

ICCS18 Program

18th International Conference on Composite Structures

General Information

Venue: EPIC SANA Lisboa HOTEL (near Amoreiras Shopping Mall)
Av. Engenheiro Duarte Pacheco 15, 1070-100 Lisboa, Portugal
www.lisboa.epic.sanahotels.com

Registration opens from 08h00 to 18h00, June 15 to Jun 18 (floor -1)

Pre-Registration on Sunday 14 June from 16h00 to 18h00

Coffee-break 10h30-11h00 and 16h00 to 16h30, June 15 to Jun 18 (floor -1)

Lunch-break 13h00 to 14h00, June 15 to Jun 18 (floor -1)

Welcome drink Monday June 15 @ 19h00-20h00 (floor -1)

Banquet Wednesday June 17 @ 20h00 @ Estufa Fria, location details at the registration desk (ticket required)

Lecture rooms are located in floors -1 and +1

Opening Ceremony

(Room MORUS IV, floor -1)

Monday June 15 - 08h45 (Conference Chair)

PLENARY LECTURES (Room MORUS IV, floor -1)

Monday 15 June

Chair: Y. Narita, Japan

09h00

6980 | Composite Notch Behaviour - From Coupon to Airbus A350XWB

Laurent Risse (laurent.risse@airbus.com), Airbus, France

Ian Lane (ian.lane@airbus.com), Airbus, United Kingdom

09h30

8926 | FE Shell Formulations for Layered Composite Structures

Cinefra Maria (maria.cinefra@polito.it), Politecnico di Torino, Italy

10h00

8891 | Design and failure prediction of composite repair systems for corroded pipelines

Reis, João M.L. (jreis@mec.uff.br), UFF - Universidade Federal Fluminense, Brazil

Tuesday 16 June

Chair: E. Carrera, Italy

08h30

8935 | Modeling the effects of cure induced chemo-mechanical processes on the strength of fiber reinforced composites

Waas, Anthony M. (dcw@umich.edu), University of Michigan, United States America

09h00

9017 | STRUCTURAL COMPOSITE MATERIALS FOR AEROSPACE APPLICATION. MAIN ACHIEVEMENTS AND FUTURE TRENDS

Cinquin, Jacques (Jacques.cinquin@airbus.com), AIRBUS, France

09h30

8951 – Cork in composite structures: from low to high energy dynamics

Teixeira-Dias, F. (F.Teixeira-Dias@ed.ac.uk), The University of Edinburgh, United Kingdom

10h00

6982 | Computational Materials Design on Polymer-Matrix Composites

Rabczuk, Timon (timon.rabczuk@uni-weimar.de), Bauhaus--University Weimar, Germany

Msekh, Mohammed A. (mohammed.msekh@outlook.com), Bauhaus--University Weimar, Germany

Silani, Mohammad (mohammadsilani@gmail.com), Bauhaus--University Weimar, Germany

Wednesday 17 June

Chair: O. Polit, France

08h30

Auxetics in composite structures: microarchitectures and performance
Fabrizio Scarpa, University of Bristol, UK

09h00

7759 | Composite structures for proton exchange membrane fuel cells (PEMFC) and energy storage systems (ESS)

Dai Gil Lee (dglee@kaist.ac.kr), KAIST, Korea, South
Jun Woo Lim (jul170@kaist.ac.kr), Chonbuk National University, Korea, South
Minkook Kim (magicicada@kaist.ac.kr), KAIST, Korea, South
Jaeheon Choe (jhchoe@kaist.ac.kr), KAIST, Korea, South
Soohyun Nam (namsu0615@kaist.ac.kr), KAIST, Korea, South
Bu Gi Kim (willy4@kaist.ac.kr), Standard Energy Co., Ltd., Korea, South
Ki Hyun Kim (kimkyun@kaist.ac.kr), Standard Energy Co., Ltd., Korea, South

09h30

8281 | Layerwise Optimization and New Extensions for Lay-up Design Problems of Laminated Composite Plates and Shells

Narita, Yoshihiro (ynarita@eng.hokudai.ac.jp), Hokkaido University, Japan

10h00

9380 | Nonlocal effects in composites

Feo, L. (l.feo@unisa.it), University of Salerno, Italy
Luciano, Raimondo (luciano@unicas.it), University of Cassino, Italy

Thursday 18 June

Chair: A. Waas, USA

08h30

Modeling of FG-CNT reinforced composite structures
KM Liew and LW Zhang, City University of Hong Kong, China

09h00

Theoretical and numerical models for composite structures
Olivier Polit, University of Paris, France

09h30

8898 | NON-LINEARITY AND ANISOTROPY AT NANOSCALE

Silvestre, Nuno (nsilvestre@ist.utl.pt), IST - UNIVERSITY OF LISBON, Portugal

10h00

9474 | Active Morphing Composites and Structures: Challenge and Prospect
Leng JS (lengjs@hit.edu.cn), Harbin Institute of Technology, China

Parallel Sessions

(every paper 20 minutes, including 5 minutes discussion)

MONDAY 15 June
Room MORUS IV

Session 2 - Analysis of composite beams, plates and shells, Organizer: Erasmo Carrera, Politecnico di Torino, Italy

Session 2.1 | Chairs: Rainer Groh (University of Bristol, UK) and Alberto Milazzo (University of Palermo, Italy)

11h00

6852 | Equilibrium of a Guastavino helical stair

Angelillo, Maurizio (mangelillo@unisa.it), University of Salerno, Italy

11h20

7611 | A mixed variational, higher order zig-zag theory for highly heterogeneous layered structures

Rainer MJ Groh (rainer.groh@bristol.ac.uk), University of Bristol, United Kingdom

Paul M Weaver (paul.weaver@bristol.ac.uk), University of Bristol, United Kingdom

11h40

7791 | Analysis of Composite Plates with Stiffener Run-Out by pb - 2 Rayleigh Ritz Method

Oliveri, V. (vincenzo.oliveri@unikore.it), University of Enna, Italy

Alaimo, A. (andrea.alaimo@unikore.it), University of Enna, Italy

Orlando, C. (calogero.orlando@unikore.it), University of Enna, Italy

Milazzo, A. (alberto.milazzo@unipa.it), University of Palermo, Italy

12h00

7870 | Finite elements for nonlinear free vibrations analysis of smart laminates subjected to in-plane loadings

Milazzo, A. (alberto.milazzo@unipa.it), University of Palermo, Italy

Alaimo, A. (andrea.alaimo@unikore.it), University of Enna "Kore", Italy

Oliveri, V. (vincenzo.oliveri@unikore.it), University of Enna "Kore", Italy

12h20

8597 | Variable kinematics models for buckling and vibration of multilayered panels

D'Ottavio, Michele (mdottavi@u-paris10.fr), Université Paris Ouest Nanterre La Défense, France

Polit, Olivier (opolit@u-paris10.fr), Université Paris Ouest Nanterre La Défense, France

12h40

9617 | Ply optimization of variable stiffness composite laminates based on density distribution curve method

Liu, Zhe (lz880818@hotmail.com), Tsinghua University, China

Fan, Zhirui (hexiaoqi12@foxmail.com), North University of China, China

Session 2.2 | Chairs: Erasmo Carrera (Politecnico di Torino) and Maria Cinefra (Politecnico di Torino, Italy)

14h00

9024 | Predicting Mechanical Behaviour of Tidal Turbine Blade Made of Composite Materials Using Finite Element Code (ANSYS)

Hassan Izadi Gonabadi (h.izadi-gonabadi@ncl.ac.uk), Newcastle University, United Kingdom

Noushin Moharrami (noushin.moharrami@ncl.ac.uk), Newcastle University, United Kingdom

Adrian Oila (adrian.oila@ncl.ac.uk), Newcastle University, United Kingdom

Steve Bull (steve.bull@ncl.ac.uk), Newcastle University, United Kingdom

14h20

8885 | Vibration of thin-walled laminated composite beams having open and closed sections

Sheikh, Abdul Hamid (abdul.sheikh@adelaide.edu.au), University of Adelaide, Australia

Asadi, Arash (arash.asadi.k@gmail.com), University of Adelaide, Australia

Thomsen, Ole Thybo (O.Thomsen@soton.ac.uk), University of Southampton, United Kingdom

14h40

6367 | Analysis of cylindrical sandwich structures under moving loads

Toubia, Elias (etoubia1@udayton.edu), The University of Dayton, United States America

El Mir, Charles (elmirc1@udayton.edu), The University of Dayton, United States America

Brockman, Robert (rbrockman1@udayton.edu), The University of Dayton, United States America

15h00

7776 | Adaption of the FIB bulletin 14 design guideline for externally bonded bending reinforcement made of a Textile Reinforced Cement composite

Verbruggen, Svetlana (svetlana.verbruggen@vub.ac.be), Vrije Universiteit Brussel, Belgium

Tysmans, Tine (Tine.Tysmans@vub.ac.be), Vrije Universiteit Brussel, Belgium

Wastiels, Jan (jan.wastiels@vub.ac.be), Vrije Universiteit Brussel, Belgium

De Sutter, Sven (svdesutt@vub.ac.be), Vrije Universiteit Brussel, Belgium

Woźniak, Maciej (mwozniak@vub.ac.be), Vrije Universiteit Brussel, Belgium

15h20

9221 | Experimental Testing of Bridge Deck Slabs Reinforced with Basalt FRP

Fadi Alsharif (fadi.alsharif@hbmengineering.com), HBM Engineering Group, LLC, United States America

Mohsen Issa (missa@uic.edu), University of Illinois at Chicago, United States America

15h40

9554 | Free vibration analysis of simply supported composite sandwich beams with a graded lattice core

Zhigai Wang (wasngzhigai@126.com), Harbin University of Science and Technology, China

Guo-dong Xu (275804663@qq.com), Harbin University of Science and Technology, China

Tao Zeng (taozeng@hrbust.edu.cn), Harbin University of Science and Technology, China

Su Cheng (34804361@qq.com), Harbin University of Science and Technology, China

Session 2.3 | Chairs: Erasmo Carrera (Politecnico di Torino) and Maria Cinefra (Politecnico di Torino, Italy)

16h30

9210 | A multilayered plate theory with transverse shear and normal warping functions

Loredo A. (alexandre.loredo@u-bourgogne.fr), Université de Bourgogne, France

16h50

9191 | Bending deflection of sandwich beams considering local effects

Anghel Cernescu (anghelcernescu@gmail.com), Aalto University, Finland

Jani Romanoff (jani.romanosff@aalto.fi), Aalto University, Finland

17h10

8971 | Vibration Analysis and Genetic Algorithm Optimization for Control of a Composite Structure with Piezoelectric Elements Subject to Impact

Djojodihardjo, Harijono (harijono@djojodihardjo.com), Universitas Al-zhar Indonesia, Indonesia

17h30

8963 | ANALYSIS OF STRENGTH DEGRADATION OF LATTICE COMPOSITE FUSELAGE SECTION CONTAINING RIBS WITH DELAMINATION

Dubovikov, Evgeny (evgeny.dubovikov@tsagi.ru), Central Aerohydrodynamic Institute (TsAGI), Russian Federation

Fomin, Victor (victor.fomin@mail.ru), Central Aerohydrodynamic Institute (TsAGI), Russian Federation

Mareskin, Ivan (mivan_500@mail.ru), Central Aerohydrodynamic Institute (TsAGI), Russian Federation

17h50

9068 | EXPERIMENTAL TESTS OF SANDWICH COMPOSITE STRUCTURES IN FOOTBRIDGE DESIGN PROCESS

Pyrzowski, Łukasz (lukasz.pyrzowski@wilis.pg.gda.pl), Gdańsk University of Technology, Poland

Rucka, Magdalena (magdalena.rucka@wilis.pg.gda.pl), Gdańsk University of Technology, Poland

Ferenc, Tomasz (tomasz.ferenc@wilis.pg.gda.pl), Gdańsk University of Technology, Poland

Chróścielewski, Jacek (jacek.chroscielewski@wilis.pg.gda.pl), Gdańsk University of Technology, Poland

18h10

9071 | Validation tests of full scale footbridge sandwich segment

Ferenc, Tomasz (tomasz.ferenc@wilis.pg.gda.pl), Gdansk University of Technology, Poland

Mikulski, Tomasz (tomi@pg.gda.pl), Gdansk University of Technology, Poland

Miśkiewicz, Mikołaj (mikołaj.miskiewicz@wilis.pg.gda.pl), Gdansk University of Technology, Poland

Pyrzowski, Łukasz (lukasz.pyrzowski@wilis.pg.gda.pl), Gdansk University of Technology, Poland

18h30

7054 | Experimental investigation of failure process of the compressed channel-section GFRP laminate columns assisted with the Acoustic Emission method

Kubiak Tomasz (tomasz.kubiak@p.lodz.pl), Lodz University of Technology, Poland

Samborski Sylwester (s.samborski@pollub.pl), Lublin University of Technology, Poland

Teter Andrzej (a.teter@pollub.pl), Lublin University of Technology, Poland

MONDAY 15 June Room VITUS I

Session 6 - Composite Structures in Civil Engineering

Session 6.1 | Chairs: Capozucca, R. (Polytechnic University of Marche, Italy) and Correia, João R. (ICIST, IST, Universidade de Lisboa, Portugal)

11h00

9220 | Design of Retrofit CFRP System for Pier Caps of I-88 Bridge over Fox River

Mohsen Issa (missa@uic.edu), University of Illinois at Chicago, United States America

Elias Ajami (eajami@getipass.com), Illinois Toll way Authority, United States America

11h20

9145 | Research on the Constraint Effect of GFRP Grid Beam Filled with Concrete

Mao, Jize (maojize@hrbeu.edu.cn), Harbin Engineering University, Harbin, China

Zhang, Shuai (fushoushichun@hotmail.com), Harbin Engineering University, Harbin, China

Jin, Huiying (124386664@qq.com), Harbin Engineering University, Harbin, China

Guo, Qingyong (qingyong622@126.com), Harbin Engineering University, Harbin, China

11h40

9009 | Research on the FRP deck panel for road bridge application

Siwowski, Tomasz W. (siwowski@prz.edu.pl), Rzeszow University of Technology, Poland

Kulpa, Maciej (kulpa@prz.edu.pl), Rzeszow University of Technology, Poland

12h00

9000 | NONLINEAR MICROMECHANICAL MODELING OF TUFF STONE MASONRY FOR DYNAMIC RESPONSE ANALYSIS

Balestrieri, Claudio (claudiobalestrieri@gmail.com), of Naples Federico II, Italy

Parisi, Fulvio (fulvio.parisi@unina.it), University of Naples Federico II, Italy

Asprone, Domenico (d.asprone@unina.it), University of Naples Federico II, Italy

12h20

8966 | Eccentric compression performance of laminated bamboo column

Haitao Li (lhaitao1982@126.com), Nanjing Forestry University, China

Jingwen Su (sujingwen2013@126.com), Nanjing Forestry University, China

12h40

9549 | Parametric study of net section failure of pultruded connections with three-dimensional finite element approach

Girao Coelho, Ana M (a.m.girao-coelho@warwick.ac.uk), University of Warwick, United Kingdom

Mottram, JT (j.t.mottram@warwick.ac.uk), University of Warwick, United Kingdom

Harries, KA (kharries@pitt.edu), University of Pittsburgh, United States America

Girao Coelho, Ana M (a.m.girao-coelho@warwick.ac.uk), University of Warwick, United Kingdom

Mottram, JT (j.t.mottram@warwick.ac.uk), University of Warwick, United Kingdom

Harries, KA (kharries@pitt.edu), University of Pittsburgh, United States America

Session 6.2 | Chairs: Capozucca, R. (Polytechnic University of Marche, Italy) and Correia, João R. (ICIST, IST, Universidade de Lisboa, Portugal)

14h00

8567 | Theoretical and numerical analysis of RC beams externally strengthened with SRG and SRP systems tested to flexure

Bencardino, Francesco (francesco.bencardino@unical.it), University of Calabria, Italy

Condello, Antonio (antonio.condello@unical.it), University of Calabria, Italy

Spadea, Giuseppe (g.spadea@unical.it), University of Calabria, Italy

14h20

8847 | Beam-to-column bolted connections between GFRP pultruded tubular members: Experimental tests and numerical modeling

Martins, David (davidjmmartins@tecnico.ulisboa.pt), ICIST, IST, Universidade de Lisboa, Portugal

Proença, Miguel (miguel.m.proenca@ist.utl.pt), IST, Universidade de Lisboa, Portugal

Arruda, Mário (marruda@civil.ist.utl.pt), ICIST, IST, Universidade de Lisboa, Portugal

Correia, João R. (joao.ramoa.correia@tecnico.ulisboa.pt), ICIST, IST, Universidade de Lisboa, Portugal

Ferreira, João F. (joaof@civil.ist.utl.pt), ICIST, IST, Universidade de Lisboa, Portugal

Silvestre, Nuno (nsilvestre@ist.utl.pt), LAETA, IST, Universidade de Lisboa, Portugal

14h40

5455 | A Double-Composite Rectangular Truss Bridge and its Joint Analysis

Yongjian LIU (steellyj@126.com), Chang'an University, School of Highway, China

Zhihua XIONG (xiongzhihua_2013@126.com), Chang'an University, School of Highway, China

Ge LIU (747410853@qq.com), Chang'an University, School of Highway, China

Gao CHENG (1255726999@qq.com), Chang'an University, School of Highway, China

Yalin LUO (luoyalin123@126.com), Chang'an University, School of Highway, China

15h00

7699 | FIRST EXPERIMENTAL RESULTS ON THE MECHANICAL BEHAVIOUR OF "PULTRUDED" BEAMS REALIZED BY BONDING MODULAR PLATES

Ascione Francesco (fascione@unisa.it), University of Salerno (Italy), Italy

Lamberti Marco (malamberti@unisa.it), University of Salerno (Italy), Italy

Lebon Frederic (lebon.dir@lma.cnrs-mrs.fr), CNRS, France

Maurel-Pantel Aurelien (maurel@lma.cnrs-mrs.fr), CNRS, France

Spadea Saverio (sspadea@unisa.it), University of Salerno (Italy), Italy

15h20

7149 | Mechanical properties of FRP anchors for masonry and concrete strengthening

Francesca Giulia Carozzi (francescagiulia.carozzi@polimi.it), Politecnico di Milano, Italy

Pierluigi Colombi (pierluigi.colombi@polimi.it), Politecnico di Milano, Italy

Carlo Poggi (carlo.poggi@polimi.it), Politecnico di Milano, Italy

15h40

7150 | Out-of-plane strengthening of masonry panel with fabric reinforced cementitious matrix (FRCM) systems

Francesca Giulia Carozzi (francescagiulia.carozzi@polimi.it), Politecnico di Milano, Italy

Pierluigi Colombi (pierluigi.colombi@polimi.it), Politecnico di Milano, Italy

Carlo Poggi (carlo.poggi@polimi.it), Politecnico di Milano, Italy

Session 6.3 | Chairs: Capozucca, R. (Polytechnic University of Marche, Italy) and Silvestre, N. (IST - UNIVERSITY OF LISBON, Portugal)

16h30

7694 | Static behaviour of GFRP pultruded profile-concrete composite beams

Jurkiewicz, Bruno (bruno.jurkiewicz@univ-lyon1.fr), Université Lyon 1, France

Koaik, Alaa (alaa.koaik@hotmail.com), Université Lyon 1, France

Bel, Sylvain (sylvain.bel@univ-lyon1.fr), Université Lyon 1, France

16h50

6726 | Reinforcement of cement mortars through recycled nylon fibers

Spadea, Saverio (sspadea@unisa.it), University of Salerno, Italy

Farina, Ilenia (ylenia.farina@gmail.com), University of Salerno, Italy

Fraternali, Fernando (f.fraternali@unisa.it), University of Salerno, Italy

17h10

7790 | Design, Modelling and Numerical Testing of 5-Box GFRP Shell Footbridge

Klasztorny, Marian (m.klasztorny@gmail.com), Military University of Technology, Faculty of Mechanical Engineering, Department of Mechanics and Applied Computer Science, Poland
Nycz, Daniel (daniel.nycz@interia.pl), DES ART Co., Sanok, Poland

17h30

8027 | The study on the properties of polymer concrete with various curing temperature for application to rail slab track with reduced rolling noise generation

Jeon, Eun-Beom (jeoneb85@gmail.com), Hanyang University, Korea, South
Ahn, SangKeun (ask9156@hanyang.ac.kr), Hanyang University, Korea, South
Koh, Hyo-In (hikoh@krri.re.kr), Korea Railroad Research Institute, Korea, South
Park, Junhong (parkj@hanyang.ac.kr), Hanyang University, Korea, South
Kim, Hak-Sung (kima@hanyang.ac.kr), Hanyang University, Korea, South

17h50

8672 | NEW AND EMERGING COMPOSITE TECHNOLOGIES FOR CIVIL INFRASTRUCTURE

Aravinthan, Thiru (thiru.aravinthan@usq.edu.au), University of Southern Queensland, Australia
Manalo, Allan C. (manalo@usq.edu.au), University of Southern Queensland, Australia

18h10

8693 | Flexural strength and ductility of reinforced and partially prestressed concrete sections with corrugated steel web(s)

Au, Francis T.K. (francis.au@hku.hk), Department of Civil Engineering, The University of Hong Kong, Hong Kong
Chen, Xiachun (u3001945@connect.hku.hk), Department of Civil Engineering, The University of Hong Kong, Hong Kong
Bai, Zhizhou (billbay.cn@gmail.com), Department of Bridge Engineering, Tongji University, China
Li, Zhenhu (leezhenhu@gmail.com), Department of Civil Engineering, The University of Hong Kong, Hong Kong

18h30

9091 | Seismic resistance of GFRP reinforced concrete columns

Tavassoli, Arsalan (arsalan.tavassoli@mail.utoronto.ca), University of Toronto, Canada
Sheikh, Shamim A. (sheikh@ecf.utoronto.ca), University of Toronto, Canada

MONDAY 15 June Room VITUS II

Session 8 - Durability and Ageing of Composite Materials, organized by Marco Gigliotti (ENSMA, France)

Session 8.1 | Chairs: Gigliotti, Marco (ENSMA, UPR, France) and Jacquemin, Frédéric (Université de Nantes, France)

11h00

9553 | Optimum graphite foil coating on carbon/epoxy composite bipolar plates for vanadium redox flow batteries

Choe, Jaeheon (jhchoe@kaist.ac.kr), KAIST, Korea, South
Lim, Jun Woo (jul170@jbnu.ac.kr), Chonbuk National University, Korea, South
Kim, Minkook (magicicada@kaist.ac.kr), KAIST, Korea, South
Kim, Jinwhan (jinwhan@kaist.ac.kr), KAIST, Korea, South
Lee, Dai Gil (dglee@kaist.ac.kr), KAIST, Korea, South

11h20

7903 | Numerical studies of the coupling between water absorption and mechanical state based on the free volume theory

Péret, Thomas (thomas.peret@irt-jules-verne.fr), IRT Jules Verne, France
Clement, Alexandre (alexandre.clement@univ-nantes.fr), Université de Nantes, France
Fréour, Sylvain (sylvain.freour@univ-nantes.fr), Université de Nantes, France
Jacquemin, Frédéric (frederic.jacquemin@univ-nantes.fr), Université de Nantes, France

11h40

7907 | Validation of a generic tool of kinetic simulation of polymer ageing

Ben Hassine, Mouna (mouna.ben-hassine@edf.fr), EDF R&D_Matériaux et mécanique des composants (MMC), France
Maurin, Romain (romain.maurin@edf.fr), EDF R&D_Matériaux et mécanique des composants (MMC), France
Marque, Grégory (gregory.marque@edf.fr), EDF R&D_Matériaux et mécanique des composants (MMC), France

12h00

7973 | On The Long-term Behavior of Glass Fiber Reinforced Polyester Pipes

Rafiee, Roham (Roham.Rafiee@ut.ac.ir), Composites Research Laboratory, Faculty of New Sciences & Technologies, University of Tehran, Tehran, Iran
Mazhari, Behzad (roham.rafiiee@ut.ac.ir), Composites Research Laboratory, Faculty of New Sciences & Technologies, University of Tehran, Tehran, Iran

12h20

8031 | Species diffusion in textile composite materials

Gigliotti, Marco (marco.gigliotti@ensma.fr), Department of Physic and Mechanics of Materials, Institut P' CNRS, Université de Poitiers, ENSMA, UPR, France
Simar, Aline (aline.simar@ensma.fr), Aircelle, groupe Safran, France
Beringhier, Marianne (marianne.beringhier@ensma.fr), Université de Poitiers, France
Grandier, Jean-Claude (jean-claude.grandier@ensma.fr), Université de Poitiers, ENSMA, France
Ammar-Khodja, Isabelle (isabelle.ammar-khodja@aircelle.com), Aircelle, groupe Safran, France

12h40

8113 | A numerical method to deal with stochastic transient uncoupled hygro-elastic problems: application to glass fiber reinforced polyamide composites

Clement Alexandre (alexandre.clement@univ-nantes.fr), GeM Université de Nantes, France
Obeid Hassan (hassan.obeid@univ-nantes.fr), GeM Université de Nantes, France
Fréour Sylvain (sylvain.freour@univ-nantes.fr), GeM Université de Nantes, France
Jacquemin Frédéric (frederic.jacquemin@univ-nantes.fr), GeM Université de Nantes, France

Session 8.2 | Chairs: Gigliotti, Marco (ENSMA, UPR, France) and Jacquemin, Frédéric (Université de Nantes, France)

14h00

8802 | Durability of cement and geopolimer composites

Tomasz Blaszczyński (tomasz.blaszczyński@put.poznan.pl), Poznan University of Technology, Poland
Maciej Krol (krol.101@wp.pl), Koszalin University of Technology, Poland

14h20

8044 | Towards a strain rate and water ageing sensitive constitutive modelling: Effects of strain rate and water ageing upon the properties of epoxy resin matrix for composites

Quino, Gustavo (gustavo.quinoquispe@eng.ox.ac.uk), University of Oxford, United Kingdom
Tagarielli, Vito (v.tagarielli@imperial.ac.uk), Imperial College, United Kingdom
Petrinic, Nik (nik.petrinic@eng.ox.ac.uk), University of Oxford, United Kingdom

14h40

8103 | Structural deformation assessment of glass fibre reinforced polymers subjected to hygrothermal ageing

Grammatikos, Sotirios A. (s.grammatikos@bath.ac.uk), University of Bath, Bath, United Kingdom
Ball, Richard J. (r.j.ball@bath.ac.uk), University of Bath, Bath, United Kingdom
Evernden, Mark (m.evernden@bath.ac.uk), University of Bath, Bath, United Kingdom

15h00

9289 | Accelerated Ageing of Pultruded Fibre Reinforced Polymers: Physical and Mechanical Characterization

Zafari, Behrouz (B.Zafari@warwick.ac.uk), The University of Warwick, United Kingdom
Mottram, Toby (J.T.Mottram@warwick.ac.uk), The University of Warwick, United Kingdom

MONDAY 15 June

Room VITUS II

Session 40 - Delamination

Session 40.1 | Chairs: Jiye Chen, University of Portsmouth, United Kingdom

16h30

7643 | An extended cohesive damage model for predicting multiple crack propagation in composite structures
J Chen and X Li (jiye.chen@port.ac.uk), University of Portsmouth, United Kingdom

16h50

9532 | FLOCK FIBER REINFORCED LAMINAR COMPOSITES FOR IMPROVED INTERLAMINAR SHEAR STRENGTH

Rice, John M. (jrice@umassd.edu), UMass Dartmouth, United States America
Kim, Yong K. (ykim@umassd.edu), UMass Dartmouth, United States America
Chalivendra, Vijaya (vchalivendra@umassd.edu), UMass Dartmouth, United States America
Lewis, Armand F. (armlewe@earthlink.net), UMass Dartmouth, United States America

17h10

8984 | NUMERICAL APPROACHES FOR DELAMINATION IN CARBON-CARBON COMPOSITE LAMINATES

Airolidi, Alessandro (alessandro.airolidi@polimi.it), Belotti, Paolo (paolo.belotti@polimi.it)
Panichelli, Paolo (paolo.panichelli@polimi.it), Politecnico di Milano, Italy

17h30

8972 | Mixed mode I/II delamination growth of multidirectional composites with different delaminating interfaces

Zhao L.B. (lbzhao@buaa.edu.cn), School of Astronautics, Beihang University, Beijing 100191, PR China, China
Wang Y.N. (wangyana198833@163.com), School of Astronautics, Beihang University, Beijing 100191, PR China, China
Zhang J.Y. (jyzhang@vip.126.com), College of Aerospace Engineering, Chongqing University, Chongqing 400044, PR China, China
Gong Y. (gyuscien@gmail.com), School of Astronautics, Beihang University, Beijing 100191, PR China, China

17h50

7649 | AN EXTENDED FINITE ELEMENT MODEL FOR THE DELAMINATION ANALYSIS OF COMPOSITE LAMINATES

Yazdani, Saleh (yazdani@ikm.uni-hannover.de), Leibniz Universität Hannover, Germany
Rust, Wilhelm J.H. (Wilhelm.Rust@hs-hannover.de), Hochschule Hannover, Germany
Wriggers, Peter (wriggers@ikm.uni-hannover.de), Leibniz Universität Hannover, Germany

18h10

8056 | Comparison of numerical and local partition methods in ADCB specimens

Mollon, Victoria (mollonvictoria@uniovi.es), University of Oviedo, Spain
Bonhomme, Jorge (bonhomme@uniovi.es), University of Oviedo, Spain
Elmarakbi, Ahmed (ahmed.elmarakbi@sunderland.ac.uk), University of Sunderland, United Kingdom
Viña, Jaime (jaure@uniovi.es), University of Oviedo, Spain
Arguelles, Antonio (antonio@uniovi.es), University of Oviedo, Spain

18h30

8147 | Mode III of fracture in composites. A new device and formulations

López-Menéndez, A. (ajlopez@gijon.es), University of Oviedo, Spain
Viña, J. (jaure@uniovi.es), University of Oviedo, Spain
Arguelles, A. (antonio@uniovi.es), University of Oviedo, Spain
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Mollón, V. (mollonvictoria@uniovi.es), University of Oviedo, Spain
Lozano, M. (milozanga@gmail.com), University of Oviedo, Spain

18h50

7645 | An extended cohesive damage element for simulating arbitrary damage propagation in fibre composites

X Li and J Chen (xiaole.li@port.ac.uk), University of Portsmouth, United Kingdom

MONDAY 15 June

Room VITUS III

Session 11 - FRP reinforced concrete structures

Session 11.1 | Chairs: Torres, Lluís (University of Girona, Spain)

11h00

9080 | Interfacial Bond-Slip Behavior of Near Surface-Mounted FRP Plate in Concrete

Seo, Soo-yeon (syseo@ut.ac.kr), Korea National University, Korea, South

11h20

6531 | Numerical Simulation of the Fatigue Bond Behavior of Near surface mounted (NSM) FRP reinforcement

Wang, Zeyuan (wzy1106@126.com), Tsinghua University, China

Cheng, Lijuan (dawcheng@ucdavis.edu), UC Davis, United States America

Feng, Peng (fengpeng@tsinghua.edu.cn), Tsinghua University, China

11h40

7580 | The Issues Related to Flexural Behaviour of FRP Prestressed Concrete Beams

Atutis, Mantas (mantas.atutis@vgtu.lt), Vilnius Gediminas technical university, Lithuania

Atutis, Edgaras (edgaras.atutis@vgtu.lt), Vilnius Gediminas technical university, Lithuania

Valivonis, Juožas (juozas.valivonis@vgtu.lt), Vilnius Gediminas technical university, Lithuania

12h00

7719 | RC beams strengthened with NSM GFRP rods

Capozucca, R. (r.capozucca@univpm.it), Polytechnic University of Marche, Italy

Bossoletti, S. (s.bossoletti@univpm.it), Polytechnic University of Marche, Italy

Corina, V. (valeria.corina@libero.it), Polytechnic University of Marche, Italy

12h20

7862 | Anchoring element for prestressed FRP reinforcement - functionality and design

Girgle F. (girgle.f@fce.vutbr.cz), Brno University of Technology, Czech Republic

Prokes J. (prokes@prefa.cz), PREFA KOMPOZITY Corp., Czech Republic

Danek P. (danek.p@fce.vutbr.cz), Brno University of Technology, Czech Republic

Stepanek P. (stepanek.p@fce.vutbr.cz), Brno University of Technology, Czech Republic

12h40

7881 | Characterisation of microstructural evolutions in high alumina refractory castables reinforced with carbon fibers

Boris, Renata (renata.boris1@gmail.com), Vilnius Gediminas Technical University, Vilnius, Lithuania

Madej, Dominika (dmadej@agh.edu.pl), AGH University of Science and Technology, Krakow, Poland

Antonovič, Valentin (valentin.antonovic@vgtu.lt), Vilnius Gediminas Technical University, Vilnius, Lithuania

Szczerba, Jacek (jszczerb@agh.edu.pl), AGH University of Science and Technology, Krakow, Poland

Kerene, Jadvyga Regina, Vilnius Gediminas Technical University, Lithuania

Session 11.2 | Chairs: Reis, João M.L. (UFF - Universidade Federal Fluminense, Brazil)

14h00

8617 | Textile based lightweight shell in hybrid prefabricated construction

Petzoldt, Carolin (carolin.petzoldt@mb.tu-chemnitz.de), Technische Universität Chemnitz, Germany

Röhrkohl, Meike (meike.roehrkohl@mb.tu-chemnitz.de), Technische Universität Chemnitz, Germany

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Gelbrich, Sandra (sandra.gelbrich@mb.tu-chemnitz.de), Technische Universität Chemnitz, Germany

Kroll, Lothar (lothar.kroll@mb.tu-chemnitz.de), Technische Universität Chemnitz, Germany

14h20

8047 | Multi-objective weight and cost optimisation of hybrid composite-concrete beams

De Munck, Matthias (mdemunck@vub.ac.be), Vrije Universiteit Brussel, Belgium

De Sutter, Sven (svdesutt@vub.ac.be), Vrije Universiteit Brussel, Belgium

Verbruggen, Svetlana (Svetlana.Verbruggen@vub.ac.be), Vrije Universiteit Brussel, Belgium

Tysmans, Tine (ttsymans@vub.ac.be), Vrije Universiteit Brussel, Belgium

Filomeno Coelho, Rajan (rfilomen@ulb.ac.be), Université Libre de Bruxelles, Belgium

14h40

8295 | Steel-CFRP Composite Bars as Shear Reinforcement for RC T-Beams

Fahmy, Mohamed F.M. (mfmf1976@yahoo.com), International Institute for Urban Systems Engineering, Southeast University, China

Abd-ElShafy, Zainab E. (zainabebraheem@yahoo.ca), Faculty of Engineering, Assiut University, Egypt

15h00

8180 | Influence of recycled aggregate on bond behaviour between recycled aggregate concrete and fibre reinforced polymer bars

Baena, Marta (marta.baena@udg.edu), University of Girona, Spain

Torres, Lluís (lluis.torres@udg.edu), University of Girona, Spain

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Comas, Jordi (jordi.comasb@udg.edu), University of Girona, Spain

Barris, Cristina (cristina.barris@udg.edu), University of Girona, Spain

Vilanova, Irene (irene.vilanova@udg.edu), University of Girona, Spain

15h20

8615 | Chloride Resistance of Engineered Cementitious Composites containing Palm Oil Fuel Ash

Nurdeen, Altwair M. (nurdeenaltwair@gmail.com), Al-Merghab University Al-Khoms, Libya

Krem, Mohamed A. (omgaon2x@yahoo.com), Al-Merghab University Al-Khoms, Libya

Omeman, Zkaria M. (zkaria_m_om@yahoo.com), Al-Merghab University Al-Khoms, Libya

15h40

8639 | Use of prestressed CFRP strips for flexural strengthening of RC slabs with the NSM method

