estatística, Universidade Estadual do Rio de Janeiro (UERJ); Cristiane Oliveira de Faria // Instituto de Matemática e Estatística, Universidade Estadual do Rio de Janeiro (UERJ);
14:30-14:45	10932	PHASE-FIELD MODEL FOR PRESSURIZED FRACTURES SIMULATION	Eduarda Marques Ferreira // Structural Engineering Department, Federal University of Minas Gerais; Roque Luiz da Silva Pitangueira // Structural Engineering Department, Federal University of Minas Gerais; Lapo Gori // Structural Engineering Department, Federal University of Minas Gerais;
14:45-15:00	10740	PHASE-FIELD MODELLING OF A MULTIPHASE MATERIAL	Hugo Mouro Leão // Structural Engineering Department, Federal University of Minas Gerais; Roque Luiz da Silva Pitangueira // Structural Engineering Department, Federal University of Minas Gerais; Lapo Gori // Structural Engineering Department, Federal University of Minas Gerais; Ramon Pereira da Silva // Structural Engineering Department, Federal University of Minas Gerais;
15:00-15:15	10641	SOME MODELING FEATURES FOR TWO-DIMENSIONAL ISOPARAMETRIC AND ISOGEOMETRIC FINITE ELEMENT ANALYSIS	João Carlos L. Peixoto // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Danilo S. Bomfim // Department of Structural Engineering, University of São Paulo; Rodrigo L. Soares // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Luiz F. Bez // Instituto de Computação, Universidade Federal Fluminense; Pedro C. F. Lopes // Instituto de Computação, Universidade Federal Fluminense; André M. B. Pereira // Instituto de Computação, Universidade Federal Fluminense; Rafael L. Rangel // International Center for Numerical Methods in Engineering, Polytechnic University of Catalonia; Luiz F. Martha // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro;
15:15-15:30	10994	THE IMPORTANCE OF LINEAR SEARCH FOR THE BOUND-CONSTRAINED SOLVER FOR PHASE-FIELD MODELING OF FRACTURE WITH FEM	Matheus Moreno Fortes // Structural Engineering Graduate Course at the Federal University of Minas Gerais; Hugo Mouro Leão // Structural Engineering Graduate Course at the Federal University of Minas Gerais; Lapo Gori // Structural Engineering Department at the Federal University of Minas Gerais; Roque Luiz da Silva Pitangueira // Structural Engineering Department at the Federal University of Minas Gerais;
15:30-15:45	10906	THREE-DIMENSIONAL PHASE-FIELD FEM MODELLING FOR FRACTURE	Leilane R. S. Gomes // Structural Engineering Department, Federal University of Minas Gerais; Hugo M. Leão // Structural Engineering Department, Federal University of Minas Gerais; Roque L. S. Pitangueira // Structural Engineering Department, Federal University of Minas Gerais; Lapo Gori // Structural Engineering Department, Federal University of Minas Gerais;

ROOM MARFIM IV - Computational intelligence techniques for optimization and data modeling

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10977	FUZZY CONTROLLER FOR A BATTERY AND SUPERCAPACITOR HYBRID ENERGY STORAGE SYSTEM VEHICLE	Taysa M. B. Marques // Dpto de Engenharia Elétrica, Universidade Tecnológica Federal do Paraná; Matheus P. S. Laia // Dpto de Engenharia Elétrica, Universidade Tecnológica Federal do Paraná; Fernanda Cristina Corrêa // Dpto de Engenharia Elétrica, Universidade Tecnológica Federal do Paraná; Hugo Valadares Siqueira // Dpto de Engenharia Elétrica, Universidade Tecnológica Federal do Paraná; Gabriel do Carmo // Dpto de Engenharia Elétrica, Universidade Tecnológica Federal do Paraná; Daniel Batista // Dpto de Engenharia Elétrica, Universidade Tecnológica Federal do Paraná;
14:15-14:30	11108	METAHEURISTICS-BASED OPTIMIZATION OF THE GAUSSIAN ADAPTIVE PID CONTROL (GAPID) AND THE FUZZY LOGIC PID CONTROL (FLPID) FOR A SPEED CONTROL IN A BLDC MOTOR	FERNANDA CRISTINA CORREA // Universidade Tecnológica Federal do Paraná; CARLOS DA CONCEIÇÃO CASTILHO NETO // Universidade Tecnológica Federal do Paraná; TAYSA MILLENA BANIK // Universidade Tecnológica Federal do Paraná; HUGO VALADARES SIQUEIRA // Universidade Tecnológica Federal do Paraná; MARCELLA SCOCZYNSKI RIBERO MARTINS // Universidade Tecnológica Federal do Paraná; MAURÍCIO DOS SANTOS KASTER // Universidade Tecnológica Federal do Paraná;
14:30-14:45	11246	OPTIMAL POWER FLOW CONSIDERING NON-SMOOTH GENERATION COST FUNCTION AND EMISSIONS USING AMPL AND KNITRO SOLVER	Jefferson Lourenço da Silva // Center for Engineering, Modeling and Applied Social Sciences, Federal University of ABC; Prof. Dr. Edmarcio Antonio Belati // Center for Engineering, Modeling and Applied Social Sciences, Federal University of ABC;
14:45-15:00	10684	RECURRENT NEURAL NETWORKS FOR AIR-QUALITY FORECAST MODELS IN THE CITY OF RIO DE JANEIRO	José Fernando Lopes Leocadio // Coppe- UFRJ; Nelson Francisco Favilla Ebecken // Coppe- UFRJ;
15:00-15:15	11152	SOFT FAULTS DIAGNOSIS IN ANALOG CIRCUITS USING OPTIMIZATION INSPIRED BY BAT BEHAVIOR	Jalber D. L. Galindo // Dept. of Electronics Eng. and Telecom., State University of Rio de Janeiro, Rio de Janeiro, Brazil; Nadia Nedjah // Dept. of Electronics Eng. and Telecom., State University of Rio de Janeiro, Rio de Janeiro, Brazil; Luiza de M. Mourelle // Dept. of System Eng. and Computation, State University of Rio de Janeiro, Rio de Janeiro, Brazil;
15:15-15:30	10807	THE USE OF INTELLIGENT ALGORITHMS IN THE PREDICTION OF BONDING STRENGTH IN STEEL-CONCRETE INTERFACES	Vanderci F. Arruda // PROGRAMA DE PÓS-GRADUAÇÃO EM MODELAGEM MATEMÁTICA E COMPUTACIONAL, CENTRO FEDERAL DE EDUCAÇÃO TECNOLÓGICA DE MINAS GERAIS; Gray F. Moita // PROGRAMA DE PÓS-GRADUAÇÃO EM MODELAGEM MATEMÁTICA E COMPUTACIONAL, CENTRO FEDERAL DE EDUCAÇÃO TECNOLÓGICA DE MINAS GERAIS; Eliene P. Carvalho // PROGRAMA DE PÓS-GRADUAÇÃO EM MODELAGEM MATEMÁTICA E COMPUTACIONAL, CENTRO FEDERAL DE EDUCAÇÃO TECNOLÓGICA DE MINAS GERAIS; Priscila F. S. Silva // PROGRAMA DE PÓS-GRADUAÇÃO EM MODELAGEM MATEMÁTICA E COMPUTACIONAL, CENTRO FEDERAL DE EDUCAÇÃO TECNOLÓGICA DE MINAS GERAIS;
15:30-15:45	11159	PREDICTING LOAD CAPACITY OF PRECAST CONCRETE PILES USING SPT AND ARTIFICIAL NEURAL NETWORK	Juliele Nascimento Jesus // Departamento de Tecnologia, Universidade Estadual de Feira de Santana; Maria do Socorro Costa São Mateus // Departamento de Tecnologia, Universidade Estadual de Feira de Santana; Anderson de Souza Matos Gádea // Departamento de Tecnologia, Universidade Estadual de Feira de Santana

ROOM MARFIM V - Computational Bioengineering and Biomechanics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	11109	A VARIATIONAL FULL-NETWORK CONSTITUTIVE MODEL WITH ANISOTROPIC DAMAGE AND VISCOELASTICITY INDUCED BY DEFORMATION FOR BIOLOGICAL TISSUES	Daniel Magalhães da Cruz // Department of Mechanical Engineering, Universidade Federal do Rio Grande do Sul; Francisco Luiz Bresolin // Department of Mechanical Engineering, Universidade Federal do Rio Grande do Sul; Jakson Manfredini Vassoler // Department of Mechanical Engineering, Universidade Federal do Rio Grande do Sul;
14:15-14:30	10591	FISSION AND DEFORMATIONS IN THE COLON EPITHELIUM USING FINITE ELEMENT METHODS	G. ROMANAZZI // INSTITUTE OF MATHEMATICS, STATISTICS AND SCIENTIFIC COMPUTATION; STATE UNIVERSITY OF CAMPINAS; G. SETTANNI // DYRECTA LAB, ITALY;
14:30-14:45	10544	METHODOLOGY BASED ON GENETIC ALGORITHMS AND FINITE ELEMENTS TO OBTAIN THE 3D SURGICAL PLANNING FOR THE PERIACETABULAR OSTEOTOMY PROCEDURE IN TREATMENT OF HIP DYSPLASIA	Marcus V. S. Ferraz // Centro Federal de Educação Tecnológica de Minas Gerais; Daniel S. Ferreira // Universidade Federal de Juiz de Fora; Flávia S. Bastos // Universidade Federal de Juiz de Fora; Bruno G. S. Souza // Faculdade de Ciências Médicas e da Saúde de Juiz De Fora; Sara D. Vecchio // Instituto Federal de Educação, Ciência e Tecnologia do Sudeste de Minas Gerais;
14:45-15:00	10945	MICROSCOPIC SWIMMERS IN CONCENTRATION GRADIENTS: SIMULATION AND LEARNING	Gustavo C. Buscaglia // ICMC, University of São Paulo; Stevens Paz // Dept. Mathematics, Univ. del Valle, Colombia; Roberto F. Ausas // ICMC, University of São Paulo; Juan P. Carbajal // Ostschweizer Fachhochschule, Institut für Energietechnik IET, Switzerland;
15:00-15:15	10636	MODELING AND NUMERICAL SIMULATION OF DRUG TRANSPORT AND ABSORPTION IN A TUMOR.	Daniela Cortes Ospina // Student of PhD. of Institute of Mathematics, Statistics and Scientific Computing, State University of Campinas.; Giuseppe Romanazzi // Dept. of Institute of Mathematics, Statistics and Scientific Computing, State University of Campinas.;

ROOM MARFIM VI - Scientific Machine Learning and Uncertainty Quantification

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10653	A MULTI-FIDELITY REDUCED-ORDER MODEL APPLIED TO RESERVOIR ENGINEERING	Matheus Silva Gonçalves // Kognitus; Yuri Nunes Saraiva // Kognitus; Mathieu Ducros // Kognitus;
14:15-14:30	10613	ANALYSIS OF CONVERGENCE DIAGNOSTICS FOR MCMC METHODS	Douglas Souza de Albuquerque // Programa de Pós-Graduação em Modelagem Computacional, Laboratório Nacional de Computação Científica; Renato Simões Silva // Programa de Pós-Graduação em Modelagem Computacional, Laboratório Nacional de Computação Científica;
14:30-14:45	10597	ARTIFICIAL INTELLIGENCE METHODS APPLIED TO THE DAMAGE DETECTION IN BEAMS	Luiz C. Wrobel // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Fernando V. B. Medeiros // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro;
14:45-15:00	10771	COMPARISON BETWEEN MONTE CARLO DROPOUT AND VARIATIONAL INFERENCE TECHNIQUES FOR BAYESIAN NEURAL NETWORK MODELS APPLIED TO ROTATING MACHINERY DIAGNOSTICS	Olympio Belli Neto // School of Mechanical Engineering, University of Campinas; Matheus de Moraes // School of Mechanical Engineering, University of Campinas; João Paulo Dias // School of Engineering, Shippensburg University; Hélio Fiori de Castro // School of Mechanical Engineering, University of Campinas;
15:00-15:15	10812	COMPARISON OF KRIGING-BASED ALGORITHMS FOR OPTIMIZATION WITH HETEROGENEOUS NOISE	Cibelle D. de C. D. Maia // Dept of Civil Engineering, Federal University of Florianópolis; Rafael H. Lopez // Dept of Civil Engineering, Federal University of Florianópolis;
15:15-15:30	10741	MODELING COMPLEX MECHANICAL COMPUTER CODES WITH FUNCTIONAL INPUT VIA GAUSSIAN PROCESSES	Andrés F. López-Lopera // CERAMATHS, Univ. Polytechnique Hauts-de-France, F-59313 Valenciennes, France; Franck Massa // LAMIH, CNRS, UMR 8201, Univ. Polytechnique Hauts-de-France, INSA Hauts-de-France, F-59313 Valenciennes, France; Isabelle Turpin // CERAMATHS, Univ. Polytechnique Hauts-de-France, F-59313 Valenciennes, France; Nicolas Leconte // ONERA, DMAS, CRD, Lille, France;
15:30-15:45	10937	ON THE APPROXIMATION OF THE WAVE EQUATION OPERATOR USING DEEP LEARNING METHODS	Ziad Aldirany // Département de Mathématiques et de Génie Industriel, Polytechnique Montréal; Régis Cottreau // Laboratoire de Mécanique et d'Acoustique UMR 7031, CNRS, Ecole Centrale de Marseille; Marc Laforest // Département de Mathématiques et de Génie Industriel, Polytechnique Montréal; Serge Prudhomme // Département de Mathématiques et de Génie Industriel, Polytechnique Montréal;
15:45-16:00	10562	UNCERTAINTY ANALYSIS IN PREDICTION OF PORE PRESSURE OF EXPLORATORY HYDROCARBON WELLS.	Vinícius F. Carneiro // Exploration Dept., Petrobras; Nelson F. F. Ebecken // Civil Engineering Dept., COPPE, Federal University of Rio de Janeiro;