Przygocka, Marta (martaprzygocka@wp.pl), Lodz University of Technology, Poland

Lasek, Krzysztof (krzysztof.lasek@p.lodz.pl), Lodz University of Technology, Poland

Kotynia, Renata (renata.kotynia@p.lodz.pl), Lodz University of Technology, Poland

Session 11.3 | Chairs:, João M.L. (UFF - Universidade Federal Fluminense, Brazil)

16h30

9144 | Study on Flexural Performance of GFRP Grid and Concrete Composite Beam

Mao, JIze (maojize@hrbeu.edu.cn), Harbin Engineering University, China

Jin, Huiying (124386664@qq.com), Harbin Engineering University, China

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Guo, Qingyong (guoqingyong@hrbeu.edu.cn), Harbin Engineering University, China

Zhou, Peng (306432251@qq.com), Harbin Engineering University, China

16h50

8791 | Experiments of AMS Fiber Cementitious Composite and Reinforced Concrete Beams

Cho, Chang-Geun (chocg@chosun.ac.kr), Chosun University, Korea, South

Feo, Luciano (l.feo@unisa.it), University of Salerno, Italy

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Moon, Hyeong-Joo (chocg@chosun.ac.kr), Chosun University, Korea, South

Kim, Sang-Wan (chocg@chosun.ac.kr), Chosun University, Korea, South

Kim, Hoyeon (chocg@chosun.ac.kr), Chosun University, Korea, South

17h10

7690 | Sandwich panels with thin-walled high performance concrete layers

Stark, Alexander P B (astark@imb.rwth-aachen.de), Institute of Structural Concrete, RWTH Aachen University, Germany

Shams, Ali (ashams@imb.rwth-aachen.de), Institute of Structural Concrete, RWTH Aachen University, Germany

Hegger, Josef (heg@imb.rwth-aachen.de), Institute of Structural Concrete, RWTH Aachen University, Germany

17h30

7740 | A mechanical model for predicting the stress-strain response of FRP/SMA reinforcing bars for concrete structures

Mancusi, Geminiano (g.mancusi@unisa.it), University of Salerno, Italy

Orefice, Agostina (agostinaorefice@yahoo.it), University of Salerno, Italy

17h50

9148 | Experimental Calibration for Tensile Strength Estimation of Circular GFRP Rebar

You, Young-Jun (yjyou@kict.re.kr), Korea Institute of Civil Engineering and Building Technology, Korea, South

Park, Ki-Tae (ktpark@kict.re.kr), Korea Institute of Civil Engineering and Building Technology, Korea, South

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Hwang, Ji-Hyun (jhhwang@kict.re.kr), Korea Institute of Civil Engineering and Building Technology, Korea, South

18h10

7620 | Optimization of FRP Hybrid Bar Design for Tensile and Bonding Performance

Seo, Dong-Woo (dwseo@kict.re.kr), Korea Institute of Civil Engineering and Building Technology, Korea, South

Park, Ki-Tae (ktpark@kict.re.kr), Korea Institute of Civil Engineering and Building Technology, Korea, South

You, Young-Jun (yjyou@kict.re.kr), Korea Institute of Civil Engineering and Building Technology, Korea, South

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Hwang, Ji-Hyun (jhhwang@kict.re.kr), Korea Institute of Civil Engineering and Building Technology, Korea, South

18h30

9469 | Analysis of 2D-Solids with Internal Friction and Tensile Resistant Membranes

Baratta Alessandro (alebarat@unina.it), University of Naples Federico II, Italy

Corbi Ileana (ilecorbi@unina.it), University of Naples Federico II, Italy

Corbi Ottavia (corbi@unina.it), University of Naples Federico II, Italy

MONDAY 15 June Room VITUS IV

Session 12 - Functionally Graded Materials and Structures

Session 12.1 | Chairs: Carla Roque (INEGI, Portugal)

11h00

9295 | Differential evolution for optimization of functionally graded materials

Roque, C.M.C. (croque@fe.up.pt), INEGI, Portugal

Martins, P.A.L.S. (palsm@fe.up.pt), INEGI, Portugal

11h20

9123 | Free vibration and buckling analysis of FG-CNT reinforced composite quadrilateral plates resting on Pasternak foundations

Zhang, L.W. (lwzhang@shou.edu.cn), Shanghai Ocean University, China

Liew, K.M. (kmliew@cityu.edu.cn), City University of Hong Kong, Hong Kong

11h40

9280 | Numerical Analysis of Functionally Graded Circular Plates with Modified Couple Stress Theory

Reddy, J. N. (jnreddy@tamu.edu), Texas A&M University, United States America

Romanoff, Jani (jani.romanoff@aalto.fi), Aalto University, Finland

Loya, Jose Antonio (jloya@ing.uc3m.es), University Carlos III of Madrid, Spain

12h00

9033 | Levy-type solution for vibration and buckling analysis of functionally graded sandwich plates based on quasi-3D theory

Trinh, Luan C. (cong.trinh@northumbria.ac.uk), Department of Mechanical & Construction Engineering, Faculty of Engineering and Environment, Northumbria University, United Kingdom

Osofero, Adelaja I. (adelaja.osofero@northumbria.ac.uk), Department of Mechanical & Construction Engineering, Faculty of Engineering and Environment, Northumbria University, United Kingdom

Vo, Thuc P. (thuc.vo@northumbria.ac.uk), Department of Mechanical & Construction Engineering, Faculty of Engineering and Environment, Northumbria University, United Kingdom

Thai, Tai H. (t.thai@unsw.edu.au), Centre for Infrastructure Engineering and Safety, School of Civil and Environmental Engineering, The University of New South Wales, Australia

12h20

7050 | Mechanical properties of an FGM consisting of a high-alloyed CrMnNi-steel and varying Mg-PSZ content processed by asymmetric Spark Plasma Sintering

Decker, Sabine (sabine.decker@iwt.tu-freiberg.de), Institute of Materials Engineering, TU Bergakademie Freiberg, Germany

Krüger, Lutz (krueger@ww.tu-freiberg.de), Institute of Materials Engineering, TU Bergakademie Freiberg, Germany

12h40

9096 | Characteristics of thin films prepared from SEBS/PP/WAX composites as polyelectrolyte membranes for fuel cell applications

Murat Sen (msen@hacettepe.edu.tr), Hacettepe University, Turkey

Kinyas Polat (kinyaspolat@hotmail.com), Bilkent University, Turkey

Session 12.2 | Chairs: Pietro Russo (Institute for Polymers, Composites and Biomaterials - National Council of Research, Italy)

14h00

7313 | Influence of interface strength gradation on mechanical properties of woven glass fabric/polypropylene laminates

Russo P. (pietro.russo@unina.it), Institute for Polymers, Composites and Biomaterials - National Council of Research, Italy
Simeoli G. (giorgio.simeoli@unina.it), Dept. Chemical, Materials Engineering and Industrial Production - University Naples Federico II, Italy

Iannace S. (iannace@unina.it), Institute for Polymers, Composites and Biomaterials - National Council of Research, Italy
Sorrentino L. (luigi.sorrentino@cnr.it), Institute for Polymers, Composites and Biomaterials - National Council of Research, Italy

14h20

7607 | The Combined Model of Heat Conduction in a Skeletal Micro-heterogeneous Hollow Cylinder

Ostrowski, Piotr (piotr.ostrowski@p.lodz.pl), Łódź University of Technology, Poland

14h40

7696 | Thermoelastic phenomena in the transversally graded laminates

Jędrzyak, Jarosław (jaroslaw.jedrzyak@p.lodz.pl), Łódź University of Technology, Poland

Pazera, Ewelina (ewelina.pazera@interia.pl), Łódź University of Technology, Poland

15h00

7789 | The effect of step-wise graded density cores on the blast resistance of polymeric foam core sandwich panels.

Kelly, Mark (mark.kelly08@imperial.ac.uk), Imperial College London, United Kingdom

Arora, Hari (hari.arora04@imperial.ac.uk), Imperial College London, United Kingdom

Dear, John (j.dear@imperial.ac.uk), Imperial College London, United Kingdom

15h20

7823 | Creep Relaxation in FGM Rotating Disc with non-Uniform Profiles

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hamid ekhteraei Toussi (ekhteraee@um.ac.ir), Ferdowsi University of Mashhad, Iran

hamid jarfi (hamid_490@yahoo.com), Sharfi University of Technology, Iran

Session 12.3 | Chairs: Adele Carrado (IPCMS UMR 7504 CNRS, France) and Heinz Palkowski (TU Clausthal, Germany)

16h30

8121 | Ti/polymer/Ti sandwich systems for bio-applications

Melania Reggente (melania.reggente@uniroma1.it), Sapienza University of Rome , Italy

Irene Bonafede (bonafedeirene@gmail.com), Sapienza University of Rome , Italy

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Mohamed Harharsh (Mohamed.Harharsh@tu-clausthal.de), TU Clausthal, Germany

Patrick Masson (patrick.masson@ipcms.unistra.fr), IPCMS UMR 7504 CNRS, France

Heinz Palkowski (heinz.palkowski@tu-clausthal.de), TU Clausthal, Germany

16h50

8690 | Nonlocal effects in viscoelastic functionally graded Bernoulli-Euler nanobeams

Barretta, R. (rabarret@unina.it), University of Naples Federico II, Italy

Luciano, R. (luciano@unicas.it), University of Cassino and Southern Lazio, Italy

17h10

8556 | Analysis of forced vibrations of annular plates made of functionally graded material

Wirowski, Artur (artur.wirowski@p.lodz.pl), Lodz University of Technology, Poland

Rabenda, Martyna (martynarabenda@gmail.com), Lodz University of Technology, Poland

17h30

8557 | DYNAMIC MODELLING OF RECTANGULAR THIN PLATES WITH DENSE SYSTEM OF RIBS IN TWO DIRECTIONS

Rabenda, Martyna (martynarabenda@gmail.com), Lodz University of Technology, Poland

Michalak, Bohdan (bmichala@p.lodz.pl), Lodz University of Technology, Poland

17h50

8624 | BUCKLING AND VIBRATION ANALYSIS OF FUNCTIONALLY GRADED SANDWICH BEAMS USING A ZERO-THORDER SHEAR DEFORMATION BEAM THEORY

Nguyen, Kien T. (kiennt@hcmute.edu.vn), Ho Chi Minh City University of Technology and Education, Vietnam

Vo, Thuc P. (thuc.vo@northumbria.ac.uk), Northumbria University, United Kingdom

18h10

8745 | A nonlocal higher-order beam theory with application to bending, buckling, and vibration of functionally graded nanobeams

Thuc P. Vo (thuc.vo@northumbria.ac.uk), Northumbria University, UK

Trung Kien Nguyen (kiennt@hcmute.edu.vn), University of Technical Education Ho Chi Minh City, Vietnam

18h30

8741 | Functionally graded oxide glasses with nanostructural conductive surface layers

Karczewski, Jakub (jkarczew@p.lodz.pl), Gdańsk University of Technology , Poland

Bochentyn, Beata (bbochentyn@mif.pg.gda.pl), Gdańsk University of Technology , Poland

Gazda, Maria (maria@mif.pg.gda.pl), Gdańsk University of Technology , Poland

Kusz, Bogusław (bodzio@mif.pg.gda.pl), Gdańsk University of Technology , Poland

MONDAY 15 June

Room LAURUS

Session 13 - Health Monitoring Techniques in Composite Structures

Session 13.1 | Chairs: Galvanetto, Ugo (Università degli studi di Padova, Italy) and Tita, Volnei (University of São Paulo, Brazil)

11h00

8929 | DELAMINATION IDENTIFICATION IN COMPOSITE MULTILAYERD STRUCTURES

Stawiarski Adam (asta@mech.pk.edu.pl), Institute of Machine Design, Poland

Muc Aleksander (olekmuc@mech.pk.edu.pl), Institute of Machine Design, Poland

11h20

8910 | Structural Health Monitoring in composite plate using system identification

Chowdhury, Md. Shakar Ullah (md.chowdhury@student.adfa.edu.au), The University of New South Wales, Australia

Shankar, Krishna (K.Shankar@adfa.edu.au), The University of New South Wales, Australia

11h40

7056 | Recent development in passive sensing for structural health monitoring applications

Thiene, Marco (m.thiene11@imperial.ac.uk), Imperial College London, United Kingdom

Galvanetto, Ugo (ugo.galvanetto@unipd.it), Università degli studi di Padova, Italy

12h00

7664 | Flexural After Impact (FAI): A new criterion to evaluate the residual strength of composite materials

De Medeiros, Ricardo (medeiros@sc.usp.br), Department of Aeronautical Engineering, São Carlos School of Engineering - University of São Paulo, Brazil

Sartorato, Murilo (murilosart@gmail.com), Department of Aeronautical Engineering, São Carlos School of Engineering - University of São Paulo, Brazil

Vandepitte, Dirk (Dirk.Vandepitte@kuleuven.be), Department of Mechanical Engineering - PMA, KU Leuven, Belgium

Tita, Volnei (voltita@sc.usp.br), Department of Aeronautical Engineering, São Carlos School of Engineering - University of São Paulo, Brazil

12h20

7779 | Fatigue Studies in the Development of a Proof Test for Through-Life Monitoring of Bond Integrity in Aircraft Bonded Repairs

Chang, P (paul.chang@dsto.defence.gov.au), DSTO, Australia

Baker, A (alan.baker@dsto.defence.gov.au), DSTO, CRC-ACS, ACSA, Australia

Wang, J (john.wang@dsto.defence.gov.au), DSTO, Australia

Gunnion, A (a.gunnion@acs-aus.com), CRC-ACS, ACSA, Australia

12h40

8104 | Hybrid Effect of Conductive Materials on the Bending Behaviour of Concrete Beam and Self-Monitoring of Freeze-Thaw Damage

Ding, Yining (yinding@hotmail.com), Dalian university of technology, China

Huang, Yesheng (hysdut@mail.dlut.edu.cn), Dalian university of technology, China

Zhang, Yulin (zhang@math.uminho.pt), University of Minho, Portugal

Aguiar, J B (aguiar@civil.uminho.pt), University of Minho, Portugal

Session 13.2 | Tita, Volnei (University of São Paulo, Brazil) and Mauricio Caliri (University of São Paulo, Brazil)

14h00

8105 | Concrete with triphasic conductive materials for self-monitoring of cracking development subjected to flexure

Ding, Yining (yinding@hotmail.com), Dalian university of technology, China

Huang, Yesheng (hysdut@mail.dlut.edu.cn), Dalian university of technology, China

Zhang, Yulin (zhang@math.uminho.pt), University of Minho, Portugal

14h20

8109 | Structural Health Monitoring of Stiffened Composite Panels Using the Damage Force Indicator Method

Samaratunga, Dulip (dulip@raspet.msstate.edu), Mississippi State University, United States America

Jha, Ratneshwar (jha@raspet.msstate.edu), Mississippi State University, United States America

Gopalakrishnan, S. (krishnan@aero.iisc.ernet.in), Indian Institute of Science, India

14h40

8653 | Felicity Effect and Ratio in Multilayer Composite Overlapped Pressure Vessel

DAHME, Fethi (f.dahmene@institutdesoudure.com), Institut de Soudure, France

YAACOUBI, Slah (s.yaacoubi@institutdesoudure.com), Institut de Soudure, France

15h00

8686 | Damage Detection of a Prestressed Concrete Bridge with Corrugated Steel Webs Using a Moving Vehicle

Li, Zhenhu (leezhenhu@gmail.com), Research Center, Shenzhen Municipal Engineering Design and Research Institute, China

Chen, Xiachun (u3001945@connect.hku.hk), Department of Civil Engineering, The University of Hong Kong, Hong Kong

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Jiang, Ruijuan (jiangrj@hotmail.com), Research Center, Shenzhen Municipal Engineering Design and Research Institute, China

15h20

8713 | Fabrication of the thermoplastic composite impact sensor usable at cryogenic environment

Kun Jeong (kunj@jbnu.ac.kr), Chonbuk National University, Korea, South

Seong Su Kim (sskim@jbnu.ac.kr), Chonbuk National University, Korea, South

Session 13.3 | Chairs: Seong Su Kim (Chonbuk National University, Korea, South) and and Mauricio Caliri (University of São Paulo, Brazil)

16h30

8751 | LAMB WAVE PROPAGATION IN A DELAMINATED COMPOSITE PANEL: MODELING AND TESTING

Maio, Leandro (leandro.maio@unina.it), Department of Industrial Engineering - Aerospace Section, Italy

Memmo, Vittorio (v.memmo@gmail.com), Department of Industrial Engineering - Aerospace Section, Italy

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Monaco, Ernesto (ermonaco@unina.it), Department of Industrial Engineering - Aerospace Section, Italy

Meola, Carosena (carmeola@unina.it), Department of Industrial Engineering - Aerospace Section, Italy

16h50

7771 | On the direction-dependent thermal behavior of layered structures fabricated via Fused Deposition Modeling

Economidou, Sophia N. (sneconom@unipi.gr), University of Piraeus, Greece

Kousiatza, Charoula (chkousiatza@unipi.gr), University of Piraeus, Greece

Karalekas, Dimitris (dkara@unipi.gr), University of Piraeus, Greece

17h10

7804 | Damage detection using artificial neural networks (ANN) and probability ellipse (PE) methods via Lamb waves approach

Assunta Sorrentino (a.sorrentino@cira.it), CIRA - Italian Aerospace Research Center, Italy

Angelo De Fenza (angelo.defenza@unina.it), University of Naples, Federico II - Dept. of Industrial Engineering - Aerospace section, Italy

Pasquale Vitiello (p.vitiello@cira.it), CIRA - Italian Aerospace Research Center, Italy

17h30

8683 | Exploring the limits of the mode shape derivatives to localize damage in laminated composite plates

Moreno-García, P. (pmorenogarcia@gmail.com), Escuela Superior de Ingeniería. Universidad de Sevilla, Spain

Araújo dos Santos, J. V. (viriato@ist.utl.pt), LAETA, IDMEC, Portugal

Lopes, H. (hml@isep.ipp.pt), DEM, ISEP, Instituto Politécnico do Porto, Portugal

17h50

8919 | Effect of Water Absorption and Sorptivity on the Durability of CNTs modified mortars

Alafogianni, P. (pan.alafogianni@gmail.com), Department of Materials Science and Engineering, University of Ioannina, Greece

Matikas, T.E. (matikas@cc.uoi.gr), Department of Materials Science and Engineering, University of Ioannina, Greece

Barkoula, N.-M. (nbarkoul@cc.uoi.gr), Department of Materials Science and Engineering, University of Ioannina, Greece

18h10

8211 | VARIABLE-STIFFNESS COMPOSITE PANELS: Effects of manufacturing on laminate properties

Falcó, O. (olben.falco@imdea.org), IMDEA Materials Institute, Spain

Lopes, C. S. (claudiosaul.lopes@imdea.org), IMDEA Materials Institute, Spain

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Maimí, P. (pere.maimi@udg.edu), AMADE, Polytechnic School, Universitat de Girona, Spain

MONDAY 15 June Room QUERCUS

Session 14 - Impact on Composite Structures

Session 14.1 | Chairs: Coghe, Frederik (Royal Military Academy, Belgium)

11h00

9303 | SOFT IMPACT RESPONSE OF LAMINATED GLASS PLATES USING FINITE ELEMENT ANALYSIS

Zhou, Jie (jie.zhou09@imperial.ac.uk), Imperial College London, United Kingdom

Mohagheghian, Iman (i.Mohagheghian@imperial.ac.uk), Imperial College London, United Kingdom

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Dear, John P (j.dear@imperial.ac.uk), Imperial College London, United Kingdom

Charalambides, Maria (m.charalambides@imperial.ac.uk), Imperial College London, United Kingdom

11h20

9334 | Assessment of Damage Tolerance in Composite Sandwich Structures with Cork Film Interleaves

Faria, Luís M. M. G. (em10068@fe.up.pt), FEUP, Portugal

Moreira, Pedro G. M. O. (em10079@fe.up.pt), FEUP, Portugal

Nóvoa, Paulo J. R. O. (prnovoaa@fe.up.pt), FEUP, Portugal

Marques, António T. (marques@fe.up.pt), FEUP, Portugal

11h40

9219 | Composite Structural Characteristics Based Progressive Damage Response in Hypervelocity

Horton, Brandon (bahorton@vt.edu), Virginia Tech, United States America

Bayandor, Javid (bayandor@vt.edu), Virginia Tech, United States America

12h00

9067 | Theoretical foundations of splats formation at impact of decamicon-sized porous composite particles "liquid binder - solid ultra-fine inclusions" onto substrate

Solonenko, Oleg (o_solonenko@yahoo.com), Khristianovich Institute of Theoretical and Applied Mechanics, SB RAS, Novosibirsk, Russian Federation

12h20

8887 | Impact damage observations of CFRP composite laminates by using X-ray Computed Tomography

Suzuki, Kohji (kohji.suzuki@it-chiba.ac.jp), Chiba Institute of Technology, Japan

Session 14.2 | Chairs: Coghe, Frederik (Royal Military Academy, Belgium)

14h00

7858 | Behind-armour blunt trauma: matching measurement to injury using finite element modeling

Coghe, Frederik (frederik.coghe@rma.ac.be), Royal Military Academy, Belgium

Gilson, Lionel (lionel.gilson@rma.ac.be), Royal Military Academy, Belgium

Miranda, Angel (angel.miranda@rma.ac.be), Royal Military Academy, Belgium

Azevedo, Ana (ana.azevedo@rma.ac.be), Royal Military Academy, Belgium

Rabet, Luc (luc.rabet@rma.ac.be), Royal Military Academy, Belgium

Pirlot, Marc (marc.pirlot@rma.ac.be), Royal Military Academy, Belgium

14h20

7104 | Experimental and numerical study of oblique impact on helicopter blades

Pascal, Pascal (florian.pascal@isae.fr), Institut Clément Ader - Toulouse, France
Navarro, Pablo (pablo.navarro@univ-tlse3.fr), Institut Clément Ader- Toulouse, France
Marguet, Steven (steven.marguet@univ-tlse3.fr), Institut Clément Ader- Toulouse, France
Casari, Pascal (Pascal.Casari@univ-nantes.fr), GEM Nantes, France
Ferrero, Jean Francois (jean-francois.ferrero@univ-tlse3.fr), Institut Clément Ader- Toulouse, France
Tawk, Issam (Issam.Tawk@balamand.edu.lb), Université de Balamand, Lebanon

14h40

7777 | Finite element analysis of the effect of shape impactors on the impact behavior of circular notched composite material at low velocity impact

Djilali Beida Maamar (beida03@yahoo.fr), University of Mostaganem, Algeria
R.Zenasni (zramdane@netcourrier.com), University of Mostaganem, Algeria
Jaime Vina Olay (jaure@uniovi.es), University of Oviedo, Campus de Viesques, 33204 Gijón, Spain
Antonio Arguelles amado (antonio@uniovi.es), University of Oviedo, Campus de Viesques, 33204 Gijón, Spain

15h00

7848 | Modification of selected mechanical properties of ablative composites by a selection of components

Przybytek, Paweł (sqcdr@wp.pl), Polish Air Force Academy, Department of Airframe and Engine, Poland
Kucharczyk, Wojciech (wojciech.kucharczyk@uthrad.pl), Kazimierz Pułaski University of Technology and Humanities in Radom, Faculty of Mechanical Engineering, Poland
Opara, Tadeusz A. (tadeuszopara@civ.pl), Kazimierz Pułaski University of Technology and Humanities in Radom, Faculty of Mechanical Engineering, Poland
Komorek, Andrzej (komman@op.pl), Polish Air Force Academy, Department of Avionics and Control Systems, Poland

15h20

7857 | Impact Mechanical Behaviour of Graphite Fiber Reinforced Peek

García-González, D. (danigarc@ing.uc3m.es), Carlos III University of Madrid, Spain
Rusinek, A. (rusinek@yahoo.fr), National Engineering School of Metz, France
Jankowiak, T. (tomasz.jankowiak@put.poznan.pl), Poznań University of Technology, Poland
Arias, A. (aariash@ing.uc3m.es), Carlos III University of Madrid, Spain

15h40

8230 | An Advanced Multi-scale Model for Composite Impact

Jian Xu (jian.xu@imdea.org), Imdea Materials, Spain
Sandip Haldar (sandip.haldar@imdea.org), Imdea Materials, Spain
Claudio Lopes (claudiosaul.lopes@imdea.org), Imdea Material, Spain
Carlos González (carlosdaniel.gonzalez@imdea.org), Imdea Material, Spain

Session 14.3 | Chairs: Azevedo, Ana (ana.ferreira@rma.ac.be), Royal Military Academy, Belgium

16h30

7913 | Numerical modelling of small calibre impact on Dyneema HB80 composite material

Azevedo, Ana (ana.ferreira@rma.ac.be), Department of Weapon Systems and Ballistics, Royal Military Academy, Renaissance Avenue, 30, B-1000 Brussels, Belgium, Belgium
Miranda-Vicario, Angel (angel.miranda@rma.ac.be), Department of Weapon Systems and Ballistics, Royal Military Academy, Renaissance Avenue, 30, B-1000 Brussels, Belgium, Belgium
Coghe, Frederik (frederik.coghe@rma.ac.be), Department of Weapon Systems and Ballistics, Royal Military Academy, Renaissance Avenue, 30, B-1000 Brussels, Belgium, Belgium
Teixeira-Dias, Filipe M. H. V. (f.teixeira-dias@ed.ac.uk), Institute for Infrastructure and Environment, School of Engineering, The University of Edinburgh, The King's Buildings, Edinburgh EH9 3JL, UK, United Kingdom

16h50

7931 | Simulation of delaminations induced by low velocity impacts in composites: a sensitivity study to guide an effective use of cohesive elements

Panettieri, Enrico (enrico.panettieri@for.unipi.it), University of Pisa, Italy
Fanteria, Daniele (daniele.fanteria@unipi.it), University of Pisa, Italy
Danzi, Federico (danzi.federico@gmail.com), University of Pisa, Italy

17h10

7984 | Analysis of obliquity in the high velocity impact of carbon/epoxy fragments

Mata Díaz, Alberto (almatad@ing.uc3m.es), Universidad Carlos III de Madrid, Spain
Artero Guerrero, José Alfonso (jartero@ing.uc3m.es), Universidad Carlos III de Madrid, Spain
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Varas Doval, David (dvaras@ing.uc3m.es), Universidad Carlos III de Madrid, Spain
López-Puente, Jorge (jlpuente@ing.uc3m.es), Universidad Carlos III de Madrid, Spain

17h30

7989 | Analysis of the effect of high velocity impact of ice spheres upon the static and dynamic response of carbon/epoxy laminates

M. A. Pérez (marco.antonio.perez@upc.edu), Universitat Politècnica de Catalunya, Spain,
J. Pernas-Sánchez (jpernas@ing.uc3m.es), University Carlos III of Madrid, Spain
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J. López-Puente (jpernas@ing.uc3m.es), University Carlos III of Madrid, Spain
Ll. Gil (lluis.gil@upc.edu), Universitat Politècnica de Catalunya, Spain

17h50

8046 | Numerical study of carbon/epoxy woven laminates submitted to equienergetic impacts

Pernas-Sánchez, Jesús (jpernas@ing.uc3m.es), Universidad Carlos III de Madrid, Spain
Artero-Guerrero, Jose A. (jartero@ing.uc3m.es), Universidad Carlos III de Madrid, Spain
López-Puente, Jorge (jlpuente@ing.uc3m.es), Universidad Carlos III de Madrid, Spain
Varas, David (dvaras@ing.uc3m.es), Universidad Carlos III de Madrid, Spain

18h10

8302 | Mechanical response of composite laminates at high strain rates: Effect of hostile solutions

Dias, B. S. M. (bruno.samuel.dias@hotmail.com), University of Coimbra, Portugal
Amaro, A. M. (ana.amaro@dem.uc.pt), University of Coimbra, Portugal
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Reis, P. N. B. (preis@ubi.pt), University of Beira Interior, Portugal
Neto, M. A. (augusta.neto@dem.uc.pt), University of Coimbra, Portugal

18h30

9115 | The impact performances of GLARE laminates

Chen, Qi (chq@buaa.edu.cn), School of Aeronautic Science and Engineering, Beihang University, China
Guan, Zhidong (choujidann@163.com), School of Aeronautic Science and Engineering, Beihang University, China
Zhuo, Yue (choujidann@163.com), School of Aeronautic Science and Engineering, Beihang University, China

18h50

8698 | Tribological properties of polymer-ceramic composites under dry sliding and artificial saliva lubrication

Madej, Monika (mmadej@tu.kielce.pl), Kielce University of Technology, Poland
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Baranowicz, Paweł (pawel.baranowicz@ekstradent.pl), NZOZ EKSTRADENT, Poland
Wysokińska-Miszczyk, Joanna (joanna.wysokinska-miszczyk@umlub.pl), Medical University of Lublin, Poland

MONDAY 15 June
Room OLIVA

Session 15 - Joints in Composite Structures

Session 15.1 | Chairs: Konstantinos Tserpes (University of Patras, Greece) and Pearce, Garth M. (UNSW Australia, Australia)

11h00

8974 | Seismic performance of RC engineered cementitious composite (ECC) exterior beam-column joints under reversed cyclic loading.

Said, Shwan H. (shwan_19652000@yahoo.com), University of Malaya, Malaysia

Abdul Razak, Hashim (hashim.abdulrazak@gmail.com), University of Malaya, Malaysia

11h20

9093 | Cyclic behaviour of an all pultruded FRP beam-column joint

Boscato, Giosue (gboscato@iuav.it), IUAV University of Venice, Italy

Francesca, Feroldi (feroldifrancesca@gmail.com), IUAV University of Venice, Italy

Russo, Salvatore (russo@iuav.it), IUAV University of Venice, Italy

11h40

8948 | Investigation of the transition zone for locally metal reinforced joining areas

Enno Petersen (enno.petersen@dlr.de), German Aerospace Center (DLR), Germany

12h00

8925 | Numerical simulation of the mechanical performance of composite bonded joints containing X-bolt crack stoppers

Ioannis Floros (gfloros@mech.upatras.gr), University of Patras, Greece

Konstantinos Tserpes (kit2005@mech.upatras.gr), University of Patras, Greece

12h20

8871 | Effect of shimming on bearing response of composite-aluminium joints with countersunk bolt

Zhai Yunong (zhaiyunong.1988@163.com), School of Mechanical Engineering & Automation, BeiHang University, China

Li Dongsheng (lidongs@buaa.edu.cn), School of Mechanical Engineering & Automation, BeiHang University, China

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Wang Liang (123512382@qq.com), School of Mechanical Engineering & Automation, BeiHang University, China

Yin Yu (2388805674@qq.com), School of Mechanical Engineering & Automation, BeiHang University, China

12h40

7139 | Damage behavior of pin loaded CFRP at elevated temperatures

Julia Wagner (julia.wagner@bmw.de), BMW Group, Germany

Session 15.2 | Chairs: Konstantinos Tserpes (University of Patras, Greece) and Pearce, Garth M. (UNSW Australia, Australia)

14h00

7531 | DAMAGE ANALYSIS OF COMPOSITE-ALUMINIUM ADHESIVELY-BONDED SINGLE-LAP JOINTS

Ribeiro, Tiago E.A. (1081605@isep.ipp.pt), ISEP, Portugal

Campilho, Raul D.S.G. (raulcampilho@gmail.com), ISEP, Portugal

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da Silva, Lucas L.M. (lucas@fe.up.pt), FEUP, Portugal

Goglio, Luca (luca.goglio@polito.it), Politecnico di Torino, Italy

14h20

7793 | The effect of titanium bush repairs on the static strength of CFRP coupons and joints

Falconieri, Diletta; Starikov, Roman; Franco, Francesco. (dilefalconieri@gmail.it), Federico II University, Naples, Italy

14h40

7827 | Comparison of Static and Fatigue Characteristics of Hybrid and Standard Joints for Thick Composite Structures

Chowdhury, Nabil M. (nabil.chowdhury@monash.edu), Monash University, Australia

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Chang, Paul (Paul.Chang@dsto.defence.gov.au), Defence Science and Technology Organisation, Australia

15h00

7884 | Meshless Analysis of Stresses in a Single Lap Bonded-Bolted Composite Joint

Bodjona, Kobye (kobyebodjona@mail.mcgill.ca), McGill University, Canada

Lessard, Larry B. (larry.lessard@mcgill.ca), McGill University, Canada

15h20

7980 | Analysis of Bolted and Bonded Composite Joint using Experimentally Determined Flexible Adhesive Properties

Lim, Gyu-hyeong (gyu-hyeong.lim@mail.mcgill.ca), McGill University, Canada

Bodjona, Kobye (kobyebodjona@mail.mcgill.ca), McGill University, Canada

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Campagne, Denis (denis.campagne@insalien.org) INSA Lyon, France

Lessard, Larry B. (larry.lessard@mcgill.ca), McGill University, Canada

15h40

7932 | The Behavior of Reinforced Concrete Slab-Column Connection Reinforced with Headed Shear Studs Arranged in Orthogonal and Radial Layouts

Dam, Thai X. (wikidam@umich.edu), University of Michigan, United States America

Wight, James K. (jwight@umich.edu), University of Michigan, United States America

Session 15.3 | Chairs: Konstantinos Tserpes (University of Patras, Greece) and Pearce, Garth M. (UNSW Australia, Australia)

16h30

7981 | Numerical analysis of modified CFRP laminate in bearing conditions

Szymczyk Elzbieta (eszymczyk@wat.edu.pl), Military University of Technology, Poland

Puchala Krzysztof (kpuchala@wat.edu.pl), Military University of Technology, Poland

Jachimowicz Jerzy (jjachimowicz@wat.edu.pl), Military University of Technology, Poland

16h50

7985 | Damage sizing of thermoplastic bolted joints on composite materials

Hamonou, Romain (romain.hamonou@ec-nantes.fr), Ecole Centrale Nantes, France

Gornet, Laurent (laurent.gornet@ec-nantes.fr), Ecole Centrale Nantes, France

Jacquemin, Frédéric (Frederic.Jacquemin@univ-nantes.fr), Université de Nantes, France

Auger, Stéphane (Stephane.Auger@cetim.fr), CETIM, France

17h10

8029 | Bearing Failure Prediction for Hybrid Bolted-Bonded Composite Joints using Onset Theory

Pearce, Garth M. (g.pearce@unsw.edu.au), UNSW Australia, Australia

17h30

8037 | Design and implementation of an ARCAN-style test rig for off-axis testing of bolted joints in composite laminates

Pearce, Garth M. (g.pearce@unsw.edu.au), UNSW Australia, Australia

Gould, Coel (coel.gould@student.unsw.edu.au), UNSW Australia, Australia

17h50

8053 | Numerical investigation on the effect of bolt-hole position alignment errors on strength of bearing-type multi-row bolted connections for FRP composite structures

Kader, M.A. (biplotduet@yahoo.com), Nagoya University, Bangladesh

Kitane, Y. (ykitane@civil.nagoya-u.ac.jp), Nagoya University, Japan

Itoh, Y. (itoh@civil.nagoya-u.ac.jp), Nagoya University, Japan

18h10

8102 | Numerical design of a dismountable spar for a light airplane in carbon fiber reinforced plastic

Clément, Fleuret (c.fleuret@crittmatériaux.fr), CRITT Matériaux Poitou-Charentes, France
Anne-Sophie, Andreani (as.andreani@crittmatériaux.fr), CRITT Matériaux Poitou-Charentes, France
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Jean-Marie, Buignet (jmbuignet@c3technologies.fr), C3 Technologies, France
Eric, Lainé (eric.laine@ensma.fr), Institut Pprime - CNRS • ENSMA • Université de Poitiers • UPR 3346, France
Anne-Laure, Gorge (anne-laure.gorge@ensma.fr), Institut Pprime - CNRS • ENSMA • Université de Poitiers • UPR 3346, France
Jean-Claude, Grandidier (grandidier@ensma.fr), Institut Pprime - CNRS • ENSMA • Université de Poitiers • UPR 3346, France