NOVEMBER, 22 - TUESDAY - 17:30-18:30

ROOM MARFIM I - Numerical Modeling of Frictional Contact, Wear, Damage and Plasticity

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10854	A NOVEL NEWMARK-BASED METHOD APPLIED TO AN ANISOTROPIC DAMAGE PHASE FIELD MODEL	Marco L. Bittencourt // Dept. of Integrated System, University of Campinas; Carlos Lamarca Carvalho Souza Esteves // Dept. of Integrated System, University of Campinas; Ana Luísa Evaristo Rocha Petrini // Dept. of Integrated System, University of Campinas; José Luiz Boldrini // Dept. of Integrated System, University of Campinas; Rodrigo Santos Nogueira Jr // Dept. of Integrated System, University of Campinas;
17:45-18:00	11168	2D CONTACT SIMULATION OF FRETTING SPECIMENS USING IGABEM	Leonardo Bernardo e Silva // ENM - Department of Mechanical Engineering, Faculty of Technology, University of Brasília: Campus Darcy Ribeiro; Fernando Morais de Loyola // ENM - Department of Mechanical Engineering, Faculty of Technology, University of Brasília: Campus Darcy Ribeiro; Thiago Doca // ENM - Department of Mechanical Engineering, Faculty of Technology, University of Brasília: Campus Darcy Ribeiro; Éder Lima de Albuquerque // ENM - Department of Mechanical Engineering, Faculty of Technology, University of Brasília: Campus Darcy Ribeiro;

ROOM MARFIM II- Applied Mathematics and Mathematical Modeling

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	11274	NUMERICAL ANALYSIS OF PUNCHING SHEAR IN CONCRETE REINFORCED FLAT SLAB USING DAMAGED PLASTICITY MODEL	Gustavo Savaris // Dept. of Civil Engineering, Federal University of Technology - Paraná – Campus Toledo; Elyson A. P. Liberati // Dept. of Civil Engineering, State University of Maringá;
17:45 -18:00	10612	NUMERICAL VERIFICATION FOR THE ASIAN RUST DISPERSION IN PARANÁ	Eduardo Oliveira Belinelli // Graduate Program in Numerical Method in Engineering; Luciano Araki // Dept. of Engineering, Federal University of Paraná (UFPR); Nicholas Dicati // Dept. of Mechanical Engineering, Maringá State University (UEM);
18:00-18:15	10702	SOLUTION CONSTRUCTION FOR A DRAINAGE PROCESS FOR A SYSTEM MODELING THE FOAM FLOW WITH LINEAR SURFACTANT ADSORPTION	Giulia C. Fritis // LAMAP, Federal University of Juiz de Fora, Juiz de Fora; Pavel Z.S. Paz // LAMAP, Federal University of Juiz de Fora, Juiz de Fora; Grigori Chapiro // LAMAP, Federal University of Juiz de Fora, Juiz de Fora;
18:15- 18:30	10549	VERIFICATION OF THE ORDER OF ACCURACY OF THE DISCRETIZATION ERROR IN THE SIMULATION OF TUMOR GROWTH	Jesika Maganin // Graduate Program in Numerical Method in Engineering, Federal University of Paraná; Marcio Augusto Villela Pinto // Dept. of Mechanical Engineering, Federal University of Paraná; Neyva Maria Lopes Romeiro // Dept. of Mathematics, State University of Londrina;

ROOM MARFIM IV - Computational Geophysics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	11138	FULLY EXPLICIT FEM FORMULATION FOR NMR SIMULATIONS USING THE DUFORT-FRANKEL METHOD	Luiz F. Bez // Instituto de Computação, Universidade Federal Fluminense; Ricardo Leiderman // Instituto de Computação, Universidade Federal Fluminense; André Souza // Instituto de Geociências, Universidade Federal Fluminense; Rodrigo B. de V. Azeredo // Instituto de Química, Universidade Federal Fluminense; André M. B. Pereira // Instituto de Computação, Universidade Federal Fluminense;
17:45-18:00	10904	WAVE PROPAGATION ANALYSES CONSIDERING A TRULY-EXPLICIT TIME-MARCHING FORMULATION	Lucas Ruffo Pinto // COPPE/Federal University of Rio de Janeiro; Delfim Soares Jr. // Structural Engineering Department, Federal University of Juiz de Fora; Webe João Mansur // COPPE/Federal University of Rio de Janeiro;

ROOM MARFIM V - Data Science and High-Performance Computing in Engineering Problems

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	11161	MACHINE LEARNING APPLICATION TO ASSESS A PROCESS CONTROL OF A CATALYTIC CRACKING UNIT	Guilherme Lopes de Campos // Universidade Federal Fluminense; Troner Assenheimer de Souza // Dept. Chemical and Petroleum Engineering, Universidade Federal Fluminense; Víctor Rolando Ruiz Ahón // Dept. Chemical and Petroleum Engineering, Universidade Federal Fluminense; Ninoska Isabel Bojorge Ramirez // Dept. Chemical and Petroleum Engineering, Universidade Federal Fluminense;

ROOM MARFIM VI - Scientific Machine Learning and Uncertainty Quantification

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10574	USE OF PHYSICS INFORMED NEURAL NETWORKS TO SOLVE HEAT CONDUCTION IN ONE AND TWO DIMENSIONS	Felipe M. Eler // Department of Civil Engineering, COPPE/UFRJ; Anaximandro A.P.M. de Souza // Department of Civil Engineering, COPPE/UFRJ; Alvaro L.G.A. Coutinho // Department of Civil Engineering, COPPE/UFRJ; Paulo Couto // Department of Civil Engineering, COPPE/UFRJ;
17:45 -18:00	10644	USE OF RANDOM FOREST TO PREDICT THE ACCUMULATION OF PLASTIC DEFORMATION AT GRAIN BOUNDARIES OF A POLYCRYSTALLINE MATERIAL.	Lara Cristina Pereira de Araujo // Dept. de Engenharia Mecânica, Pontifícia Universidade Católica do Rio de Janeiro; Helon Vicente Hultmann Ayala // Dept. de Engenharia Mecânica, Pontifícia Universidade Católica do Rio de Janeiro; Renato Bichara Vieira // Dept. de Engenharia Mecânica, Pontifícia Universidade Católica do Rio de Janeiro;

NOVEMBER, 23 - WEDNESDAY - 09:30-11:30

ROOM CATARATAS DO IGUAÇÚ - Research Beginners

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10926	AGROPHOTOVOLTAIC SYSTEM IN ALAGOAS – DESIGN CONTRIBUTION AND PERFORMANCE ANALYSIS OF SUPPORT STRUCTURES FOR PHOTOVOLTAIC SOLAR PANELS	José Luiz Carlos Marinho Peronico Pedrosa // Federal University of Alagoas; Márcio André Araújo Cavalcante // Federal University of Alagoas;
09:45-10:00	10639	APPLICATION OF THE NEWMARK INTEGRATION METHOD TO DETERMINE THE DYNAMIC RESPONSE OF A COMPLETE VEHICLE MODEL SUBJECTED TO THE EXCITATION OF A RANDOM ROAD PROFILE ACCORDING TO ISO 8608	José Marcelo M. L. Rodrigues // Dept. of Mechanical Engineering, Federal University of Rio Grande do Sul; Leticia F. F. Miguel // Dept. of Mechanical Engineering, Federal University of Rio Grande do Sul;
10:00-10:15	10970	CONCRETEGRID: A COMPUTATIONAL TOOL TO ANALYSIS AND DESIGN OF STRUCTURAL GRIDS IN REINFORCED CONCRETE	Milton M. G. dos Santos // Centro de Tecnologia, Universidade Federal de Alagoas; João C. C. Barbirato // Centro de Tecnologia, Universidade Federal de Alagoas;
10:15-10:30	10998	FIRESTEEL: A COMPUTATIONAL TOOL FOR THE STUDY OF STEEL ELEMENTS IN FIRE SITUATION	Milton M. G. dos Santos // Centro de Tecnologia, Universidade Federal de Alagoas; Luciano B. dos Santos // Centro de Tecnologia, Universidade Federal de Alagoas;
10:30-10:45	11254	TOPOLOGY OPTIMIZATION OF 3D TRUSS STRUCTURES CONSIDERING STRESS, DISPLACEMENT AND BUCKLING CONSTRAINTS	Verônica C. H. Pazda // Dept. of Mechanical Engineering, Santa Catarina State University; Eduardo L. Cardoso // Dept. of Mechanical Engineering, Santa Catarina State University;
10:45-11:00	10894	ANALYSIS OF REINFORCED CONCRETE BEAMS WITH OPENING USING INCOMPATIBLE MODE ELEMENTS AND STRUT-AND-TIES MODEL	Evilly Raquel Henrique da Silveira // INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DA PARAÍBA (IFPB); Adenilda Timóteo Salviano // INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DA PARAÍBA (IFPB); Sebastião Simão da Silva // INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DA PARAÍBA (IFPB); José Soares Neto // INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DA PARAÍBA (IFPB);
11:00-11:15	10674	ACOUSTIC CAVITY THEORETICAL AND NUMERICAL ANALYSES FOR NOISE ATTENUATION BY APPLYING HELMHOLTZ RESONATORS	Derick Fernando O. Fernandes // Universidade de Brasília; Manuel N. D. Barcelos Júnior // Universidade de Brasília; Henrique G. de Moura // Universidade de Brasília;

ROOM MAFIM I - Computational Modeling of Flow in Porous Media

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	11127	A COMPUTATIONAL MODEL FOR THE ANALYSIS OF UPLIFT PRESSURES AND FLUID FLOW IN THE JUCAZINHO RCC DAM	Josinaldo L. de Souza // Programa de Pós-Graduação em Engenharia Civil (PPGEC) Universidade Federal de Pernambuco; Paulo M. V. Ribeiro // Programa de Pós-Graduação em Engenharia Civil (PPGEC) Universidade Federal de Pernambuco;
09:45-10:00	11039	CORE FLOOD IN POROUS MICROMODEL MADE OF GLASS	Jordana Colman // Dept. of Civil Engineering, Federal University of Rio de Janeiro; Fernanda Oliveira Hoerle // Dept. of Civil Engineering, Federal University of Rio de Janeiro; Agatha Densy dos Santos Francisco // Federal University of Rio de Janeiro; Raquel Machado Fedrizzi // Dept. of Nanotechnology Engineering, Federal University of Rio de Janeiro; José Luís Drummond Alves // Dept. of Civil Engineering, Federal University of Rio de Janeiro; Paulo Couto // Dept. of Civil Engineering, Federal University of Rio de Janeiro;
10:00-10:15	10575	NUMERICAL OBSERVATION OF TRAVELING WAVE SOLUTION IN A NON-NEWTONIAN FOAM MODEL	Jhuan B. Cedro // Computational Modeling Graduate Program, Federal University of Juiz de Fora; Grigori Chapiro // Laboratory of Applied Mathematics, Federal University of Juiz de Fora;
10:15-10:30	10950	NUMERICAL SOLUTION OF SINGLE-PHASE FLOWS IN KARSTIFIED HETEROGENEOUS CARBONATE ROCKS	Uebert G. Moreira // University of São Paulo; Franciane F. Rocha // University of São Paulo; Alfredo Jaramillo // University of São Paulo; Fabricio S. de Sousa // University of São Paulo; Roberto F. Ausas // University of São Paulo; Gustavo C. Buscaglia // University of São Paulo; Felipe Pereira // The University of Texas at Dallas, United States;