18h30

9118 | Analyzing the modal behavior of adhesive bonded thermoplastic honeycomb sandwich panels to estimate the elastic properties of the joint

Stijn Debruyne (stijn.debruyne@kuleuven.be), KU Leuven, Belgium
Dirk Vandepitte (dirk.vandepitte@kuleuven.be), KU Leuven, Belgium
Korneel Vanmassenhove (korneel.vanmassenhove@kuleuven.be), KU Leuven, Belgium

18h50

7497 | FAILURE MODE AND ANALYSIS OF BONDED/BOLTED JOINTS BETWEEN HFRP AND ALUMINIUM

Yogesh, T.L (tlnyogesh@gmail.com), Chalmers University of Technology, Sweden
Arunkumar, N (n.arunkumar@rediffmail.com), St. Joseph's College of Engineering, India

19h10

7960 | Influence of substrates' fibers orientations on the behavior of composite substrates double lap bonded assemblies under impact shear loads (15. Joints in Composite Structures)

Hazimeh, Rachad (rachad.hazimeh@ec-nantes.fr), LUNAM Université, Ecole Centrale de Nantes, Institut de Recherche en Génie Civil et Mécanique, UMR CNRS 6183, France
Challita, Georges (George_Challita@yahoo.com), Equipe MMC, Université Libanaise, Faculté de génie, Lebanon
Khalil, Khaled (Khkhalil@ul.edu.lb), Equipe MMC, Université Libanaise, Faculté de génie, Lebanon
Othman, Ramzi (rothman1@kau.edu.sa), Mechanical Engineering Department, Faculty of Engineering, King Abdulaziz University, Saudi Arabia

MONDAY 15 June
Room CASTANEA

Session 19 - Nano-Composites

Session 19.1 | Chairs: Crainic, N. (Politehnica University of Timisoara, Romania) and Marques, António T. (FEUP, Portugal)

11h00

9022 | Bioinspired 3D Nanotube Composite Surfaces for Implant Applications

Shokuhfar (tshokuhf@mtu.edu), Michigan Technological University, United States America

11h20

9113 | Outstanding composites of the photovoltaic perovskite and carbon nanostructures

Forró, László (laszlo.forro@epfl.ch), Ecole Polytechnique Fédérale de Lausanne, Switzerland

11h40

9057 | Structure and optical properties of thin poly(p-xylylene) - silver nanocomposite films prepared by lowtemperature vapor deposition polymerization

Streltsov, Dmitry R. (streltsov.dmitry@gmail.com), Enikolopov Institute of Synthetic Polymer Materials, Russian Academy of Sciences, Russian Federation

Mailyan, Karen A. (K.Mailyan@gmail.com), Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences, Russian Federation

Gusev, Alexey V. (4839356@mail.ru), Institute for Theoretical and Applied Electromagnetics, Russian Academy of Sciences, Russian Federation

Pebalk, Andrey V. (apebalk@cc.nifhi.ac.ru), Karpov Institute of Physical Chemistry, Russian Federation

Odarchenko, Yaroslav I. (yaroslav.odarchenko@gmail.com), Institut de Science des Matériaux de Mulhouse (IS2M), France

Ivanov, Dimitri A. (dimitri.ivanov@hotmail.fr), Institut de Science des Matériaux de Mulhouse (IS2M), France

Chvalun, Sergei N. (chvalun@cc.nifhi.ac.ru), National Research Centre "Kurchatov Institute", Russian Federation

12h00

9047 | Bridging nano- to macro-mechanical properties of an aerospace-grade mono-component epoxy reinforced with carbon nanotubes

Laurenzi, S. (susanna.laurenzi@uniroma1.it), Sapienza University of Rome, Italy

Santonicola, M. G. (mariagabriella.santonicola@uniroma1.it), Sapienza University of Rome, Italy

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Materazzi, S. (stefano.materazzi@uniroma1.it), Sapienza University of Rome, Italy

12h20

9032 | Nanoscale wrinkling of graphene on substrates with asperities

Yuli Chen (yulicheng@buaa.edu.cn), Beihang University, China

Yanguang Zhou (yanguang.zhou@rwth-aachen.de), RWTH Aachen University, Germany

12h40

8997 | Carbon nanotube coated glass fiber using ionic interaction and their thermoplastic composites

Jung, Byung Mun (bmjung@kims.re.kr), Korea Institute of Materials Science, Korea, South

Yoon, Soon Ho (shyoon@kims.re.kr), Korea Institute of Materials Science, Korea, South

Jang, Hongkyu (hongkyu@kims.re.kr), Korea Institute of Materials Science, Korea, South

Kim, Kyung Duk (kimkd@kims.re.kr), Korea Institute of Materials Science, Korea, South

Session 19.2 | Chairs: Crainic, N. (Politehnica University of Timisoara, Romania) and Marques, António T. (FEUP, Portugal)

14h00

8906 | Organic semiconducting/ferroelectric blend memristors fabricated by temperature controlled spin coating

Hu, Jinghang (gawdon@163.com), Fudan University, China

Zhu, Guodong (gdzhu@fudan.edu.cn), Fudan University, China

14h20

8947 | Pt dispersion and structure of alumina-platinum composites obtained by thermal oxidation of Al-Pt thin layers.

Kazimierz Reszka (kazimierz.reszka@tu.koszalin.pl), Institute of Mechatronics, Nanotechnology and Vacuum Technique, Koszalin University of Technology, Poland

Jerzy Morgiel (nmmorgiel@imim-pan.krakow.pl), Institute of Metallurgy and Materials Science, Polish Academy of Science, Kraków, Poland

Mieczyslaw Szczypinski (mieczyslaw.szczypinski@onet.eu), TERMEX Ltd., Poland

14h40

8833 | Properties and Structure of Sintered Materials with Borides (Metal Matrix Composite)

Karwan-Baczewska, Joanna (jokaba@agh.edu.pl), AGH University of Science and Technology, Poland

15h00

5837 | Photocatalytic Activities and Structural Formation of Au-Pd Nano Alloys Embedded into Amphiphilic Graft Copolymer

Hazer B (bhazer2@yahoo.com), Bulent Ecevit University, Turkey

Kalaycı OA (ozlem_altunordu@yahoo.com.tr), Bulent Ecevit University, Turkey

15h20

6974 | Mechanical Behavior of Three-dimensional Graphene Foam and its Polymer-filled Composites

Samda, Yarjan (yarjan.abdulsamad@kustar.ac.ae), Khalifa University, United Arab Emirates

Li, Yuanqing (yuanqing.li@kustar.ac.ae), Khalifa University, United Arab Emirates

Schiffer, Andreas (andreas.schiffer@kustar.ac.ae), Khalifa University, United Arab Emirates

Liao, Kin (kin.liao@kustar.ac.ae), Khalifa University, United Arab Emirates

Session 19.3 | Chairs: Crainic, N. (Politehnica University of Timisoara, Romania)

16h30

7520 | Preparation and characterization of DNA/allophane composite hydrogels

Masami Okamoto (okamoto@toyota-ti.ac.jp), Toyota Technological Institute, Japan

Yoko Matsuura (okamoto@toyota-ti.ac.jp), Toyota Technological Institute, Japan

Takuya Kawachi (okamoto@toyota-ti.ac.jp), Toyota Technological Institute, Japan

16h50

7555 | Radar absorbing structures composed of the nano-composites dispersed with the carbon black and the carbon nanotube

Choi, Ilbeom (chib1020@kaist.ac.kr), KAIST, Korea, South

Lee, Dongyoung (missingnum@kaist.ac.kr), KAIST, Korea, South

Lee, Dai Gil (dglee@kaist.ac.kr), KAIST, Korea, South

17h10

7586 | Development and characterization of biocompatible magnetic nanoparticles based on magnetite (Fe₃O₄) and ferrite (Fe₂O₄) and its application in the treatment by hyperthermia

Diaz-Bleis, Dianela (dianela86@hotmail.com), CINVESTAV, Mexico

Freile-Pelegrin, Yolanda (freile@mda.cinvestav.mx), CINVESTAV, Mexico

Alvarado-Gill, Juan J. (jjag09@yahoo.com), CINVESTAV, Mexico

17h30

7720 | Interfacial Phenomena in Structural Polymeric Nano-clay Synthetic fibre-reinforced Cementitious Composites

Lee, Su-Jin (jpwon111@msn.com), Konkuk University, Korea, South

Won, Jong-Pil (jpwon@konkuk.ac.kr), Konkuk University, Korea, South

17h50

7889 | Microfibrillar composites of PCL matrix and layered silicates

Kelnar, Ivan (kelnar@imc.cas.cz), Institute of Macromolecular Chemistry ASCR, v.v.i., Czech Republic

Kratochvil, Jaroslav (jakr@imc.cas.cz), Institute of Macromolecular Chemistry ASCR, v.v.i., Czech Republic

18h10

9348 | Fabrication and Characterization of Functionalized Silica-Epoxy Based Composite

Jaewoo Nam (allakuk@hanmail.net), Changwon National University, Korea, South

Dong Sik Bae (dsbae7@changwon.ac.kr), Changwon National University, Korea, South

18h30

9349 | Fabrication and Characterization of Glass fiber-Epoxy Based Composite

Jong Ju Jo (Jongjj@changwon.ac.kr), Changwon National University, Korea, South

Dong Sik Bae (dsbae7@changwon.ac.kr), Changwon National University, Korea, South

18h50

8996 | Localized surface plasmon resonance for Quantum Dot-gold nanoparticle hybrid

Qianqian, Huang/Dr (hqqstudy@126.com), School of Electronic Science and Engineering, Southeast University, Nanjing, China, China

Jing, Chen/Dr (chenjing@seu.edu.cn), School of Electronic Science and Engineering, Southeast University, Nanjing, China, China

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Jiangyong, Pan/Dr (1287033997@qq.com), School of Electronic Science and Engineering, Southeast University, Nanjing, China, China

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MONDAY 15 June
Room NUX

Session 37 - Symposium on Mechanics of Composite Materials and FGM structures, celebrating the 70th Anniversary of Professor J. N. Reddy

Session 37.1 | Chairs: Cristovao M. Soares (IST, Portugal) and Araujo (Instituto Superior Técnico, University of Lisbon, Portugal)

11h00

6758 | Non-Local Beam Theory for Micro- and Macro-Structural Responses
Romanoff, J. (jani.romanoff@aalto.fi), Aalto University, Finland

11h20

9003 | Size effect on the free vibration of geometrically nonlinear functionally graded micro-beams under electrical actuation and temperature change

Jia X. L. (xljia@cup.edu.cn), China University of Petroleum-Beijing, China
Feng C. B. (caufengchengbao@163.com), China University of Petroleum-Beijing, China
Ke L. L. (llke@bjtu.edu.cn), Beijing Jiaotong University, China
Yang J. (j.yang@rmit.edu.au), RMIT University, Australia
Kitipornchai S. (s.kitipornchai@uq.edu.au), The University of Queensland, Australia

11h40

6805 | Dynamic prediction fatigue life of composite wind turbine blade

Samir, Lecheb (samir_lecheb@yahoo.fr), University of Boumerdes, Algeria
Abdelkader, Nour (c.chellil@yahoo.fr), University of Boumerdes, Algeria
Ahmed, Chellil (abdelkader-nour@hotmail.fr), University of Boumerdes, Algeria
Hamza, Mechakra (h.mechakra@yahoo.fr), University of Boumerdes, Algeria
Hichem, Ghanem (g_hichem@yahoo.fr), University of Boumerdes, Algeria
Hocine, Kebir (h.kebir@yahoo.fr), University of Compiene, France

12h00

6840 | A FINITE ELEMENT FOR LAMINATED GLASS PLATES WITHIN THE FIRST ORDER SHEAR DEFORMATION THEORY

Altenbach, Holm (holm.altenbach@ovgu.de), Otto von Guericke University Magdeburg, Institute of Mechanics, Germany
Eisenträger, Johanna (johanna.eisentraeger@st.ovgu.de), Otto von Guericke University Magdeburg, Institute of Mechanics, Germany
Naumenko, Konstantin (konstantin.naumenko@ovgu.de), Otto von Guericke University Magdeburg, Institute of Mechanics, Germany
Eremeyev, Victor A. (victor.eremeyev@ovgu.de), Otto von Guericke University Magdeburg, Institute of Mechanics, Germany

12h20

6899 | Vibration Analysis of Laminated Thick Plates by an Improved Hierarchical Finite Element Method Using Reddy's Third-order Shear Deformation Theory

Bo Liu (liubo68@buaa.edu.cn), The Solid Mechanics Research Centre, Beihang University (BUAA), China, China
Yufeng Xing (xingyf@buaa.edu.cn), The Solid Mechanics Research Centre, Beihang University (BUAA), China, China

12h40

7529 | Gradual degradation in two-phase polycrystalline ceramics due to time dependent thermal loading

Sadowski, Tomasz (sadowski.t@gmail.com), Lublin University of Technology, Poland
Golewski, Przemyslaw (pgolewski@gmail.com), Lublin University of Technology, Poland

Session 37.2 | Chairs: Cristovao M. Soares (IST, Portugal) and Araujo (Instituto Superior Técnico, University of Lisbon, Portugal)

14h00

7544 | Computational Modeling of Female Pelvic System To Understand The Mechanics of Pelvic Organ Prolapse

Chanda, Arnab (achanda@crimson.ua.edu), University of Alabama, Tuscaloosa, United States America

Unnikrishnan, Vinu (vunnikrishnan@eng.ua.edu), University of Alabama, Tuscaloosa, United States America

Roy, Samit (sroy@eng.ua.edu), University of Alabama, Tuscaloosa, United States America

14h20

7564 | ADVANCED APPLICATIONS FOR LAMINATED DOUBLY CURVED SHELLS WITH VARIABLE CURVATURES

Tornabene, F. (francesco.tornabene@unibo.it), University of Bologna, Italy

Fantuzzi, N. (nicholas.fantuzzi@unibo.it), University of Bologna, Italy

Baccocchi, M. (michele.baccocchi@unibo.it), University of Bologna, Italy

Viola, E. (erasmo.viola@unibo.it), University of Bologna, Italy

14h40

7613 | Structural Essentials for Modular Hybrid Wind Turbine Blades

Ochoa, Ozden O. (ochoa@tamu.edu), Texas A&M University, United States America

Nanami, Norimichi (g0503150nu.mecst@gmail.com), Nihon University, Japan

15h00

7934 | Electro-Mechanical Analysis of a Layered Hollow Sphere with Functionally Graded Piezoelectric Material

Sburlati R. (roberta.sburlati@unige.it), University of Genova, Italy, Italy

Atashipour S.A. (sa.atashipour@edu.unige.it), University of Genova, Italy, Italy

15h20

8143 | Static, vibration and buckling of composite beams using a quasi-3D theory

Thuc P. Vo (thuc.vo@northumbria.ac.uk), Faculty of Engineering and Environment, Northumbria University, Newcastle upon Tyne, NE1 8ST, UK, United Kingdom

Domagoj Lanc (dlanc@riteh.hr), Department of Engineering Mechanics, Faculty of Engineering, University of Rijeka, Vukovarska 58, HR-51000 Rijeka, Croatia, Croatia

15h40

9488 | On micromechanics-based nonlocal modeling of elastic matrices containing multi-layer particles

Monetto, Ilaria (ilaria.monetto@unige.it), University of Genoa, Italy

Berrino, Giulia (giulia.berrino@libero.it), University of Genoa, Italy

Session 37.3 | Chairs: Samit Roy, USA

16h30

8188 | Exact vibration solutions of refined theories of variable order for laminated and FGM plates and shells

Dozio, L. (lorenzo.dozio@polimi.it), Politecnico di Milano, Italy

16h50

8189 | GEOMETRICALLY NONLINEAR ANALYSIS OF SOFT CORE SANDWICH - STRUCTURES

Moita, J. (jmoita50@gmail.com), LAETA, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Portugal

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Soares, Cristóvão (cristovao.mota.soares@tecnico.ulisboa.pt), LAETA, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Portugal

Soares, Carlos (cristovao.mota.soares@tecnico.ulisboa.pt), LAETA, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Portugal

Herskovits, J. (jose@optimize.ufrj.br), COPPE-UFRJ, Universidade Federal do Rio de Janeiro, Brazil

17h10

8201 | DYNAMIC ANALYSIS OF SOFT CORE SANDWICH STRUCTURES USING KRIGING MODELS

Loja, M.A.R. (amelialoja@dem.isel.ipl.pt), ISEL, IDMEC, Portugal

Barbosa, J.I. (jib@dem.isel.ipl.pt), ISEL, IDMEC, Portugal

Mota Soares, C.M. (cristovao.mota.soares@ist.utl.pt), IDMEC, Portugal

17h30

6918 | Some fundamental problems of multiscale asymptotic expansion method

Xing, Yufeng (xingyf@buaa.edu.cn), Beihang University, China

Chen, Lei (chenlei2012year@sina.com), Beihang University, China

17h50

8594 | CREEP DEFORMATION AND FRACTURE PROCESSES IN MAGNESIUM METAL MATRIX COMPOSITES

Sklenicka, Vaclav (sklen@ipm.cz), Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Czech Republic

Kucharova, Kveta (kucharova@ipm.cz), Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Czech Republic

Svoboda, Milan (svobm@ipm.cz), Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Czech Republic

Kvapilova, Marie (kvapilova@ipm.cz), Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Czech Republic

18h10

9387 | Effect of an inhomogeneous interphase zone on the bulk modulus of a particulate composite containing spherical inclusions

Sburlati, R. (roberta.sburlati@unige.it), University of Genoa, Italy

Monetto, I. (ilaria.monetto@unige.it), University of Genoa, Italy

18h30

9367 | On Damage Mechanics of 3D Orthogonal Woven Composites: Experiment and Numerical Modelling

Saleh, Mohamed Nasr (mohamed.saleh-7@postgrad.manchester.ac.uk), University of Manchester (UoM), United Kingdom

Lubineau, Gilles (gilles.lubineau@kaust.edu.sa), King Abdullah University of Science and Technology (KAUST), Saudi Arabia

Soutis, Constantinos (constantinos.soutis@manchester.ac.uk), University of Manchester (UoM), United Kingdom

TUESDAY 16 June Room MORUS IV

Session 2.4 | Chairs: Nicholas Fantuzzi (University of Bologna, Italy) and Michele Baccocchi (University of Bologna, Italy)

11h00

7659 | Natural vibrations of thin microstructured FG plates

Jedrysiak, Jaroslaw (jarek@p.lodz.pl), Lodz University of Technology, Poland

11h20

8757 | Effect of Boundary Conditions on Nonlinear Vibrations of Variable Stiffness Composite Plates

Jansen, Eelco (e.jansen@isd.uni-hannover.de), Leibniz Universität Hannover, Institute of Structural Analysis, Germany

Ribeiro, Pedro (pmleal@fe.up.pt), Universidade do Porto, DEMec, Faculdade de Engenharia, Portugal

Rahman, Tanvir (T.Rahman@tnodiana.com), TNO DIANA BV, Netherlands

Rolfes, Raimund (r.rolfes@isd.uni-hannover.de), Leibniz Universität Hannover, Institute of Structural Analysis, Germany

11h40

7575 | Preliminary theoretical study on shear lag effect of the PC box girder bridge with a constant depth and corrugated steel webs

Xiao, Yu Feng (xiaoyf@szmedi.com.cn), Shenzhen Municipal Engineering Design & Research Institute, China

Jiang, Rui Juan (jiangrj@hotmail.com), Shenzhen Municipal Engineering Design & Research Institute, China

Wu, Qi Ming (wuqm@szmedi.com.cn), Shenzhen Municipal Engineering Design & Research Institute, China

12h00

7597 | The transient responses analysis of ply-dropped laminated composite beams by a developed reverberation-ray matrix method

Miao, Fuxing (aifxmiao@gmail.com), Ningbo University, China

Sun, Guojun (gjsun@sjtu.edu.cn), Shanghai Jiaotong University, China

12h20

7656 | Geometrically nonlinear vibrations of slender meso-periodic beams

Domagalski, Lukasz (lukasz.domagalski@p.lodz.pl), Lodz University of Technology, Poland
Jedrysiak, Jaroslaw (jarek@p.lodz.pl), Lodz University of Technology, Poland

12h40

9503 | Meshless natural neighbor Galerkin method for nonlinear analysis of composite laminates

Preethi Kasirajan (CE13P1008@iith.ac.in), IIT Hyderabad, India
Amirtham Rajagopal (rajagopal@iith.ac.in), IIT Hyderabad, India

Session 2.5 | Chairs: Nicholas Fantuzzi (University of Bologna, Italy) and Michele Baccocchi (University of Bologna, Italy)

14h00

7701 | Deflection and strength of a five layer sandwich beam - a nonlinear hypothesis

Smyczynski, Mikolaj J (mikolaj.smyczynski@put.poznan.pl), Pozan University of Technology, Poland
Magnucka-Blandzi, E (ewa.magnucka-blandzi@put.poznan.pl), Pozan University of Technology, Poland

14h20

7921 | Morphing structures: A refined, computationally-efficient solution for von Kármán shells

Lamacchia, Ettore (ettore.lamacchia@bristol.ac.uk), University of Bristol, United Kingdom
Pirrera, Alberto (alberto.pirrera@bristol.ac.uk), University of Bristol, United Kingdom
Weaver, Paul M. (paul.weaver@bristol.ac.uk), University of Bristol, United Kingdom

14h40

7968 | Analysis of a Orthotropic Cylindrical Cantilever Beam under Transverse Loading

Hamidreza Yazdani Sarvestani (h_yazd@encs.concordia.ca), Concordia University, Canada
Suong Van Hoa (suong.hoa@concordia.ca), Concordia University, Canada
Mehdi Hojjati (mehdi.hojjati@concordia.ca), Concordia University, Canada

15h00

8850 | Three-dimensional Elastic Static Analysis of Sandwich Composite Plate Considered Imbue Layer Effects

Huo, Ruili (ruilihuo@njtech.edu.cn), College of Civil Engineering, Nanjing Tech University, China
Zhou, Ding (dingzhou57@yahoo.com), College of Civil Engineering, Nanjing Tech University, China
Liu, Weiqing (wqliu@njtech.edu.cn), College of Civil Engineering, Nanjing Tech University, China
Wang, Lu (kevinlwang@hotmail.com), College of Civil Engineering, Nanjing Tech University, China
Zhao, Kai (24871725@qq.com), College of Civil Engineering, Nanjing Tech University, China

15h20

8045 | Experimental and numerical study on temperature dependent anisotropic visco-elastic properties of the printed circuit board (PCB) patterns

Joo, Sung-Jun (juvenile.junn@gmail.com), Hanyang University, Korea, South
Park, Buhm (parkbuhm@gmail.com), Hanyang University, Korea, South
Nam, Gwon-Woo (gnwngw128@gmail.com), Hanyang University, Korea, South
Kim, Do-Hyoung (dongsene3@gmail.com), Hanyang University, Korea, South
Kwak, Dong-Ok (dokwak@samsung.com), Samsung Electronics, Korea, South
Park, Junhong (parkj@hanyang.ac.kr), Hanyang University, Korea, South
Kim, Hak-Sung (kima@hanyang.ac.kr), Hanyang University, Korea, South

15h40

8095 | Local web-buckling of shear-deformable laminated composite beams under shear and uniaxial compressive loads using discrete plate analysis

Torsten Kuehn, Hartmut Pasternak and Christian Mittelstedt (torsten.kuehn@efw.eads.net), Elbe Flugzeugwerke GmbH, Germany

Session 2.6 | Chairs: Nicholas Fantuzzi (University of Bologna, Italy) and Michele Baccocchi (University of Bologna, Italy)

16h30

8171 | FE analysis of CFRP-strengthened timber finger-joint

Khelifa M. (mourad.khelifa@univ-lorraine.fr), University of Lorraine, France

Rogaume Y. (yann.rogaume@univ-lorraine.fr), University of Lorraine, France

16h50

8641 | the effective flange width calculation for box girder bridges with varying flange thickness

Wu, Qi-Ming (wuqm@szmedi.com.cn), Shenzhen Municipal Engineering Design & Research Institute, China

Jiang, Rui-Juan (jiangrj@hotmail.com), Shenzhen Municipal Engineering Design & Research Institute, China

Gai, Wei-Ming (gaiwm@szmedi.com.cn), Shenzhen Municipal Engineering Design & Research Institute, China

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Xiao, Yu-Feng (xiaoyf@szmedi.com.cn), Shenzhen Municipal Engineering Design & Research Institute, China

17h10

8649 | A BEAM ELEMENT FOR PC BOX-GIRDER BRIDGES WITH CORRUGATED STEEL WEBS

Jiang, Rui-Juan (jiangrj@hotmail.com), Shenzhen Municipal Engineering Design & Research Institute, China

Wu, Qi-Ming (wuqm@szmedi.com.cn), Shenzhen Municipal Engineering Design & Research Institute, China

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Li, Zhen-Hu (wnmdi@163.com), Shenzhen Municipal Engineering Design & Research Institute, China

Yi, Xiao-Wei (yixw@szmedi.com.cn), Shenzhen Municipal Engineering Design & Research Institute, China

17h30

8613 | The effect of defects on the crashing characteristics of CFRP square tubes

Qiang Liu (liu5168198110@126.com), School of Engineering, Sun Yat-Sen University, Guangzhou City 510006, China, China

Zhengyan Ou (273797922@qq.com), School of Engineering, Sun Yat-Sen University, Guangzhou City 510006, China, China

17h50

8794 | Effect of stacking sequence on the fatigue behaviour of CFRP laminates developed for wind turbine blades

Liu, Zhe (liuz0037@e.ntu.edu.sg), Nanyang Technological University, Singapore

Li, Peifeng (peifeng.li@ntu.edu.sg), Nanyang Technological University, Singapore

Huang, Ruoxuan (huan0237@e.ntu.edu.sg), Nanyang Technological University, Singapore

Srikanth, Narasimalu (nsrikanth@ntu.edu.sg), ERIAN, Nanyang Technological University, Singapore

18h10

8958 | EFFECTS OF TEST SET-UP ON THE INDUCED INTERNAL TORQUE IN FOUR-POINT BENDING OF THIN LAMINATES

Wowk, Diane (diane.wowk@rmc.ca), Royal Military College of Canada, Canada

Marsden, Catharine (catharine.marsden@rmc.ca), Royal Military College of Canada, Canada

18h30

8644 | A new displacement based plate model accounts for transverse shear stress free conditions and transverse normal strain

Sandeep Shiyekar (shiyekar@gmail.com), Shivaji University, India

TUESDAY 16 June Room VITUS I

Session 6.4 | Chairs: Pierluigi Colombi (Politecnico di Milano, Italy) and Ascione, Luigi (University of Salerno, Italy)

11h00

7577 | Verification of bonding performance of FRP hybrid rebar

Ki-Tae Park (ktpark@kict.re.kr), KICT, Korea, South
Dongwoo Seo (dwseo@kict.re.kr), KICT, Korea, South
Ji-Hyun Hwang (jhhwang@kict.re.kr), KICT, Korea, South
Young-Jun Yu (yjyou@kict.re.kr), KICT, Korea, South
Sangyoon Lee (sylee@kict.re.kr), KICT, Korea, South

11h20

9307 | On the structural design of the Portable Temporary Mataf Pedestrian Bridge

Mohsen zadeh tabari, Golnaz (golnaz.mohsenzadeh@sl-rasch.de), SL-Rasch GmbH, Germany
Scheone, Stefan (stefan.scheone@sl-rasch.de), SL-Rasch GmbH, Germany

11h40

9222 | BEHAVIOUR OF CONCRETE FILLED DOUBLE SKIN CIRCULAR STEEL TUBES IN AXIAL COMPRESSION

(Behaviour of Concrete filled double skin circular steel tubes in axial compression)

Essopjee, Yoosuf (Yoosuf.Essopjee@transnet.net), University of Johannesburg, Department of Civil Engineering Science, South Africa
Dundu, Morgan (mdundu@uj.ac.za), University of Johannesburg, Department of Civil Engineering Science, South Africa

12h00

8539 | Effect of the inherent eccentricity in single-lap direct-shear tests of FRCM composites

Carlioni, Christian (christian.carlioni@unibo.it), University of Bologna, Italy
D'Antino, Tommaso (tommaso.dantino@dicea.unipd.it), University of Padova, Italy
Sneed, Lesley H. (sneedlh@mst.edu), Missouri S&T, United States America
Pellegrino, Carlo (carlo.pellegrino@unipd.it), University of Padova, Italy

12h20

9208 | Reinforcement of old masonry structures by advanced composites materials: experimental analysis and modelling.

Gharib, Turath (turath.gharib@etu.univ-lyon1.fr), University Claude Bernard Lyon1, France
Gabor, Aron (aron.gabor@univ-lyon1.fr), University Claude Bernard Lyon1, France
Ferrier, Emmanuel (emmanuel.ferrier@univ-lyon1.fr), University Claude Bernard Lyon1, France

Session 36 - Design and Application of Composite Structure

Session 36.1 | Chairs: Sneed, Lesley H. (sneedlh@mst.edu), Missouri S&T, United States America

14h00

8706 | Design of the composite journal bearing for turbine/generator application

Kang Yeong Choe (kychoi1077@naver.com), Chonbuk National University, Korea, South
Seong Su Kim (sskim@jbnu.ac.kr), Chonbuk National University, Korea, South

14h20

8742 | NUMERICAL ANALYSIS OF A MASONRY PANEL REINFORCED WITH PULTRUDED GFRP PROFILES

Casalegno, Carlo (casalegno.c@gmail.com), IUAV University of Venice, Italy
Russo, Salvatore (russo@iuav.it), IUAV University of Venice, Italy
Sciarretta, Francesca (scifra@iuav.it), IUAV University of Venice, Italy

14h40

6991 | Discrete ply modelling of failure scenario of open-hole tensile test

Achard Victor (victor.achard@airbus.com), Airbus France, France
Castanié Bruno (bruno.castanie@insa-toulouse.fr), Institut Clément Ader, France
Bouvet Christophe (christophe.bouvet@isae.fr), Institut Clément Ader, France
Chirol Clément (clement.chirol@airbus.com), Airbus France, France

15h00

8065 | Robust design of composite golf shafts considering fiber orientation errors in stacking process

Hwang, Hui Yun (hyhwang@andong.ac.kr), Andong National University, Korea, South
Hwang, Sang Kyun (siriushwang@naver.com), Andong National University, Korea, South
Park, Se Gi (segi1101@naver.com), Andong National University, Korea, South
Hwang, Uh Kyun (xxzergsxx@naver.com), Andong National University, Korea, South
Kim, Kyu He (lovable614@hanmail.net), Andong National University, Korea, South

15h20

9347 | Aeroelastic Instability Analysis of a Composite Wind Turbine Blade

Rafiee, Roham (roham.rafiiee@ut.ac.ir), Faculty of New Sciences & Technologies, University of Tehran, Iran
Moradi, Mohsen (m.moradi89@ut.ac.ir), Faculty of New Sciences & Technologies, University of Tehran, Iran

General Session

Session General | Chairs: Sneed, Lesley H. (sneedlh@mst.edu), Missouri S&T, United States America

16h30

7770 | Fabrication and properties of steel-TiB₂ composites (Metal Matrix Composites)

Sulima, Iwona (isulima@up.krakow.pl), Institute of Technology, Pedagogical University, Podchorążych 2 st., 30-084 Krakow, Poland, Poland
Hyjek, Paweł (phyjek@up.krakow.pl), Institute of Technology, Pedagogical University, Podchorążych 2 st., 30-084 Krakow, Poland, Poland
Sonia Boczek (sboczek@imn.skawina.pl), Institute of Non-Ferrous Metals in Gliwice, Light Metals Division Skawina, Poland

16h50

7852 | Methods for analysis of effective mechanical, thermal and electric properties of composite materials

Salnikov, Vladimir (vladimir.salnikov@unicaen.fr), University of Caen Lower Normandy, France
Lemaitre, Sophie (sophie.lemaitre@unicaen.fr), University of Caen Lower Normandy, France
Choi, Daniel (daniel.choi@unicaen.fr), University of Caen Lower Normandy, France
Karamian, Philippe (philippe.karamian@unicaen.fr), University of Caen Lower Normandy, France

17h10

8059 | An Innovative Method of Suppressing Drilling-Induced Delamination in Composite Tube (drilling and machining)

Hocheng, Hong (hocheng@pme.nthu.edu.tw), Department of Power Mechanical Engineering, National Tsing Hua University, Taiwan, Taiwan
Tsao, Chung Chen (hocheng@pme.nthu.edu.tw), Department of Mechatronics Engineering, Ta Hua University of Technology, taiwan, Taiwan
Chen, Hsiao Chung (hocheng@pme.nthu.edu.tw), Department of Power Mechanical Engineering, National Tsing Hua University, Taiwan, Taiwan

17h30

8374 | Composite Structure of Nb-Si-B Alloys Prepared by Spark Plasma Sintering Process

Suk, Myung-Jin (panpani@kangwon.ac.kr), Kangwon National University, Korea, South
Kim, Sang-Hwan (tkdghks911@naver.com), Kangwon National University, Korea, South
Kim, Young Do (ydkim1@hanyang.ac.kr), Hanyang University, Korea, South
Oh, Sung-Tag (stoh@seoultech.ac.kr), Seoul National University of Science and Technology, Korea, South

17h50

9486 | Development of the gasket-integrated elastomer composite bipolar plate for high-temperature PEMFC

Lee, Dongyoung (missingnum@kaist.ac.kr), KAIST, Korea, South
Lim, Jun Woo (jul170@kaist.ac.kr), Chonbuk National University, Korea, South
Nam, Soohyun (namsu0615@kaist.ac.kr), KAIST, Korea, South
Choi, Ilbeom (chib1020@kaist.ac.kr), Agency for Defense Development, Korea, South
Lee, Dai Gil (dglee@kaist.ac.kr), KAIST, Korea, South

TUESDAY 16 June Room VITUS II

Session 10 - Electro-Thermal Properties of Composite Materials

Session 10.1 | Chairs: Airoidi, Alessandro (alessandro.airoidi@polimi.it)

11h00

9205 | Numerical and experimental study of thermal energy storage of phase-change materials based on high-density polyethylene filled with micro-encapsulated paraffin wax

Mustapha Karkri (mustapha.karkri@u-pec.fr), Université Paris-Est, CERTES, 61 avenue du Général de Gaulle, 94010 Créteil France, France

Mariam AlMaadeed A. (m.alal@qu.edu.qa), Center for Advanced Materials, Qatar University, 2713 Doha, Qatar, Qatar
Igor Krupa2 (Igor.Krupa@qu.edu.qa), Center for Advanced Materials, Qatar University, 2713 Doha, Qatar, Qatar

11h20

9206 | Computational homogenization for the thermo-mechanical analysis of phase change composite materials

Amen TOGNEVI (amen.tognevi@gmail.com), Université Paris-Est, France

Mustapha Karkri (mustapha.karkri@u-pec.fr), Université Paris-Est, France

Julien YVONNET (Julien.Yvonnet@u-pem.fr), Université Paris-Est, France

Mariam A. AlMaadeed (m.alali@qu.edu.qa), Center for Advanced Materials, Qatar University, 2713 Doha, Qatar, Qatar
Igor Krupa (Igor.Krupa@qu.edu.qa), Center for Advanced Materials, Qatar University, 2713 Doha, Qatar, Qatar

11h40

7775 | Structure of Reinforcing Filler Network Determined by On - line Measurement of Electrical Conductivity of the Polymer / Carbon Black Composite

Chodak I (upolchiv@savba.sk), Polymer Institute SAS, Slovak Republic

Krajci J (krajci.juraj@centrum.sk), Polymer Institute SAS, Slovak Republic

12h00

8071 | Thermal conductivity enhancement of vertically aligned long nanotube carpet reinforced thermoset composites

Bouillonnet, Jonathan (jonathan.bouillonnet@mines-albi.fr), Institut Clément Ader, Mines Albi, France

Bernhart, Gerard (gerard.bernhart@mines-albi.fr), Institut Clément Ader, Mines Albi, France

Pinault, Mathieu (mathieu.pinault@cea.fr), Laboratoire Francis Perrin, CEA Saclay, France

Olivier, Philippe (Philippe.Olivier@iut-tlse3.fr), Institut Clément Ader, Université Toulouse, France

Mayne-L'Hermite, Martine (martine.mayne@cea.fr), Laboratoire Francis Perrin, CEA Saclay, France

12h20

8072 | Novel method of metal - oxide glass composite fabrication for use in thermoelectric devices

Bochentyn, Beata (bbochentyn@mif.pg.gda.pl), Gdansk University of Technology, Poland

Karczewski, Jakub (jkarczew@mif.pg.gda.pl), University of Technology, Poland

Gazda, Maria (maria@mif.pg.gda.pl), University of Technology, Poland

Kusz, Bogusław (bodzio@mif.pg.gda.pl), Gdansk University of Technology, Poland

Session 10.2 | Chairs: Airoidi, Alessandro (alessandro.airoidi@polimi.it)

14h00

8655 | Laser Flash Analysis of Thermal Conductivity in Non-Homogeneous Polymer-VANT Composites

Vorobyeva, Ekaterina A. (vorkate89@mail.ru), Lomonosov Moscow State University, Russian Federation

Makarenko, Irina V. (makarenkoirina@gmail.com), Lomonosov Moscow State University, Russian Federation

Chechenin, Nikolay G. (nchechenin@yandex.ru), Lomonosov Moscow State University, Russian Federation

14h20

8720 | Investigation of the Thermal Insulation of Polyester Microfiber and also Polyester and Acrylic Fabrics Coated with White Tuff Stone Powder with Different Particle Size

Mehmet Kilinc (mkilinc@ticaret.edu.tr), Istanbul Commerce University, Turkey

Habip Dayioglu (hdayioglu@ticaret.edu.tr), Istanbul Commerce University, Turkey

Nigar Merdan (nmerdan@ticaret.edu.tr), Istanbul Commerce University, Turkey

Seyda Canbolat (scanbolat@ticaret.edu.tr), Istanbul Commerce University, Turkey

Mustafa Atmaca (matmaca@marmara.edu.tr), Marmara University, Turkey

14h40

8928 | Numerical evaluation of residual stresses in composite structures

Chwal, Malgorzata (mchwal@pk.edu.pl), Cracow University of Technology, Poland
Stawiarski, Adam (asta@mech.pk.edu.pl), Cracow University of Technology, Poland
Muc, Aleksander (olekmuc@mech.pk.edu.pl), Cracow University of Technology, Poland

Session 25 - Failure and Damage

Session 25.1 | Chairs: Muc, Aleksander (olekmuc@mech.pk.edu.pl), Cracow University of Technology, Poland

16h30

9198 | Fatigue failure and optimization of composite plates and shells with holes

Muc, Aleksander (olekmuc@mech.pk.edu.pl), Cracow University of Technology, Poland

16h50

9200 | Prediction of Long Term Performance of GRP Pipes Subjected to Sustained External Pressure Based on Linear Regression Analysis

Yoon, Sung Ho (shyoon@kumoh.ac.kr), Kumoh National Institute of Technology, Korea, South
Oh, Jin Oh (rio575@kumoh.ac.kr), Kumoh National Institute of Technology, Korea, South

17h10

9202 | Crack propagation in anisotropic materials under thermomechanical loading using XFEM

Lyazid BOUHALA (lyazid.bouhala@list.lu), Luxembourg Institute of Science and Technology, Luxembourg
Ahmed Makradi (ahmed.makradi@list.lu), list, Luxembourg
Salim Belouettar (salim.belouettar@list.lu), list, Luxembourg

17h30

9162 | Plastic damage model for fatigue in composites

Barbu, Lucia G. (lgratiela@cimne.upc.edu), CIMNE - Universitat Politecnica de Catalunya, Spain
Martinez, Xavier (x.martinez@upc.edu), CIMNE - Universitat Politecnica de Catalunya, Spain
Oller, Sergio (sergio.oller@upc.edu), CIMNE - Universitat Politecnica de Catalunya, Spain
Barbat, Alex H. (alex.barbat@upc.edu), CIMNE - Universitat Politecnica de Catalunya, Spain

17h50

9176 | Numerical Simulation of Progressive Fatigue Damage in Laminated Composites

Taheri-Behrooz, F. (taheri@iust.ac.ir), Iran University of Science and Technology, Iran
Mousavi, S.S. (sina_mousavi@auto.iust.ac.ir), Iran University of Science and Technology, Iran

18h10

7494 | 3D CRACK ANALYSIS OF A CHOPPED GLASS-REINFORCED POLYESTER CRUCIFORM SPECIMEN UNDER BIAxIAL LOADING USING TWO DIFFERENT NUMERICAL TECHNIQUES FOR MODELLING CRACKS: XFEM AND A PROGRESSIVE DAMAGE MODEL

Navarro-Zafra, J. (jnavarrozafra1@sheffield.ac.uk), University of Sheffield, United Kingdom
Curiel-Sosa, J.L. (j.curiel-sosa@sheffield.ac.uk), University of Sheffield, United Kingdom
Serna Moreno, M.C. (mariacarmen.serna@uclm.es), Universidad de Castilla la Mancha, Spain

18h30

9149 | Post-buckling-driven surface delamination

Wang, S (s.wang@lboro.ac.uk), Loughborough University, United Kingdom
Wang, B (b.wang2@lboro.ac.uk), Loughborough University, United Kingdom
Harvey, CM (c.m.harvey@lboro.ac.uk), Loughborough University, United Kingdom
Watson, A (a.watson@lboro.ac.uk), Loughborough University, United Kingdom

TUESDAY 16 June Room VITUS III

Session 16 - Numerical Methods

Session 16.1 | Chairs: Juri Majak, Carlos Santiuste

11h00

9207 | A new device and inverse method to characterize thermal properties of composite phase change materials: thermal conductivity, sensible and latent heat.

Didier GOSSARD (didier.gossard@u-pec.fr), Université Paris-Est, France

Mustapha Karkri (mustapha.karkri@u-pec.fr), Université Paris-Est, France

Mariam A. AlMaadeed (m.alali@qu.edu.qa), Center for Advanced Materials, Qatar University, 2713 Doha, Qatar, Qatar

Igor Krupa (Igor.Krupa@qu.edu.qa), Center for Advanced Materials, Qatar University, 2713 Doha, Qatar, Qatar

11h20

9163 | Numerical Modelling of Progressive Failure in Filament Wound Cylindrical Pressure Vessels

Ellul, Brian (brian.ellul.04@um.edu.mt), University of Malta, Malta

Camilleri, Duncan (duncan.camilleri@um.edu.mt), University of Malta, Malta

11h40

9088 | An incremental multilevel computational homogenization method for elastoplastic composites

Trung Hieu Hoang (trung-hieu.hoang@devinci.fr), Département de Mécanique Numérique et Modélisation, De Vinci Technology Lab., Ecole Supérieure d'Ingénieurs Léonard de Vinci (ESILV), F-92916 Paris la Défense Cedex, France, France

Mohamed Guerich (mohamed.guerich@devinci.fr), Département de Mécanique Numérique et Modélisation, De Vinci Technology Lab., Ecole Supérieure d'Ingénieurs Léonard de Vinci (ESILV), F-92916 Paris la Défense Cedex, France, France

Julien Yvonnet (julien.yvonnet@u-pem.fr), Université Paris-Est, Laboratoire Modélisation et Simulation Multi-Echelle (MSME UMR CNRS 8208), 5 boulevard Descartes, F-77454 Marne La Vallée cedex, France, France

12h00

8987 | Element Free Galerkin Model for Orthogonal Cutting of Unidirectional Fibre-Reinforced Plastics (FRP)

Kahwash, Fadi (fadi.kahwash@northumbria.ac.uk), Northumbria University, United Kingdom

Shyha, Islam (islam.shyha@northumbria.ac.uk), Northumbria University, United Kingdom

Maheri, Alireza (alireza.maheri@northumbria.ac.uk), Northumbria University, United Kingdom

12h20

7553 | Volume integral equation method for scattering of SH waves by multilayered anisotropic inclusions

Lee, Jungki (inq3jkl@wow.hongik.ac.kr), Hongik University, Korea, South

12h40

7606 | Convergence theorems for Haar wavelet based discretization method. New concept for expansion

Majak, Juri (Juri.Majak@ttu.ee), Tallinn University of Technology, Estonia

Haavajõe, Anti (Anti.Haavajoe@gmail.com), Tallinn University of Technology, Estonia

Mikola, Madis (madis.mikola@gmail.com), Tallinn University of Technology, Estonia

Shvartsman, Boris (Boris.Shvartsman@ttu.ee), Estonian Entrepreneurship University of Appl. Sci., Estonia

Pohlak, Meelis (Meelis.Pohlak@ttu.ee), Tallinn University of Technology, Estonia

Session 16.2 | Chairs: Juri Majak, Carlos Santiuste

14h00

7608 | USE OF ARTIFICIAL NEURAL NETWORKS AND MONTE CARLO SIMULATIONS AS A PREDICTIVE METHOD TO DETERMINE STRENGTH OF HIGH PERFORMANCE CONCRETE (ASTM C39/C39 M)

García Fernández, Francisco (francisco.garcia@upm.es), Universidad Politécnica de Madrid, Madrid, Spain

Acuña Pinaud, Luis (lacuna@uni.edu.pe), Universidad Nacional de Ingeniería, Lima, Peru

Moromi Nakata, Isabel (imoromi@yahoo.com), Universidad Nacional de Ingeniería, Lima, Peru

Torre Carrillo, Ana (anatorre@uni.edu.pe), Universidad Nacional de Ingeniería, Lima, Peru

Espinoza Haro, Pedro (pcesp67@gmail.com), Universidad Nacional de Ingeniería, Lima, Peru

14h20

7637 | Simulation and optimization methodology for the development of structures manufactured by a combined sheet moulding compound and prepreg compression moulding process

Bachem, Harald (h.bachem@ostfalia.de), Ostfalia University of Applied Science, Research Area for Driving Safety, Germany

Fette, Marc (marc.fette@airbus.com), Composite Technology Center Stade (An Airbus Company) & Helmut Schmidt University, Institute of Production Engineering, Germany

Stoess, Nicole (nicole.stoess@polynt.com), Polynt GmbH, Germany

Herrmann, Axel (axel.herrmann@airbus.com), Composite Technology Center Stade (Airbus Company), Germany

Wulfsberg, Jens (jens.wulfsberg@hsu-hh.de), Helmut Schmidt University, Institute of Production Engineering, Germany

14h40

7735 | STRONG FORMULATION FINITE ELEMENT METHOD FOR ARBITRARY SHAPED COMPOSITE STRUCTURES

Fantuzzi, N. (nicholas.fantuzzi@unibo.it), University of Bologna, Italy

Tornabene, F. (francesco.tornabene@unibo.it), University of Bologna, Italy

Viola, E. (erasmo.viola@unibo.it), University of Bologna, Italy

15h00

9279 | Comparative Study of Flexural Versus Tensile Behaviour of fibre reinforced and sandwich composite Materials Using Finite Element Analysis (ANSYS code) (experimental and finite element method)

Hassan Izadi Gonabadi (h.izadi-gonabadi@ncl.ac.uk), University of Newcastle, United Kingdom

Steve Bull (steve.bull@ncl.ac.uk), University of Newcastle, United Kingdom

15h20

7915 | Numerical and experimental analysis of commingled yarns thermoplastic composites consolidation process

Baochao, LI (baochao.li@mines-douai.fr), Mines Douai, France

Mylène, DELEGLISE (mylene.lagardere@mines-douai.fr), Mines Douai, France

Chung-Hae, PARK (chung-hae.park@mines-douai.fr), Mines Douai, France

15h40

8120 | COMPARATIVE STUDY OF NUMERICAL METHODS FOR DESIGNING SFRC SECTIONS SUBJECTED TO AXIAL FORCE AND BENDING MOMENT

Portillo, J.P. (jpportillo@farq.edu.uy), Facultad de Arquitectura, Universidad de la República, Uruguay

Pérez-Zerpa, J.M. (jperez@fing.edu.uy), Facultad de Ingeniería, Universidad de la República, Uruguay

Segura-Castillo, L. (lsegura@fing.edu.uy), Facultad de Ingeniería, Universidad de la República, Uruguay

Session 16.3 | Chairs: Jorge Belinha, INEGI, Portugal

16h30

8140 | Adaptive Concurrent Recursive Multi-Scale Method for Simulation of the Response of Laminated Composites to Underwater Blast Loading

Bombace N. (nicola.bombace@eng.ox.ac.uk), Oxford University, United Kingdom

Barbieri E. (e.barbieri@qmul.ac.uk), Queen Mary University of London, United Kingdom

Cui H. (hao.cui@eng.ox.ac.uk), Oxford University, United Kingdom

Hoffmann J. (justus.hoffmann@eng.ox.ac.uk), Oxford University, United Kingdom

Petrinic N. (nik.petrinic@eng.ox.ac.uk), Oxford University, United Kingdom

16h50

8156 | FE analysis of carbon foam under multiple compressive loading

Khelifa M. (mourad.khelifa@univ-lorraine.fr), University of Lorraine, France

Fierro V. (vanessa.fierro@univ-lorraine.fr), University of Lorraine, France

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Letellier M. (maxime.letellier@univ-lorraine.fr), University of Lorraine, France

Delgado Sánchez C. (delgadosanchezclara@outlook.com), University of Lorraine, France

17h10

8731 | The inelastic analysis of plates considering a meshless method

Belinha, Jorge (jorge.belinha@fe.up.pt), Instituto de Engenharia Mecânica e Gestão Industrial, Portugal

Dinis, Lúcia (ldinis@fe.up.pt), Faculdade de Engenharia da Universidade do Porto, Portugal

Natal Jorge, Renato (rnatal@fe.up.pt), Faculdade de Engenharia da Universidade do Porto, Portugal

17h30

8981 | Numerical comparison of geodesic, non-geodesic and generalized spline paths in order to wind complex, axisymmetric geometries

Vargas R Erik (erikvargasrojas@hotmail.com), Université de Franche-Comté, France

TUESDAY 16 June Room VITUS IV

Session 34 - Probabilistic methods

Session 34.1 | Chairs: Marcin Kaminski (Univ. Lodz, Poland)

11h00

7556 | The CGSM for static finite element analysis of composite structures with variability

Yin, Qi (qi.yin@utc.fr), Laboratoire Roberval, Centre de Recherches de Royallieu, Université de Technologie de Compiègne, France

Druésne, Frédéric (frederic.druésne@utc.fr), Laboratoire Roberval, Centre de Recherches de Royallieu, Université de Technologie de Compiègne, France

Lardeur, Pascal (pascal.lardeur@utc.fr), Laboratoire Roberval, Centre de Recherches de Royallieu, Université de Technologie de Compiègne, France

11h20

9142 | A Diffuse Approximation model for stochastic free vibration analysis of laminated composites

Haeri, Ali and Fadaee Mohammadjavad (alihaeri92@eng.uk.ac.ir), Shahid Bahonar University of Kerman, Iran, Iran

11h40

8284 | 2 AND 3D PROBABILISTIC HOMOGENIZATION OF THE CARBON FIBER-REINFORCED POLYMERS

Kaminski, Marcin (Marcin.Kaminski@p.lodz.pl), Technical University of Lodz, Poland

Pawlak, Anna (a.pawlak@o2.pl), Technical University of Lodz, Poland

12h00

8547 | On the efficiency of fibrous reinforcement as a function of matrix crack density

Rypl, Rostislav (rypl.r@fce.vutbr.cz), Inst. of Structural Mechanics, Czech Republic

Chudoba, Rostislav (rostislav.chudoba@rwth-aachen.de), Inst. of Structural Concrete, Germany

Vořechovsky, Miroslav (vorechovsky.m@fce.vutbr.cz), Inst. of Structural Mechanics, Czech Republic

Session 17 - Micromechanics

Session 17.1 | Chairs: Luciano, Raimondo (University of Cassino, Italy) and Ahmed Makradi (list, Luxembourg)

14h00

8995 | Numerical analysis of composites with inclusions periodically arranged in non-orthogonal coordinate system

Caporale, Andrea (a.caporale@unicas.it), University of Cassino and Southern Lazio, Italy

Luciano, Raimondo (luciano@unicas.it), University of Cassino and Southern Lazio, Italy

14h20

9201 | MULTISCALE MEAN-FIELD MODELING OF DUCTILE DAMAGE IN COMPOSITES

W. L. Azoti (Azoti@list.lu), LIST, Luxembourg, Luxembourg

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S. Belouettar (salim.Belouettar@list.lu), LIST, Luxembourg, Luxembourg

H. Zahrouni (hamid.zahrouni@univ-lorraine.fr), University of Lorraine, France

14h40

7635 | Application of couple-stress theory for description of large strain bending of fibre composites

Fedorova, Svitlana (svtlnfdv2@gmail.com), Brno University of Technology, Czech Republic

Lasota, Tomáš (tlasota@seznam.cz), Brno University of Technology, Czech Republic

Burša, Jiří (bursa@fme.vutbr.cz), Brno University of Technology, Czech Republic

15h00

9186 | 3D NUMERICAL COMPUTATION OF ELASTIC PROPERTIES OF A UNIDIRECTIONALLY REINFORCED LAMINA CONSIDERING A RANDOM ARRAY OF FIBRES

Giner, Eugenio (eginerm@mcm.upv.es), Universidad Politécnica de Valencia, Spain

Marco, Miguel (mimarcoe@ing.uc3m.es), Universidad Carlos III de Madrid, Spain

Vercher, Ana (anvermar@dimm.upv.es), Universidad Politécnica de Valencia, Spain

15h20

7047 | Analysis of micro-shear test of titanium nitride coatings deposited on left ventricular assist device

Kopernik, Magdalena (kopernik@agh.edu.pl), AGH University of Science and Technology, Poland
Milenin, Andrzej (milenin@agh.edu.pl), AGH University of Science and Technology, Poland

15h40

7753 | Predicting the mechanical behaviour of a visco-plastic particulate composite at high volume fractions

Li-Mayer, Joanna Y.S. (joanna.li-mayer@imperial.ac.uk), Imperial College London, United Kingdom
Lewis, Daniel (Daniel.Lewis@awe.co.uk), AWE, United Kingdom
Glauser, Annette (Annette.Glauser@awe.co.uk), AWE, United Kingdom
Charalambides, Maria N. (m.charalambides@imperial.ac.uk), Imperial College London, United Kingdom

Session 17.2 | Chairs: Luciano, Raimondo (University of Cassino, Italy) and Ahmed Makradi (list, Luxembourg)

16h30

7925 | SENSITIVITY OF MATRIX-DOMINATED FAILURE MODES TO CARBON/EPOXY CONSTITUENT PROPERTIES VIA COMPUTATIONAL MICROMECHANICS

Danzi, Federico (danzi.federico@gmail.com), University of Pisa, Italy
Fanteria, Daniele (daniele.fanteria@unipi.it), University of Pisa, Italy
Panettieri, Enrico (enrico.panettieri@for.unipi.it), University of Pisa, Italy

16h50

7963 | The Heat Treatment of HSS based copper infiltrated composites

Madej Marcin (mmadej@agh.edu.pl), AGH University of Science and Technology, Poland
Leszczynska-Madej Beata (bleszcz@agh.edu.pl), AGH University of Science and Technology, Poland

17h10

7964 | The influence of production parameters on microstructure and properties of Al - SiC composites

Leszczynska-Madej B. (bleszcz@agh.edu.pl), AGH University of Science and Technology, Poland
Madej M. (mmadej@agh.edu.pl), AGH University of Science and Technology, Poland

17h30

8650 | Failure Envelopes for Unidirectional Composites Generated by the HFGMC Micromechanical Method

Levi-Sasson, Aviad (aviadsas@post.tau.ac.il), Tel-Aviv University, Israel
Aboudi, Jacob (aboudi@eng.tau.ac.il), Tel-Aviv University, Israel
Matzenmiller, Anton (amat@uni-kassel.de), University of Kassel, Germany
Haj-Ali, Rami (rami98@eng.tau.ac.il), Tel-Aviv University, Israel

17h50

8944 | Application of Lattice Composite Technologies to Aircraft Primary Structures

Shanygin, Alexander N. (alexander.shanygin@tsagi.ru), Central Aerohydrodynamic Institute (TsAGI), Russian Federation
Kondakov, Ivan O. (ivan.kondakov@tsagi.ru), Central Aerohydrodynamic Institute (TsAGI), Russian Federation

18h10

8292 | Fabrication, analysis of mechanical properties, and finite element model of shape memory alloy(SMA) fiber reinforced polymer composites

Tian Gao (gaotian_npu@163.com), Engineering Simulation and Aerospace Computing (ESAC), Northwestern Polytechnical University, Xi'an, Shaanxi 710072, China, China
Yingjie Xu (xu.yingjie@nwpu.edu.cn), Engineering Simulation and Aerospace Computing (ESAC), Northwestern Polytechnical University, Xi'an, Shaanxi 710072, China, China

TUESDAY 16 June Room LAURUS

Session 18 - Multiscale Analysis

Session 18.1 | Chairs: Tita, Volnei (University of São Paulo , Brazil) and Mauricio Caliri (University of São Paulo, Brazil)

11h00

9090 | Effective size of RVE for finite element analysis of structures made of nonlinear random composites

T.H. Hoang (trung-hieu.hoang@devinci.fr), Departement de Mecanique Numerique et Modelisation, De Vinci Technology Lab., Ecole Superieure d'Ingenieurs Leonard de Vinci (ESILV), F-92916 Paris la Defense Cedex, France, France
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J. Yvonnet (julien.yvonnet@u-pem.fr), Universite Paris-Est, Laboratoire Modelisation et Simulation MultiEchelle MSME UMR 8208 CNRS, 5 bd Descartes, F-77454 Marne-la-Vallee, France, France

11h20

9066 | Efficient multiple length/time-scale simulation of large composite structures

Pinho, Silvestre T. (silvestre.pinho@imperial.ac.uk), Imperial College London, United Kingdom
Gigliotti, Luigi (l.gigliotti12@imperial.ac.uk), Imperial College London, United Kingdom

11h40

6928 | Multi-scale analysis of moisture diffusion coupled with stress distribution in CFRP composites

Maozhou Meng (maozhou.meng@plymouth.ac.uk), Plymouth University, United Kingdom
Huirong Le (huirong.le@plymouth.ac.uk), Plymouth University, United Kingdom
MD Jahir Rizvi (mdjahir.rizvi@plymouth.ac.uk), Plymouth University, United Kingdom
Stephen M Grove (s.grove@plymouth.ac.uk), Plymouth University, United Kingdom

12h00

8930 | HIERARCHICAL FINITE ELEMENT BASED MULTISCALE COMPUTATIONAL HOMOGENISATION OF COUPLED HYGRO-MECHANICAL ANALYSIS FOR FIBRE-REINFORCED POLYMERS

Ullah, Zahur (Zahur.Ullah@glasgow.ac.uk), School of Engineering, University of Glasgow, United Kingdom
Kaczmarczyk, Lukasz (Lukasz.Kaczmarczyk@glasgow.ac.uk), School of Engineering, University of Glasgow, United Kingdom
Pearce, Chris J. (Chris.Pearce@glasgow.ac.uk), School of Engineering, University of Glasgow, United Kingdom

12h20

7605 | Multi-scale Evaluation of the Linear Elastic and Failure Parameters of the Unidirectional Laminated Textiles

Čalnerytė, Dalia (dalia.calneryte@ktu.edu), Kaunas University of Technology, Lithuania
Barauskas, Rimantas (rimantas.barauskas@ktu.lt), Kaunas University of Technology, Lithuania

12h40

7901 | Prediction of web-core sandwich plate nonlinear stiffness from a representative volume element

Reinaldo Goncalves, Bruno (bruno.reinaldogoncalves@aalto.fi), Aalto University, Finland
Jelovica, Jasmin (jasmin.jelovica@aalto.fi), Aalto University, Finland
Romanoff, Jani (jani.romanoff@aalto.fi), Aalto University, Finland

Session 18.2 | Chairs: Tita, Volnei (University of São Paulo , Brazil) and and Mauricio Caliri (University of São Paulo, Brazil)

14h00

8162 | Numerical prediction of the uncertainties in the structural response of sandwich structures consisting of solid foams

Hohe, Jörg (joerg.hohe@iwm.fraunhofer.de), Fraunhofer-Institut für Werkstoffmechanik IWM, Germany
Beckmann, Carla (carla.beckmann@iwm.fraunhofer.de), Fraunhofer-Institut für Werkstoffmechanik IWM, Germany

14h20

8598 | Non-linear multiscale strategy to analyze composite materials efficiently

Otero, Fermin (fotero@cimne.upc.edu), Technical University of Catalonia (UPC), International center for Numerical Methods in Engineering (CIMNE), Spain

Martinez, Xavier (x.martinez@upc.edu), Technical University of Catalonia (UPC), International center for Numerical Methods in Engineering (CIMNE), Spain

Oller, Sergio (sergio.oller@upc.edu), Technical University of Catalonia (UPC), International center for Numerical Methods in Engineering (CIMNE), Spain

14h40

7535 | Meso and Macro Scale Numerical Modelling of 3D Woven Composites

Cunningham, Paul R. (p.cunningham@lboro.ac.uk), Loughborough University, United Kingdom

Dai, Shuo (s.dai@lboro.ac.uk), Loughborough University, United Kingdom

15h00

9153 | COMPUTATIONAL MODELLING OF THE PROGRESSIVE FAILURE IN HETEROGENEOUS ADHESIVES

Anita, Catapano (anita.catapano@bordeaux-inp.fr), Université de Bordeaux, I2M CNRS UMR 5295, France

Julien, Jumel (julien.jumel@u-bordeaux.fr), Université de Bordeaux, I2M CNRS UMR 5295, France

15h20

7713 | Calibration and validation of Ladeveze ply model for predicting the crush performance of energy absorbing structures made of carbon-fiber reinforced plastics

Qianjin Zhang (15262732003@163.com), College of Textiles, Donghua University, Shanghai 201620, China, China

Jing Xu (1016430995@qq.com), College of Textiles, Donghua University, Shanghai 201620, China, China

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Pierre Culiere (pierre.culiere@esi-group.com), ESI-group Shanghai representative, Shanghai 201620, China, France

Yuqiu Yang (amy_yuqiu_yang@dhu.edu.cn), College of Textiles, Donghua University, Shanghai 201620, China, China

15h40

7928 | Transition of longitudinal compressive failure mode in a unidirectional carbon fiber reinforced plastic

Tae-kun Jeong (cste13001@g.nihon-u.ac.jp), Nihon University, Korea, South

Masahito Ueda (ueda@mech.cst.nihon-u.ac.jp), Nihon University, Japan

Session 36.2 | Chairs: Tita, Volnei (University of São Paulo , Brazil) and and Mauricio Caliri (University of São Paulo, Brazil)

16h30

9133 | Large sandwich structures fire tests modelling

Goupil, Anne-Charlotte (anne-charlotte.goupil@siemens.com), Siemens, France

Craveur, Jean-Charles (jccraveur@ismans.fr), ISMANS, France

Barabinot, Philippe (philippe.barabinot@siemens.com), Siemens, France

Mercier, Benjamin (bmercier@ismans.fr), ISMANS, France

16h50

9042 | Edge effects modeling in the design of laminated beams with curved inherent configuration

Gorynin, Gleb L. (ggorynin@list.ru), Surgut State University, Russian Federation

17h10

7093 | Static and dynamic analysis of bending-torsion coupling of a CFRP sandwich beam

Bernard Loic (loic.bernard@isae.fr), Institut Clément Ader, France

Michon Guilhem (guilhem.michon@isae.fr), Institut Clément Ader, France

Castanié Bruno (bruno.castanie@insa-toulouse.fr), Institut Clément Ader, France

Negre Vincent (vincent.negre@airbus.com), Airbus Helicopter, France

Reveillon Damien (damien.reveillon@airbus.com), Airbus Helicopter, France

17h30

8956 | Structural Design Optimization of CFRP Chopper Disks

Weinzierl, Matthias (weinzierl@llb.mw.tum.de), Institute of Lightweight Structures, Technische Universität München, Germany

Schatz, Markus (schatz@llb.mw.tum.de), Institute of Lightweight Structures, Technische Universität München, Germany

Antonelli, Valeria (antonelli@llb.mw.tum.de), Institute of Lightweight Structures, Technische Universität München, Germany

Baier, Horst (baier@llb.mw.tum.de), Institute of Lightweight Structures, Technische Universität München, Germany

17h50

8254 | Predictions of the strength of bonded connections in space opto-mechanical domain
VIALE Roger (roger.viale@thalesaleniaspace.com), THALES ALENIA SPACE, France
COQUILLARD Marc (alpco3@free.fr), Alpco3, France

18h10

8255 | A Simple and Reliable method for the Strength prediction of the CFRP UD Pieces
VIALE Roger (roger.viale@thalesaleniaspace.com), THALES ALENIA SPACE, France
COQUILLARD Marc (alpco3@free.fr), Alpco3, France

TUESDAY 16 June Room QUERCUS

Session 14.4 | Chairs: Jaime Vina Olay (University of Oviedo, Spain)

11h00

8067 | The oblique impact response of composite sandwich plates
Ivañez, Ines (idel@ing.uc3m.es), Universidad Carlos III of Madrid, Spain
Moure, Marta M (mmmoure@ing.uc3m.es), Universidad Carlos III of Madrid, Spain
Garcia-Castillo, Shirley K. (sgcastil@ing.uc3m.es), Universidad Carlos III of Madrid, Spain
Sánchez-Sáez, Sonia (ssanchez@ing.uc3m.es), Universidad Carlos III of Madrid, Spain

11h20

8391 | A dual-scale modelling approach for multi-layered, multi-directionally reinforced laminated structures subjected to impact loading
Hoffmann, Justus (justus.hoffmann@eng.ox.ac.uk), University of Oxford, United Kingdom
Cui, Hao (hao.cui@eng.ox.ac.uk), University of Oxford, United Kingdom
Wiegand, Jens (j.wiegand@cyi.ac.cy), The Cyprus Institute, Cyprus
Petrinic, Nik (nik.petrinic@eng.ox.ac.uk), University of Oxford, United Kingdom

11h40

8303 | Effect of electrical discharges on the structural integrity of composite laminates
Farto, E. M. (emfarto@gmail.com), University of Coimbra, Portugal
Amaro, A. M. (ana.amaro@dem.uc.pt), University of Coimbra, Portugal
Santos, M. (marioj@deec.uc.pt), University of Coimbra, Portugal
Santos, J. B. (jaime@deec.uc.pt), University of Coimbra, Portugal
Reis, P. N. B. (preis@ubi.pt), University of Beira Interior, Portugal

12h00

8499 | MAGNETOHYDRODYNAMICS AND COUPLED ELECTRICAL/THERMAL/MECHANICAL FINTE ELEMENT SIMULATION OF LIGHTENING STRIKE EFFECT ON COMPOSITE PANELS
Abdelal, G (g.abdelal@qub.ac.uk), Queen's University Belfast, United Kingdom
Foster, P (pfoster216@qub.ac.uk), Queen's University Belfast, United Kingdom
Murphy, A (a.murphy@qub.ac.uk), Queen's University Belfast, United Kingdom

12h20

9231 | Impact response analysis of fiber-reinforced composite laminates
Jian He (hejian@hrbeu.edu.cn), Aerospace and Civil Engineering Department, Harbin Engineering University, China
Qipeng Tang (294466969@qq.com), Aerospace and Civil Engineering Department, Harbin Engineering University, China
Yunmeng Chen (yunmengzixi@163.com), Aerospace and Civil Engineering Department, Harbin Engineering University, China
Xin Wei (xin_wei1989@163.com), Aerospace and Civil Engineering Department, Harbin Engineering University, China

12h40

8682 | A STUDY OF SCALING EFFECTS IN FILAMENT WOUND GRE TUBES SUBJECTED TO LOW VELOCITY IMPACT
Hafeez, F (fhafeez@pi.ac.ae), The Petroleum Institute, United Arab Emirates
AlMaskari, F (falmaskari@pi.ac.ae), The Petroleum Institute, United Arab Emirates

Session 33 - Multifunctional and Smart Composites

Session 33.1 | Chairs: Khan, Kamran A. (kamran.khan@kustar.ac.ae), Khalifa University of Science Technology and Research, United Arab Emirates

14h00

9167 | Optimization of constrained viscoelastic damping treatments

Moreira, Rui A.S. (rmoreira@ua.pt), Universidade de Aveiro, Portugal

Oliveira, Monica (rmoreira@ua.pt), Universidade de Aveiro, Portugal

14h20

7662 | Development of organic aerogels reinforced with carbonaceous nanomaterials

Sanchez-Silva, Luz (marialuz.sanchez@uclm.es), University of Castilla La Mancha, Spain

Simon-Herrero, Carolina (krol_s_h@hotmail.com), University of Castilla La Mancha, Spain

Romero, Amaya (amaya.romero@uclm.es), University of Castilla La Mancha, Spain

Valverde, Jose Luis (joseluis.valverde@uclm.es), University of Castilla La Mancha, Spain

14h40

7749 | Mechanical and rheological characteristics of carbonyl iron based magnetorheological elastomer composite

Bica, Ioan (ioanbica50@yahoo.com), West University of Timisoara, Romania

Liu, Ying Dan (ydlju2000@naver.com), Yanshan University, China

Choi, Hyoung Jin (hjchoi@inha.ac.kr), Inha University, Korea, South

15h00

7768 | Vibration of Porous Beams with Embedded Piezoelectric Sensors and Actuators

Della, Christian N. (christian.della@glasgow.ac.uk), University of Glasgow, United Kingdom

Shu, Dong Wei (mdshu@ntu.edu.sg), Nanyang Technological University, Singapore

15h20

8670 | MASTERBATCH OF CELLULOSE BASED POLYMER COMPOSITES

Biscaia, Sara (sara.biscaia@ipleiria.pt), Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, Portugal

Malça, Cândida (candida@isec.pt), Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria and 2 Polytechnic Institute of Coimbra, ISEC, Portugal

Viana, Tânia (tania.viana@ipleiria.pt), Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, Portugal

Mateus, Artur (artur.mateus@ipleiria.pt), Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, Portugal

Mitchell, Geoffrey (geoffrey.mitchell@ipleiria.pt), Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, Portugal

15h40

8166 | Potential of Cyanoacrylate as Structural Adhesive for Fibre Reinforced Polymer Composites

Fifo, Omosola (fifoo@tcd.ie), Biswajit Basu (basub@tcd.ie), Trinity College Dublin, Ireland

Session 33.2 | Chairs: Khan, Kamran A. (kamran.khan@kustar.ac.ae), Khalifa University of Science Technology and Research, United Arab Emirates

16h30

9482 | Design of a representative test probe of the state of stresses in the structural joint of the fuselage with main landing gear and wing-strut, of a two seat-aircraft built with composites

Vargas-Rojas Erik (erikvargasrojas@hotmail.com), Instituto Politécnico Nacional, Mexico

Parmentelat Bertrand (bertrand.parmentelat@insa-lyon.fr), INSA Lyon, France

Hernández-Moreno Hilario (hihernandezm@ipn.mx), Instituto Politécnico Nacional, Mexico