10:30-10:45	10885	PORE NETWORK EVALUATION OF HYDROPHYSICAL PROPERTIES OF CARBONATE ROCKS (COQUINAS)	Maira C.O.L.Santo // Dept. of Civil Engineering, UFRJ; Elisabeth M.D.Pon- tedeiro // Dept. of Civil Engineering, UFRJ; Mateus Ramirez // Dept. of Mechanical Engineering, UFRJ; Martinus, T. van Genuchten // Dept. of Earth Sciences, Utrecht University; Paulo Couto // Dept. of Civil Engineering, UFRJ; José Luis Drummond Alves // Dept. of Civil Engineering, UFRJ;
10:45-11:00	10576	WAVEFRONT VELOCITY FOR FOAM FLOW IN THREE-LAYER POROUS MEDIA	Andrés J. Castrillón Vásquez // Computational Modeling Program, Federal University of Juiz de Fora; Grigori Chapiro // Applied Mathematics Labora- tory, Federal University of Juiz de Fora;

ROOM MARFIM II - Health monitoring and numerical modeling of structures

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	11271	CALIBRATION AND VALIDATION OF THE NUMERICAL MODEL OF A FREIGHT WAGON BASED ON DYNAMIC TESTS UNDER OPERATING CONDITIONS	Cássio S. C. Bragança // Dept. of Structural Engineering, Univ. of Minas Gerais; José Neto // CONSTRUCT - LESE, Faculty of Engineering, Univ. of Porto, Porto, Portugal; Nuno Pinto // CONSTRUCT - LESE, Faculty of Engineering, Univ. of Porto, Porto, Portugal; Pedro A. Montenegro // CONSTRUCT - LESE, Faculty of Engineering, Univ. of Porto, Porto, Portugal; Diogo Ribeiro // CONSTRUCT - LESE, Faculty of Engineering, Univ. of Porto, Porto, Portugal; Hermes Carvalho // Dept. of Structural Engineering, Univ. of Minas Gerais; Rui Calçada // CONSTRUCT - LESE, Faculty of Engineering, Univ. of Porto, Porto, Portugal; Túlio N. Bittencourt // Dept. of Structural and Geotechnical Engineering, Univ. of São Paulo;
09:45-10:00	10661	DEEP LEARNING ALGORITHM BASED ON YOLOV5 NEURAL NETWORK FOR DERMATOSCOPIC CLASSIFICATION AND DETECTION OF EPITHELIAL CANCER (MELANOMA)	Thiago Valfré Lecchi // Control and Automation Engineering Program, Federal Institute of Education, Science and Technology of Espírito Santo (Ifes); Rafael Peixoto Derenzi // Control and Automation Engineering Program, Federal Institute of Education, Science and Technology of Espírito Santo (Ifes); Gustavo Maia de Almeida // Control and Automation Engineering Program, Federal Institute of Education, Science and Technology of Espírito Santo (Ifes);
10:00-10:15	11272	DEGRADATION PREDICTION OF IN-SERVICE RAILWAY BRIDGES SUPPORTED BY SEMI-MARKOV PROCESS	Fagner Furtado // Rumo Logística, Railway Infrastructure, Brazil; Adriano Bonatto // Rumo Logística, Railway Infrastructure, Brazil; Diogo Ribeiro // CONSTRUCT-LESE, School of Engineering, Polytechnic of Porto, Porto, Portugal;
10:15-10:30	11086	INFERENCE OF THE MODAL PARAMETERS OF A WALKWAY THROUGH THE CLUSTERING AND BOOTSTRAP TECHNIQUES ASSOCIATION.	Renato Cancherini Lefone // COPPE / UFRJ; Luiz Augusto Cavalcante Moniz de Aragão Filho // Instituto Militar de Engenharia (IME); Carlos Magluta // COPPE / UFRJ;
10:30-10:45	11288	INFLUENCE OF DIFFERENT FACTORS RELATED WITH THE TRAIN-BRIDGE INTERACTION SYSTEM IN THE STABILITY OF HIGH-SPEED TRAINS SUBJECTED TO STRONG WINDS	R. Calçada // CONSTRUCT - LESE, Faculty of Engineering, University of Porto, Porto, Portugal; J.M. Goicolea // School of Civil Engineering, Technical University of Madrid, Madrid, Spain; W. Zhai // Train and Track Research Institute, State Key Laboratory of Traction Power, Southwest Jiaotong Uni- versity, Chengdu, China; M. Ortega // IDEAM SA, Madrid, Spain; F. Millanes // IDEAM SA, Madrid, Spain; P.A. Montenegro // CONSTRUCT - LESE, Faculty of Engineering, University of Porto, Porto, Portugal; H. Carvalho // Department of Structural Engineering, Federal University of Minas Gerais, Belo Horizonte, Brazil; D. Ribeiro // CONSTRUCT - LESE, School of Engineering, Polytechnic of Porto, Porto, Portugal;
10:45-11:00	10764	INFLUENCE OF SOIL-STRUCTURE INTERACTION (SSI) ON THE PERFORMANCE OF THE CONNECTED CONTROL METHOD (CCM)	Luis A. P. Pena // Faculty of Architecture and Urbanism, University of Brasília; Suzana M. Avila // Gama Engineering College, University of Brasília; Graciela Doz // Faculty of Technology, University of Brasília;
11:00-11:15	11289	INTEGRATED METHODOLOGY FOR FATIGUE LIFE PREDICTION OF EXISTING METALLIC RAILWAY BRIDGES	A.M.P. Jesus // INEGI, Faculty of Engineering, University of Porto; R. Calçada // CONSTRUCT - LESE, Faculty of Engineering, University of Porto; C.S. Ho- ras // CONSTRUCT - LESE, Faculty of Engineering, University of Porto;
11:15-11:30	10716	NUMERICAL EVALUATION OF MODAL INDICES FOR DAMAGE IDENTIFICATION IN STEEL FOOTBRIDGES	Augusto César M. Feijão // Department of Civil and Environmental Engi- neering, Pontifical Catholic University of Rio de Janeiro (PUC-Rio); Cassio Marques R. Gaspar // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro (PUC-Rio); Elisa D. Sotelino // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro (PUC-Rio);

ROOM MARFIM III - Computational Geotechnics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10768	A MODIFIED DRUCKER-PRAGER CAP PLASTICITY MODEL FOR TRIAXIAL SIMULATION OF RESIDUAL SOILS	Fernando Fante // Ph.D. Student, Graduate Program in Civil Engineering, Universidade Federal do Rio Grande do Sul; Maria Mariana de Sousa Rocha // Ph.D. Student, Graduate Program in Civil Engineering, Universidade Federal do Rio Grande do Sul; Gracieli Dienstmann // Professor of Civil Engineering, Department of Civil Engineering, Universidade Federal de Santa Catarina; Cesar Alberto Ruver // Professor of Civil Engineering, Graduate Program in Civil Engineering, Universidade Federal do Rio Grande do Sul; Nilo Cesar Consoli // Professor of Civil Engineering, Graduate Program in Civil Engineering, Universidade Federal do Rio Grande do Sul;
09:45-10:00	10873	AN ANALYTICAL MODEL FOR STRESSES INDUCED BY PORE-WATER PRESSURES IN POROUS ROCK SLABS	Yasmim C. Guimarães // Aeronautics Institute of Technology; Anna Maria Ferrero // University of Turin; William H. Ito // Aeronautics Institute of Technology; Talita Scussiato // Aeronautics Institute of Technology; Paulo I. B. de Queiroz // Aeronautics Institute of Technology;
10:00-10:15	11031	ANALYTICAL AND NUMERICAL COMPARISON OF BEARING CAPACITY OF STRIP FOUNDATION ON SLOPES	Marko Antonio López Bendejú // Carrera de Ingeniería Civil, Universidad de Lima, Perú; Anthony Junior Flores Carpio // Carrera de Ingeniería Civil, Universidad de Lima, Perú; Saskia Alexandra Arévalo Bardález // Carrera de Ingeniería Civil, Universidad de Lima, Perú;
10:15-10:30	10878	ANALYTICAL MODEL FOR DISSIPATION OF THERMALLY INDUCED PORE PRESSURE IN MARBLE SLABS	Paulo Ivo B. de Queiroz // Aeronautics Institute of Technology; Yasmim C. Guimarães // Aeronautics Institute of Technology; Anna Maria Ferrero // University of Turin; Caroline T. Santos // Federal University of Technology – Parana; William H. Ito // Federal University of Technology – Parana;
10:30-10:45	10704	BUCKLING OF PILES IN SOFT CLAY: COMPARISON BETWEEN ANALYTICAL AND NUMERICAL FORECASTING	Paula A. P. Martins // Federal University of Juiz de Fora; Juliane C. Goncalves // Structural Engineering Department, Federal University of Juiz de Fora;
10:45-11:00	11075	GEOMECHANICAL DAMAGE EVALUATION OF FRACTURED CARBONATE ROCKS SCENARIOS RELATED TO THE BRAZILIAN PRE-SALT VIA FINITE ELEMENT ANALYSIS	Ximena Alejandra Rodríguez Flórez // Civil Engineering Department, Federal University of Pernambuco; Leonardo José do Nascimento Guimarães // Civil Engineering Department, Federal University of Pernambuco; Bruno Marcelo Canabarro Machado Maciel // Civil Engineering Department, Federal University of Pernambuco;
11:00-11:15	10746	MACHINE LEARNING APPLIED TO PREDICT PILE BEARING CAPACITY	Yago Ferreira Gomes // Civil Engineering Division, Aeronautics Institute of Technology; Dimas Betsioli Ribeiro // Civil Engineering Division, Aeronautics Institute of Technology;
11:15-11:30	11105	NUMERICAL ANALYSIS OF AN EMBEDDED PILE IN FRACTURED ROCK	Bruna Carvalho Matheus // Federal University of Santa Catarina; Rafael Marcus Schwabe // Federal University of Santa Catarina; Jade Jacomini de Jesus // Federal University of Santa Catarina; Gracieli Dienstmann // Federal University of Santa Catarina;

ROOM MARFIM IV - Structural Reliability Methods and Design Optimization under Uncertainties

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	11284	FRAGILITY CURVES AND FAILURE MODELS BASED ON LUMPED DAMAGE MECHANICS APPLIED TO REINFORCED CONCRETE FRAMES UNDER SEISMIC LOADS	Rúbia Mara Bosse // Federal University of Technology - Paraná; André Teófilo Beck // Department of Structural Engineering, University of São Paulo;
09:45-10:00	11033	MECHANICAL MODEL COMPARISON USING SOBOL' INDICES	Riccelli Begnini // PPGECI, UNILA; André Jacomet Torii // UNILA; Henrique Machado Kroetz // UFPR;
10:00-10:15	10958	MODEL UPDATING USING HIERARCHICAL BAYESIAN STRATEGY AND ERROR SCALE FACTOR EMPLOYING B-WIM CALIBRATION DATA	Sabrina K. Heinen // Civil Engineering Dept., Federal University of Santa Catarina; Rafael H. Lopez // Civil Engineering Dept., Federal University of Santa Catarina; Matheus S. Gonçalves // Civil Engineering Dept., Federal University of Santa Catarina; Leandro F. F. Miguel // Civil Engineering Dept., Federal University of Santa Catarina;
10:15-10:30	10675	MULTI-LEVEL OPTIMIZATION OF MAINTENANCE PLANNING FOR PIPELINES CONSIDERING DIFFERENT CORROSION GROWTH MODELS	Savanna Cristina Medeiros D'Aguiar // Departamento de Engenharia Civil e Ambiental, Universidade Federal de Pernambuco; Álamo DiTarso Sousa Pessoa // Departamento de Engenharia Civil e Ambiental, Universidade Federal de Pernambuco; Paulo Fernando Silva Sousa // Departamento de Engenharia Civil e Ambiental, Universidade Federal de Pernambuco; Silvana Maria Bastos Afonso da Silva // Departamento de Engenharia Civil e Ambiental, Universidade Federal de Pernambuco; Ramiro Brito Willmersdorf // Departamento de Engenharia Mecânica, Universidade Federal de Pernambuco;