16h50

8998 | FULLY COUPLED NONLINEAR ELECTRO-THERMO-VISCOELASTIC ANALYSES OF SMART COMPOSITES

Khan, Kamran A. (kamran.khan@kustar.ac.ae), Khalifa University of Science Technology and Research, United Arab Emirates

Muliana, Anastasia H (amuliana@tamu.edu), Texas A&M University, United States America

TUESDAY 16 June

Room OLIVA

Session 15.4 | Chairs: Marc, Oudjene (marc.oudjene@univ-lorraine.fr), University of Lorraine, France
And Belingardi, Giovanni (giovanni.belingardi@polito.it), Politecnico di Torino - DIMEAS, Italy

11h00

8139 | On the numerical modelling of reinforced timber structures and joints

Meghlat, E-M (mahdi_meg@yahoo.fr), university of Tizi-Ouzou, Algeria
Oudjene, M (marc.oudjene@univ-lorraine.fr), university of Lorraine, France
Ait-Aider, H (h_aitaider@yahoo.fr), university of Tizi-Ouzou, Algeria

11h20

8248 | EFFECT OF THICKNESS AND LAYUP ON THE MECHANICAL PROPERTIES OF COMPOSITE-METAL JOINTS STRENGTHENED BY SURFI-SCULPT

Wei Xiong (w.xiong13@imperial.ac.uk), Imperial College London, United Kingdom
Bamber Blackman (b.blackman@imperial.ac.uk), Imperial College London, United Kingdom
John P. Dear (j.dear@imperial.ac.uk), Imperial College London, United Kingdom
Xichang Wang (xichangw@sina.com), Beijing Aeronautical Manufacturing Technology Research Institute, China

11h40

8753 | Finite element analysis of the timber-to-concrete connection under dynamic loading using BTSA approach

Arezki, Mansouri (mans_arez@yahoo.fr), university Mouloud Mammeri of Tizi-Ouzou, Algeria
El-Mahdi, Meghlat (mahdi_meg@yahoo.fr), university Mouloud Mammeri of Tizi-Ouzou, Algeria
Marc, Oudjene (marc.oudjene@univ-lorraine.fr), University of Lorraine, France
Hacène, Ait Aider (h_aitaider@yahoo.fr), university Mouloud Mammeri of Tizi-Ouzou, Algeria

12h00

8785 | Investigation of creep phenomenon on composite material for bolt connections

Scattina, Alessandro (alessandro.scattina@polito.it), Politecnico di Torino - DIMEAS, Italy
Roncato, Davide (davide.roncato@crf.it), Centro Ricerche Fiat, Italy
Belingardi, Giovanni (giovanni.belingardi@polito.it), Politecnico di Torino - DIMEAS, Italy

12h20

9211 | Experimental investigation of the mechanical behavior of spot welding-adhesives joints

Costa, Hector R. M. (hectorey@gmail.com), CEFET/RJ, Brazil
Lopes, Diego M. (diego.lopes@int.gov.br), CEFET/RJ, Brazil
Souza, Juliana P. B. (juliana_basilio@id.uff.br), CEFET/RJ, Brazil
Aguiar, Ricardo A. A. (ricardoamar@yahoo.com.br), CEFET/RJ, Brazil
Pacheco, Pedro M. C. L. (pmcl.pacheco@gmail.com), CEFET/RJ, Brazil

12h40

8628 | Design the adhesive joints between PEI and CFRP for the composite ultracentrifuge rotor

Yoon, Soon Ho (shyoon@kims.re.kr), Korea Institute of Material Science, Korea, South
Lee, Hak Gu (hakgulee@kims.re.kr), Korea Institute of Material Science, Korea, South
Park, Jisang (jspark@kims.re.kr), Korea Institute of Material Science, Korea, South
Kim, Kyoung Deok (kimkd@kims.re.kr), Korea Institute of Material Science, Korea, South

Session 7 - Innovative Applications

Session 7.1 | Chairs: Cristóvão Mota Soares, Aurelio Auraújo

14h00

9192 | FEM Analysis of a Tailored B-Pillar using composite materials

Nicolas Saba (nicolas.saba@balamand.edu.lb), University of Balamand, Lebanon

Jihad Rishmany (jihad.rishmany@balamand.edu.lb), University of Balamand, Lebanon

Issam Tawk (issam.tawk@balamand.edu.lb), University of Balamand, Lebanon

14h20

6380 | Organic/inorganic composite fibers for x-ray protection applications

Mahlting, Boris (boris.mahlting@hs-niederrhein.de), Hochschule Niederrhein, Germany

Kyosev, Yordan (yordan.kyosev@hs-niederrhein.de), Hochschule Niederrhein, Germany

Gunther, Karoline (karoline.guenther@hs-niederrhein.de), Hochschule Niederrhein, Germany

Giebing, Christina (christina.giebing@hs-niederrhein.de), Hochschule Niederrhein, Germany

Gersching, Detlef (gersching@titk.de), TITK, Germany

Krieg, Marcus (krieg@titk.de), TITK, Germany

14h40

7795 | Experimental study on mechanical behavior of FRP reinforced 3D printed elements

Meng, Xin M. (mengxinmiao123@163.com), Tsinghua University, China

Feng, Peng (fengpeng@tsinghua.edu.cn), Tsinghua University, China

15h00

7821 | Carbon fiber/thermoplastic bipolar plate-carbon felt electrode assembly for vanadium redox flow batteries (VRFB)

Lim, Jun Woo (jul170@kaist.ac.kr), Chonbuk National University, Korea, South

Lee, Dongyoung (missingnum@kaist.ac.kr), KAIST, Korea, South

Kim, Minkook (magicicada@kaist.ac.kr), KAIST, Korea, South

Choe, Jaeheon (jhchoe@kaist.ac.kr), KAIST, Korea, South

Lee, Dai Gil (dglee@kaist.ac.kr), KAIST, Korea, South

15h20

9575 | Manufacturing of the carbon/phenol composite bipolar plate for PEMFC with hot rolling process

Kim, Minkook (magicicada@kaist.ac.kr), KAIST, Korea, South

Choe, Jaeheon (jhchoe@kaist.ac.kr), KAIST, Korea, South

Lim, Jun Woo (jul170@jbnu.ac.kr), Chonbuk National University, Korea, South

Lee, Dai Gil (dglee@kaist.ac.kr), KAIST, Korea, South

Session 32 - Textile Structural Composites

Session 32.1 | Chairs: CORINALDESI, Valeria (v.corinaldesi@univpm.it), Università Politecnica delle Marche, Ancona, Italy

16h30

8146 | Improving adhesion at the fibers/matrix interface in FRCM for masonry strengthening

CORINALDESI, Valeria (v.corinaldesi@univpm.it), Università Politecnica delle Marche, Ancona, Italy

DONNINI, Jacopo (j.donnini@univpm.it), Università Politecnica delle Marche, Ancona, Italy

16h50

8707 | Tribological characteristics of Carbon/PVDF composites

Seung A Song (ascl8564@naver.com), Chonbuk National University, Korea, South

Seong Su Kim (sskim@jbnu.ac.kr), Chonbuk National University, Korea, South

17h10

8719 | Investigation of the Acoustic Insulation of Polyester and Acrylic Fabrics Coated with White Tuff Stone Powder

Seyda Canbolat (scanbolat@ticaret.edu.tr), Istanbul Commerce University, Turkey

Habip Dayioglu (hdayioglu@ticaret.edu.tr), Istanbul Commerce University, Turkey

Nigar Merdan (nmerdan@ticaret.edu.tr), Istanbul Commerce University, Turkey

Mehmet Kilinc (mkilinc@ticaret.edu.tr), Istanbul Commerce University, Turkey

17h30

8722 | The Evaluation of Thermal and Acoustic Insulation of Different Particle Size Perlite Coated Materials Having Gecko Properties

Habip Dayioglu (hdayioglu@ticaret.edu.tr), Istanbul Commerce University, Turkey
Nigar Merdan (nmerdan@ticaret.edu.tr), Istanbul Commerce University, Turkey
Seyda Canbolat (scanbolat@ticaret.edu.tr), Istanbul Commerce University, Turkey
Mehmet Kilinc (mkilinc@ticaret.edu.tr), Istanbul Commerce University, Turkey
Mustafa Atmaca (matmaca@marmara.edu.tr), Marmara University, Turkey

17h50

9209 | Analysis and modelling of physical and mechanical properties of 2D and 3D circularly braided composites.

Gabor, Aron (aron.gabor@univ-lyon1.fr), University Claude Bernard Lyon 1, France
Hamelin, Patrice (patrice.hamelin@univ-lyon1.fr), University Claude Bernard Lyon 1, France
Guyader, Guillaume (guillaume.guyader@etu.univ-lyon1.fr), University Claude Bernard Lyon 1, France

18h10

8587 | Intraply Shear Characterisation of Carbon/Epoxy Prepregs for Automotive Press-forming Applications at Appropriate Temperatures and Strain Rates

Khan, M. A. (m.a.khan@warwick.ac.uk), WMG, The University of Warwick, Coventry, United Kingdom
Reynolds, N. (Neil.Reynolds@warwick.ac.uk), WMG, The University of Warwick, Coventry, United Kingdom
Williams, G. J. (G.J.Williams@warwick.ac.uk), WMG, The University of Warwick, Coventry, United Kingdom
Kendall, K. N. (K.N.Kendall@warwick.ac.uk), WMG, The University of Warwick, Coventry, United Kingdom

18h30

9698 | Minimum-weight design for three dimensional woven composite stiffened panels using neural networks and genetic algorithms

Fu, Xinwei (xinwei.fu@polimi.it), Department of Aerospace Science and Technology, Politecnico di Milano, Italy
Ricci, Sergio (sergio.ricci@polimi.it), Department of Aerospace Science and Technology, Politecnico di Milano, Italy
Bisagni, Chiara (chiara.bisagni@polimi.it), Department of Aerospace Science and Technology, Politecnico di Milano, Italy

TUESDAY 16 June

Room CASTANEA

Session 19.4 | Chairs: Merijs Meri, R. (remo.merijs-meri@rtu.lv), Riga Technical University, Institute of Polymer Materials, Latvia

11h00

7902 | Novel Colloidal Processing Routes to Layered Hydroxide Filler-Based Nano-Composites

LANGRY, Arthur (arthur.langry@univ-bpclermont.fr), ICCF UMR 6296, France
KOENIG, Andrej (koenig.andrej@googlemail.com), BASF COATINGS, Germany
LEROUX, Fabrice (fabrice.leroux@univ-bpclermont.fr), ICCF UMR 6296, France
HINTZE-BRUENING, Horst (horst.hintze-bruening@basf.com), BASF COATINGS, Germany

11h20

7945 | Development and research of nanostructured multilayer composite coatings for tungsten-free carbide with extended area of technological applications

Vereschaka, Alexey A. (ecotech@rambler.ru), MSTU STANKIN, Russian Federation
Batako, Andre D. (a.d.batako@ljmu.ac.uk), Liverpool John Moores University, Great Britain
Vereschaka, Anatoly S. (dr_averes@rambler.ru), MSTU STANKIN, Russian Federation
Sedych, Mikhail I. (sedychmi@mail.ru), MSTU STANKIN, Russian Federation

11h40

7987 | Thermal, mechanical and morphological properties of nanosized silica/polyethylene and POSS/polyethylene nanocomposites

Niemczyk, Arkadiusz (aniemczyk@uni.opole.pl), Opole University, Poland
Dziubek, Katarzyna (katarzyna.dziubek@uni.opole.pl), Opole University, Poland
Czaja, Krystyna (Krystyna.Czaja@uni.opole.pl), Opole University, Poland

12h00

8092 | Structure and elastic properties of modified polycarbonate (PC) / acrylonitrile-butadiene-styrene (ABS) copolymer blend composites with organically modified nanoclay

Merijs Meri, R. (remo.merijs-meri@rtu.lv), Riga Technical University, Institute of Polymer Materials, Latvia
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Ivanova, T. (zicans@ktf.rtu.lv), Riga Technical University, Institute of Polymer Materials, Latvia
Berzina, R. (zicans@ktf.rtu.lv), Riga Technical University, Institute of Polymer Materials, Latvia
Maksimov, R. (maksimov@pmi.lv), University of Latvia, Institute of Polymer Mechanics, Latvia

12h20

8079 | CNT/Al nanocomposites produced by hot extrusion and powder metallurgical route using dispersion/mixture technique

Simões, S (ssimoes@fe.up.pt), CEMUC, University of Porto, Portugal
Cruz, S (sylvia.andrea.cruz@aimen.es), AIMEN Technology Center, Spain
Rey, P (prey@aimen.es), AIMEN Technology Center, Spain
Viana, F (fviana@fe.up.pt), CEMUC, University of Porto, Portugal
Vieira, F. M. (mvieira@fe.up.pt), CEMUC, University of Porto, Portugal

Session 19.5 | Chairs: Simões, S (ssimoes@fe.up.pt), CEMUC, University of Porto, Portugal

14h00

8258 | Particularity concerning the use of magnetorheological fluids / nanofluids, to obtain polymeric nanocomposites materials

Crainic, N. (nicolae.crainic@upt.ro), Politehnica University of Timisoara, Romania
Torres Marques, A. (marques@fe.up.pt), Instituto de Engenharia Mecanica e Gestao Industrial, Portugal
Vekas, L. (vekas@acad-tim.tm.edu.ro), Romanian Academy - Timisoara Division, Romania
Novoa, P. (prnovoa@inegi.up.pt), Instituto de Engenharia Mecanica e Gestao Industrial, Portugal
Marinica, O. (oana.marinica@upt.ro), Politehnica University of Timisoara, Romania
Moreira De Sa, C. (cmsa@cemup.up.pt), Centro de Engenharia de Materias da Universidade do Porto, Portugal
Popa, N. C. (ncpopa@flumag2.mec.upt.ro), Romanian Academy - Timisoara Division, Romania

14h20

8554 | Influence of micro- and nano-particles on the mechanical and physical properties of pure copper

Dash, Khushbu (khushbudash@gmail.com), Oxford University, United Kingdom
Trojanova, Zuzanka (ztrojan@met.mff.cuni.cz), Charles University in Prague, Czech Republic
Džugan, J. (jdzugan@comtesfht.cz), 3COMTES FHT, Czech Republic

14h40

8595 | A nonlocal finite element approach for capturing size effects in nanocomposites

De Domenico, Dario (dario.dedomenico@unirc.it), University Mediterranea of Reggio Calabria, Italy, Italy
Fuschi, Paolo (paolo.fuschi@unirc.it), University Mediterranea of Reggio Calabria, Italy, Italy
Pisano, Aurora A. (aurora.pisano@unirc.it), University Mediterranea of Reggio Calabria, Italy, Italy

15h00

8746 | Beating phenomenon and energy localization in Single-Walled Carbon Nanotubes

Strozzi, Matteo (matteo.strozzi@unimore.it), University of Modena and Reggio Emilia, Italy
Manevitch, Leonid I. (lmanev@chph.ras.ru), Russian Academy of Sciences, Russian Federation
Pellicano, Francesco (francesco.pellicano@unimore.it), University of Modena and Reggio Emilia, Italy
Barbieri, Marco (mark@unimore.it), University of Modena and Reggio Emilia, Italy
Zippo, Antonio (antonio.zippo@unimore.it), University of Modena and Reggio Emilia, Italy

15h20

8793 | Mechanical Behavior of Graphene encapsulated Plastics

Tsai, I-Shou (Tsai.ishou@gmail.com), Department of Fiber and Composites, Feng Chia University, Taiwan
Hsu, Ping-Cheng (pingchenghsu@gmail.com), Department of Fiber and Composites, Feng Chia University, Taiwan

Session 38 - Mechanics and Engineering of Lattice & Structured Material

Session 38.1 | Chairs: Fraternali, Fernando (University of Salerno, Italy) and Atul Bhaskar (Univ. Southampton, UK)

16h30

6727 | On the optimal design of tensegrity lattices

Fraternali, Fernando (f.fraternali@unisa.it), University of Salerno, Italy

Amendola, Ada (adamendola@gmail.com), University of Salerno, Italy

Carpentieri, Gerardo (gcarpentieri@unisa.it), University of Salerno, Italy

16h50

9035 | Structure-property relationship of additively manufactured lattice materials: micromechanics and measurements

Cuan-Urquizo, Enrique (E.CuanUrquizo@soton.ac.uk), University of Southampton, United Kingdom

Bhaskar, Atul (A.Bhaskar@soton.ac.uk), University of Southampton, United Kingdom

17h10

9026 | Mechanical response of an auxetic cellular sheet under plastic deformation

Bonfanti, Alessandra (A.Bonfanti@soton.ac.uk), University of Southampton, United Kingdom

Bhaskar, Atul (A.Bhaskar@soton.ac.uk), University of Southampton, United Kingdom

17h30

7839 | Hierarchical composite lattice structures

Yin Sha (yinsha2008@gmail.com), Beihang University, China

Zhang Boming (zbm@buaa.edu.cn), Beihang University, China

Wu Sujun (Wusj@buaa.edu.cn), Beihang University, China

Robert O. Ritchie (roritchie@gmail.com), Beihang University, China

17h50

8636 | Vibro-acoustic optimization of sandwich panels involving hexagonal honeycomb cores

Droz, Christophe (christophe.droz@ec-lyon.fr), Ecole Centrale de Lyon (LTDS), France

Zergoune, Zakaria (zakaria.zergoune@ec-lyon.fr), Ecole Centrale de Lyon (LTDS), France

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Christen, Jean-Loup (jean-loup.christen@ec-lyon.fr), Ecole Centrale de Lyon (LTDS), France

Ichchou, Mohamed (mohamed.ichchou@ec-lyon.fr), Ecole Centrale de Lyon (LTDS), France

18h10

7842 | The effect of different valency cations on the sintering process of magnesium oxide composites

Szczerba, Jacek (jszczerb@agh.edu.pl), AGH University of Science and Technology, Faculty of Materials Science and Ceramics, al. A. Mickiewicza 30, 30-059 Krakow, Poland, Poland

Madej, Dominika (dmadej@agh.edu.pl), AGH University of Science and Technology, Faculty of Materials Science and Ceramics, al. A. Mickiewicza 30, 30-059 Krakow, Poland, Poland

TUESDAY 16 June

Room NUX

Session 25.2 | Chairs: Simon Wang and Harvey, CM (Loughborough University, UK)

11h00

7468 | Evaluation of compressive test methods for braided composites using coupon and tube specimens

Michaelis, Daniel (michaelis@ifb.uni-stuttgart.de), Institute of Aircraft Design, Germany
Prinz, Nicolai (nicolai@prinz28.de), Institute of Aircraft Design, Germany
Krauter, Anja (anjakrauter@gmail.com), Institute of Aircraft Design, Germany
Middendorf, Peter (middendorf@ifb.uni-stuttgart.de), Institute of Aircraft Design, Germany

11h20

9229 | Dynamic behavior of ocean current turbine blade with damage

Lecheb Samir (samir_lecheb@yahoo.fr), University of Boumerdes, Algeria
Nour Abdelkader (abdelkader_nour@yahoo.fr), University of Boumerdes, Algeria
Mechakra Hamza (mechakra_h@yahoo.fr), University of Boumerdes, Algeria
Chellil Ahmed (c.chellil@yahoo.fr), University of Boumerdes, Algeria
Hidouchi Hamza (h_hidouchi@yahoo.com), University of Boumerdes, Algeria
Naceur Hakim (hakim_n@yahoo.fr), School of Engineering ENSIAME, France

11h40

7532 | MODELLING ADHESIVELY-BONDED JOINTS IN COMPOSITE STRUCTURES BY COHESIVE ZONE MODELS

Campilho, Raul D.S.G. (raulcampilho@gmail.com), ISEP, Portugal

12h00

7616 | Experimental Verification of a Matrix Failure Criterion for a Laminated Composite Material under Biaxial Loading

Chowdhury, Nayeem T. (nayeem.chowdhury@monash.edu), Monash University, Australia
Wang, John J. (John.Wang@dsto.defence.gov.au), Defence Science and Technology Organisation, Australia
Chiu, Wing K. (wing.kong.chiu@monash.edu), Monash University, Australia
Yan, Wenyi (wenyi.yan@monash.edu), Monash University, Australia

12h20

7626 | Numerical procedure for mesoscopic scale damage modeling of woven polymer matrix composites

Doitrand A. (aurelien.doitrand@onera.fr), Onera -The French Aerospace Lab, France
Fagiano C. (christian.fagiano@onera.fr), Onera -The French Aerospace Lab, France
Hirse Korn M. (martin.hirse Korn@onera.fr), Onera -The French Aerospace Lab, France
Chiaruttini V. (vincent.chiaruttini@onera.fr), Onera -The French Aerospace Lab, France

12h40

7632 | Study of the interlaminar fracture of composite materials in mode III

Cynthia Aoun (cynthia.aoun@std.balamand.edu.lb), University Of Balamand, Lebanon
Assaad Hani (assaad.hani@std.balamand.edu.lb), University Of Balamand, Lebanon
Issam Tawk (issam.tawk@balamand.edu.lb), University Of Balamand, Lebanon
Jihad Rishmany (jihad.rishmany@balamand.edu.lb), University Of Balamand, Lebanon

Session 25.3 | Chairs: Simon Wang and Harvey, CM (Loughborough University, UK)

14h00

7676 | Brittle interface crack between two elastic layers

Harvey, C. M. (C.M.Harvey@lboro.ac.uk), Loughborough University, United Kingdom
Wood, J. D. (J.Wood@lboro.ac.uk), Loughborough University, United Kingdom
Wang, S. (S.Wang@lboro.ac.uk), Loughborough University, United Kingdom
Watson, A. (A.Watson@lboro.ac.uk), Loughborough University, United Kingdom

14h20

7677 | Experimental assessment of mixed-mode partition theories for fracture toughness in laminated composite beams

Harvey, C. M. (C.M.Harvey@lboro.ac.uk), Loughborough University, United Kingdom
Eplett, M. (M.R.Eplett@lboro.ac.uk), Loughborough University, United Kingdom
Wang, S. (S.Wang@lboro.ac.uk), Loughborough University, United Kingdom
Cunningham, P. (P.Cunningham@lboro.ac.uk), Loughborough University, United Kingdom

14h40

7678 | Effect of through the Thickness Selective Stitching on Inter-laminar Strength in Bonded Lap Joints of Composite Laminates

Herle, Hemanth R. (hemanth_herle@infosys.com), Infosys Limited, India
Kumar, Ravi GVV (ravikumar_gvv@infosys.com), Infosys Limited, India

15h00

8739 | Influence of fibre aqueous-based sizing treatments and of the matrix intrinsic reinforcement on the damage mechanisms of novel laminated acrylic thermoplastic composites

Matadi Boumbimba, Rodrigue (matadi@enim.fr), 1- National Engineering School of Metz, France
Wang, Kui (kui.wang@tudor.lu), 2- CRP Henri Tudor, Department of Advanced Materials and Structures, Luxembourg
Frédéric, Addiego (frederic.addiego@tudor.lu), 2- CRP Henri Tudor, Luxembourg
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Gerard, Pierre (pierre.gerard@arkema.com), 3- ARKEMA, Groupement de Recherche de Lacq, France
Ruch, David (david.ruch@tudor.lu), 2- CRP Henri Tudor, Department of Advanced Materials and Structures, Luxembourg

15h20

7727 | Mechanical properties of a high strength Aluminium Alloy developed for ballistic protection application

Queudet Hippolyte (hippolyte.queudet@isl.eu), Institut de recherche de Saint Louis, Saint Louis, France
Lemonnier Sébastien (sebastien.lemonier@isl.eu), Institut de recherche de Saint Louis, Saint Louis, France
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Gaffet Eric (erci.gaffet@univ-lorraine.fr), Institut Jean Lamour, UMR 7198 CNRS, Université de Lorraine, Nancy, France

15h40

7745 | Analysis of the crack propagation in composites with irregular microstructure

Podgórski, Jerzy (j.podgorski@pollub.pl), Lublin University of Technology, Poland

Session 25.4 | Chairs: Simon Wang and Harvey, CM (Loughborough University, UK)

16h30

7766 | A fatigue failure theory for fibre-reinforced composite laminates based on the improved Puck's failure theory

Dong, Hai (donghai@pku.edu.cn), Peking University, China
Li, Zhi (lizhisteve@pku.edu.cn), Peking University, China
Wang, Jianxiang (jxwang@pku.edu.cn), Peking University, China
Karihaloo, Bhushan (KarihalooB@cardiff.ac.uk), Cardiff University, United Kingdom

16h50

7835 | Stress concentration of composite laminates with large cutouts

Chen, Jianlin (cjl@pku.edu.cn), Peking University, China
Li, Zheng (lizheng@pku.edu.cn), Peking University, China
Xu, Jifeng (xujifeng@comac.cc), Beijing Aeronautical Science & Technology Research Center, China
Lu, Zizi (luzizi@comac.cc), Beijing Aeronautical Science & Technology Research Center, China
Wang, Yan (wangyan11@comac.cc), Beijing Aeronautical Science & Technology Research Center, China

17h10

7849 | Investigation of the interaction of damage mechanisms in composite materials

Stier, Bertram (bertram.stier@rwth-aachen.de), Institute of Applied Mechanics, Germany
Bednarczyk, Brett A. (brett.a.bednarczyk@nasa.gov), NASA Glenn Research Center, United States America
Simon, Jaan-W. (jaan.simon@rwth-aachen.de), Institute of Applied Mechanics, Germany
Stefanie Reese (stefanie.reese@rwth-aachen.de), Institute of Applied Mechanics, Germany

17h30

7908 | Numerical and experimental investigation of composite tubes under hydrostatic pressure

Pavlopoulou, Sofia (sofia.pavlopoulou@gmail.com), University of Manchester, United Kingdom
Roy, Sree Shankhachur (roy.shankhachur@gmail.com), University of Manchester, United Kingdom
Gautam, Mayank (mayank.gautam-3@postgrad.manchester.ac.uk), University of Manchester, United Kingdom
Potluri, Prasad (prasad.potluri@manchester.ac.uk), University of Manchester, United Kingdom

17h50

7922 | Continuum damage model for inter-fibre failure of unidirectional laminates

Cui, Hao (hao.cui@eng.ox.ac.uk), University of Oxford, United Kingdom
Hoffmann, Justus (justus.hoffmann@exeter.ox.ac.uk), University of Oxford, United Kingdom
Wiegand, Jens (jens.wiegand@eng.ox.ac.uk), University of Oxford, United Kingdom
Petrinic, Nik (nik.petrinic@eng.ox.ac.uk), University of Oxford, United Kingdom

18h10

7105 | Comparisons of performances of several new designs of shockAbsorbers

Dorival, Olivier (Olivier.Dorival@insa-toulouse.fr), Institut Clément Ader - Toulouse, France

Navarro, Pablo (pablo.navarro@univ-tlse3.fr), Institut Clément Ader - Toulouse, France

Ferrero, Jean Francois (jean-francois.ferrero@univ-tlse3.fr), Institut Clément Ader - Toulouse, France

Petiot, Caroline (caroline.petiot@airbus.com), Airbus group SAS Innovations, France

Bermudez, Michel (michel.bermudez@airbus.com), Airbus group SAS Innovations, France

Wednesday 17 June Room MORUS IV

Session 2.7 | Chairs: Jansen, Eelco (Leibniz Universität Hannover, Germany) and Paul Weaver (University of Bristol, UK)

11h00

8759 | Efficient Models for Initial Post-Buckling Analysis of Variable Stiffness Curved Panels

Jansen, Eelco (e.jansen@isd.uni-hannover.de), Leibniz Universität Hannover, Institute of Structural Analysis, Germany

Weaver, Paul (Paul.Weaver@bristol.ac.uk), University of Bristol, Advanced Composites Centre for Innovation and Science, United Kingdom

Rahman, Tanvir (T.Rahman@tnodiana.com), TNO DIANA BV, Netherlands

White, Simon (Simon.White@bristol.ac.uk), University of Bristol, Advanced Composites Centre for Innovation and Science, United Kingdom

Rolfes, Raimund (r.rolfes@isd.uni-hannover.de), Leibniz Universität Hannover, Institute of Structural Analysis, Germany

11h20

9285 | Influence of elastic coupling and anisotropy on uncertainty quantification in the aeroelastic response of idealized composite wings

Nitschke, Christian T. (christian.nitschke@dalembert.upmc.fr), Université Pierre & Marie Curie, Paris, France

Maruani, Jonas (jonas.maruani@etu.upmc.fr), Université Pierre & Marie Curie, Paris, France

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Chassaing, Jean-Camille (jean-camille.chassaing@upmc.fr), Université Pierre & Marie Curie, Paris, France

Lucor, Didier (didier.lucor@upmc.fr), Université Pierre & Marie Curie, Paris, France

11h40

6934 | Buckling of Composite Plates under Biaxial Compressive Loads

Della, Christian N. (christian.della@glasgow.ac.uk), University of Glasgow, Singapore

Ngan, Jing Xun (2059242N@student.gla.ac.uk), University of Glasgow, Singapore

Loh, Jieshen (2013457L@student.gla.ac.uk), University of Glasgow, Singapore

12h00

7014 | Nonlinear Dynamic Instability Analysis of Laminated Composite Stiffened Plates

Patel, Shuvendu N. (shuvendu@pilani.bits-pilani.ac.in), BITS Pilani, Pilani Campus, India

12h20

8208 | Composite Concrete Elements Reinforced by Perforated Steel Sheets; Corbel Approach

Apostolidi, Eftychia (eftychia.apostolidi@boku.ac.at), University of Natural Resources and Life Sciences, Austria

Strauss, Alfred (alfred.strauss@boku.ac.at), University of Natural Resources and Life Sciences, Austria

12h40

9184 | Computational analysis of damage in hybrid composite structure

Had, Jiri (jiri.had@gmail.com), Czech Technical University in Prague, Czech Republic

Ruzicka, Milan (milan.ruzicka@fs.cvut.cz), Czech Technical University in Prague, Czech Republic

Session 2.8 | Chairs: Boscolo, Marco (Airbus, United Kingdom) and Ascione, Luigi (University of Salerno, Italy)

14h00

8752 | LAYER WISE ANALYTICAL SOLUTION FOR FREE VIBRATION ANALYSIS OF COMPOSITE PLATES AND PLATES ASSEMBLIES

Boscolo, Marco (marco.boscolo@airbus.com), Airbus, United Kingdom

14h20

7686 | Validation of anisotropic damage model for the simulation of textile reinforced concrete shells exhibiting strainhardening response

Sharei, Ehsan (esharei@imb.rwth-aachen.de), Institute of Structural Concrete, RWTH Aachen University, Germany
Scholzen, Alexander (ascholzen@imb.rwth-aachen.de), Institute of Structural Concrete, RWTH Aachen University, Germany

Chudoba, Rostislav (rostislav.chudoba@rwth-aachen.de), Institute of Structural Concrete, RWTH Aachen University, Germany

Hegger, Josef (heg@imb.rwth-aachen.de), Institute of Structural Concrete, RWTH Aachen University, Germany

14h40

8770 | INFLUENCE OF BINDER CONFIGURATION ON 3D WOVEN COMPOSITES

Dhiman, Sarvesh (s.dhiman@manchester.ac.uk), University of Manchester, United Kingdom

Silva, Chris (CSilva@mwright.co.uk), M Wright & Sons, United Kingdom

Potluri, Prasad (prasad.potluri@manchester.ac.uk), University of Manchester, United Kingdom

15h00

7956 | Numerical Analysis of the Influence of Ply Waviness on the mechanical Behaviour of Composite Laminates by using laminated RVE

Peng He (peng.he@live.de), Quanzhou Insitute of Equipment Manufacturing, Chinese Academy of Sciences, China

Horst Baier (baier@llb.mw.tum.de), Insitute of Lightweight Structures, Technical University of Munich, Germany

15h20

8697 | Analytical formulation for the postbuckling analysis of unsymmetrically laminated composite plates under combined inplane compression and shear loading

Kun Nie (niekun_2008@163.com), School of Aerospace Engineering and Applied Mechanics, Tongji University, China

Yi Liu (liuyi.chine@126.com), School of Aerospace Engineering and Applied Mechanics, Tongji University, China

Ying Dai (ydai@tongji.edu.cn), School of Aerospace Engineering and Applied Mechanics, Tongji University, China

15h40

9388 | Full bandgap for in-plane waves in thin plates: numerical modelling and experiment

Méndez-Sánchez, Rafael (mendez@fis.unam.mx), Universidad Nacional Autónoma de México, Mexico

Ramírez-Ramírez, Filiberto (mayor_filiberto@hotmail.com), Universidad Autónoma Metropolitana- Azcapotzalco, Mexico

Franco-Villafañe, John (jofrabil@gmail.com), Universidad Nacional Autónoma de México, Mexico

Báez, Gabriela (gbaez69@gmail.com), Universidad Autónoma Metropolitana-Azcapotzalco, Mexico

Session General | Chairs: Boscolo, Marco (Airbus, United Kingdom) and Ascione, Luigi (University of Salerno, Italy)

16h30

7930 | Tribological properties and a wear model of aluminium alloy matrix composites

Wieczorek Jakub JW (jakub.wieczorek@polsl.pl), Silesian University of Technology, Poland

16h50

8843 | Determination of ultimate strength and fatigue limit of particulate reinforced metal matrix composites (PRMMC) by using upper-and-lower bound approaches

Chen, G. (G.Chen@iwm.rwth-aachen.de), RWTH Aachen University, Germany

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Weichert, D. (weichert@iam.rwth-aachen.de), Institute of General Mechanics, Germany

17h10

8700 | Interface compatibilization of high performance thermoplastic composites by surface activation and supramolecular assembly as a versatile way to obtain environmental friendly adhesion promotion

Martin, Arnaud (arnaud.martin@tudor.lu), CRP Henri Tudor, Luxembourg

Addiego, Frédéric (frederic.addiego@tudor.lu), CRP Henri Tudor, Luxembourg

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Michel, Marc (marc.michel@tudor.lu), CRP Henri Tudor, Luxembourg
Ruch, David (david.ruch@tudor.lu), CRP Henri Tudor, Luxembourg

17h30

8970 | Damage assessment of notched composite structures and adhesively bonded repairs

Martínez Vicente, Juan Luis (juanluis.martinez@uclm.es), University of Castilla-La Mancha, Spain
Caminero Torija, Miguel Ángel (miguelangel.caminero@uclm.es), University of Castilla-La Mancha, Spain
López Cela, Juan José (juanjose.lopez@uclm.es), University of Castilla-La Mancha, Spain

17h50

9056 | Structural Properties and Mechanical Behavior of the Reinforced Titanium Fiber on Al-Si/SiCp Metal Matrix Composite by Powder Metallurgy (Metal Matrix Composite)

Oak, Jeong-Jung (ojj69@pusan.ac.kr), Pusan National University, Korea, South
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Chun, Ho-Hwan (chunahh@pusan.ac.kr), Pusan National University, Korea, South
Park, Yong Ho (yhpark@pusan.ac.kr), Pusan National University, Korea, South

18h10

8021 | Investigation of mechanical behavior of a bone plate made of bioresorbable phosphate glass fiber reinforced PLA composite

Hassan (hassan_fsd83@hotmail.com), Chung-Ang University, Korea, South
Kyung-Chae (kongche1@naver.com), Chung-Ang University, Korea, South
Min-Gu (loded@hanmail.net), Chung-Ang University, Korea, South
Seung-Hwan (phigs4@cau.ac.kr), Chung-Ang University, Korea, South

18h30

8767 | Investigation of Sintering Condition and Mechanical Property of Al-Si-Cu-Mg/SiCp MMC Fabricated by Powder Metallurgy