10:30-10:45	10966	RELIABILITY ANALYSIS OF COLD FORMED STEEL MEMBERS WITH PLAIN C-LIPPED AND SUPACEE SECTION IN SHEAR.	Frederico B. Costa // Federal University of Ouro Preto (UFOP); André L. R. Brandão // Federal University of Itajubá (Itabira campus); Marcílio S. da R. Freitas // Federal University of Ouro Preto (UFOP);
10:45-11:00	10888	RELIABILITY OF BUILT-UP COLD-FORMED STEEL COLUMNS DESIGNED BY THE DIRECT STRENGTH METHOD	Celmar Pereira de Andrade // PROPEC, Federal University of Ouro Preto; Marcílio Sousa da Rocha Freitas // PROPEC, Federal University of Ouro Preto; André Luís Riqueira Brandão // Itabira Campus, Federal University of Itajubá;
11:00-11:15	11051	RELIABILITY STUDY OF THE DUCTILITY OF REINFORCED CONCRETE BEAMS BASED ON THE NBR 6118 (2014)	Ana Carolina da Silva Pacheco // Dept. of Civil Engineering, Federal University of Santa Catarina; Wellison José de Santana Gomes // Dept. of Civil Engineering, Federal University of Santa Catarina;
11:15-11:30	10796	RISK OPTIMIZATION OF A RC FRAME UNDER COLUMN LOSS SCENARIO	Lucas da Rosa Ribeiro // Dept. of Structural Engineering, University of São Paulo; André Teófilo Beck // Dept. of Structural Engineering, University of São Paulo; Fulvio Parisi // Dept. of Structures for Engineering and Architecture, University of Naples Federico II;

ROOM MARFIM V - Nonlinear Dynamics Analysis and Control of Vibration Systems on Macro and MEMS Scales and its Applications to Engineering

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10956	A NUMERICAL STUDY OF CARDIAC PACEMAKERS WITH RELAXATION OSCILLATORS	Felipe Lima de Abreu // Faculdade de Engenharia, Universidade Federal da Grande Dourados; Marcus Varanis // Instituto de Física, Universidade Federal de Mato Grosso do Sul; Clivaldo de Oliveira // Faculdade de Engenharia, Universidade Federal da Grande Dourados; José Manoel Balthazar // Universidade Tecnológica Federal do Paraná; Angelo Marcelo Tusset // Universidade Tecnológica Federal do Paraná;
09:45-10:00	10967	CHARACTERIZATION OF DISTURBANCE IN ELECTRIC POWER SIGNALS: A MACHINE LEARNING APPROACH	Felipe Abreu de LIMA // Faculdade de Engenharia, Universidade Federal da Grande Dourados; Marcus Varanis // Instituto de Física, Universidade Federal de Mato Grosso do Sul; Pedro Augusto Beck // Faculdade de Engenharia, Universidade Federal da Grande Dourados; Clivaldo de Oliveira // Faculdade de Engenharia, Universidade Federal da Grande Dourados; José Manoel Balthazar // Universidade Tecnológica Federal do Paraná;
10:00-10:15	11111	CUBIC NONLINEAR STIFFNESS AND QUADRATIC NONLINEAR PIEZOELECTRICAL COUPLING ON THE DYNAMIC BEHAVIOUR OF AN AEROELASTIC ENERGY HARVESTING SYSTEM	Ana C. G. Amaral // Dept. of Mechanical Engineering, State University of São Paulo; Marcos Silveira // Dept. of Mechanical Engineering, State University of São Paulo;
10:15-10:30	10943	DESIGN OF OPTIMUM VISCOELASTIC DYNAMIC NEUTRALIZERS BY RESPONSE REANALYSIS	Gabriel R. do Amaral // Institute of Technology for Development - Lactec, Mechanical Testing Laboratory; Kevin M. M. Ribeiro // Dept. of Mechanical Engineering, Federal University of Paraná (UFPR); José M. Balthazar // Dept. of Mechanical Engineering, Engineering School, São Paulo State University (UNESP) – Bauru; Alexandre de Macêdo Wahrhaftig // Dept. of Construction and Structures, Polytechnic School, Federal University of Bahia (UFBA); Isabel Gebauer Soares // Dept. of Mechanical Engineering, Federal University of Paraná (UFPR); Eduardo M. de Oliveira Lopes // Dept. of Mechanical Engineering, Federal University of Paraná (UFPR);
10:30-10:45	10898	DYNAMIC ANALYSIS OF AN ALUMINUM SPUR GEAR PAIR	Tobias J. D. E. Rosa // Master's Program in Mechanical Engineering, Military Engineering Institute; Rogério P. Menezes Filho // Dept. of Mechatronics, MWF Mechatronics; Elias D. R. Lopes // Master's Program in Mechanical Engineering, Military Engineering Institute; Gustavo S. Rodrigues // Master's Program in Mechanical Engineering, Military Engineering Institute; Sérgio G. L. Bodart // Master's Program in Mechanical Engineering, Military Engineering Institute;
10:45-11:00	10623	EVALUATION OF STRUCTURAL DYNAMIC MODIFICATION BY VISCOELASTIC NEUTRALIZERS BASED ON METHODS OF RESPONSE REANALYSIS	Isabel G. Soares // Department of Mechanical Engineering, Federal University of Paraná; Eduardo M. O. Lopes // Department of Mechanical Engineering, Federal University of Paraná;
11:00-11:15	10803	NUMERICAL SIMULATION METHODOLOGY FOR ACTIVE-ADAPTIVE VIBRATION CONTROL USING A STATE-SPACE FORMULATION AND IIR FILTERS	Maurizio R. Barghouthi // Department of Mechanical Engineering, Federal University of Paraná; Eduardo L. O. Batista // Department of Electrical and Electronics Engineering, Federal University of Santa Catarina; Eduardo M. O. Lopes // Department of Mechanical Engineering, Federal University of Paraná;
11:15-11:30	10973	NUMERICAL STUDY OF A MULTI-DEGREE OF FREEDOM STRUCTURE UNDER THE INFLUENCE OF WIND EXCITATION.	Géder G. L. Cunha // Faculdade de engenharia, Universidade Federal da Grande Dourados; Marcus Varanis // Instituto de Física, Universidade Federal de Mato Grosso do Sul; Murilo Cesar Filipus // Faculdade de engenharia, Universidade Federal da Grande Dourados; Clivaldo de Oliveira // Faculdade de engenharia, Universidade Federal da Grande Dourados; José Manoel Balthazar // Universidade Tecnológica Federal do Paraná;
11:30-11:45	10897	ANALYSIS OF TEMPERATURE TREATMENTS AND MANUFACTURE METHODS OF SUPERELASTIC NITI BENDING SPRINGS WITH COMPLEX-SHAPE	Igor J. G. de Sena // Unidade Acadêmica de Engenharia Mecânica, Universidade Federal de Campina Grande; Richard Senko // Unidade Acadêmica de Engenharia de Produção, Universidade Federal de Campina Grande;

NOVEMBER, 23 - WEDNESDAY - 14:00-16:00

ROOM CATARATAS DO IGUAÇÚ - Research Beginners

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10662	DETECTION AND CLASSIFICATION OF FIREARMS APPLIED TO ENTERTAINMENT MEDIA	Junior G. dos Santos // Dept. of Control and Automation Engineering, Federal Institute of Espírito Santo; Gustavo M. de Almeida // Dept. of Control and Automation Engineering, Federal Institute of Espírito Santo; Flávio G. Pereira // Dept. of Control and Automation Engineering, Federal Institute of Espírito Santo;
14:15-14:30	10723	FATIGUE LIFE ANALYSIS OF A WIND TURBINE BLADE SUBJECTED TO DAVENPORT LOADING USING THE COMPUTATIONAL TOOL ANSYS	Lidiane Laís Silva Santos Lima // Universidade de Brasília - Faculdade do Gama - FGA; Suzana Moreira Ávila // Universidade de Brasília - Faculdade do Gama - FGA; Maura Angélica Milfont Shzu // Universidade de Brasília - Faculdade do Gama - FGA; - / / -; - / / -;
14:30-14:45	10652	GES: INTELLIGENT SYSTEM FOR CLASSIFICATION AND DETECTION OF DEFECTS IN GRANITE SHEET	Alexsander Alves Novaes // Mestrando em Engenharia de Controle e Automação, Ifes Serra.; Gustavo Maia de Almeida // Cordenadoria de Automação Industrial Ifes Serra - Professor; Gustavo Maia de Almeida // Cordenadoria de Automação Industrial Ifes Serra - Professor; Rafael Peixoto Derenzi Vivacqua // Cordenadoria de Automação Industrial Ifes Serra - Orientador; Daniel Cruz Cavalieri // Cordenadoria de Automação Industrial Ifes Serra - Co-orientador;
14:45-15:00	10886	GRAPHIC PREPROCESSOR FOR THERMAL ANALYSIS VIA CS-ASA/FA	Thiago C. Assis // Departamento de Tecnologia em Engenharia Civil, Computação, Automação, Telemática e Humanidades (DTECH), Universidade Federal de São João del-Rei (UFSJ); Lavínia L. M. Damasceno // Departamento de Tecnologia em Engenharia Civil, Computação, Automação, Telemática e Humanidades (DTECH), Universidade Federal de São João del-Rei (UFSJ); Dalilah Pires // Departamento de Tecnologia em Engenharia Civil, Computação, Automação, Telemática e Humanidades (DTECH), Universidade Federal de São João del-Rei (UFSJ); Rafael C. Barros // Programa de Pós-graduação em Engenharia Civil - PROPEC, Departamento de Engenharia Civil, Escola de Minas, Universidade Federal de Ouro Preto (UFOP); Ricardo A. M. Silveira // Programa de Pós-graduação em Engenharia Civil - PROPEC, Departamento de Engenharia Civil, Escola de Minas, Universidade Federal de Ouro Preto (UFOP);
15:00-15:15	10884	GRAPHIC POST PROCESSOR FOR THERMAL ANALYSIS VIA CS-ASA/FA	Lavínia L. M. Damasceno // Departamento de Tecnologia em Engenharia Civil, Computação, Automação, Telemática e Humanidades (DTECH), Universidade Federal de São João del-Rei (UFSJ); Thiago C. Assis // Departamento de Tecnologia em Engenharia Civil, Computação, Automação, Telemática e Humanidades (DTECH), Universidade Federal de São João del-Rei (UFSJ); Dalilah Pires // Departamento de Tecnologia em Engenharia Civil, Computação, Automação, Telemática e Humanidades (DTECH), Universidade Federal de São João del-Rei (UFSJ); Rafael C. Barros // Programa de Pós-graduação em Engenharia Civil - PROPEC, Departamento de Engenharia Civil, Escola de Minas, Universidade Federal de Ouro Preto (UFOP); Ricardo A. M. Silveira // Programa de Pós-graduação em Engenharia Civil - PROPEC, Departamento de Engenharia Civil, Escola de Minas, Universidade Federal de Ouro Preto (UFOP);
15:15-15:30	11247	IDENTIFICATION OF TEXT RELEVANCE IN SERVICE DESK SYSTEMS USING MACHINE LEARNING CLASSIFIERS	MARCIEL M DEGASPERI // Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo; DANIEL C CAVALIERI // Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo; FIDELIS Z CASTRO // Instituto Federal de Educação, Ciência e Tecnologia do Espírito Santo;
15:30-15:45	10703	IMPLEMENTAÇÃO DE UM CÓDIGO DE ELEMENTOS FINITOS COM ELASTOPLASTICIDADE EM PYTHON	Leonardo Oliveira Rodriguez // Escola Politécnica, Universidade Federal do Rio de Janeiro; Gabriel Maurício Macena dos Santos // Escola Politécnica, Universidade Federal do Rio de Janeiro; Silvia Corbani // Departamento de Estruturas, Universidade Federal do Rio de Janeiro;
15:45-16:00	10760	ODOMETRY AND SPEED CONTROL OF A 4WD MOBILE ROBOT INTEGRATED WITH ROS 2	Leonardo G. Batista // Master's program in control and automation engineering, Federal Institute of Espírito Santo; Pablo F. Salarolli // Master's program in control and automation engineering, Federal Institute of Espírito Santo; Daniel F. T. Gamarra // Control and Automation Engineering Course, Federal University of Santa Maria; Gustavo M. de Almeida // Control and Automation Engineering Course, Federal Institute of Espírito Santo; Rafael P. D. Vivacqua // Control and Automation Engineering Course, Federal Institute of Espírito Santo; Marco A. S. L. Cuadros // Control and Automation Engineering Course, Federal Institute of Espírito Santo;

ROOM MARFIM I - Engineering Design Optimization

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	11164	EFFICIENT BACKCALCULATION PROCEDURE FOR ASPHALT PAVEMENTS USING THE FINITE ELEMENT METHOD	<i>Elias Saraiva Barroso // Laboratório de Mecânica Computacional e Visualização, Universidade Federal do Ceará; José Lucas Ferreira de Oliveira // Laboratório de Mecânica dos Pavimentos, Universidade Federal do Ceará; Evandro Parente Junior // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Juceline Batista dos Santos Bastos // Instituto Federal de Educação, Ciência e Tecnologia do Ceará; Lucas Feitosa de Albuquerque Lima Babadopulos // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará;</i>
14:15-14:30	10924	EFFICIENT OPTIMIZATION OF ENGINEERING PROBLEMS USING MULTI-FIDELITY MODELS	<i>Leonardo Gonçalves Ribeiro // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Evandro Parente Junior // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Antônio Macário Cartaxo de Melo // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará;</i>
14:30-14:45	10922	EVALUATION OF METHODS FOR OPTIMIZING STRUCTURAL DESIGN PARAMETERS IN OIL WELLSWORD	<i>Christiano A. F. Várady Filho // Scientific Computing and Visualization Laboratory, Federal University of Alagoas; Aline V. Esteves // Scientific Computing and Visualization Laboratory, Federal University of Alagoas; Joyce K. F. Tenório // Scientific Computing and Visualization Laboratory, Federal University of Alagoas; Beatriz R. Barboza // Scientific Computing and Visualization Laboratory, Federal University of Alagoas; Eduardo. T. de Lima Junior // Scientific Computing and Visualization Laboratory, Federal University of Alagoas; João P. L. Santos // Scientific Computing and Visualization Laboratory, Federal University of Alagoas; Rafael Dias // Petrobras; Fábio S. Cutrim // Petrobras; Bruno Sergio Pimentel de Souza // Petrobras;</i>
14:45-15:00	10705	OFFSHORE WIND FARM LAYOUT OPTIMIZATION VIA METAHEURISTIC ALGORITHMS USING A THREE-DIMENSIONAL ANALYTICAL WAKE MODEL	<i>Anderson M. Ribeiro // Graduate Program in Computational Modeling, Federal University of Juiz de Fora; Felipe S. Loureiro // Dept. of Thermal and Fluid Sciences, Federal University of São João del-Rei; Patrícia H. Hallak // Dept. of Applied and Computational Mechanics, School of Engineering, Federal University of Juiz de Fora; Afonso C.C. Lemonge // Dept. of Applied and Computational Mechanics, School of Engineering, Federal University of Juiz de Fora;</i>
15:00-15:15	10828	OPTIMIZATION OF A 2D REINFORCED CONCRETE FRAME CONSIDERING A SEISMIC LOAD VIA CROSS-ENTROPY METHOD	<i>Isabela Durci Rodrigues // Department of Structural Engineering, University of São Paulo; Americo Cunha Jr // Institute of Mathematics and Statistics, Rio de Janeiro State University; André Teófilo Beck // Department of Structural Engineering, University of São Paulo;</i>
15:15-15:30	11124	OPTIMIZATION OF STEEL CASTELLATED AND CELLULAR BEAMS USING FINITE ELEMENT METHOD AND GENETIC ALGORITHMS	<i>Gabriela P. Lubke // Dept. Civil Engineering, Federal University of Ouro Preto; Amilton R. da Silva // Dept. Civil Engineering, Federal University of Ouro Preto;</i>
15:30-15:45	11131	OPTIMIZED ANALYSIS OF T, CIRCULAR AND RECTANGULAR CROSS-SECTIONS OF REINFORCED CONCRETE UNDER BIAXIAL BENDING	<i>Lucas T. Araújo // Dept. Civil Engineering, Federal University of Ouro Preto; Amilton R. da Silva // Dept. Civil Engineering, Federal University of Ouro Preto;</i>
15:45-16:00	10735	TOPOLOGY OPTIMIZATION OF CONTINUUM ELASTIC STRUCTURES EMPLOYING THE FINITE-VOLUME THEORY AND THE EVOLUTIONARY STRUCTURAL OPTIMIZATION METHOD.	<i>Luiz C. L. Vêras // Center of Technology, Federal University of Alagoas; Marcio A. A. Cavalcante // Campus of Engineering and Agricultural Sciences, Federal University of Alagoas;</i>

ROOM MARFIM II - Health monitoring and numerical modeling of structures

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	11147	PREDICTION FAILURE IN ELECTRIC MOTORS BEARINGS USING VIBRATION SIGNALS AND LONG SHORT TERM-MEMORY NEURAL NETWORKS	Rodrigo C. Campos // Programa de Pós-Graduação em Engenharia de Controle e Automação - Instituto Federal do Espírito Santo; Gabriel T. Zago // Programa de Pós-Graduação em Engenharia de Controle e Automação - Instituto Federal do Espírito Santo; Luiz A. Pinto // Programa de Pós-Graduação em Engenharia de Controle e Automação - Instituto Federal do Espírito Santo;
14:15-14:30	10959	SENSOR PLACEMENT OPTIMIZATION FOR NUMERICAL MODEL REDUCTION USING GENETIC ALGORITHM	Diogenes B. Fontes // Federal University of Rio de Janeiro (UFRJ), Ocean Engineering Program (PENO), Rio de Janeiro, Brazil; Fábio R. da Silva // Federal University of Rio de Janeiro (UFRJ), Ocean Engineering Program (PENO), Rio de Janeiro, Brazil; Leonardo O. Felix // Federal University of Rio de Janeiro (UFRJ), Ocean Engineering Program (PENO), Rio de Janeiro, Brazil; Antonio C.R. Troyman // Federal University of Rio de Janeiro (UFRJ), Ocean Engineering Program (PENO), Rio de Janeiro, Brazil; Brenno M. Castro // Federal University of Rio de Janeiro (UFRJ), Ocean Engineering Program (PENO), Rio de Janeiro, Brazil; Luiz A. Vaz // Federal University of Rio de Janeiro (UFRJ), Ocean Engineering Program (PENO), Rio de Janeiro, Brazil; Ulisses A. Monteiro // Federal University of Rio de Janeiro (UFRJ), Ocean Engineering Program (PENO), Rio de Janeiro, Brazil;
14:30-14:45	10679	SHEAR STRENGTH PREDICTION OF SFRC BEAMS USING MACHINE LEARNING	Gabriel Emídio Lage // Department of Structural and Geotechnical Engineering, Polytechnic School at the University of São Paulo; Thomaz Eduardo Teixeira Buttignol // Department of Structures, University of Campinas; Luís Antônio Guimarães Bitencourt Júnior // Department of Structural and Geotechnical Engineering, Polytechnic School at the University of São Paulo;
14:45-15:00	11177	SHM APPLIED TO THE REHABILITATION OF HISTORIC STEEL BRIDGE	Fernanda S. Ramos // Dept. of Structural and Geotechnical Engineering, Univ. of São Paulo; Túlio N. Bittencourt // Dept. of Structural and Geotechnical Engineering, Univ. of São Paulo; Alberto B. Colombo // Dept. of Structural and Geotechnical Engineering, Univ. of São Paulo; Hermes Carvalho // Dept. of Structural Engineering, Univ. of Minas Gerais;
15:00-15:15	10706	STRUCTURAL DAMAGE DETECTION WITH AUTOENCODING NEURAL NETWORKS	Lucas V. Resende // Graduate Program in Civil Engineering, Federal University of Juiz de Fora; Rafaella P. Finotti // Graduate Program in Computational Modeling, Federal University of Juiz de Fora; Flavio S. Barbosa // Graduate Program in Civil Engineering, Federal University of Juiz de Fora; Alexandre A. Cury // Graduate Program in Civil Engineering, Federal University of Juiz de Fora;
15:15-15:30	10871	STRUCTURAL HEALTH MONITORING OF PRESTRESSED CONCRETE BEAMS USING DIFFERENT CNNs ARCHITECTURES	Diego G. de Lucena // Doctoral student in Civil Engineering, Federal University of Ouro Preto (UFOP); Francisco A. das Neves // Dpt. of Civil Engineering, Federal University of Ouro Preto (UFOP); Cláudio José Martins // Dpt. of Civil Engineering, Federal Center for Technological Education of Minas Gerais (CEFET-MG);
15:30-15:45	10557	UNSUPERVISED FEATURE SELECTION-BASED TECHNIQUE FOR LOCATING STRUCTURAL DETERIORATION: A MULTI-DOMAIN APPROACH	Victor Alves // University of Juiz de Fora; Alexandre Cury // Graduate Program in Civil Engineering, University of Juiz de Fora;
15:45-16:00	11071	SIMULATION OF WHEEL DEFECTS AND TRAIN UNBALANCED LOADS FOR SMART DETECTION BASED ON WAYSIDE MONITORING SYSTEMS	Cecília Vale // CONSTRUCT, Faculty of Engineering, University of Porto; Diogo Ribeiro // CONSTRUCT-LESE, School of Engineering, Polytechnic of Porto; Araliya Mosleh // CONSTRUCT-LESE, Faculty of Engineering, University of Porto; Pedro Montenegro // CONSTRUCT-LESE, Faculty of Engineering, University of Porto; Rúben Silva // CONSTRUCT-LESE, School of Engineering, Polytechnic of Porto; António Guedes // School of Engineering, Polytechnic of Porto; M. Mohammadi // Faculty of Engineering, University of Porto; Jorge Meira // GECAD, School of Engineering, Polytechnic of Porto; Vitor Gonçalves // Faculty of Engineering, University of Porto; Afonso Lourenço // GECAD, School of Engineering, Polytechnic of Porto; Andreia Meixedo // CONSTRUCT-LESE, Faculty of Engineering, University of Porto; Goreti Marreiros // GECAD, School of Engineering, Polytechnic of Porto; Rui Calçada // CONSTRUCT-LESE, Faculty of Engineering, University of Porto;

ROOM MARFIM III - Computational Geotechnics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10880	NUMERICAL ANALYSIS OF THE EFFECT OF PENETRATION RATE IN PIEZOCONE TESTS ON SILTY SOILS	André Luis Meier // PostGraduate Prog. of Civil Engineering, Federal University of Santa Catarina; Jade Jacomini de Jesus // Dept. of Civil Engineering, Federal University of Santa Catarina; Gracieli Dienstmann // PostGraduate Prog. of Civil Engineering, Federal University of Santa Catarina; Jonatas Sosnoski // PostGraduate Prog. of Civil Engineering, Federal University of Santa Catarina;
14:15-14:30	11183	NUMERICAL MODELING OF THE LINKING DAMAGE ZONE BETWEEN GEOLOGIC FAULTS	Karoline N. Oliveira // Tecgraf Institute, PUC Rio; Roberto J. Q. Quispe // Tecgraf Institute, PUC Rio; Deane M. Roehl // Tecgraf Institute, PUC Rio; Bruno R. B. M. Carvalho // Petrobras Research Center;
14:30-14:45	10656	NUMERICAL SIMULATION OF BULGING AND THEIR EFFECTS ON ULTIMATE BEARING CAPACITY IN BORED PILES	Michael Vicente // Faculty of Science and Engineering, Pontificia Universidad Catolica del Peru PUCP, Lima, Peru; Marko Lopez // Geotechnics Area – Civil Engineering Section – Engineering Department, Pontificia Universidad Catolica del Peru PUCP, Lima, Peru; Jorge Zegarra // Geotechnics Area – Civil Engineering Section – Engineering Department, Pontificia Universidad Catolica del Peru PUCP, Lima, Peru;
14:45-15:00	11087	THREE-DIMENSIONAL FINITE ELEMENT ANALYSES OF MONOPILES IN COHESIVE SOIL FOR OFFSHORE WIND TURBINES	Marko López BendeZú // Dept. of Civil Engineering, Universidad de Lima; Emilio Chi Yep // Dept. of Civil Engineering, Universidad de Lima; Alex López Zavaleta // Dept. of Civil Engineering, Universidad de Lima;

ROOM MARFIM IV - Structural Reliability Methods and Design Optimization under Uncertainties