Jeongil Bang (wjddlf2578@pusan.ac.kr), Pusan National University, Korea, South
Jeong-Jung Oak (ojj69@pusan.ac.kr), Pusan National University, Korea, South
Eun Sun Lee (ilorangeli@pusan.ac.kr), Pusan National University, Korea, South
Yonghwan Kim (kyh871111@pusan.ac.kr), Pusan National University, Korea, South
Yongho Park (yhpark@pusan.ac.kr), Pusan National University, Korea, South

Wednesday 17 June
Room VITUS I

Session 20 - Natural Fibre Composites

Session 20.1 | Chairs: Campilho, Raul D.S.G. (ISEP, Portugal)

11h00

7742 | Effects of cellulose fiber content on physical properties of polyurethane based composites

HADJADJ, Aomar (aomar.hadjadj@univ-reims.fr), University of Reims, France
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TARA, Ahmed (ahmed.tara@univ-reims.fr), University of Reims, France
GILLIOT, Mickael (mickael.gilliot@univ-reims.fr), University of Reims, France
MALEK, Fouad (fouad_malek@yahoo.fr), University of Oujda, Morocco
MAAFI, El-Miloud (elmiloud.maafi@etudiant.univ-reims.fr), University of Oujda, Morocco
TIGHZERT, Lan (lan.tighzert@univ-reims.fr), University of Oujda, France

11h20

9230 | An Experimental Investigation into the Enhanced Mechanical Performance of A Hybrid Jute-Steel Composite
Mache, Ashok (ashokmache@gmail.com), Indian Institute of Science, Bangalore, India
Deb, Anindya (adeb@cpdm.iisc.ernet.in), Indian Institute of Science, Bangalore, India
Venkatesh, Gude S. (venkatesh@cpdm.iisc.ernet.in), Visvesvaraya Technological University, Bangalore, India

11h40

9159 | Fracture mechanics property of high strength concrete reinforced with basalt fibers
Guo Yihong (gyhhrb@126.com), Harbin Engineering University, China
Tong Lili (tonglili@hrbeu.edu.cn), Harbin Engineering University, China
Lu Yunlong (75489341@qq.com), Harbin Engineering University, China
Zhang Keyong (570308953@qq.com), Harbin Engineering University, China

12h00

9131 | EFFECT OF DIFFERENT SURFACE TREATMENT METHODS on PHYSICAL PROPERTIES of BANANA FIBERS
KOC AK E. DILARA (dkocak@marmara.edu.tr), Marmara University, Turkey
MERDAN NIGAR (nmerdan@ticaret.edu.tr), Istanbul Commerce University, Turkey
MISTIK ILKER (imistik@marmara.edu.tr), Marmara University, Turkey
AKALIN MEHMET (makalin@marmara.edu.tr), Marmara University, Turkey
KAYAR MAHMUT (mkayar@marmara.edu.tr), Marmara University, Turkey

12h20

9037 | Improving the Strength and Service Life of Jute/Epoxy Laminar Composites for Structural Applications
Michael Pinto (mpinto@umassd.edu), UMass Dartmouth, United States America
Vijaya Chlivendra (vchalivendra@umassd.edu), UMass Dartmouth, United States America
Yong K. Kim (ykim@umassd.edu), UMass Dartmouth, United States America
Armand F. Lewis (armlew@earthlink.net), UMass Dartmouth, United States America

12h40

8927 | Preliminary investigations on Sisal Fibre Reinforced Aluminium Laminates
Vieira, Luciano MG (lucianomgv@yahoo.com.br), Federal University of Minas Gerais - UFMG, Brazil
Santos, Julio C (sanjulio2000@yahoo.com.br), Federal University of São João del Rei - UFSJ, Brazil
Panzer, Tulio H (panzer@ufsj.edu.br), Federal University of São João del Rei - UFSJ, Brazil
Rubio, Juan CC (juan@ufmg.br), Federal University of Minas Gerais - UFMG, Brazil
Scarpa, Fabrizio (F.Scarpa@bristol.ac.uk), University of Bristol, United Kingdom

Session 20.2 | Chairs: Campilho, Raul D.S.G. (ISEP, Portugal)

14h00

9030 | Effect of pressing parameters and chemical modifications of flax fabrics on microstructure and mechanical properties of natural fiber-reinforced composites
Przybyszewski, Bartłomiej (bartlomiej.przybyszewski@tu-dresden.de), Institute of Lightweight Engineering and Polymer Technology, Technische Universität Dresden, Germany
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Broda, Piotr (chuhro@gmail.com), Faculty of Materials Science and Engineering, Warsaw University of Technology, Poland

14h20

9018 | Effect of Alkali Treatment on the Thermal Stability of Alkali Treated Water Hyacinth/Multi-walled Carbon Nanotube/High Density Polyethylene Composite
Wirawan, Riza (rwirawan@unj.ac.id), Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Jakarta, Indonesia
Anggrainy, Rani (rani.anggrainy@gmail.com), Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Jakarta, Indonesia
Dwiayati, Siska T (siska_td@yahoo.com), Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Jakarta, Indonesia

14h40

8864 | Low impact behaviour of hems fibre reinforced epoxy composites

G. Caprino (caprino@unina.it), University of Naples Federico II, Italy
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M. Durante (mdurante@unina.it), University of Naples Federico II, Italy
A. Langella (antgella@unina.it), University of Naples Federico II, Italy
V. Lopresto (lopresto@unina.it), University of Naples Federico II, Italy

15h00

7712 | NUMERICAL STUDY OF THE BEHAVIOUR OF NATURAL FIBRES COMPOSITES UNDER LOW-VELOCITY IMPACT

Rubio-López, Ángel (anrubiol@ing.uc3m.es), University Carlos III of Madrid, Spain
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Olmedo, Álvaro (aolmedo@ing.uc3m.es), University Carlos III of Madrid, Spain
Santiste, Carlos (csantius@ing.uc3m.es), University Carlos III of Madrid, Spain

15h20

8832 | A Study on the Structural Performance of Jute Fiber-Based Composite Tubes under Axial and Transverse Loadings

Mache, Ashok (macheashok@gmail.com), Indian Institute of Science, Bangalore & Vishwakarma Institute of Information Technology, Pune, India
Deb, Anindya (adeb@cpdm.iisc.ernet.in), Indian Institute of Science, Bangalore, India

15h40

9183 | SYNTHESIS OF MICROCELLULOSE (MCC) AND NANOCELLULOSE (NCC) FROM EUCALYPTUS KRAFT ssp PULP

Zeni, M. (mzandrad@ucs.br), Caxias do Sul University, Brazil
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Lanfredi, M. (mlanfredi@ucs.br), Caxias do Sul University, Brazil
Pacheco, K. (kpacheco@ucs.br), Caxias do Sul University, Brazil

Session 20.3 | Chairs: Campilho, Raul D.S.G. (ISEP, Portugal)

16h30

7739 | ANALYSIS OF THE MANUFACTURING PARAMETERS ON THE MECHANICAL PROPERTIES OF NATURAL FIBRES COMPOSITES

Rubio-López, Ángel (anrubiol@ing.uc3m.es), Department of Continuous Mechanics and Structures Theory, University Carlos III of Madrid, Spain
Díaz-Álvarez, Antonio (andiaza@ing.uc3m.es), Department of Mechanics, University Carlos III of Madrid, Spain
Olmedo, Álvaro (aolmedo@ing.uc3m.es), Department of Continuous Mechanics and Structures Theory, University Carlos III of Madrid, Spain
Santiuste, Carlos (csantius@ing.uc3m.es), Department of Continuous Mechanics and Structures Theory, University Carlos III of Madrid, Spain

16h50

7534 | FRACTURE PROPERTY DETERMINATION IN NATURAL FIBRE COMPOSITES

Campilho, Raul D.S.G. (raulcampilho@gmail.com), ISEP, Portugal
Moura, Daniel C. (daniel.c.moura@gmail.com), FEUP, Portugal

17h10

8811 | Bond behavior of flax-FRCM and PBO-FRCM composites applied on clay bricks: experimental and theoretical study

Olivito R. (renato.olivito@unical.it), Civil Engineering Department - University of Calabria, Italy
Codispoti R. (rosamaria.codispoti@unical.it), Civil Engineering Department - University of Calabria, Italy
Cevallos O. (oscarcevallos@gmail.com), Civil Engineering Department - University of Calabria, Ecuador

17h30

8036 | Properties and evaluation of structural changes of thermoplastic polymer composites with renewable plant materials after accelerated weathering tests

Barton-Pudlik Joanna (jbarton@uni.opole.pl), Opole University, Poland
Czaja Krystyna (krystyna.czaja@uni.opole.pl), Opole University, Poland
Sacher-Majewska Beata (beata.sacher@uni.opole.pl), Opole Univeristy, Poland
Sobków Dariusz (dariusz.sobkow@uni.opole.pl), Opole University, Poland

17h50

8669 | PRODUCTION OF CELLULOSE BASED BIOCOMPOSITES WITH HYDROXYAPATITE FOR MEDICAL APPLICATIONS

Viana, Tânia (tania.viana@ipleiria.pt), Polytechnic Institute of Leiria, Portugal

Malça, Cândida (candida@isec.pt), Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria and Polytechnic Institute of Coimbra, ISEC, Portugal

Biscaia, Sara (sara.biscaia@ipleiria.pt), Polytechnic Institute of Leiria, Portugal

Mateua, Artur (artur.mateus@ipleiria.pt), Polytechnic Institute of Leiria, Portugal

Mitchell, Geoffrey (geoffrey.mitchell@ipleiria.pt), Polytechnic Institute of Leiria, Portugal

18h10

9087 | SURFACE PROPERTIES OF PAPERS COATED WITH THE STYRENE-ACRYLATE BASED COPOLYMERS

OZDEMIR ALP, Mehlika (ozdemir.mehlika@gmail.com), Kocaeli University, Turkey

OZDEMIR, Mehmet (mehmet17ozdemir@hotmail.com), Kocaeli University, Turkey

AYTAC, Ayse (aaytac@gmail.com), Kocaeli University, Turkey

DENIZ, Veli (vdeniz41@gmail.com), Kocaeli University, Turkey

**Wednesday 17 June
Room VITUS II**

Session 21 - Non-destructive Inspection Techniques for Composite Materials and Structures

Session 21.1 | Chairs: Findeis, Dirk (dirk.findeis@uct.ac.za), University of Cape Town, Dept of Mech Eng, South Africa

11h00

7526 | A non-intrusive automated procedure based on active thermography for defect localization in plane composite.

Perez, Laetitia (laetitia.perez@univ-nantes.fr), LTN, IUT, University of Nantes, France

Lascoup, Bertrand (bertrand.lascoup@irt-jules-verne.fr), IRT Jules Verne, France

Autrique, Laurent (laurent.autrique@univ-angers.fr), LARIS, ISTIA, University of Angers, France

11h20

9077 | Thermographic Interpretation of Failure Mode in Polymer Matrix Composites

Kim, Jeongguk (jkim@krri.re.kr), Korea Railroad Research Institute, Korea, South

11h40

8934 | APPLICATION OF ULTRASONIC GUIDED WAVES FOR DEFECT DETECTION IN HONEYCOMB

Draudviliene, Lina (lina.draudviliene@ktu.lt), Kaunas University of Technology, Lithuania

Raisutis, Renaldas (renaldas.raisutis@ktu.lt), Kaunas University of Technology, Lithuania

Zukauskas, Egidijus (egidijus.zukauskas@ktu.lt), Kaunas University of Technology, Lithuania

12h00

7633 | Non-destructive evaluation of satin woven fiber reinforced polymer matrix composites

Montesano, John (gmontesa@ryerson.ca), Ryerson University, Canada

Fawaz, Zouheir (zfawaz@ryerson.ca), Ryerson University, Canada

Bougherara, Habiba (habiba.bougherara@ryerson.ca), Ryerson University, Canada

12h20

7674 | Identification of dynamic stiffness distribution of fatigue loaded polymer concrete through vibration measurement

Ahn, SangKeun (ask9156@hanyang.ac.kr), Hanyang University, Korea, South

Jeon, Eunbeom (jeoneb85@gmail.com), Hanyang University, Korea, South

Park, Junhong (parkj@hanyang.ac.kr), Hanyang University, Korea, South

Kim, Hak-sung (kima@hanyang.ac.kr), Hanyang University, Korea, South

Koh, Hyo-in (hikoh@krri.re.kr), Korea Railroad Research Institute, Korea, South

12h40

7769 | Evaluation of residual strain field and temperature mapping in 3D printed layered polymer plates

Kousiatza, Charoula (chkousiatza@unipi.gr), University of Piraeus, Greece
Economidou, Sophia N. (sneconom@unipi.gr), University of Piraeus, Greece
Karalekas, Dimitris (dkara@unipi.gr), University of Piraeus, Greece

Session 21.2 | Chairs: Findeis, Dirk (dirk.findeis@uct.ac.za), University of Cape Town, Dept of Mech Eng, South Africa

14h00

7781 | On the use of Laser-spot Thermography for the Nondestructive Inspection of Composites

Evola, Pietro (pietroevola@live.it), University of Palermo, Italy, Italy
Vandone, Ambra (ambra.vandone@gmail.com), Politecnico di Milano, Italy, Italy
Rizzo, Piervincenzo (pir3@pitt.edu), University of Pittsburgh, USA, United States America

14h20

7782 | Dispersion analysis of Lamb waves in composite laminates based on Reverberation-ray theory

Ma, Zhaoyang (mazhaoyang@pku.edu.cn), Peking University, China
Chen, Jianlin (cjl@pku.edu.cn), Peking University, China
Zhou, Jie (zhoujieafan@gmail.com), Peking University, China
Yi, Jianlin (yjl1992@163.com), Peking University, China
Su, Xianye (xyswsk@pku.edu.cn), Peking University, China

14h40

7820 | Direct Estimation of the Elastic Constants of CFRP Plates by using Lagrange's Equation

Hartl, Stefan (stefan.hartl@tuwien.ac.at), Vienna University of Technology, Austria
Schulz, Alexander (alexander.schulz@tuwien.ac.at), Vienna University of Technology, Austria
Manfred, Kaltenbacher (manfred.kaltenbacher@tuwien.ac.at), Vienna University of Technology, Austria

15h00

7843 | Nondestructive evaluation technique of multiple-delaminations in glass fiber reinforced composites using terahertz spectroscopy

Kim, Do-Hyoung (dongsene3@gmail.com), Hanyang University, Korea, South
Ryu, Chung-Hyeon (rch5755@gmail.com), Hanyang University, Korea, South
Kim, Hak-Sung (kima@hanyang.ac.kr), Hanyang University, Korea, South

15h20

7917 | Spectromicroscopic characterization and magnetic properties of submicron Ni rod arrays in silicon dioxide matrix

S.Yu. Turishchev (tsu@phys.vsu.ru), Voronezh State University, Russian Federation
E.V. Parinova (parinova@phys.vsu.ru), Voronezh State University, Russian Federation
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E.A. Streltsov (StreltEA@bsu.by), Belarusian State University, Belarus
A.K. Fedotov (fedotov@bsu.by), Belarusian State University, Belarus
E.P. Domashevskaya (fft@phys.vsu.ru), Voronezh State University, Russian Federation

15h40

8060 | Using the Flexural Rigidity to Detect the Presence of Defects in Composite Sandwich Beams

Findeis, Dirk (dirk.findeis@uct.ac.za), University of Cape Town, Dept of Mech Eng, South Africa
Gryzagoridis, Jasson (jasson.gryzagoridis@uct.ac.za), University of Cape Town, Dept of Mech Eng, South Africa

Session 21.3 | Chairs: Durão, L. M. P. (ISEP - Instituto Superior de Engenharia do Porto, Portugal) and Panzera, T. H. (Universidade Federal de São João Del Rei (UFSJ), Brazil)

16h30

8084 | DAMAGE ASSESSMENT OF HYBRID FIBRE REINFORCED LAMINATES

Durão, L. M. P. (lmd@isep.ipp.pt), ISEP - Instituto Superior de Engenharia do Porto, Portugal
Panzera, T. H. (tuliopanzera@hotmail.com), Universidade Federal de São João Del Rei (UFSJ), Brazil
Scarpa, F. (f.scarpa@bristol.ac.uk), University of Bristol, United Kingdom
Sergio, LMR Filho (sergiolmrf@gmail.com), Universidade Federal de São João Del Rei (UFSJ), Brazil
Oliveira, P. R. (pabloresendeo@uol.com.br), Universidade Federal de São João Del Rei (UFSJ), Brazil

16h50

8115 | LIFETIME OF FIBROUS CARBON/CERAMIC COMPOSITES SUBJECTED TO A CYCLIC LOAD

Gumula, Teresa (tgumula@agh.edu.pl), AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Al. Mickiewicza 30, 30-059 Krakow, Poland, Poland

Martinez-Viviente, Felix L. (felix.martinez@upct.es), Universidad Politecnica de Cartagena, Departamento de Electronica y Tecnologia de Computadoras, 30202 Cartagena, Spain, Spain

17h10

8137 | Nondestructive evaluation of carbon fibre reinforced composites with infrared thermography and ultrasonics

Meola, C. (carmeola@unina.it), University of Naples Federico II, Italy

Carlomagno, G.M. (carmagno@unina.it), University of Naples Federico II, Italy

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Boffa, N.D. (natboffa@hotmail.com), University of Naples Federico II, Italy

Ricci, F. (fabricci@unina.it), University of Naples Federico II, Italy

17h30

8365 | Probing the Characteristic Free-Volume, Void, and Elemental Composition within a Polyamide Composite Membrane by Age-Momentum Correlation Spectroscopy

Hung, Wei-Song (wshung@cycu.edu.tw), Chung Yuan University, Department of Chemical, Taiwan

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Lee, Kueir-Rarn (krlee@cycu.edu.tw), Chung Yuan University, Department of Chemical, Taiwan

Lai, Juin-Yih (jylai@cycu.edu.tw), Chung Yuan University, Department of Chemical, Taiwan

17h50

8648 | Analysis of damage mechanisms in drilling of composite materials by acoustic emission

Zarif Karimi, Navid (navid.zarif@gmail.com), University of Bologna, Italy

Kianfar, Parnian (parnian.kianfar@gmail.com), Amirkabir University of Technology, Iran

Minak, Giangiacomo (giangiacomo.minak@unibo.it), University of Bologna, Italy

18h10

7916 | Edge-illumination X-ray dark-field imaging for imaging defects in composite structures

Endrizzi, M. (m.endrizzi@ucl.ac.uk), University College London, United Kingdom

Murat, B. I. S. (bb.intan.suraya@gmail.com), University College London, United Kingdom

Fromme, P. (p.fromme@ucl.ac.uk), University College London, United Kingdom

Olivo, A. (a.olivo@ucl.ac.uk), University College London, United Kingdom

Wednesday 17 June
Room VITUS III

Session 22 - Optimization Techniques and Methods

Session 22.1 | Chairs: Liu Qimao (qimao.liu@aalto.fi), Aalto University, Finland

11h00

8986 | Lightweight design of composite plate and shell structures in vibration environments

Liu Qimao (qimao.liu@aalto.fi), Aalto University, Finland

11h20

9146 | Optimizational Design and Analysis for Composite horizontal axis tidal turbine blades

Tong Lili (tonglili@hrbeu.edu.cn), Harbin Engineering University, China

Chai Jun (chaijun@hrbeu.edu.cn), Harbin Engineering University, China

Tang Xiao (tangxiao@hebeu.edu.cn), Harbin Engineering University, China

Guo Yihong (gyhhrb@126.com), Harbin Engineering University, China

11h40

8977 | Optimum design of shape and reinforcement of oval cut-out in fiber-reinforced composite laminates

Yu, K (yuke@pku.edu.cn), Peking University, China

Wang, J (jxwang@pku.edu.cn), Peking University, China

Tong, L (liyong.tong@sydney.edu.au), University of Sydney, Australia

Wang, Y (wangyan11@comac.cc), Beijing Aeronautical Science and Technology Research Institute, China

12h00

9188 | Efficiency optimisation of composite hydrofoils and cavitation tunnel experiments

Herath, Manudha T. (m.herath@unsw.edu.au), University of New South Wales, Australia

Phillips, Andrew W. (Andrew.Phillips@dsto.defence.gov.au), Defence Science and Technology Organization, Australia

St John, N. (Nigel.StJohn@dsto.defence.gov.au), Defence Science and Technology Organization, Australia

Prusty, B. Gangadhara (g.prusty@unsw.edu.au), University of New South Wales, Australia

12h20

9124 | SIMULTANEOUS SHAPE AND MATERIAL OPTIMIZATION OF SANDWICH PANELS WITH HONEYCOMB CORE FOR ADDITIVE MANUFACTURING

Montemurro, Marco (marco.montemurro@ensam.eu), Arts et Métiers ParisTech, I2M CNRS UMR 5295,, France

Catapano, Anita (anita.catapano@inp-bordeaux.fr), Université de Bordeaux, I2M CNRS UMR 5295,, France

Doroszewski, Dominique (dominique.doroszewski@ensam.eu), Arts et Métiers ParisTech, France

12h40

7648 | QUALITY ASSESSMENT OF 2D BRAIDED COMPOSITES WITH OPTICAL MEASUREMENT TECHNIQUES

Heieck, Frieder (heieck@ifb.uni-stuttgart.de), Institute of Aircraft Design, University of Stuttgart, Germany

Fuhr, Jan-Philipp (fuhr@ifb.uni-stuttgart.de), Institute of Aircraft Design, University of Stuttgart, Germany

Middendorf, Peter (middendorf@ifb.uni-stuttgart.de), Institute of Aircraft Design, University of Stuttgart, Germany

Session 22.2 | Chairs: Montemurro, Marco (marco.montemurro@ensam.eu), Catapano, Anita (anita.catapano@inp-bordeaux.fr), France

14h00

7850 | Cast aluminium matrix composites modified with using plastic deformation process - changing of the structure and mechanical properties

Kurtyka, Pawel (pkurtyka@up.krakow.pl), Institute of Technology, Pedagogical University of Krakow, Poland

Ryłko, Natalia (nrylko@gmail.com), Institute of Technology, Pedagogical University of Krakow, Poland

Tokarski, Tomasz (tokarski@agh.edu.pl), Faculty of Non-Ferrous Metals, AGH University of Science and Technology, Poland

Wójcicka, Anna (awojcicka@up.krakow.pl), Institute of Technology, Pedagogical University of Krakow, Poland

Pietras, Adam (Adam.Pietras@is.gliwice.pl), Institute of Welding of Gliwice, Poland

14h20

7887 | Methodology for the Product Engineering of Lightweight Structures in Multi-Material Design

Lauter, Christian (christian.lauter@uni-paderborn.de), University of Paderborn, Germany

Wang, Zheng (zheng.wang@uni-paderborn.de), University of Paderborn, Germany

Troester, Thomas (thomas.troester@uni-paderborn.de), University of Paderborn, Germany

Brandis, Rinje (r.brandis@krause.de), Krause-Biagosch GmbH, Germany

Koechling, Daniel (daniel.koechling@hni.uni-paderborn.de), Heinz Nixdorf Institut, University of Paderborn, Germany

14h40

7896 | Crashworthiness optimization of metal-composite energy absorption devices

Díaz, Jacobo (jdiaz@udc.es), Universidade da Coruña, Spain

Romera, Luis (lromera@udc.es), Universidade da Coruña, Spain

Paz, Javier (javier.paz.mendez@udc.es), Universidade da Coruña, Spain

Costas, Miguel (miguel.costas@udc.es), Universidade da Coruña, Spain

15h00

7986 | An efficient semi-automated optimization algorithm for (lattice) composite structures: implementation and application

Pavlov, Leonid (leonid.pavlov@atg-europe.com), ATG Europe, Netherlands

15h20

8012 | Torsion induced buckling design of a variable stiffness composite cylinder made by fiber steering

Rouhi, Mohammad (m_rouh@encs.concordia.ca), Concordia University, Canada

Ghayoor, H. (h_ghayoo@encs.concordia.ca), Concordia University, Canada

Hoa, Suong V. (hoasuon@alcor.concordia.ca), Concordia University, Canada

Hojjati, M. (mehdi.hojjati@concordia.ca), Concordia University, Canada

15h40

8069 | THE INFLUENCE OF EXPANSIVE AGENTS ON THE PROPERTIES OF FIBER REINFORCED CEMENT-BASED COMPOSITES

CORINALDESI, Valeria (v.corinaldesi@univpm.it), Università Politecnica delle Marche, Ancona, Italy

NARDINOCCHI, Alessandro (a.nardinocchi@univpm.it), Università Politecnica delle Marche, Ancona, Italy

Session 22.3 | Chairs: Parker, Sa-aadat (saparker@sun.ac.za), Stellenbosch University, South Africa and Trias, Daniel (dani.trias@udg.edu), Universitat de Girona, Spain

16h30

8286 | Influence of SiC particles on tribological properties in aluminum based composites

Susniak, Magdalena (susniak@agh.edu.pl), AGH University of Science and Technology, Poland

Karwan-Baczewska, Joanna (jokaba@agh.edu.pl), AGH University of Science and Technology, Poland

16h50

8581 | Experimental study and validation of computational optimised, endless fibre reinforced thermoplastic parts
Rettenwander, Thomas (thomas.rettewander@jku.at), Institute for Injection Molding and Process automation, JKU Linz, Austria

Fischlschweiger, Michael (michael.fischlschweiger@engel.at), Center for Lightweight Composite Technologies, Engel Austria, Austria

Steinbichler, Georg (georg.steinbichler@jku.at), Institute for Injection Molding and Process automation, JKU Linz, Austria

17h10

8733 | Simultaneous Analysis and Design of Composite Structures

Parker, Sa-aadat (saparker@sun.ac.za), Stellenbosch University, South Africa

Groenwold, Albert A. (albertg@sun.ac.za), Stellenbosch University, South Africa

17h30

8747 | Systematic search for optimums using a methodical ap-proach coupled with genetic algorithm

Ngahane Nana, Liliane G. (nana@ikt.rwth-aachen.de), Chair and Institut for engineering Design , Germany

Thomas, Fieder (fieder@ikt.rwth-aachen.de), Chair and Institut for engineering Design , Germany

Stephanie, Dallmeier (dallmeier@ikt.rwth-aachen.de), Chair and Institut for engineering Design , Germany

Jonathan, Schmidt (schmidt@ikt.rwth-aachen.de), Chair and Institut for engineering Design , Germany

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Zhuzhell, Montano (montano@ikt.rwth-aachen.de), Chair and Institut for engineering Design , Germany

Jörg, Feldhusen (feldhusen@ikt.rwth-aachen.de), Chair and Institut for engineering Design , Germany

17h50

8572 | Maximization of the fundamental frequency of composite plates and cylinders using genetic algorithms

Trias, Daniel (dani.trias@udg.edu), Universitat de Girona, Spain

Maimí, Pere (pere.maimi@udg.edu), Universitat de Girona, Spain

Blanco, Norbert (norbert.blanco@udg.edu), Universitat de Girona, Spain

18h10

9336 | Optimal and robust design of glass and carbon fibre reinforced hybrid composites under flexural loading

Mehdi Kalantari (mehdi.kalantar@postgrad.curtin.edu.au), Curtin University, Australia

Chensong Dong (c.dong@curtin.edu.au), Curtin University, Australia

Ian J. Davies (i.davies@curtin.edu.au), Curtin University, Australia

18h30

9470 | An advantageous technique for the optimal reinforcement design

Baratta Alessandro (alebarat@unina.it), University of Naples "Federico II", Italy

Corbi Ileana (ilecorbi@unina.it), University of Naples "Federico II", Italy

Corbi Ottavia (corbi@unina.it), University of Naples "Federico II", Italy

Wednesday 17 June
Room VITUS IV

Session 23 - Finite elements

Session 23.1 | Chairs: Kubiak Tomasz (Lodz University of Technology, Poland)

11h00

9215 | FE formulation for a generalized quasi-3D layerwise HSDT for beams

J.A. Yarasca (jorgeyarasca@gmail.com), National University of Engineering, Peru

J.L. Mantari (jmantari@utec.edu.pe), Univestity of Enginering and Technology, Peru

11h20

6845 | Damage growth characteristics in composite glass-epoxy plate by Vibration analysis

Chellil A. (cchellil@yahoo.fr), Motor dynamic and vibroacoustic laboratory, University of Boumerdès, .Algeria., Algeria

Nour A. (nour@yahoo.fr), Motor dynamic and vibroacoustic laboratory, University of Boumerdès, .Algeria., Algeria

Lecheb S. (samir_lecheb@yahoo.fr), Motor dynamic and vibroacoustic laboratory, University of Boumerdès, .Algeria

Kebir H. (hocine@yahoo.fr), Laboratoire Roberval, Université de Technologie de Compiègne, UTC, France., Algeria

Mechakra H. (mechzakra@yahoo.fr), Motor dynamic and vibroacoustic laboratory, University of Boumerdès, .Algeria

11h40

9465 | A finite element formulation for viscoplasticity

De Angelis, Fabio (fabio.deangelis@unina.it), Dept of Structures for Engineering and Architecture, University of Naples Federico II, Italy

12h00

7837 | Modelling of beam - column composite joints at elevated temperature

Al-Jabri, Khalifa S. (aljabri@squ.edu.om), Sultan Qaboos University, Oman

Pillay, Prashob (m091846@squ.edu.om), Sultan Qaboos University, Oman

Waris, Muhammad B. (waris@squ.edu.om), Sultan Qaboos University, Oman

Pervez, Tasneem (tasneem@squ.edu.om), Sultan Qaboos University, Oman

12h20

9119 | Aero-elastic analysis of composite plate swept wings using the finite element method

Mahran, Mohamed A. (abdu_aerospace@eng.cu.edu.eg), Cairo University, Egypt

Negm, Hani (hnegm_cu@hotmail.com), Cairo University, Egypt

El-Sabbagh, Adel (aelsabbagh@eng.asu.edu.eg), Ain Shams University, Egypt

Maalawi, Karam (nrc.aero@gmail.com), National Research Center, Egypt

12h40

7926 | An approach based on the variable separation for finite element modeling of free edge effect for composite plates

Vidal P. (philippe.vidal@u-paris10.fr), University Paris Ouest, France

Gallimard L. (laurent.gallimard@u-paris10.fr), University Paris Ouest, France

Polit O. (olivier.polit@u-paris10.fr), University Paris Ouest, France

Session 23.2 | Chairs: Kubiak Tomasz (Lodz University of Technology, Poland)

14h00

9121 | Finite element formulation for stiffened structures

JL Mantari (jmantari@utec.edu.pe), Univestity of Enginering and Technology, Peru

14h20

9045 | FEM modeling cermet coatings post-treatment by pulsed high-concentrated energy fluxes

Solonenko, Oleg (o_solonenko@yahoo.com), Khristianovich Institute of Theoretical and Applied Mechanics, SB RAS, Novosibirsk, Russian Federation

Golovin, Alexey (swimen@yandex.ru), Khristianovich Institute of Theoretical and Applied Mechanics, SB RAS, Novosibirsk, Russian Federation

14h40

8999 | A multi-linear material based FEM for nonlinear analysis of steel-reinforced glulam timber

De Luca, Vincenzo (vincenzo.deluca@unibas.it), Università degli Studi della Basilicata, DIS, Viale dell'Ateneo Lucano 10, Potenza, Italy, Italy

Marano, Cosimo (cosimo.marano@unibas.it), Università degli Studi della Basilicata, SAFA, Viale dell'Ateneo Lucano 10, Potenza, Italy, Italy

15h00

8924 | Finite element analysis and study for the mechanical property predictions of Fiber Metal Laminates

Qi-Gang Han (hanqg@jlu.edu.cn), Jilin University, China

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Meng-Lu Chen (mlchen14@mails.jlu.edu.cn), Jilin University, China

Zheng Yi (yizheng14@mails.jlu.edu.cn), Jilin University, China

15h20

7576 | Evaluation of structural integrity of Type III hydrogen pressure vessel under impact loading by using finite element analysis

Han, Min-Gu (loded@hanmail.net), Chung-Ang University, Korea, South

Chang, Seung-Hwan (phigs4@cau.ac.kr), Chung-Ang University, Korea, South

15h40

7837 | Modelling of beam - column composite joints at elevated temperature

Al-Jabri, Khalifa S. (aljabri@squ.edu.om), Sultan Qaboos University, Oman

Pillay, Prashob (m091846@squ.edu.om), Sultan Qaboos University, Oman

Waris, Muhammad B. (waris@squ.edu.om), Sultan Qaboos University, Oman

Pervez, Tasneem (tasneem@squ.edu.om), Sultan Qaboos University, Oman

Session 23.3 | Chairs: Kubiak Tomasz (Lodz University of Technology, Poland)

16h30

7935 | Structural analysis of composites under manufacturing constraints

Mayer Natalie (mayer@lcc.mw.tum.de), Technische Universität München, Faculty of Mechanical Engineering, Germany

Klaus Drechsler (mayer@lcc.mw.tum.de), Technische Universität München, Germany

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Tamas Havar (mayer@lcc.mw.tum.de), AIRBUS Group Innovations, Munich, Germany

Jens Prowe (mayer@lcc.mw.tum.de), AIRBUS Group Innovations, Munich, Germany

16h50

7959 | A C⁰-continuous RZT beam element for the damped response of laminated structures

Treviso, Alessandra (alessandra.treviso@unical.it), University of Calabria/ Siemens Industry Software nv, Italy

Mundo, Domenico (d.mundo@unical.it), University of Calabria, Italy

Tournour, Michel (michel.tournour@siemens.com), Siemens Industry Software nv, Belgium

17h10

8263 | MPFEM simulation on the 2D compaction of binary Al/SiC particulate composites

Huang, Fen (389767834@qq.com), School of Materials and Metallurgy, Northeastern University, China

An, Xizhong (anxz@mail.neu.edu.cn), School of Materials and Metallurgy, Northeastern University, China

17h30

8709 | Design of a composite bucket seat used in automobiles

Jung Woo Noh (njw75@kitech.re.kr), Korea Institute of Industrial Technology, Korea, South

Song Hee Han (sh0921@jbnu.ac.kr), Chonbuk National University, Korea, South

Ki Young Kim (kkim@kitech.re.kr), Korea Institute of Industrial Technology, Korea, South

Seong Su Kim (sskim@jbnu.ac.kr), Chonbuk National University, Korea, South

17h50

8222 | Simplified Seismic Evaluation Method for Steel Members with Thin-walled Stiffened Box Sections

Zhang Jiandong (chokt5@gmail.com), Jiangsu Transportation Research Institute, China

18h10

8553 | Hybrid epoxy/carbon fibre composites containing nano/micro silica particles

Santos, Júlio C. (sanjulio2000@yahoo.com.br), Federal University of Sao Joao del Rei - UFSJ, Brazil
Vieira, Luciano M.G. (lucianomg@yahoo.com.br), Federal University of Sao Joao del Rei - UFSJ, Brazil
Panzera, Túlio H. (panzera@ufs.edu.br), Federal University of Sao Joao del Rei - UFSJ, Brazil
Schiavon, Marco A. (schiavon@ufs.edu.br), Federal University of Sao Joao del Rei - UFSJ, Brazil
Christoforo, André L. (alchristoforo@yahoo.com.br), Federal University of São Paulo - UFScar, Brazil
Scarpa, F. (f.scarpa@bristol.ac.uk), Federal University of Bristol, United Kingdom

Wednesday 17 June Room Morus II

Session 24 - Buckling problems

Session 24.1 | Chairs: Mauricio Caliri (University of São Paulo, Brazil) and Dozio, Lorenzo (lorenzo.dozio@polimi.it), Politecnico di Milano, Italy

11h00

9193 | Unilateral contact buckling of stiffened rectangular plate under non-uniform compression