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	11083	ROBUST TOPOLOGY OPTIMIZATION OF RESONANT STRUCTURES CONSIDERING UNCERTAINTY IN THE EXCITATION FREQUENCY	Fernando Valentini // Universidade do Estado de Santa Catarina; Olavo M. Silva // Universidade Federal de Santa Catarina; Eduardo Lenz Cardoso // Universidade do Estado de Santa Catarina;
14:15-14:30	10965	SENSITIVITY ANALYSIS AND PARAMETER IDENTIFICATION TO RAILWAY BRIDGE MODEL UPDATING	Thiago M. Fernandes // Center for Optimization and Reliability in Engineering, Federal University of Santa Catarina; Rafael H. Lopez // Center for Optimization and Reliability in Engineering, Federal University of Santa Catarina; Leandro F.F. Miguel // Center for Optimization and Reliability in Engineering, Federal University of Santa Catarina;
14:30-14:45	10876	STOCHASTIC LIVE LOAD MODEL FOR BUILDINGS AND ITS APPLICATION IN RELIABILITY-BASED CODE CALIBRATION	Luis G. L. Costa // Dept. of Structural Engineering, São Carlos School of Engineering, University of São Paulo; André T. Beck // Dept. of Structural Engineering, São Carlos School of Engineering, University of São Paulo; Wagner C. Santiago // Civil Engineering Collegiate, Federal University of the São Francisco Valley;
14:45-15:00	10915	STRUCTURAL RELIABILITY OF STRENGTHENED REINFORCED CONCRETE BEAMS: COMPARATIVE STUDY OF DIFFERENT DESIGN METHODS	Flávia Gelatti // Programa de Pós-graduação em Eng. Civil (PPGEC), UFSC; Wellison José de Santana Gomes // Centro de Otimização e Confiabilidade em Engenharia - PPGEC, UFSC;
15:00-15:15	11057	A STOCHASTIC GRADIENT DESCENT APPROACH FOR RISK OPTIMIZATION USING THE CHERNOFF BOUND	André Gustavo Carlon // Computer, Electrical and Mathematical Sciences & Engineering Division, King Abdullah University of Science & Technology (KAUST); Henrique Machado Kroetz // Center for Marine Studies, Federal University of Paraná (UFPR); André Jacomel Torii // Latin American Institute for Technology, Infrastructure and Territory, Federal University for Latin American Integration (UNILA); Rafael Holdorf Lopez // Center for Optimization and Reliability in Engineering (CORE), Department of Civil Engineering, Federal University of Santa Catarina (UFSC); Leandro Fleck Fadel Miguel // Center for Optimization and Reliability in Engineering (CORE), Department of Civil Engineering, Federal University of Santa Catarina (UFSC);
15:15-15:30	11100	ADAPTIVE IMPORTANCE SAMPLING FOR RELIABILITY ANALYSIS	André Jacomel Torii // UNILA; Rafael Holdorf Lopez // UFSC; Leandro Fleck Fadel Miguel // UFSC; Henrique Machado Kroetz // UFPR; Wellison José de Santana Gomes // UFSC; André Teófilo Beck // USP;

ROOM MARFIM V - Numerical Methods Applied in Computational Mechanics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10964	A HYBRID ALGORITHM BASED ON STATIONARY AND KRYLOV METHODS FOR NONSYMMETRIC LINEAR SYSTEMS	Sebastian Marin // School of Engineering, National University of Asunción; Carlos Marcelo Vera Irala // School of Engineering National University of Asunción; Juan C. Cabral // Polytechnic School, National University of Asunción; Christian E. Schaefer // Polytechnic School, National University of Asunción;
14:15-14:30	11080	A HYBRID-STABILIZED FEM METHOD APPLIED TO HEAT CONDUCTION EQUATION	Daiana Soares Barreiro // LNCC - Laboratório Nacional de Computação Científica; José Karam-Filho // LNCC - Laboratório Nacional de Computação Científica; Cristiane Oliveira de Faria // UERJ- Universidade Estadual do Rio de Janeiro;
14:30-14:45	10770	A LOW-ORDER PRECONDITIONER FOR HIGH-ORDER ELEMENT-WISE DIVERGENCE CONSTANT FINITE ELEMENT SPACES	Jeferson Wilian Dossa Fernandes // FEC, Unicamp; Nathan Shauer // FEC, Unicamp; Philippe Remy Bernard Devloo // FEC, Unicamp;
14:45-15:00	11235	A RATE-DEPENDENT AND UNCONSTRAINED PHASE-FIELD MODEL FOR BRITTLE FRACTURE	Diego R. D. Turbino // Dept. of Mechanical Engineering, Federal University of Rio de Janeiro; Fernando P. Duda // Dept. of Mechanical Engineering, Federal University of Rio de Janeiro; Gabriel M. Guerra // Dept. of Mechanical Engineering, Fluminense Federal University;
15:00-15:15	10687	AN INVERSE PROBLEM APPROACH FOR THE IDENTIFICATION OF THE REFRACTION INDEX IN THE HELMHOLTZ EQUATION	Matheus de Lara Todt // Dept. of Mechanics, Universidade Tecnológica Federal do Paraná; Hilbeth P. A. de Deus // Dept. of Mechanics, Universidade Tecnológica Federal do Paraná;
15:15-15:30	10743	CONTACT INTERACTION LAW BASED ON THE HERTZ THEORY FOR MULTIBODY APPLICATIONS	Lucas da Silva // Dept. of Structural and Geotechnical Engineering, Escola Politécnica, University of São Paulo; Alfredo Gay Neto // Dept. of Structural and Geotechnical Engineering, Escola Politécnica, University of São Paulo;
15:30-15:45	10996	NONLINEAR GEOMETRIC ANALYSIS OF ORTHOTROPIC LAMINATED PLATES AND SHELLS WITH ZIG-ZAG EFFECT	Vinicius de B. Souza // Dept. of Structural Engineering, São Carlos School of Engineering, University of São Paulo; Humberto B. Coda // Dept. of Structural Engineering, São Carlos School of Engineering, University of São Paulo;
15:45-16:00	10605	SOLUTION OF ILL-POSED PROBLEM IN PLANE WAVE DECOMPOSITION FOR SOUND FIELD RECONSTRUCTION	Augusto Cesar Fantinelli de Carvalho // Postgraduate Program in Mechanical and Materials Engineering, Federal University of Technology of Paraná; Hilbeth Parente Azikri de Deus // Postgraduate Program in Mechanical and Materials Engineering, Federal University of Technology of Paraná; Márcio Henrique de Avelar Gomes // Academic Department of Mechanics, Federal University of Technology of Paraná; Eric Brandão // Acoustic Engineering, Federal University of Santa Maria; Lorenzo Fabricio Rodrigues Garron // Mechatronics Engineering, Federal University of Technology of Paraná;

ROOM MARFIM VI - Developments and applications of special enrichment methods and innovative discretization techniques - meshfree, pou methods and GFEM/XFEM, isogeometric analysis

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
14:00-14:15	10624	A NEW APPROACH FOR THE MODIFIED LOCAL GREEN'S FUNCTION METHOD APPLIED TO POISSON EQUATION	Ramon Macedo Corrêa // Graduate Program in Numerical Methods in Engineering, Federal University of Paraná; Marcos Arndt // Graduate Program in Numerical Methods in Engineering, Federal University of Paraná; Roberto Dalledone Machado // Graduate Program in Numerical Methods in Engineering, Federal University of Paraná;
14:15-14:30	10589	APPLICATION OF THE G / XFEM, QUASI-3D THEORY, AND THE NON-LOCAL ELASTICITY IN THE VIBRATIONS ANALYSIS OF THICK FUNCTIONAL GRADED NANO-PLATES.	Dr. Eng. : Osca Alfredo Garcia de Suarez // Departamento de Engenharia Mecânica, Universidade Federal do Rio Grande do Sul.; Rodrigo Rossi // Departamento de Engenharia Mecânica, Universidade Federal do Rio Grande do Sul.;
14:30-14:45	10625	EVALUATION OF NUMERICAL PARAMETERS OF A GLOBAL-LOCAL GFEM APPROACH SIMULATING DAMAGE PROPAGATION IN AN L-SHAPED CONCRETE PANEL	Anelize Borges Monteiro // Federal University of Santa Catarina (campus Joinville); Felício Bruzzi Barros // Federal University of Minas Gerais; Roque Luiz da Silva Pitanguira // Federal University of Minas Gerais; Samuel Silva Penna // Federal University of Minas Gerais;
14:45-15:00	11165	GEOMETRICALLY NONLINEAR ISOGEOMETRIC ANALYSIS OF FUNCTIONALLY GRADED SOLIDS	Elias Saraiva Barroso // Laboratório de Mecânica Computacional e Visualização, Universidade Federal do Ceará; Evandro Parente Junior // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; John Williams Ferreira de Souza // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Marcelo Silva Medeiros Junior // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; Renan Melo Barros // Departamento de Engenharia Estrutural e Construção Civil, Universidade Federal do Ceará; - / - / -;
15:00-15:15	10841	GFEM MODELING BENDING OF FUNCTIONALLY GRADED MATERIAL (FGM) PLATES	Bruno P. Santos // Dept. of Mechanical Engineering, Federal University of Santa Catarina; Paulo de Tarso R. Mendonça // Dept. of Mechanical Engineering, Federal University of Santa Catarina;
15:15-15:30	11117	IMPLEMENTATION OF A NON-INTRUSIVE APPROACH USING A GLOBAL-LOCAL STRATEGY FOR THE GENERALIZED FINITE ELEMENT METHOD	Neimar A. da Silveira Filho // Department of Structural Engineering, Federal University of Minas Gerais; Felício Bruzzi Barros // Department of Structural Engineering, Federal University of Minas Gerais;
15:30-15:45	10610	ON A HIGH-ORDER GENERALIZED FINITE ELEMENT METHOD	André de F. Stabile // Department of Structural Engineering (SET), São Carlos School of Engineering (EESC), University of São Paulo (USP); Sergio P. B. Proença // Department of Structural Engineering (SET), São Carlos School of Engineering (EESC), University of São Paulo (USP);
15:45-16:00	10804	ON CRACK SIMULATION BY MIXED DIMENSIONAL COUPLING IN GFEM GLOBAL-LOCAL	Lorena Leocádio Gomes // Dept. of Structural Engineering, Federal University of Minas Gerais; Felício Bruzzi Barros // Dept. of Structural Engineering, Federal University of Minas Gerais;

NOVEMBER, 23 - WEDNESDAY - 17:00-18:30**ROOM MARFIM I - Engineering Design Optimization**

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10892	TOPOLOGY OPTIMIZATION OF PERIODIC MATERIALS EMPLOYING THE FINITE-VOLUME THEORY	Arnaldo dos Santos Júnior // Federal University of Alagoas; Márcio André Araújo Cavalcante // Federal University of Alagoas;
17:45-18:00	10975	OPTIMIZATION OF A PRESTRESSED CONCRETE WIND TURBINE TOWER USING DIFFERENTIAL EVOLUTION	Evandro P. Junior // Department of Structural Engineering and Civil Construction, Federal University of Ceará; Antônio M. C. de Melo // Department of Structural Engineering and Civil Construction, Federal University of Ceará; Jonatas M. de F. C. Martins // Department of Structural Engineering and Civil Construction, Federal University of Ceará;

ROOM MARFIM II - Continuum damage and cyclic plasticity in fatigue life estimate

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	11134	DIMENSIONING OF SHEET METAL BENDING PROCESS THROUGH DUCTILE DAMAGE	Lucas de Oliveira Barros // University of Brasília; Ricardo Nunes de Miranda // University of Brasília; Caio César Abreu Bílio // University of Brasília; Caio Rodrigues Ayres de Lacerda // University of Brasília; Paulo Henrique Reis Brandão // University of Brasília; Lucival Malcher // University of Brasília;
17:45 - 18:00	11136	NUMERICAL SIMULATION OF A FORGED INCONEL 718 ALLOY INDENTATION PROCESS	José Felipe de Aguiar // University of Brasília; Artur Pereira // University of Brasília; Igor Gaviano // University of Brasília; Lucas Arslanian // University of Brasília; Matheus Leal // University of Brasília; Lucival Malcher // University of Brasília;
18:00-18:15	11137	NUMERICAL SIMULATION OF THE DEEP DRAWING PROCESS USING THE JOHNSON AND COOK MODEL	Gabriel Guimarães Hofmam // University of Brasília; Rafael Alves Martins // University of Brasília; Brenda Kennedy de Oliveira // University of Brasília; Lúcio Starling de Azevedo // University of Brasília; Matheus Correa Santos // University of Brasília; Valter Alvares Gonzaga Filho // University of Brasília; Lucival Malcher // University of Brasília;
18:15-18:30	11133	NUMERICAL STUDY OF THE EFFECT OF CUTTING PARAMETERS ON THE ORTHOGONAL CUT OF INCONEL 718 ALLOY	Gabriel de Paiva Silva // University of Brasília; Rômulo R. de Andrade Santos // University of Brasília; Juan Linhares Barbosa // University of Brasília; Talles Jordan Setúbal Carvalho // University of Brasília; Déborah de Oliveira // University of Brasília; Lucival Malcher // University of Brasília;
18:30-18:45	10567	PLASTIC STRESS CONCENTRATION FACTORS IN FATIGUE	Antonio Carlos de Oliveira Miranda // Department of Civil and Environmental Engineering, University of Brasília; Menggen Liu // Mechanical Engineering Department, Pontifical Catholic University of Rio de Janeiro; Marco Antonio Meggiolaro // Mechanical Engineering Department, Pontifical Catholic University of Rio de Janeiro; Jaime

ROOM MARFIM III - Computational Geotechnics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10908	SETTLEMENT ANALYSIS OF AN OIL STORAGE TANK CONSIDERING INCLINED SUBSOIL LAYERS	Rebeca Pereira Fernandes // PUC-Rio; Celso Romanel // PUC-Rio; Pedricto Rocha Filho // PUC-Rio

ROOM MARFIM V - Numerical Methods Applied in Computational Mechanics

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10827	STUDY OF SIMPLIFIED ELEMENTS FOR STATIC AND DYNAMIC ANALYSIS OF ORIGAMI STRUCTURES	Daniel S. de Carvalho // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Renan C. Sales // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Ney A. Dumont // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro;
17:45 - 18:00	10833	THE MORLEY'S PLATE ELEMENT IN THE FRAME OF A GENERALIZED, FREQUENCY-DEPENDENT HYBRID FINITE ELEMENT FORMULATION	Renan C. Sales // Dept. of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Ney A. Dumont // Dept. of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro;
18:00 - 18:15	10981	A STABILITY STUDY BY FOURIER METHOD FOR THE FRACTIONAL DIFFUSION EQUATION WITH DIMENSION CORRECTION PARAMETER	Jhoab P. de Negreiros // Programa de Pós-Graduação em Ciências Computacionais, Universidade do Estado do Rio de Janeiro; Cristiane O. Faria // Instituto de Matemática e Estatística, Universidade do Estado do Rio de Janeiro; Carlos A. de Moura // PPG-EM e PPG-CComp, Universidade do Estado do Rio de Janeiro;
18:15-18:30	11097	ENRICHMENT OF MULTISCALE HYBRID METHOD USING STEKLOV EIGENVALUES PROBLEM	Denise de Siqueira // Dept. of Mathematics, FEDERAL UNIVERSITY OF TECHNOLOGY – PARANÁ; Philipe R. B. Devloo // Dept of Civil Engineering, University of Campinas;

ROOM MARFIM VI - Developments and applications of special enrichment methods and innovative discretization techniques - meshfree, pou methods and GFEM/XFEM, isogeometric analysis

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
17:30-17:45	10539	ON THE IMPLEMENTATION OF SGFEM SIMULATION OF COHESIVE CRACK PROPAGATION PROBLEMS	Thaianne Simonetti de Oliveira // Dept. of Structural Engineering, Federal University of Minas Gerais; Felício Bruzzi Barros // Dept. of Structural Engineering, Federal University of Minas Gerais; Samuel Silva Penna // Dept. of Structural Engineering, Federal University of Minas Gerais;
17:45 - 18:00	10669	TWO-DIMENSIONAL ELASTIC LINEAR PROBLEMS USING THE VIRTUAL ELEMENT METHOD	Paulo Akira Figuti Enabe // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo; Rodrigo Provasi // Dept. of Structural and Geotechnical Engineering, Polytechnic School, University of São Paulo;
18:00-18:15	10694	VIRTUAL ELEMENT METHOD FOR 3D POISSON EQUATION	Tiago Fernandes Moherdauí // Dept. of Structural and Geotechnical Engineering, University of São Paulo; Alfredo Gay Neto // Dept. of Structural and Geotechnical Engineering, University of São Paulo;

NOVEMBER, 24 - THURSDAY - 9:30-11:30

ROOM CATARATAS DO IGUAÇÚ - Research Beginners

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10676	OPTIMAL MAINTENANCE PLANNING IN PIPELINES WITH CORROSION DEFECTS CONSIDERING DIFFERENT TYPES OF STEEL	PAULO VIRGINIO DA SILVA NETO // Department of Mechanical Engineering, Federal University of Pernambuco; PAULO FERNANDO SILVA SOUSA // Department of Civil Engineering, Federal University of Pernambuco; ALAMO DITARSO SOUSA PESSOA // Department of Civil Engineering, Federal University of Pernambuco; SAVANNA CRISTINA MEDEIROS D'AGUIAR // Department of Civil Engineering, Federal University of Pernambuco; SILVANA MARIA BASTOS AFONSO DA SILVA // Department of Civil Engineering, Federal University of Pernambuco;
09:45-10:00	10606	PISCICULTURE 4.0: TECHNOLOGY AND INNOVATION IN THE FISH PRODUCTION	Alisson G. L. da Silva // Dept. of Automation and Computing; Arthur F. Gadelha // Technology and Science School; Carlos M. de Lima // Technology Center;
10:00-10:15	10758	ROS 2 IN THE DEVELOPMENT OF AN AUTONOMOUS NAVIGATION APPLICATION FOR A 4WD MOBILE ROBOT WITH GPS, ODOMETRY AND INERTIAL SYSTEMS	Pablo F. Salarolli // Master's program in control and automation engineering, Federal Institute of Espírito Santo; Leonardo G. Batista // Master's program in control and automation engineering, Federal Institute of Espírito Santo; Gustavo M. de Almeida // Master's program in control and automation engineering, Federal Institute of Espírito Santo; Rafael P. D. Vivacqua // Master's program in control and automation engineering, Federal Institute of Espírito Santo; Daniel F. T. Gamarra // Control and Automation Engineering Course, Federal University of Santa Maria; Marco Antonio de S. L. Cuadros // Master's program in control and automation engineering, Federal Institute of Espírito Santo;
10:15-10:30	11026	USAGE OF THE NEURAL NETWORK TO PREDICT MEAT TENDERNESS APPROACH	Gabriel Furini // Universidade Federal de Rondonópolis; Ana Cristina Dornelles Gomes // Universidade Federal de Rondonópolis; Angelo Polizel Neto // Universidade Federal de Rondonópolis; Heinsten Frederich Leal dos Santos // Universidade Federal de Rondonópolis;
10:30-10:45	10941	VIBRATION OF TALL BUILDINGS UNDER WIND LOADS	Caio A. Padilha // Universidade Federal Fluminense; Janine D. Vieira // Civil Engineering Department, Universidade Federal Fluminense; Eliane M. L. Carvalho // Civil Engineering Department, Universidade Federal Fluminense;
10:45-11:00	11013	RISK ANALYSIS IN CORRODED BURIED PIPELINES	Marília Gabriela Alves de Arruda // Graduanda em Engenharia Civil, Universidade Federal de Pernambuco; Thiago Victor da Silva Ferreira // Graduando em Engenharia Civil, Universidade Federal de Pernambuco; Juliana Von Schmalz Torres // Núcleo de Tecnologia, Engenharia Civil, Universidade Federal de Pernambuco, Centro Acadêmico do Agreste; Silvana Maria Bastos Afonso // Departamento de Engenharia Civil, Universidade Federal de Pernambuco;
11:00-11:15	10848	NUMERICAL MODELING OF THE ELASTOPLASTIC FLEXURAL RESPONSE OF ULTRAHIGH PERFORMANCE FIBER-REINFORCED CONCRETE (UHPC) USING THE XFEM FRACTURE MODEL	Giulia Caravello // Department of Civil and Environmental Engineering, Pontifical Catholic University of Rio de Janeiro; Marcello Congro // Department of Civil and Environmental Engineering and Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro; Deane Roehl // Department of Civil and Environmental Engineering and Tecgraf Institute, Pontifical Catholic University of Rio de Janeiro;
11:15-11:30	11238	VERTICAL LINEAR DISPLACEMENTS IN TOPOLOGICALLY OPTIMIZED BEAMS	Joanna Paulla Alves de Castro // Curso de Engenharia Civil, Universidade Federal Rural do Semi-árido; Paulo Henrique Araújo Bezerra // Departamento de Engenharias e Tecnologia, Universidade Federal Rural do Semi-árido;

ROOM MARFIM I - Computational Thermal Sciences

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	11181	ARTIFICIAL NEURAL NETWORKS APPLIED TO HEAT EXCHANGER PROBLEMS: A REVIEW	Thomas Siqueira Pereira // Programa de Pós-Graduação em Engenharia Mecânica, Universidade Tecnológica Federal do Paraná; Thiago Antonini Alves // Programa de Pós-Graduação em Engenharia Mecânica, Universidade Tecnológica Federal do Paraná; Hugo Valadares Siqueira // Programa de Pós-Graduação em Engenharia de Produção, Universidade Tecnológica Federal do Paraná; Yara de Souza Tadano // Programa de Pós-Graduação em Engenharia Mecânica, Universidade Tecnológica Federal do Paraná;
09:45-10:00	11173	COMPUTATIONAL METHOD FOR ESTIMATING THE EMISSIVITY OF HUMAN SKIN UNDER DIFFERENT CONDITIONS: DRY SKIN, SWEATY AND WITH LOTION	João T. Lemos // Postgraduate Program in Sustainable Technologies, Federal Institute of Espírito Santo; Andrielle Ninke // Undergraduate Course in Electrical Engineering Coordination, Federal Institute of Espírito Santo; Pablo R. Muniz // Postgraduate Program in Sustainable Technologies, Federal Institute of Espírito Santo; Josemar Simão // Electrotechnical Coordination, Federal Institute of Espírito Santo; Reginaldo B. Nunes // Postgraduate Program in Sustainable Technologies, Federal Institute of Espírito Santo; Hércules L. M. Campos // Institute of Health and Biotechnology, Federal University of Amazonas;
10:00-10:15	10823	NUMERICAL ANALYSIS OF THE BIFURCATION POINT SENSIBILITY TO THE TEMPERATURE FIELD IN THE TAYLOR-COUETTE FLOW	Henrique Queiroz Rodrigues // Universidade Federal da Grande Dourados; André Yudi Kiatake Kamiya // Universidade Federal da Grande Dourados; Julien Pellé // Université Polytechnique Hauts-de-France; Thiago Antonini Alves // Universidade Tecnológica Federal do Paraná; Fernando Augusto Alves Mendes // Universidade Federal da Grande Dourados; Augusto Salomão Bornschlegell // Universidade Federal da Grande Dourados;
10:15-10:30	11153	NUMERICAL SOLUTION OF THE LIQUID FILM MODEL FOR INTERMITTENT GAS-LIQUID FLOWS	Alysson H. R. de Almeida // Department of Mechanics, Federal University of Technology – Paraná; Luiz E. M. Lima // Department of Mechanics, Federal University of Technology – Paraná;
10:30-10:45	10820	NUMERICAL-EXPERIMENTAL ANALYSIS OF FROST FORMATION ON COPPER FLAT PLATES	Felipe Mercês Biglia // Federal University of Technology - Parana (UTFPR/Curitiba); Víctor Victor Dimbarre // Federal University of Technology - Parana (UTFPR/Ponta Grossa); Raquel da Cunha Ribeiro da Silva // Federal University of Technology - Parana (UTFPR/Guarapuava); Thiago Antonini Alves // Federal University of Technology - Parana (UTFPR/Ponta Grossa);
10:45-11:00	10813	ON THE INITIAL INVESTIGATION OF THE USE OF TEMPERATURE GRADIENT MEASUREMENTS TO ESTIMATE THE PRESENCE OF LEAK	Luís A. F. Bispo // Departamento de Engenharia de Mecânica UNESP Bauru; Fabricio C. L. de Almeida // Departamento de Engenharia de Mecânica UNESP Bauru; Vicente L. Scalon // Departamento de Engenharia de Mecânica UNESP Bauru; Gabriel A. Binelli // Departamento de Engenharia de Mecânica UNESP Bauru;
11:00-11:15	10821	THE INFLUENCE OF NON-ISOTHERMAL FLOWS IN THE TAYLOR-COUETTE INSTABILITY THROUGH NUMERICAL ANALYSIS	André Yudi Kiatake Kamiya // Universidade Federal da Grande Dourados; Henrique Queiroz Rodrigues // Universidade Federal da Grande Dourados; Julien Pellé // Université Polytechnique Hauts-de-France; Thiago Antonini Alves // Universidade Tecnológica Federal do Paraná; Fernando Augusto Alves Mendes // Universidade Federal da Grande Dourados; Augusto Salomão Bornschlegell // Universidade Federal da Grande Dourados;
11:15-11:30	11095	THERMAL ANALYSIS OF CONCRETE IN EARLY AGES BY COMPUTER MODELLING	Cladilson Nardino // Programa de pós-graduação em Engenharia Civil - PPGCEC, Universidade Federal do Paraná - UFPR; Roberto Dalledone Machado // Programa de pós-graduação em Engenharia Civil - PPGCEC, Universidade Federal do Paraná - UFPR; Ricardo Pieralisi // Programa de pós-graduação em Engenharia Civil - PPGCEC, Universidade Federal do Paraná - UFPR;

ROOM MARFIM II - Numerical methods applied to structural design of civil construction