Zhang, Ning (johnning@live.cn), College of Water Resources and Architectural Engineering, Northwest A&F University, China
Liu, Yong J. (steellyj@126.com), Bridge Engineering Institute, Chang'an University, China
Li, Hui (lihui2210@yeah.net), Bridge Engineering Institute, Chang'an University, China

11h20

9166 | Refined Buckling Analysis of Composite Plates Under Various Boundary Conditions

Dozio, Lorenzo (lorenzo.dozio@polimi.it), Politecnico di Milano, Italy
Vescovini, Riccardo (riccardo.vescovini@polimi.it), Politecnico di Milano, Italy

11h40

9049 | A NEW FOURIER-RELATED DOUBLE SCALE ANALYSIS FOR WRINKLING ANALYSIS OF THIN FILMS ON COMPLIANT SUBSTRATES

Qun Huang (huang.qun@whu.edu.cn), Wuhan University, China
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Wei Huang (w.huang@whu.edu.cn), Wuhan University, China
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Gaetano Giunta (gaetano.giunta@tudor.lu), Centre de Recherche Public Henri Tudor, Luxembourg
Salim Belouettar (salim.belouettar@tudor.lu), Centre de Recherche Public Henri Tudor, Luxembourg

12h00

8949 | NUMERICAL EVALUATION OF THE LOCAL BUCKLING MOMENT FOR PULTRUDED FRP BEAMS

Ascione, Francesco (fascione@unisa.it), University of Salerno, Italy
Feo, Luciano (l.feo@unisa.it), University of Salerno, Italy
Minghini, Fabio (fabio.minghini@unife.it), University of Ferrara, Italy
Tullini, Nerio (nerio.tullini@unife.it), University of Ferrara, Italy

12h20

7058 | Numerical and experimental investigation of post-buckling behavior of square cross-section composite tubes

Czapski, Pawel (pawel_czapski@interia.pl), Lodz University of Technology, Poland
Kubiak, Tomasz (tomasz.kubiak@p.lodz.pl), Lodz University of Technology, Poland
Urbaniak, Mariusz (mariusz.urbania@p.lodz.pl), Lodz University of Technology, Poland

12h40

7096 | Influence of boundary conditions on the behavior of composite channel-section columns under compression

Urbaniak, Mariusz (mariusz.urbania@p.lodz.pl), Lodz University of Technology, Poland
Teter, Andrzej (a.teter@pollub.pl), Lublin University of Technology, Poland
Kubiak, Tomasz (tomasz.kubiak@p.lodz.pl), Lodz University of Technology, Poland

Session 24.2 | Chairs: and Mauricio Caliri (University of São Paulo, Brazil) and Lanc, Domagoj (dlanc@riteh.hr), Faculty of Engineering, University of Rijeka, Croatia

14h00

7601 | Design formulae for buckling of Built-in-Free and Rotationally Restrained-Free Orthotropic plates
Javier Giménez Vila (jgv2@faculty.ie.edu), IE University, Spain

14h20

7681 | Effect of edge reinforcement and low-speed impact damage on the buckling stability of composite I-section beam loaded in shear

Gao Weicheng (gaoweicheng@hit.edu.cn), Harbin Institute of Technology, China
Zhang Jian (xiwang1988@yeah.net), Harbin Institute of Technology, China

14h40

7732 | Buckling performance of composite cylindrical shells subjected to axial compression loads

Wu Pengfei (wuzizhuyan@163.com), School of Aeronautics Science and Engineering, Beihang University, China
Cheng Xiaoquan (xiaoquan_cheng@buaa.edu.cn), School of Aeronautics Science and Engineering, Beihang University, China
Fan Zhou (fanzhouv5@126.com), Beijing Institute of Space Long March Vehicle, China

15h00

7741 | A Laminated Shell Model for Buckling Analysis of Laminated Glass Structures

Liang, Yating (yating.liang11@imperial.ac.uk), Imperial College London, United Kingdom
Lancaster, Franklin (Franklin@eckersleyocallaghan.com), Eckersley O'Callaghan, United States America
Izzuddin, Bassam A. (b.izzuddin@imperial.ac.uk), Imperial College London, United Kingdom

15h20

7783 | A beam formulation for nonlinear stability analysis of semi-rigid composite frames

Turkalj, G. (goran.turkalj@riteh.hr), University of Rijeka, Faculty of Engineering, Croatia
Lanc, D. (dlanc@riteh.hr), University of Rijeka, Faculty of Engineering, Croatia
Pešić, I. (ipesic@riteh.hr), University of Rijeka, Faculty of Engineering, Croatia
Brnić, J. (brnic@riteh.hr), University of Rijeka, Faculty of Engineering, Croatia

15h40

7860 | Nonlinear buckling analysis of thin-walled laminated composite beams with monosymmetric sections

Lanc, Domagoj (dlanc@riteh.hr), Faculty of Engineering, University of Rijeka, Croatia
Turkalj, Goran (goran.turkalj@riteh.hr), Faculty of Engineering, University of Rijeka, Croatia
Vo, Thuc P. (thuc.vo@northumbria.ac.uk), Faculty of Engineering and Environment, Northumbria University, Newcastle upon Tyne, United Kingdom
Pesic, Igor (ipesic@riteh.hr), Faculty of Engineering, University of Rijeka, Croatia

Session 24.3 | Chairs: Mauricio Caliri (University of São Paulo, Brazil) and Oktem, Ahmet S. (sinan_oktem@yahoo.com), Gebze Technical University, Turkey

16h30

8041 | FRP Shear Strengthening for the Web Panels of Steel Plate Girders

Al-Azzawi, Zaid M. K. (z.al-azzawi@ed.ac.uk), School of Engineering, The University of Edinburgh, United Kingdom
Stratford, Tim (tim.stratford@ed.ac.uk), School of Engineering, The University of Edinburgh, United Kingdom
Rotter, Michael (m.rotter@ed.ac.uk), School of Engineering, The University of Edinburgh, United Kingdom
Bisby, Luke (luke.bisby@ed.ac.uk), School of Engineering, The University of Edinburgh, United Kingdom

16h50

8054 | Semi-analytical panel buckling of cylindrical composite grid-stiffened structures comprising discrete stiffener formulations

Weber, Markus J. (markus.weber@airbus.com), Airbus Group Innovations, Germany
Middendorf, Peter (peter.middendorf@ifb.uni-stuttgart.de), University of Stuttgart, Institute of Aircraft Design (IFB), Germany

17h10

7991 | Imperfection sensitivity analysis of laminated folded plates using Koiter's asymptotic approach

Barbero Ever J. (ever.barbero@mail.wvu.edu), West Virginia University, Morgantown, WV, USA, United States America
Madeo Antonio (antonio.madeo81@unical.it), DIMES, University of Calabria, Italy
Zagari Giuseppe (giuseppe.zagari@gmail.com), DIMES, University of Calabria, Italy
Zinno Raffaele (raffaele.zinno@unical.it), DIMES, University of Calabria Italy
Zucco Giovanni (giovannizucco@gmail.com), DIMES, University of Calabria, Italy

17h30

9232 | Thermal Buckling of Empty Closed Cylindrical Nano-Tube Viruses under External Pressure

Karasoy, Taner (tanerkarasoy@hotmail.com), Gebze Technical University, Turkey
Oktem, Ahmet S. (sinan_oktem@yahoo.com), Gebze Technical University, Turkey

17h50

9129 | Characterisation of composite mesoporous membranes using nitrogen isothermal measurements

Shehu, Habiba (h.shehu@rgu.ac.uk), Robert Gordon University, United Kingdom
Okon, Edidiong (e.p.okon@rgu.ac.uk), Robert Gordon University, United Kingdom
Gobina, Edward (e.gobina@rgu.ac.uk), Robert Gordon University, United Kingdom

Wednesday 17 June Room QUERCUS

Session 26 - Thermal problems on Composite structures

Session 26.1 | Chairs: Nowak, Tomasz (tomasz.nowak@pl.abb.com), ABB Corporate Research, Poland and JL Mantari (jmantari@utec.edu.pe), Univestity of Engineering and Technology, Peru

11h00

9199 | The Effect of Temperature on Mechanical Properties of Carbon/Epoxy Composites

Im, Jae-Moon (jaemoon_im@naver.com), Hanbat National University, Mechanical Design Engineering, Korea, South
Shin, Kwang-Bok (shin955@hanbat.ac.kr), Hanbat National University, Mechanical Engineering, Korea, South
Hwang, Tae-Kyung (cais99@hanmail.net), Agency for Defense Development, Korea, South

11h20

9044 | Evolution of ultra-fine TiC-inclusions in TiC-NiCr cermet powders synthesized at different volume content of binder and high-energy impacts

Solonenko, Oleg (o_solonenko@yahoo.com), Khristianovich Institute of Theoretical and Applied Mechanics, Russian Federation
Ovcharenko, Vladimir (ove45@mail.ru), Institute of Strength Physics and Material Science, Siberian Branch of RAS, Tomsk, Russian Federation
Chesnokov, Anton (chae@ngs.ru), Khristianovich Institute of Theoretical and Applied Mechanics, SB RAS, Novosibirs, Russian Federation

11h40

6344 | Thermally Conductive Polymer Composites with Continuous Cu Thermal Dissipation Pathway

Yu, Seunggun (syu@kist.re.kr), Korea Institute of Science and Technology, Korea, South
Koo, Chong Min (koo@kist.re.kr), Korea Institute of Science and Technology, Korea, South

12h00

8662 | Influence of different type of carbon filler on structure, mechanical and thermal properties of rigid polyurethane foam

Ciecierska, Ewelina (ewelina.ciecierska@inmat.pw.edu.pl), Warsaw University of Technology, Poland
Jurczyk-Kowalska, Magdalena (magdalena.jurczyk@inmat.pw.edu.pl), Warsaw University of Technology, Poland
Bazarnik, Piotr (bazarnik123@gmail.com), Warsaw University of Technology, Poland
Gloc, Michał (michalgloc@poczta.fm), Warsaw University of Technology, Poland
Kowalski, Maciej (maciej.k@taps.com.pl), Transport Vehicles Upholstery Manufacturer TAPS - Maciej Kowalski, Poland
Krauze, Sławomir (krauze@taps.com.pl), Transport Vehicles Upholstery Manufacturer TAPS - Maciej Kowalski, Poland
Lewandowska, Małgorzata (malew@inmat.pw.edu.pl), Warsaw University of Technology, Poland

Session 26.2 | Chairs: Nowak, Tomasz (tomasz.nowak@pl.abb.com), ABB Corporate Research, Poland and JL Mantari (jmantari@utec.edu.pe), Univestity of Engineering and Technology, Peru

14h00

7569 | Thermomechanical behavior of aeronautical structural carbon epoxy composite submitted to a laser irradiation

Lacroix, Fabrice (fabrice.lacroix@isl.eu), ISL, France
Allheily, Vadim (vadim.allheily@isl.eu), ISL, France
Diener, Karsten (karsten.diener@isl.eu), ISL, France
Eichhorn, Alfred (alfred.eichhorn@isl.eu), ISL, France
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L'Hostis, Gildas (gildas.lhostis@uha.fr), UHA, laboratoire LPMT, France

14h20

8112 | Thermo-mechanical behavior of thick-walled laminated tubes used in High Voltage applications

Nowak, Tomasz (tomasz.nowak@pl.abb.com), ABB Corporate Research, Poland
Juszkiewicz, Grzegorz (grzegorz.juszkiewicz@pl.abb.com), ABB Corporate Research, Poland

14h40

8123 | A new HSDT for the thermoelastic bending analysis of laminated plates

JL Mantari (jmantari@utec.edu.pe), Univestity of Engineering and Technology, Peru
M Oré (moreg@uni.pe), National University of Engineering, Peru

15h00

8125 | Comparative study on thin and thick walled cylinder models subjected to thermo-mechanical loading

Juszkiewicz, Grzegorz (grzegorz.juszkiewicz@pl.abb.com), ABB Corporate Research, Poland
Nowak, Tomasz (tomasz.nowak@pl.abb.com), ABB Corporate Research, Poland

15h20

8126 | A new quasi-3D HSDT for the thermoelastic bending analysis of laminated plates

M Ore (moreg@uni.pe), National University of Engineering, Peru
JL Mantari (jmantari@utec.edu.pe), Univestity of Engineering and Technology, Peru

15h40

8207 | High temperature effect on impact behavior of sandwich wall boards with GFRP face sheets and a foam-web core

Wang, Lu (kevinlwang@hotmail.com), College of Civil Engineering, Nanjing Tech University, China
Liu, Weiqing (wanglu0122@163.com), College of Civil Engineering, Nanjing Tech University, China

Session 26.3 | Chairs: TÜZÜN, F.Nihal (nihaltuzun@yahoo.com), Hitit University, Turkey and JL Mantari (jmantari@utec.edu.pe), Univestity of Engineering and Technology, Peru

16h30

8551 | DETERMINATION OF OPTIMUM INSULATION THICKNESS IN BUILDINGS WITH USING DIFFERENT TYPES OF INSULATION MATERIALS IN ÇORUM CITY

KARAKOÇ, Volkan Ramis (volkanramis@hotmail.com), Hitit University, Turkey
TÜZÜN, F.Nihal (nihaltuzun@yahoo.com), Hitit University, Turkey

16h50

8604 | THERMO-VISCOELASTIC ANALYSIS OF GLARE

Abouhamzeh, Morteza (m.abouhamzeh@tudelft.nl), Delft University of Technology, Netherlands
Sinke, Jos (J.sinke@tudelft.nl), Delft University of Technology, Netherlands
Benedictus, Rinze (R.Benedictus@tudelft.nl), Delft University of Technology, Netherlands

17h10

8618 | The Sound Absorption and Thermal Insulation of Fiber-Reinforced Thermoplastic Composites

Gliscinska, Eulalia (klata@p.lodz.pl), Lodz University of Technology, Department of Material and Commodity Sciences and Textile Metrology, Poland
Michalak, Marina (marina@p.lodz.pl), Department of Material and Commodity Sciences and Textile Metrology, Poland
Krucinska, Izabella (izabella.krucinska@p.lodz.pl), Department of Material and Commodity Sciences and Textile Metrology, Poland

17h30

8635 | Application of Kubelka-Munk-Theory in the heating process of thermoplastic polymer matrix composites
Luca Murenu (Luca.Murenu@jku.at), 1Institute of Polymer Injection Molding and Process Automation, Johannes Kepler University, Altenbergerstrasse 69, 4020 Linz, Austria, Austria
Fischlschweiger Michael (michael.fischlschweiger@engel.at), Center for Lightweight Composite Technologies, ENGEL AUSTRIA GmbH, Steyrerstrasse 20, 4300 St. Valentin, Austria, Austria
Steinbichler Georg (georg.steinbichler@jku.at), 1Institute of Polymer Injection Molding and Process Automation, Johannes Kepler University, Altenbergerstrasse 69, 4020 Linz, Austria, Austria

Wednesday 17 June Room OLIVA

Session 29 - Experimental Methods

Session 29.1 | Chairs: Luciano, Raimondo (University of Cassino, Italy) and Strozzi, Matteo (Università di Modena e Reggio Emilia, Italy)

11h00

7758 | Application of resorbable PGF/PLA composite for orthopedic implants: In vitro characterization of mechanical properties

Hassan (hassan_fsd83@hotmail.com), Chung-Ang University, Korea, South
Kyung-Chae (kongche1@naver.com), Chung-Ang University, Korea, South
Min-Gu (loded@hanmail.net), Chung-Ang University, Korea, South
Seung-Hwan (phigs4@cau.ac.kr), Chung-Ang University, Korea, South

11h20

7815 | Flexural behaviour of unidirectional composite laminates with different tensile and compressive strength

Martínez Vicente, J.L. (juanluis.martinez@uclm.es), University of Castilla-La Mancha, Spain
Serna Moreno, M.C. (mariacarmen.serna@uclm.es), University of Castilla-La Mancha, Spain
Romero Gutiérrez, A. (ana.rgutierrez@uclm.es), University of Castilla-La Mancha, Spain

11h40

7841 | Microstructure and Mechanical Properties of Magnesium based Composites produced by SPS sintering

Mondet, Mathieu (mathieu.mondet@univ-lorraine.fr), French-German Research Institute of Saint-Louis (ISL), France
Barraud, Elodie (elodie.barraud@isl.eu), French-German Research Institute of Saint-Louis (ISL), France
Lemonnier, Sébastien (sebastien.lemonnier@isl.eu), French-German Research Institute of Saint-Louis (ISL), France
Allain-Bonasso, Nathalie (nathalie.allain@univ-lorraine.fr), Laboratoire d'Etude des Microstructures et de Mécanique des Matériaux (LEM3), France
Grosdidier, Thierry (thierry.grosdidier@univ-lorraine.fr), Laboratoire d'Etude des Microstructures et de Mécanique des Matériaux (LEM3), France

12h00

8138 | Infrared thermography to evaluate thermoplastic composites under bending load

Meola, C. (carmeola@unina.it), University of Naples Federico II, Italy
Carlomagno, G.M. (carmagno@unina.it), University of Naples Federico II, Italy
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Simeoli, G. (giorgio.simeoli@unina.it), University of Naples Federico II, Italy
Acierno, D. (acierno@unina.it), University of Naples Federico II, Italy
Russo, P. (pietro.russo@unina.it), National Council of Research, Italy

12h20

8600 | Bond behavior of cement matrix-based composites for strengthening of masonry structures

Alecci, Valerio (valerio.alecci@unifi.it), University of Florence, Italy
De Stefano, Mario (mario.destefano@unifi.it), University of Florence, Italy
Luciano, Raimondo (luciano@unicas.it), University of Cassino, Italy
Rovero, Luisa (luisa.rovero@unifi.it), University of Florence, Italy
Stipo, Gianfranco (gianfranco.stipo@unifi.it), University of Florence, Italy

12h40

8763 | experimental study on nonlinear dynamics of circular cylindrical shell

Zippo, Antonio (antonio.zippo@unimore.it), Università di Modena e Reggio Emilia, Italy

Pellicano, Francesco (francesco.pellicano@unimore.it), Università di Modena e Reggio Emilia, Italy

Barbieri, Marco (mark@unimore.it), Università di Modena e Reggio Emilia, Italy

Strozzi, Matteo (matteo.strozzi@unimore.it), Università di Modena e Reggio Emilia, Italy

Session 29.2 | Chairs: Rui de Oliveira (BASF SE, Germany) and Schubert, Dirk W, (Friedrich-Alexander University Erlangen-Nuremberg, Germany)

14h00 (Keynote)

9217 | Mechanical characterization of continuous fiber reinforced thermoplastic composites: Challenges and recommendations

Rui de Oliveira (rui.de-oliveira@basf.com), BASF SE, Germany

Henrik Schmidt (rui.de-oliveira@basf.com), BASF SE, Germany

Sebastian Allinger (rui.de-oliveira@basf.com), BASF SE, Germany

Martin Rheinfurth (rui.de-oliveira@basf.com), BASF SE, Germany

Adam Jaszkiwicz (rui.de-oliveira@basf.com), BASF SE, Germany

14h40

9227 | Fast fabrication method and evaluation of performance of Hybrid FRTPs for applying them to automotive structural members

Ben Goichi (ben.goichi@nihon-u.ac.jp), Nihon University, Japan

Sakata, Kazuhiro (sakata.kazuhiro@nihon-u.ac.jp), Nihon University, Japan

15h00

7721 | Bond Properties of Arch-type Steel Fibre-reinforced Cementitious Composites

Lee, Jae-Ho (jpwon111@msn.com), Konkuk University, Korea, South

Lee, Su-Jin (jpwon111@msn.com), Konkuk University, Korea, South

Won, Jong-Pil (jpwon@konkuk.ac.kr), Konkuk University, Korea, South

15h20

8886 | Influence of the pressure dependent contact area between electrode and composite surface on the electrical conductivity- novel approach to eliminate imperfect contacts in the testing procedure

Liu, Xianhu (liuxianhu1234@126.com), Friedrich-Alexander University Erlangen-Nuremberg, Germany

Schubert, Dirk W, (dirk.schubert@fau.de), Friedrich-Alexander University Erlangen-Nuremberg, Germany

15h40

7539 | Traction-compression biaxial testing for shear failure determination of a chopped glass reinforced polyester

Serna Moreno, M.C. (mariacarmen.serna@uclm.es), University of Castilla-La Mancha, Spain

Martínez Vicente, J.L. (juanluis.martinez@uclm.es), University of Castilla-La Mancha, Spain

López Cela, J.J. (juanjose.lopez@uclm.es), University of Castilla-La Mancha, Spain

Session General | Chairs: G. Belingardi (giovanni.belingardi@polito.it), Politecnico Di Torino, Italy and HAMADA, H (hhamada10294@gmail.com), Kyoto Institute of Technology, Japan

16h30

8991 | Shake-table tests and numerical simulation of plastered masonry-infilled steel frames with openings

Balojevic, Goran (goran.balojevic@gradst.hr), University of Split, Croatia

Radnic, Jure (jure.radnic@gradst.hr), University of Split, Croatia

Grgic, Nikola (nikola.grgic@gradst.hr), University of Split, Croatia

Matesan, Domagoj (domagoj.matesan@gradst.hr), University of Split, Croatia

16h50

7048 | Semi Impregnated Micro-Sandwich structures - SIMS - investigation on impact behaviour and damaging process

G. Belingardi (giovanni.belingardi@polito.it), Politecnico Di Torino, Italy

B. Alem (alem.beyene@polito.it), Politecnico Di Torino, Italy

J.Ji (jindong.ji@polito.it), Politecnico Di Torino, Italy

Brunetto M. (brunetto.martorana@crf.it), Centro Ricerche FIAT, Italy

17h10

7672 | Crashworthiness of Carbon/Aramid fiber filament winding composite tube

MA, Y (18818236962@163.com), Kyoto Institute of Technology, Japan
ZHANG, QJ (15262732003@163.com), Donghua University, China
XU, J (1016430995@qq.com), Donghua University, China
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YANG, YQ (amy_yuqiu_yang@dhu.edu.cn), Donghua University, China
HAMADA, H (hhamada10294@gmail.com), Kyoto Institute of Technology, Japan

17h30

7706 | Failure modelling of braided frames under bending loads

Sturm, Ralf (Ralf.Sturm@dlr.de), German Aerospace Center, Germany
Heieck, Frieder (heieck@ifb.uni-stuttgart.de), University of Stuttgart, Germany

17h50

8068 | Deep Drawing of Low Density Sandwich Laminates

Harhash, Mohamed (mohamed.harhash@tu-clausthal.de), TU Clausthal, Germany
Palkowski, Heinz (heinz.palkowski@tu-clausthal.de), TU Clausthal, Germany

Wednesday 17 June Room CASTANEA

Session 30 - Porous and cellular materials

Session 30.1 | Chairs: H. Mata (dem09005@fe.up.pt), INEGI - Faculty of Engineering, University of Porto, Portugal and
Xu, Hang (hang.xu@mail.mcgill.ca), McGill University, Canada

11h00

6712 | Porous piezoelectric ceramics

Eichhorn, Franziska (franziska.eichhorn@fau.de), University of Erlangen-Nürnberg, Germany

11h20

6905 | Influence of composition, strain rate and temperature on mechanical properties of novel 16Cr7Mn6Ni-TRIP-matrix composite 196 cpsi honeycomb structures under compressive deformation

Baumgart, Christine (Christine.Baumgart@iwt.tu-freiberg.de), TU Bergakademie Freiberg, Germany
Ehinger, David (David.Ehinger@iww.tu-freiberg.de), TU Bergakademie Freiberg, Germany
Krüger, Lutz (Krueger@ww.tu-freiberg.de), TU Bergakademie Freiberg, Germany

11h40

9180 | Experimental Evaluation of Behavior of a Sandwich Structure With Metal Foam Core by Penetration of Spherical Punch

H. Mata (dem09005@fe.up.pt), INEGI - Faculty of Engineering, University of Porto, Portugal
R. Natal Jorge (rnatal@fe.up.pt), DEMec - Faculty of Engineering, University of Porto, Portugal
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M. P. L. Parente (mparente@fe.up.pt), INEGI - Faculty of Engineering, University of Porto, Portugal
R. A. F. Valente (robertt@ua.pt), Department of Mechanical Engineering, University of Aveiro, Portugal
A. A. Fernandes (aaf@fe.up.pt), DEMec - Faculty of Engineering, University of Porto, Portugal

12h00

9174 | Effect of micropore clustering on mechanical properties of sintered porous metals

Cho, Yi Je (yijecho@pusan.ac.kr), Pusan National University, Korea, South
Son, Yong Guk (a489756@pusan.ac.kr), Pusan National University, Korea, South
Bae, Ki Chang (krship@pusan.ac.kr), Pusan National University, Korea, South
Oak, Jeong-Jung (ojj69@pusan.ac.kr), Pusan National University, Korea, South
Park, Yong Ho (yhpark@pusan.ac.kr), Pusan National University, Korea, South

12h20

9155 | BI-MATERIAL LATTICE WITH HIGH STIFFNESS AND STRENGTH FOR LOW THERMAL EXPANSION

Xu, Hang (hang.xu@mail.mcgill.ca), McGill University, Canada

Pasini, Damiano (damiano.pasini@mcgill.ca), McGill University, Canada

12h40

9015 | Sound absorption using composite layered medium for noise control

Kim, Bo seung (r32gtr@hanyang.ac.kr), Department of Mechanical Convergence Engineering, Hanyang University, Korea, South

Cho, Sung jin (sjcho0407@hanyang.ac.kr), Department of Mechanical Engineering, Hanyang University, Korea, South

Min, Dong ki (jhsmdk@hanmail.net), Department of Mechanical Engineering, Hanyang University, Korea, South

Park, Jun hong (parkj@hanyang.ac.kr), Department of Mechanical Convergence Engineering, Hanyang University, Korea, South

Session 30.2 | Chairs: Della, Christian N. (christian.della@glasgow.ac.uk), University of Glasgow, United Kingdom

And Duarte, I. (isabel.duarte@ua.pt), Department of Mechanical Engineering, TEMA, University of Aveiro, Portugal

14h00

7767 | Effect of interlayer on the effective performance of piezoelectric composites with porous matrix

Della, Christian N. (christian.della@glasgow.ac.uk), University of Glasgow, United Kingdom

Eng, Li Qiang (2059223E@student.gla.ac.uk), University of Glasgow, United Kingdom

Shu, Dong Wei (mdshu@ntu.edu.sg), Nanyang Technological University, Singapore

14h20

7833 | POLYURETHANE FOAM LOCLLY REINFORCED WITH FIBERS FOR CRYOGENIC APPLICATION

Young Ho Yu (younghomj@kaist.ac.kr), KAIST, Korea, South

Soohyun Nam (namsu0615@kaist.ac.kr), KAIST, Korea, South

Dai Gil Lee (dglee@kaist.ac.kr), KAIST, Korea, South

14h40

7882 | Organic-inorganic hybrid aerogels as composite materials for the emerging applications

Zielecka Maria (maria.zielecka@ichp.pl), Industrial Chemistry Research Institute, Poland

Legocka Izabella (izabella.legocka@ichp.pl), Industrial Chemistry Research Institute, Poland

Bujnowska Elzbieta (elzbieta.bujnowska@ichp.pl), Industrial Chemistry Research Institute, Poland

Suwała Katarzyna (katarzyna.suwała@ichp.pl), Industrial Chemistry Research Institute, Poland

Wenda Magdalena (magdalena.wenda@ichp.pl), Industrial Chemistry Research Institute, Poland

15h00

7909 | Performance evaluation of APM (Advanced Pore Morphology) foam filled tubes

Duarte, I. (isabel.duarte@ua.pt), Department of Mechanical Engineering, TEMA, University of Aveiro, Portugal

Vesenjak, M. (matej.vesenjak@um.si), Faculty of Mechanical Engineering, University of Maribor, Slovenia

Krstulović-Opara, L. (Lovre.Krstulovic-Opara@fesb.hr), Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of Split, Croatia

Ren, Z. (zoran.ren@um.si), Faculty of Mechanical Engineering, University of Maribor, Slovenia

15h20

9028 | Rapid Rotomolding of Integral Skin Cellular Polymeric Composites

Pop-Iliev, Remon (remon.pop-iliev@uoit.ca), UOIT-University of Ontario Institute of Technology, Canada

15h40

8098 | On the mechanical characterization of Spruce and Beech material parameters under impact loading.

Wouts, Jérémy (jeremy.wouts@etu.univ-valenciennes.fr), Laboratory LAMIH, University of Valenciennes / TN International, France

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Coutellier, Daniel (daniel.coutellier@univ-valenciennes.fr), Laboratory LAMIH, University of Valenciennes, France

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Haugou, Grégory (gregory.haugou@univ-valenciennes.fr), Laboratory LAMIH, University of Valenciennes, France

Rahmoun, Jamila (jamila.rahmoun@univ-valenciennes.fr), Laboratory LAMIH, University of Valenciennes, France

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Session 30.3 | Chairs: : Della, Christian N. (christian.della@glasgow.ac.uk), University of Glasgow, United Kingdom
And Duarte, I. (isabel.duarte@ua.pt), Department of Mechanical Engineering, TEMA, University of Aveiro, Portugal

16h30

8245 | Acoustic Luneburg lens as Sonar

Klm, Sang-Hoon (shkim@mmu.ac.kr), Mokpo National Maritime University, Korea, South

16h50

7027 | Programmable cellular solids

Babak Haghpahan (bhaghpahan@coe.neu.edu), Northeastern University, United States America

Hamid Ebrahimi (ebrahimi.mech@gmail.com), Northeastern University, United States America

Davood Mousanezhad (davood.mousanezhad@gmail.com), Northeastern University, United States America

Ashkan Vaziri (avaziri2@gmail.com), Northeastern University, United States America

17h10

9350 | Fabrication and Characterization of Fe doped TiO₂ Membranes for Ultrafiltration

Dong Sik Bae (dsbae7@changwon.ac.kr), Changwon National University, Korea, South

17h30

9182 | ANALYSIS OF COMPOSITE MEMBRANES IN THE SEPARATION OF EMULSIONS SUNFLOWER OIL/WATER

Zeni, M. (mzandrad@ucs.br), Caxias do Sul University, Brazil

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Biron, D. (dbiron@ucs.br), Caxias do Sul University, Brazil

Bergmann, C.P. (cbergmann@ppgem.ufersul.br), Universidade Federal do Rio Grande do Sul, Brazil

Wednesday 17 June Room NUX

Session 25.5 | Chairs: Pyl, Lincy (lincy.pyl@vub.ac.be), Vrije Universiteit Brussel (VUB), Belgium and Waas, Anthony M. (dcw@umich.edu), University of Michigan, United States America

11h00

7940 | Fatigue damage identification of fibre reinforced composites

Pyl, Lincy (lincy.pyl@vub.ac.be), Vrije Universiteit Brussel (VUB)-Department Mechanics of Materials and Constructions, Belgium

Zastavnik, Filip (filip.zastavnik@vub.ac.be), Vrije Universiteit Brussel (VUB), Belgium

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Danny Van Hemelrijck (danny.van.hemelrijck@vub.ac.be), Vrije Universiteit Brussel (VUB), Belgium

11h20

7958 | An evaluation of micro-scale based continuum damage mechanics models applied to low energy impact loads in composite materials

Sartorato, Murilo (murilosart@gmail.com), University of São Paulo, Brazil

Tita, Volnei (voltita@sc.usp.br), University of São Paulo, Brazil

11h40

7975 | Non linear elastic behaviour of glass fibre reinforced composites with delamination

Maroua Hammami (Maroua.Hammami.Etu@univ-lemans.fr), Ecole Nationale d'Ingenieur de Sfax, Tunisia

Abderrahim ElMahi (Abderrahim.ElMahi@univ-lemans.fr), Institut Universitaire de Technologie, France

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Mohamed Haddar (Mohamed.Haddar@enis.rnu.tn), Ecole Nationale d'Ingenieur de Sfax, Tunisia

12h00

8062 | Initiation of failure in a unidirectional fiber composite in a four point bend setup

Wind, Jens L. (jlw@eng.au.dk), Aarhus University, Denmark

Waas, Anthony M. (dcw@umich.edu), University of Michigan, United States America

Jensen, Henrik M. (hjm@eng.au.dk), Aarhus University, Denmark

12h20

8077 | Failure modes of unidirectional fiber reinforced materials under off-axis loading

Marotzke, Christian G. (christian.marotzke@bam.de), BAM, Fed. Inst. for Material Research & Testing, Germany
Feldmann, Vitus (Vitus.feldmann@bam.de), BAM, Fed. Inst. for Materials Research & Testing, Germany

12h40

8101 | Damage evaluation of hybrid sandwich panels after impacts

Chiara Colombo (chiara.colombo@polimi.it), Politecnico di Milano, Italy
Laura Vergani (laura.vergani@polimi.it), Politecnico di Milano, Italy
Heinz Palkowski (heinz.palkowski@tu-clausthal.de), TU Clausthal, Germany

Session 25.6 | Chairs: Cinefra, Maria (maria.cinefra@polito.it), Politecnico di Torino, Italy
And Hafeez, F (fhafeez@pi.ac.ae), The Petroleum Institute, United Arab Emirates

14h00

8107 | INFLUENCE OF PLY THICKNESS ON THE DAMAGE EVOLUTION IN OPEN-HOLE LAMINATE PLATES

Moure, Marta M. (mmmoure@ing.uc3m.es), Universidad Carlos III of Madrid, Spain
Garcia-Castillo, Shirley K. (sgcastil@ing.uc3m.es), Universidad Carlos III of Madrid, Spain
Sánchez-Sáez, Sonia (ssanchez@ing.uc3m.es), Universidad Carlos III of Madrid, Spain
Barbero, Ever J. (ever.barbero@mail.wvu.edu), West Virginia University, United States America
Barbero, Enrique (ebarbero@ing.uc3m.es), Universidad Carlos III of Madrid, Spain

14h20

8159 | FREE-VIBRATION ANALYSIS OF DELAMINATED SHELLS VIA UNIFIED FORMULATION

Cinefra, Maria (maria.cinefra@polito.it), Politecnico di Torino, Italy
Carrera, Erasmo (erasmo.carrera@polito.it), Politecnico di Torino, Italy
Valvano, Stefano (stefano.valvano@polito.it), Politecnico di Torino, Italy

14h40

8784 | Thermo-mechanical behavior of aeronautical composite materials exposed to fire

Bertheau Denis (denis.bertheau@lmpm.ensma.fr), Pprime Institute / Ensma, France
Lainé Eric (eric.laine@ensma.fr), Pprime Institute / Ensma, France
Denis Damien (damien.denis@ensma.fr), Pprime Institute / Ensma, France
De Vicente Rocío (devicente.rocio@gmail.com), University of Seville, Spain

15h00

8229 | Fibre reinforced concrete with a combination of polyolefin and steel-hooked fibers

Alberti (mgalberti@caminos.upm.es), Marcos G., Spain
Enfedaque (alejandro.enfedaque@upm.es), Alejandro, Spain
Galvez (jaime.galvez@upm.es), Jaime C., Spain

15h20

8576 | Simulation of Lightning Strike Damage in Carbon Nanotube Doped CFRP Composites

Soykasap, Omer (soykasap@aku.edu.tr), Afyon Kocatepe University, Turkey
Karakaya, Sukru (skarakaya@aku.edu.tr), Afyon Kocatepe University, Turkey
Colakoglu, Mehmet (mehmet.colakoglu@adu.edu.tr), Adnan Menderes University, Turkey

15h40

8675 | Experimental investigation of the interlaminar fracture of composite materials in mode III

Assaad Hani (assaad.hani@std.balamand.edu.lb), University Of Balamand, Lebanon
Cynthia Aoun (cynthia.aoun@std.balamand.edu.lb), University Of Balamand, Lebanon
Jihad Rishmany (jihad.rishmany@balamand.edu.lb), University Of Balamand, Lebanon
Issam Tawk (issam.tawk@balamand.edu.lb), University Of Balamand, Lebanon