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10747	BIM METHODOLOGY APPLIED TO STRUCTURAL ANALYSIS OF THE BUILT HERITAGE	Leonardo L. Gonçalves // Dept. of Civil and Environmental Engineering, University of Brasília; Leonardo S. P. Inojosa // Dept. of Civil and Environmental Engineering, University of Brasília;
09:45-10:00	10722	COMPUTATIONAL IMPLEMENTATION FOR SEISMIC ASSESSMENT OF EXISTING STRUCTURES	Philipe Q. Rodrigues // Faculdade de Arquitetura e Urbanismo, Universidade de Brasília; João da C. Pantoja // Faculdade de Arquitetura e Urbanismo, Universidade de Brasília; Paulo de S. T. Miranda // Departamento de Engenharia Civil, Instituto Federal de Educação, Ciência e Tecnologia do Ceará;
10:00-10:15	11266	CRACK DETECTION IN CONCRETE USING ARTIFICIAL INTELLIGENCE WITH DEEP LEARNING	Túlio de Araújo Vieira // ENC-FT-UnB; Lenildo Santos da Silva // ENC-FT-UnB; Leonardo da Silveira Pirillo Inojosa // ENC-FT-UnB; Márcio Augusto Roma Buzar // PPG-FAU-UnB;

10:15-10:30	11114	DYNAMIC ANALYSIS OF PRESTRESSED CONCRETE BEAMS IN SERVICE	Antônio Celso Pinheiro Viana // Dept. de Engenharia de Estruturas e Construção civil, Universidade Federal do Ceará; Tereza Denyse Pereira de Araújo // Dept. de Engenharia de Estruturas e Construção civil, Universidade Federal do Ceará; Antonio Macário Cartaxo de Melo // Dept. de Engenharia de Estruturas e Construção civil, Universidade Federal do Ceará;
10:30-10:45	10913	INFLUENCE OF GEOMETRY ON THE STRENGTH OF SHEAR KEYS BASED ON NUMERICAL ANALYSIS	Daniilo P. Santos // Dept. Structural Engineering, School of Engineering of São Carlos, University of São Paulo; José Anchieta D. F. Neto // Dept. Structural Engineering, School of Engineering of São Carlos, University of São Paulo; Ray C. S. Silva // Dept. Structural Engineering, School of Engineering of São Carlos, University of São Paulo; Luan Reginato // Dept. Structural Engineering, School of Engineering of São Carlos, University of São Paulo;
10:45-11:00	10900	REINFORCEMENTS IN STRUCTURAL MASONRY PRISMS: A NUMERICAL STUDY OF STATIC AND DYNAMIC CHARACTERISTICS	Orlando Matheus de Lima Almeida // Postgraduate Program in Civil and Environmental Engineering (PPGECAM), Federal University of Paraíba (UFPB); Orlando Gabriel de Lima Almeida // Postgraduate Program in Civil and Environmental Engineering (PPGECAM), Federal University of Paraíba (UFPB); Arlan de Araújo Melo // Postgraduate Program in Civil and Environmental Engineering (PPGECAM), Federal University of Paraíba (UFPB); Hidelbrando José Farkat Diógenes // Postgraduate Program in Civil and Environmental Engineering (PPGECAM), Federal University of Paraíba (UFPB); Joel Araújo do Nascimento Neto // Department of Civil and Environmental Engineering (CIV), Federal University of Rio Grande do Norte (UFRN);
11:00-11:15	11059	THERMAL AND STRUCTURAL BEHAVIOR OF COLD-FORMED STEEL FRAME UNDER FIRE CONDITION	Felipe Frizon // Federal Technological University of Paraná; Dr. Diego Rizzotto Rossetto // Dept. of Mechanical Engineering, Federal Technological University of Paraná; Paulo A. G. Piloto // Department of Applied Mechanics, Polytechnic Institute of Bragança;

ROOM MARFIM III - Data Processing and Analysis

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	11223	COLLABORATION IN TECHNOLOGICAL DEVELOPMENT: AN ANALYSIS BASED ON PATENT PROPOSITION NETWORKS	Ptricia M. Dias // Departamento de Computação, Universidade do Estado de Minas Gerais - UEMG; Thiago M. R. Dias // Departamento de Computação, Centro Federal de Educação Tecnológica de Minas Gerais - CEFET-MG; Gray F. Moita // Departamento de Computação, Centro Federal de Educação Tecnológica de Minas Gerais - CEFET-MG; Emerson S. Costa // Departamento de Computação, Centro Federal de Educação Tecnológica de Minas Gerais - CEFET-MG;
09:45-10:00	11219	COLLECTION AND PROCESSING OF DATA ON BRAZILIAN TECHNICAL PRODUCTION IN ENGINEERING AREAS	Raulivan R. Silva // Departamento de Computação, Centro Federal de Educação Tecnológica de Minas Gerais - CEFET-MG; Thiago M. R. Dias // Departamento de Computação, Centro Federal de Educação Tecnológica de Minas Gerais - CEFET-MG; Higor A. D. Mascarenhas // Departamento de Computação, Centro Federal de Educação Tecnológica de Minas Gerais - CEFET-MG;
10:00-10:15	10896	DEVELOPMENT OF A MODULAR ANALYZER USING LOW-COST MICROCONTROLLERS	José Sávyo Soares Lira // Academic Unit of Electrical Engineering, Federal University of Campina Grande; Richard Senko // Academic Unit of Production Engineering, Federal University of Campina Grande;

ROOM MARFIM IV - Advances in mechanical modeling of composite materials and metamaterials

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10838	APPROACH TO CONNECTING NON-MATCHING MESHES APPLIED TO CONCRETE BEAMS OF DIFFERENT SIZES IN MULTISCALE MODELING	Wellington H. Vieira // São Carlos School of Engineering, University of São Paulo; Rodrigo R. Paccola // São Carlos School of Engineering, University of São Paulo; Humberto B. Coda // São Carlos School of Engineering, University of São Paulo;
09:45-10:00	10761	EFFECTIVE ELASTIC PROPERTIES OF FRACTURED MATERIALS BY MEANS OF A HOMOGENIZATION APPROACH	Marcos B. Guimarães // Department of Civil Engineering, Federal University of Rio Grande do Sul.; Cássio B. Aguiar // Department of Civil Engineering, Federal University of Rio Grande do Sul.; Samir Maghous // Department of Civil Engineering, Federal University of Rio Grande do Sul.;
10:00-10:15	10601	LOCAL HOMOGENIZATION OF COMPOSITE MATERIALS	Rodrigo Mero Sarmento da Silva // Instituto Federal de Alagoas; Matheus Barbosa Moreira Cedrim // Centro Universitário CESMAC; Aline da Silva Ramos Barboza // Universidade Federal de Alagoas;
10:15-10:30	11275	NUMERICAL ANALYSIS OF STRUCTURES WITH A GFRP APPLICATION IN A TRANSMISSION LINE TOWER	Leonardo W. Felchak // Lactec; Kelvin L. Becker // Lactec; Ana C. A. Lopes // Copel Geração e Transmissão; Joseane V. Gulmine // Lactec; Renan M. O. Pereira // Lactec;
10:30-10:45	11132	WAVE PROPAGATION IN A ONE-DIMENSIONAL DIATOMIC PERIODIC STRUCTURE WITH HIGH-STATIC-LOW-DYNAMIC STIFFNESS	Diego Pereira Vasconcellos // School of Engineering, São Paulo State University (Unesp); Marcos Silveira // School of Engineering, São Paulo State University (Unesp);

ROOM MARFIM V- Metaheuristic Optimization in Structural Engineering

TIME	CODE	TITLE OF THE ARTICLE	AUTHORS
09:30-09:45	10733	A VON MISES STRESS-BASED TOPOLOGY OPTIMIZATION OF CONTINUUM ELASTIC STRUCTURES THROUGH THE PROGRESSIVE DIRECTIONAL SELECTION METHOD	Luiz C. L. Vêras // Center of Technology, Federal University of Alagoas; Marcio A. A. Cavalcante // Campus of Engineering and Agricultural Sciences, Federal University of Alagoas;
09:45-10:00	10809	MEMBER GROUPING OPTIMIZATION IN A MULTI-OBJECTIVE STRUCTURAL PROBLEM OF A STEEL SPATIAL FRAME	Bruno E. de O. Brugnara // Postgraduate Program of Civil Engineering - Federal University of Juiz de Fora; Julia C. Motta // Postgraduate Program of Civil Engineering - Federal University of Juiz de Fora; Cláudio H.B. Resende // Postgraduate Program of Civil Engineering - Pontifical Catholic University of Rio de Janeiro, Brazil; José P.G. Carvalho // Civil Engineering Program, COPPE - Federal University of Rio de Janeiro, Rio de Janeiro, Brazil; Patrícia H. Hallak // Civil Engineering Program, Federal University of Juiz de Fora, Brazil; Afonso C.C. Lemonge // Civil Engineering Program, Federal University of Juiz de Fora, Brazil; João Marcos de Paula Vieira // Postgraduate Program of Civil Engineering - Federal University of Juiz de Fora;
10:00-10:15	10759	MULTI-OBJECTIVE STRUCTURAL OPTIMIZATION OF A PLANAR TRUSS CONSIDERING DYNAMIC AND GLOBAL STABILITY ASPECTS	João Marcos de Paula Vieira // Postgraduate Program in Civil Engineering, Federal University of Juiz de Fora; Afonso C.C. Lemonge // Department of Applied and Computational Mechanics, School of Engineering, Federal University of Juiz de Fora; José Pedro G. Carvalho // Civil Engineering Program, COPPE/Federal University of Rio de Janeiro; Patrícia H. Hallak // Department of Applied and Computational Mechanics, School of Engineering, Federal University of Juiz de Fora; Bruno E. de O. Brugnara // Postgraduate Program in Civil Engineering, Federal University of Juiz de Fora;
10:15-10:30	11067	OPTIMIZATION OF 3D GROUND STRUCTURES WITH CONSTRAINTS OF OVERLAPPING BARS	José Pedro Gonçalves Carvalho // Civil Engineering Program, Federal University of Rio de Janeiro; Afonso Celso de Castro Lemonge // Department of applied and computational mechanics - Federal University of Juiz de Fora; Patrícia Habib Hallak // Department of applied and computational mechanics - Federal University of Juiz de Fora; Beatriz de Souza Leite Pires de Lima // Civil Engineering Program, Federal University of Rio de Janeiro;
10:30-10:45	10903	OPTIMIZATION OF METALLIC TRUSS USING GENETIC ALGORITHMS VIA CS-ASA/MATLAB SOFTWARES COUPLING	Laís De Bortoli Lecchi // Dept. of Civil Engineering, Federal University of Ouro Preto; Francisco de Assis das Neves // Dept. of Civil Engineering, Federal University of Ouro Preto; Ricardo Azoubel da Mota Silveira // Dept. of Civil Engineering, Federal University of Ouro Preto; Walnório Graça Ferreira // Dept. of Civil Engineering, Federal University of Espírito Santo; José Eduardo Souza de Cursi // Lab. de Mécanique de Normandie, Institut National de Sciences Appliquées de Rouen;
10:45-11:00	10822	PREFERENCE-BASED WHALE OPTIMIZATION ALGORITHM FOR MULTI-OBJECTIVE STRUCTURAL OPTIMIZATION PROBLEMS USING REFERENCE POINTS	Dênis E. C. Vargas // Department of Mathematics, Federal Center for Technological Education of Minas Gerais - CEFET-MG; Afonso C.C. Lemonge // Faculty of Engineering, Federal University of Juiz de Fora - UFJF; Elizabeth F. Wanner // Department of Computer Engineering, Federal Center for Technological Education of Minas Gerais - CEFET-MG;
11:00-11:15	10929	TOPOLOGY OPTIMIZATION OF PLANE TRUSSES EMPLOYING THE PROGRESSIVE DIRECTIONAL SELECTION METHOD.	Nayro Silva Noronha Cavalcante // Federal University of Alagoas; Márcio André Araújo Cavalcante // Federal University of Alagoas; Luiz Carlos Lima Vêras // Federal University of Alagoas;
11:15-11:30	10627	TRI-OBJECTIVE OPTIMIZATION OF STEEL FRAMES WITH THE BRACING SYSTEM CONFIGURATION AS A DESIGN VARIABLE	Cláudio H. B. Resende // Pós graduação em Engenharia Civil - PUC-Rio; Afonso C. C. Lemonge // Departamento de Mecânica Aplicada e Computacional - UFJF; Patrícia H. Hallak // Departamento de Mecânica Aplicada e Computacional - UFJF; José P. G. Carvalho // Pós graduação em Engenharia Civil - UFRJ; Júlia C. Motta // Pós graduação em Engenharia Civil - UFJF; Luiz F. Martha // Departamento de Engenharia Civil e Ambiental - PUC-Rio;