Session 25.7 | Chairs: Cinefra, Maria (maria.cinefra@polito.it), Politecnico di Torino, Italy
And Hafeez, F (fhafeez@pi.ac.ae), The Petroleum Institute, United Arab Emirates

16h30

8681 | STUDY ON BEHAVIOUR OF GRE TUBES SUBJECTED TO REPEATED INDENTATION LOAD AT DIFFERENT LOCATIONS

Hafeez, F (fhafeez@pi.ac.ae), The Petroleum Institute, United Arab Emirates

AlMaskari, F (falmaskari@pi.ac.ae), The Petroleum Institute, United Arab Emirates

16h50

8692 | The properties of Composite Coatings under Lubrication Conditions with ZDDP and Ionic Liquid as a Lubricant

Madej, Monika (mmadej@tu.kielce.pl), Kielce University of Technology, Poland

Ozimina, Dariusz (ozimina@tu.kielce.pl), Kielce University of Technology, Poland

Marczewska - Boczkowska, Krystyna (boczgel@interia.pl), Lublin University of Technology, Poland

17h10

8694 | Damage development ahead of growing cracks in unidirectional fibre reinforced plastic composites

Vo, V.N.N (vietvatlieu@gmail.com), UNSW Australia, Australia

Crosky, A. (a.crosky@unsw.edu.au), UNSW Australia, Australia

17h30

8699 | Friction and wear behavior of the hybrid ceramic composites

Baranowicz, Paweł (pawel.baranowicz@ekstradent.pl), NZOZ EKSTRADENT, Poland

Wysokińska-Miszczyk, Joanna (joanna.wysokinska-miszczyk@umlub.pl), Medical University of Lublin, Poland

Ozimina, Dariusz (ozimina@tu.kielce.pl), Kielce University of Technology, Poland

Madej, Monika (mmadej@tu.kielce.pl), Kielce University of Technology, Poland

17h50

8718 | Fracture Mechanic Analysis of Bondings for Multi-Material Vehicle Components

Kickert, Reiner (reiner.kickert@leichtwerk.de), Leichtwerk AG, Germany

Weerts, Ulf (ulf.weerts@leichtwerk.de), Leichtwerk AG, Germany

Kloss, Thomas (thomas.kloss@leichtwerk.de), Leichtwerk AG, Germany

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Poster Session (Wednesday, Foyer Level -1, 09h00 - 13h00)

Please place your poster in a vacant booth, Tuesday afternoon or Wednesday Morning

Size up to A0

9168 | Dynamic response of Kevlar: Numerical analysis

Rodríguez-Millán, Marcos (mrmillan@ing.uc3m.es), University Carlos III of Madrid, Spain
López-Gálvez, Hector (hlopezga@ing.uc3m.es), University Carlos III of Madrid, Spain
Marco, Miguel (mimarcoe@ing.uc3m.es), University Carlos III of Madrid, Spain
Santiuste, Carlos (csantius@ing.uc3m.es), University Carlos III of Madrid, Spain
Miguelé, Henar (mhmiguel@ing.uc3m.es), University Carlos III of Madrid, Spain

8663 | Program ANSLACOP - Analitical solution of bending problem of layered composite plates

Rakocevic, Marina (marinara@ac.me), University of Montenegro, Faculty of Civil Engineering, Podgorica, Republic of Montenegro

8664 | Analysis of influences at layered composite rectangular plates obtained using the program ANSLACOP

Rakocevic, Marina (marinara@ac.me), University of Montenegro, Faculty of Civil Engineering, Podgorica, Republic of Montenegro

9092 | The mechanical properties of a friction-stir-welded aluminum alloy (6005A) having a double skin structure for railway applications

Choi, Dooho (dhchoi@krri.re.kr), Korea Railroad Research Institute, Korea, South

8980 | Filament winding of complex axisymmetric geometries: numerical simulation and fabrication using geodesic and non-geodesic paths

Vargas R Erik (erikvargasrojas@hotmail.com), Université de Franche-Comté, France

8050 | Fungal biocorrosion as a reason of the changes in the structure of thermoplastic polymer composites reinforced with plant fillers

Barton-Pudlik Joanna (jbarton@uni.opole.pl), Opole University, Poland
Czaja Krystyna (krystyna.czaja@uni.opole.pl), Opole University, Poland
Lipok Jacek (Jacek.Lipok@uni.opole.pl), Opole University, Poland

9074 | Thermomechanical behaviour of epoxy matrix reinforced by titanium oxide nanotubes (19. Nano-Composites)

Albuquerque, Ederson L. F. (ederson6@terra.com.br), CEFET/RJ, Brazil
Souza, Juliana P. B. (juliana_basilio@cefet-rj.br), CEFET/RJ, Brazil
Barros, Silvio R. (silvio.debarros@gmail.com), CEFET/RJ, Brazil

7971 | Numerical and experimental studies of IED protective panel subjected to IED blast

Dybcio, Paweł (pdybcio@wat.edu.pl), Military University of Technology, Poland
Barnat, Wiesław (wbarnat@wat.edu.pl), Military University of Technology, Poland

7988 | POSS/ethylene copolymer materials - study on structural, morphological and thermal properties

Groch, Paweł (pgroch@uni.opole.pl), Opole University, Faculty of Chemistry, Department of Chemical Technology and Polymer Chemistry, Poland
Dziubek, Katarzyna (katarzyna.dziubek@uni.opole.pl), Opole University, Faculty of Chemistry, Department of Chemical Technology and Polymer Chemistry, Poland
Czaja, Krystyna (Krystyna.Czaja@uni.opole.pl), Opole University, Faculty of Chemistry, Department of Chemical Technology and Polymer Chemistry, Poland

8048 | Optimization of the composition of ceramics Al₂O₃ and aramid fabric Twaron T750 in terms of stab resistance.

Sokołowski, Dariusz (dsokolowski@wat.edu.pl), Military University of Technology, Poland
Barnat, Wiesław (wbarnat@wat.edu.pl), Military University of Technology, Poland
Gieleta, Roman (rgieleta@wat.edu.pl), Military University of Technology, Poland

8058 | Numerical simulation of rigid body impact on airboat's composite bottom coating

Barnat, Wieslaw (wbarnat@wat.edu.pl), Military University of Technology, Poland
Trzaska, Malwina (mtrzaska@wat.edu.pl), Military University of Technology, Poland
Kiczko, Andrzej (akiczko@wat.edu.pl), Military University of Technology, Poland

8640 | Highly conductive polymer/metal/CNT composite fiber prepared by melt-spinning process

Tae Hwan Lim (thlim@kitech.re.kr), Korea Institute of Industrial Technology, Korea, South
Sang Young Yeo (miracle@kitech.re.kr), Korea Institute of Industrial Technology, Korea, South

8267 | Carbon Nano Composites: in-situ Polymerization Technique for preparing CNT/Graphene Nanocomposites at low Cost and by scalable Procedures

Martin Wildemann (wildemann@chemie.uni-hamburg.de), University of Hamburg, Germany
Georg Schlicke (Georg.Schlicke@lehvoss.de), Germany
Gerrit Luinstra (luinstra@chemie.uni-hamburg.de), University of Hamburg, Germany

9125 | The effect of chisel edge on drilling-induced delamination

Zarif Karimi, Navid (navid.zarif@unibo.it), University of Bologna, Italy
Minak, Giangiacomo (giangiacomo.minak@unibo.it), University of Bologna, Italy
Kianfar, Parnian (parnian.kianfar@gmail.com), Amirkabir University of Technology, Iran
Hossein Heidary (h_heidary@tafreshu.ac.ir), University of Tafresh, Iran

7583 | Study of a porous ceramic material impregnated with titania and silver for water purification

Acchar W. (acchar@dfte.ufrn.br), Post-graduation Program on Materials Science and Engineering-UFRN, Brazil
Santos I. (wacchar@gmail.com), Post-graduation Program on Materials Science and Engineering-UFRN, Brazil

9175 | Inter-laminar fracture toughness measurement of the mixed-mode delamination using acoustic emission technique

Zarif Karimi, Navid (navid.zarif@unibo.it), University of Bologna, Italy
Fotouhi, Mohamad (Fotouhi.mohamad@gmail.com), Amirkabir University of Technology, Iran
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Ahmadi Najafabadi, Mehdi (Ahmadin@aut.ac.ir), Amirkabir University of Technology, Iran

8128 | Effect of solid waste addition on the properties of soil-cement based composite

Amaral, Mateus C. (mateus.amaral2008@hotmail.com), UENF/PPGECM, Brazil
Bou-Issa, Ranny A. (holanda@uenf.br), UENF/GMCer, Brazil
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Holanda, José N.F. (jnfholanda@gmail.com), UENF/LAMAV, Brazil

6978 | Stochastic analysis of interfacial effects in polymeric nanocomposites

Silani, Mohammad (mohammadsilani@gmail.com), Institute of Structural Mechanics, Bauhaus--University Weimar, Germany
Almasi, Ashkan (almasi.ashkan@gmail.com), Institute of Structural Mechanics, Bauhaus--University Weimar, Germany
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9177 | MODELLING SPECIAL DRILL BIT GEOMETRY FOR CFRP COMPOSITES

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9122 | Effect of Epoxy Structures on Thermal Conductivities of Liquid Crystalline Epoxy/Alumina Composites

Kim, Jinhwan (jhkim@skku.edu), Sungkyunkwan University, Korea, South

8052 | Experimental and numerical assessment of two FRP-based strengthening systems for earthquake damaged precast reinforced concrete wall panels

Dan, Daniel (daniel.dan@upt.ro), Politehnica University Timisoara, Romania
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Valeriu, Stoian (valeriu.stoian@upt.ro), Politehnica University Timisoara, Romania

9161 | Numerical study of the static deflection of a sandwich beam in the complex material

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Chevalier Y. (yvon.chevalier@supmeca.fr), Higher Institute of Mechanics of Paris (ISMEP), France

8085 | Failure mechanisms of sandwich beams with stainless steel mesh faces and aluminum foam core under static and dynamic loading conditions

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9552 | Dynamic analysis and control of laminated soft core sandwich panels with active piezoelectric elements

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9582 | The Influence of Residual Stresses on the Micro-Crack Propagation Direction

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9196 | Alkali resistance of GFRP reinforcing bars slightly damaged by high temperatures

Moon, Doyoung (dymoon@ks.ac.kr), Kyungshung University, Korea, South
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9079 | A Hybrid Sandwich Design for Supporting a Large Vessel in the Ship Repair Industry

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Choi, Dooho (jylim@krri.re.kr), Korea Railroad Research Institute, Korea, South
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7836 | Influence of the filler particles on Polymer Electrolyte Membranes

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8575 | Polyamide/Silica Composite Membrane Applied to Separation of Aqueous Isopropanol Solution by Pervaporation Process

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Lai, Juin-Yih (jylai@cycu.edu.tw), Chung Yuan University, Taiwan

8370 | Electrospun MTMS/PVDF Nanofibrous Membranes for CO2 Absorption in Membrane Contactor applications

Yi-Feng Lin (yflin@cycu.edu.tw), Chung Yuan Christian University, Taiwan

8225 | Experimental and theoretical investigation on shear of steel-polypropylene fiber reinforced high performance concrete deep beams with and without openings

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7723 | The Importance of Sample Preparation of Wood Polymer Composites (WPC) for FTIR Spectroscopy and Thermal Analyses

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7088 | Numerical-experimental failure analysis of composite columns with open cross-sections under uniform compression

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Jonak, Jozef (j.jonak@pollub.pl), Lublin University of Technology, Poland

7090 | Failure analysis of thin-walled composite channel section column

Debski, Hubert (h.debski@pollub.pl), Lublin University of Technology, Poland
Jonak, Jozef (j.jonak@pollub.pl), Lublin University of Technology, Poland

9171 | The simulating study of piezoelectricity on an GaN nanorod under applied lateral forces

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Nai-Jen Cheng (njcheng@kuas.edu.tw), National Kaohsiung University of Applied Sciences, Taiwan

7655 | Nanocomposite Based Solid Polymer Electrolytes

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8093 | Novel carbon nanostructures as modifiers of elastic and electrical properties of polyvinylalcohol composites

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Kokars, V. (zicans@ktf.rtu.lv), Riga Technical University, Faculty of Materials Sciences and Applied Chemistry, Department of Chemistry, Latvia

8223 | Hybrid steel-polypropylene fiber for shear strengthening of reinforced high performance concrete beams with and without openings

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Barnat-Hunek, Danuta (d.barnat-hunek@pollub.pl), Lublin University of Technology, Faculty of Civil Engineering and Architecture, Poland

7875 | THE ULTIMATE RESISTANCE MOMENT OF REINFORCED CONCRETE BEAMS STRENGTHENED WITH CFRP

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Valivonis, Juozas (juozas.valivonis@vgtu.lt), Vilnius Gediminas Technical University, Lithuania

6884 | One-step synthesis and characterization of nanocomposite based on carbon nanotubes/aluminum and their reinforcement properties

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Jordan Del Nero (jordan@ufpa.br), Federal University of Para, Brazil
Vieira, Manuel F. (mvieira@fe.up.pt), University of Porto, Portugal

9116 | The fabrication of polyamide/polyacrylonitrile composite hollow fiber membranes via interfacial polymerization for pervaporation

Tsai, Hui-An (huian@tiit.edu.tw), Dept. of Creative Fashion Design, Taoyuan Innovation Institute of Technology, Taoyuan, Taiwan, Taiwan
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Lai, Juin-Yih (jylai@cycu.edu.tw), R&D Center for Membrane Technology, Chung-Yuan University, Taoyuan, Taiwan, Taiwan

7622 | EVALUATION OF THREE-POINT BENDING FRACTURE TESTS OF SELECTED CONCRETE - PART I: MECHANICAL FRACTURE PARAMETERS

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Keršner Zbyněk (kersner.z@fce.vutbr.cz), Brno University of Technology, Faculty of Civil Engineering, Institute of Structural Mechanics, Czech Republic

7813 | Finite Element Analysis of the Effects of Polymer Shrinkage on Composite Fracture Toughness

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Sadeghipour, Keya (keya@temple.edu), Temple University, United States America
Baran, George (grbaran@temple.edu), Temple University, United States America

9055 | Analysis of Wear Properties of Hot-Pressed Al-Zn-Mg-Cu Metal Matrix Composite by Adding Al-Si/SiCp Composite Powder

Eun Sun Lee (ilorangeli@pusan.ac.kr), Pusan National University, Korea, South
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Yong Ho Park (yhpark@pusan.ac.kr), Pusan National University, Korea, South

9053 | Fabrication and Analysis of Mechanical Property of Al-Si/SiCp + Al-Mg MMC bi-reinforced with Ti whisker by Powder Metallurgy

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Yong ho Park (yhpark@pusan.ac.kr), Pusan National University, Korea, South

7683 | EVALUATION OF THREE-POINT BENDING FRACTURE TESTS OF SELECTED CONCRETE - PART II: RESULTS OF ACOUSTIC EMISSION METHOD

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Pazdera Luboš (pazdera.l@fce.vutbr.cz), Brno University of Technology, Faculty of Civil Engineering, Czech Republic

8725 | Progressive Failure Analysis of Adhesive Joints of Composite Pressure Vessels Using CZM and VBA

Kang, SeungGu (kseunggu@naver.com), Graduate School of Mechanical Design Engineering, Hanbat Nat'l Univ., Korea, South
Shin, KwangBok (shin955@hanbat.ac.kr), Dept. of Mechanical Engineering, Hanbat Nat'l Univ., Korea, South
Hwang, TaeKyoung (cais99@hanmail.net), Agency for Defense Development, Korea, South

8647 | Poly(4-methyl-1-pentene) / metal-organic framework MIL-100 mixed matrix membranes for gas separation

Ywu-Jang Fu (fuj@mail.vnu.edu.tw), Vanung University, Taiwan
Li-Hua Cheng (chenglihua@zju.edu.cn), ZJU, China
Chia-Her Lin (chiaher@cycu.edu.tw), CYCU, Taiwan
Yu-Ching Huang (kay088985@gmail.com), CYCU, Taiwan
Chien-Chieh Hu (cchu@cycu.edu.tw), CYCU, Taiwan
Kueir-Rarn Lee (krlee@cycu.edu.tw), CYCU, Taiwan
Juin-Yih Lai (jylai@cycu.edu.tw), CYCU, Taiwan

8723 | INVESTIGATION OF SOUND ABSORPTION PROPERTIES OF ENVIRONMENTALLY MODIFIED AGAVE AMERICANA FIBERS / POLYURETHANE COMPOSITES

Dilara Kocak (dkocak@marmara.edu.tr), Marmara University, Turkey
Nigar Merdan (nmerdan@ticaret.edu.tr), Istanbul Commerce University, Turkey

9048 | Finite Element Investigation on Load-Stress Experiment of Homogeneous GaN Nano-Bridge

Shang-Chao Hung (schung99@gmail.com), Shih Chien University Kaohsiung Campus, Taiwan
Yi-Cheng Hsu (ychsux@mail.npust.edu.tw), National Pingtung University of Science and Technology, Taiwan
Nai-Jen Cheng (njcheng@kuas.edu.tw), National Kaohsiung University of Applied Sciences, Taiwan

8809 | Influence of nano TiO₂ on selected fire properties of beech plywood

Jaskolowski, Waldemar (wjaskolowski@aol.pl), The Main School of Fire Service, Poland
Maminski, Mariusz (mariusz_maminski@sggw.pl), Warsaw Agricultural University - SGGW, Poland
Borysiuk, Piotr (piotr_borysiuk@sggw.pl), Warsaw Agricultural University - SGGW, Poland

7885 | Some problems of modeling of hyperbolic heat conduction in laminates by using TAT
Radzikowska Alina (alina.radzikowska@p.lodz.pl), Technical University of Lodz, Poland

7892 | Simulation of process-induced failure behavior in cutting operations of hybrid FRP-metal composites by means of FEM

Dröder, Klaus (k.droeder@tu-bs.de), Institute of Machine Tools and Production Technology, University of Braunschweig, Germany

Gebken, Tobias (t.gebken@tu-bs.de), Institute of Machine Tools and Production Technology, University of Braunschweig, Germany

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Plath, Armin (armin.plath@volkswagen.de), Volkswagen AG, Germany

8631 | Influence of the crack length on mode III results

Bonhomme, Jorge (bonhomme@uniovi.es), University of Oviedo, Spain

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Viña, Jaime (jaure@uniovi.es), University of Oviedo, Spain

Argüelles, Antonio (antonio@uniovi.es), University of Oviedo, Spain

Thursday 18 June
Room MORUS IV

Session 35 - Fibre Metal Laminates and Composites

Session 35.1 | Chairs: Mania, R.J. (Radoslaw.Mania@p.lodz.pl), Lodz University of Technology, Poland

11h00

7518 | Study on Behavior of Compressive Deformation and Failure of Mo Fibres Reinforced TiAl Based Composites

Sun, Dongli (sundl1958@hit.edu.cn), Harbin Institute of Technology, China

Wang, D Q (wangdaqun@hit.edu.cn), Harbin Institute of Technology, China

Wang, Q (wqhit@hit.edu.cn), Harbin Institute of Technology, China

11h20

9224 | FEM simulation of bending aspect in Fiber Metal Laminates

Ostapiuk, M. (m.ostapiuk@pollub.pl), Lublin University of Technology, Poland

Surowska, B. (b.surowska@pollub.pl), Lublin University of Technology, Poland

Bienias, J. (j.bienias@pollub.pl), Lublin University of Technology, Poland

Majerski, K. (k.majerski@pollub.pl), Lublin University of Technology, Poland

11h40

9225 | Failure analysis of Fiber Metal Laminates after bending strength test

Surowska, B. (b.surowska@pollub.pl), Lublin University of Technology, Poland

Ostapiuk, M. (m.ostapiuk@pollub.pl), Lublin University of Technology, Poland

Bienias, J. (j.bienias@pollub.pl), Lublin University of Technology, Poland

Majerski, K. (k.majerski@pollub.pl), Lublin University of Technology, Poland

12h00

7519 | Deformation and fracture behavior of Mo/TiAl composites under uniaxial tensile loading

Wang, Qing (wqhit@hit.edu.cn), Harbin Institute of Technology, China

Wang, D Q (wangdaqun@hit.edu.cn), Harbin Institute of Technology, China

Sun, Dongli (sundl1958@hit.edu.cn), Harbin Institute of Technology, China

12h20

7675 | Experimental versus analytical-numerical study of buckling and postbuckling of open cross section FML profiles

Mania, R.J. (Radoslaw.Mania@p.lodz.pl), Lodz University of Technology, Poland

12h40

7703 | On suppressing the indentation failure of glass-epoxy cross ply laminates by elasto-plastic interleaves

Periyasamy, Manikandan (manikand003@e.ntu.edu.sg), Nanyang Technological University, Singapore

Gin Boay, Chai (mgbchai@pmail.ntu.edu.sg), Nanyang Technological University, Singapore

Session 20.4 | Chairs: Silva, Arlindo (arlindo.silva@tecnico.ulisboa.pt), Instituto Superior Técnico, University of Lisbon, Portugal

14h00

9078 | Study on mechanical properties and bio-degradability of matrix modified banana fiber/ Polyester composite

Rai, Bhuvneshwar (bhuvan_4u15@yahoo.com), Shriram Institute for Industrial Research, Delhi, India

Kumar, Gulshan (dhamijagulshan@yahoo.com), G. G. I. P. University, Dwarka, Delhi, India

Diwan, R. K. (bhuvaneshwarrai1@gmail.com), Shriram Institute for Industrial Research, Delhi, India

14h20

8754 | INFLUENCE OF RTM, HAND LAY-UP AND AUTOCLAVE MANUFACTURING PROCESSES IN VEGETABLE FIBRE REINFORCED COMPOSITE MECHANICAL PROPERTIES EXPOSED TO UV RADIATION

Furtado, Samuel (samuel.furtado@tecnico.ulisboa.pt), Instituto Superior Técnico, University of Lisbon, Portugal

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Araujo, Aurélio (aurelio.araujo@tecnico.ulisboa.pt), Instituto Superior Técnico, University of Lisbon, Portugal

Esteves, José (jesteves@fe.up.pt), Faculdade Engenharia, University of Porto, Portugal

14h40

9355 | Characterisation of hybrid flax carbon fibre composites

Theofanis Ampatzidis (t.ampatzidis@cranfield.ac.uk), Cranfield University, Greece
Hrushikesh Abhyankar (h.a.abhyankar@cranfield.ac.uk), Cranfield University, India

15h00

7772 | Experimental and Numerical Investigation of Paperboard Creasing

Li, Yujun (yujun.li@rwth-aachen.de), Institute of Applied Mechanics, RWTH Aachen University, Germany
Simon, Jaan W. (jaan.simon@rwth-aachen.de), Institute of Applied Mechanics, RWTH Aachen University, Germany
Stapleton, Scott (scott.stapleton@ifam.rwth-aachen.de), RWTH Aachen University, Germany
Reese, Stefanie (stefanie.reese@rwth-aachen.de), Institute of Applied Mechanics, RWTH Aachen University, Germany

Thursday 18 June Room VITUS I

Session 36.3 | Chairs: Dyzia, Maciej (maciej.dyzia@polsl.pl), Silesian University of Technology, Poland
And Dolata, Anna J. (anna.dolata@polsl.pl), Silesian University of Technology, Poland

11h00

7918 | State of the Art - Adaptive Structures, Highly Integrated Structures

Jörg Feldhusen (feldhusen@ikt.rwth-aachen.de), RWTH Aachen University, Germany
Zhuzhell Montano (montano@ikt.rwth-aachen.de), RWTH Aachen University, Germany
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Liliane Ngahane Nana (nana@ikt.rwth-aachen.de), RWTH Aachen University, Germany

11h20

8064 | An investigation of the effect of silk fabric structure on the mechanical property of the insert molded FRP

Kiyoshi FUJIWARA (fujiwara.k@mazda.co.jp), Mazda Motor Corporation, Japan
Erika SUZUKI (erika-suzuki@toyugiken.co.jp), Toyugiken Co., Ltd., Japan
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Yuqiu YANG (amy_yuqiu_yang@dhu.edu.cn), Donghua University, China
Hiroyuki HAMADA (hhamada10294@gmail.com), Kyoto Institute of Technology, Japan

11h40

8116 | AlSi/SiCp+GRp hybrid composites obtained by suspension method

Dyzia, Maciej (maciej.dyzia@polsl.pl), Silesian University of Technology, Poland
Dolata, Anna J. (anna.dolata@polsl.pl), Silesian University of Technology, Poland

12h00

8119 | THE SELECTION OF THE PHASE COMPOSITION OF THE COMPOSITE DESIGNATED FOR PISTONS

Dolata, Anna J. (anna.dolata@polsl.pl), Silesian University of Technology, Poland
Dyzia M. (maciej.dyzia@polsl.pl), Silesian University of Technology, Poland

12h20

8705 | Development of carbon fiber/polypropylene composite bipolar plates for polymer electrolyte membrane fuel cell

Song Hee Han (sh0921@jbnu.ac.kr), Chonbuk National University, Korea, South
Seung Jin See (tltdmws8706@jbnu.ac.kr), Chonbuk National University, Korea, South
Ha Eun Lee (gkdms5797@jbnu.ac.kr), Chonbuk National University, Korea, South
Seong Su Kim (sskim@jbnu.ac.kr), Chonbuk National University, Korea, South

Session General | Chairs: Silva, Jose M. (jose.silva@rmit.edu.au), RMIT University, Australia

14h00

7893 | Research of static and dynamic properties of composite structures manufactured with polyurethane resins

Głodzik, Marcin (mar_glo@wp.pl), AGH University of Science and Technology, Poland
Kita, Paweł (pkita@agh.edu.pl), AGH University of Science and Technology, Poland
Pociecha, Daniel (danpoc@agh.edu.pl), AGH University of Science and Technology, Poland
Żaba, Krzysztof (krzyzaba@agh.edu.pl), AGH University of Science and Technology, Poland

14h20

9194 | The influence of metallic and non-metallic fillers on the polymer laminate structures

Puchlerska, Sandra (spuchler@agh.edu.pl), AGH University of Science and Technology, Poland
Kita, Paweł (pkita@agh.edu.pl), AGH University of Science and Technology, Poland
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Żaba, Krzysztof (krzyzaba@agh.edu.pl), AGH University of Science and Technology, Poland
Pociecha, Daniel (danpoc@agh.edu.pl), AGH University of Science and Technology, Poland

14h40

7891 | Temperature influence on fatigue and dynamic properties of epoxy laminate composites

Pociecha, Daniel (danpoc@agh.edu.pl), AGH University of Science and Technology, Poland
Kita, Paweł (pkita@agh.edu.pl), AGH University of Science and Technology, Poland
Głodzik, Marcin (mar_glo@wp.pl), AGH University of Science and Technology, Poland
Żaba, Krzysztof (krzyzaba@agh.edu.pl), AGH University of Science and Technology, Poland

15h00

8820 | Improving Structural Damping of Composites by Viscoelastic Inclusions

Silva, Jose M. (jose.silva@rmit.edu.au), RMIT University, Australia
Blacklock, Matthew (matthew.blacklock@rmit.edu.au), RMIT University, Australia
Wang, Chun (chun.wang@rmit.edu.au), RMIT University, Australia

15h20

8652 | On the Modal Acoustic Emission testing of composite structures

DAHME, Fethi (f.dahmene@institutdesoudure.com), Institut de Soudure, France
YAACOUBI, Slah (s.yaacoubi@institutdesoudure.com), Institut de Soudure, France

15h40

7545 | EFFECT OF TRANSVERSE CRACKING IN [0m/90n]s COMPOSITE LAMINATES WITH HYGROTHERMAL CONDITIONS - DESORPTION CASE -

Mohamed khodjet-kesba (mkhojet@hotmail.fr), Laboratoire des sciences aéronautiques, Algeria
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Billel Boukert (bilanosky@hotmail.fr), Laboratoire des sciences aéronautiques, Algeria

Thursday 18 June Room VITUS II

Session 25.8 | Chairs: Bruyneel, Michael (michael.bruyneel@siemens.com), SAMTECH (A Siemens Company), Belgium

11h00

8108 | Validation of the SAMCEF material models for inter and intra-laminar damages in laminated composites made of NCF plies

Bruyneel, Michael (michael.bruyneel@siemens.com), SAMTECH (A Siemens Company), Belgium
Delsemme, Jean-Pierre (michael.bruyneel@siemens.com), SAMTECH (A Siemens Company), Belgium
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Lequesne, Cédric (michael.bruyneel@siemens.com), SAMTECH (A Siemens Company), Belgium
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Naito, Tadashi (michael.bruyneel@siemens.com), Honda R&D, Japan
Urushiyama, Yuta (michael.bruyneel@siemens.com), Honda R&D, Japan

11h20

8829 | Influence of residual stresses on crack propagation in ceramic particulate composites

Nahlik Lubos (nahlik@ipm.cz), Institute of Physics of Materials ASCR, Czech Republic
Majer Zdenek (majer@fme.vutbr.cz), Faculty of Mechanical Engineering, Brno University of Technology, Czech Republic
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Pletz Martin (martin.pletz@unileoben.ac.at), Montanuniversität Leoben, Austria
Hutar Pavel (hutar@ipm.cz), Institute of Physics of Materials ASCR, Czech Republic

11h40

8801 | Progressive Fatigue Damage Analysis of CFRP under Multiaxial Stress State

Song Zhou (dagaier@163.com), Harbin Institute of Technology, China
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Jingran Ge (jrge@yahoo.cn), Harbin Institute of Technology, China
Xiaojie Chen (123200838@qq.com), Harbin Institute of Technology, China

12h00

6837 | Dynamic prediction fatigue life of composite wind turbine blade

Samir, Lecheb (samir_lecheb@yahoo.fr), University of Boumerdes, Algeria
Abdelkader, Nour (c.chellil@yahoo.fr), University of Boumerdes, Algeria
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Hamza, Mechakra (h.mechakra@yahoo.fr), University of Boumerdes, Algeria
Hichem, Ghanem (g_hichem@yahoo.fr), University of Boumerdes, Algeria
Hocine, Kebir (h.kebir@yahoo.fr), University of Compiene, France

12h20

8657 | Analysis for delamination failure at the root end of the composite wind turbine blade

Lee, Hak Gu (hagulee@kims.re.kr), KIMS, Korea, South
Park, Jisang (jspark@kims.re.kr), KIMS, Korea, South
Kang, Min Gyu (medsgn@kims.re.kr), KIMS, Korea, South

12h40

8821 | Deterioration Mechanism of Pultruded GFRP Profiles in Marine Environment Based on Microstructure Analysis

Fang, Yuan (yuanfang@njtech.edu.cn), College of Civil Engineering, Nanjing Tech University, China
Huo, Ruili (ruilihuo@njtech.edu.cn), College of Civil Engineering, Nanjing Tech University, China
Yang, Shulan (zhuxuan0826@126.com), College of Civil Engineering, Nanjing Tech University, China
Liu, Weiqing (wqliu@njtech.edu.cn), College of Civil Engineering, Nanjing Tech University, China

Thursday 18 June
Room VITUS III

Session 28 - Vibrations

Session 28.1 | Chairs: Della, Christian N. (christian.della@glasgow.ac.uk), University of Glasgow, Singapore
And Filippi, Matteo (matteo.filippi@polito.it), Politecnico di Torino, Italy

11h00

6933 | Free Vibration Analysis of Composite Beams with Overlapping Delaminations under Axial Compressive Load

Della, Christian N. (christian.della@glasgow.ac.uk), University of Glasgow, Singapore

11h20

9095 | Variable Kinematic 1D Theories for Flutter Analysis of Wings and Blades

Carrera, Erasmo (erasmo.carrera@polito.it), Politecnico di Torino, RMIT University, Italy
Filippi, Matteo (matteo.filippi@polito.it), Politecnico di Torino, Italy

11h40

8931 | Plate Vibrations Using Static Analysis

Eisenberger, Moshe (cvmrmosh@technion.ac.il), Technion - Israel Inst. Technology, Israel
Deutsch, Aharon (tvrui@gmail.com), Technion - Israel Inst. Technology, Israel

12h00

7657 | Dynamic Characterization of a Composite Concrete/GFRP Slab

Junges, Paulo (paulojunges@gmail.com), Federal University of Santa Catarina (UFSC), Brazil
Santos Neto, Almir B. S. (almir@unipampa.edu.br), Federal University of Pampa (UNIPAMPA), Brazil
La Rovere, Henriette L. (henriettelarovere@gmail.com), Federal University of Santa Catarina (UFSC), Brazil

12h20

7627 | Determining of Characteristics of Subsystems of Mechatronic System by Exact and Approximate Methods and Their Correction

Buchacz, Andrzej (andrzej.buchacz@polsl.pl), Silesian University of Technology, Faculty of Mechanical Engineering, Institute of Engineering Processes
Automation and Integrated Manufacturing Systems, Poland

Session 28.2 | Chairs: Jędrysiak, Jarosław (jarek@p.lodz.pl), Łódź University of Technology, Poland
And Strozzi, Matteo (matteo.strozzi@unimore.it), Università di Modena e Reggio Emilia, Italy

14h00

7797 | Tolerance modelling of three-layered composite structures with a periodic microstructure

Jędrysiak, Jarosław (jarek@p.lodz.pl), Łódź University of Technology, Poland
Marczak, Jakub (jakub.marczak@p.lodz.pl), Łódź University of Technology, Poland

14h20

9404 | A novel spectral dynamic stiffness method for exact modal analysis of composite plates and plate assemblies with mass and spring attachments

Liu, Xiang (xiangliu06@gmail.com), City University London, United Kingdom
Banerjee, J. R. (J.R.Banerjee@city.ac.uk), City University London, United Kingdom

14h40

8762 | PPF MIMO Control of a Composite Carbon Fiber Plate

Zippo, Antonio (antonio.zippo@unimore.it), Università di Modena e Reggio Emilia, Italy
Pellicano, Francesco (francesco.pellicano@unimore.it), Università di Modena e Reggio Emilia, Italy
Barbieri, Marco (mark@unimore.it), Università di Modena e Reggio Emilia, Italy
Strozzi, Matteo (matteo.strozzi@unimore.it), Università di Modena e Reggio Emilia, Italy

15h00

8186 | Vibration analysis of a composite concrete/GFRP slab induced by human activities

Junges, Paulo (paulojunges@gmail.com), Universidade Federal de Santa Catarina, Brazil
Pinto, R. C. A. (rcapinto@gmail.com), Universidade Federal de Santa Catarina, Brazil
La Rovere, Henriette L. (henriettelarovere@gmail.com), Universidade Federal de Santa Catarina, Brazil

Thursday 18 June Room VITUS IV

Session 23.4 | Chairs: Larbi Walid (walid.larbi@cnam.fr), Conservatoire National des Arts et Métiers, France
And Mirza, Olivia (o.mirza@uws.edu.au), University of Western Sydney, Australia

11h00

8514 | Finite element modeling of sound transmission between two acoustic cavities separated by a double-wall

Larbi Walid (walid.larbi@cnam.fr), Conservatoire National des Arts et Métiers, France
Deu Jean-François (jean-francois.deu@cnam.fr), Conservatoire National des Arts et Métiers, France

11h20

8015 | Numerical Analysis of Headed Stud Shear Connectors for Composite Steel-Concrete Beams Utilising Carbon Nanotube under Elevated Temperatures

Mirza, Olivia (o.mirza@uws.edu.au), University of Western Sydney, Australia
Sleiman, Khodr (17567552@student.uws.edu.au), University of Western Sydney, Australia

11h40

9058 | Research on Creep Behavior of Prestressed Composite Box-girders with Corrugated Steel Webs

Li, Ming (15810833269@163.com), Research Institute of Highway Ministry of Transport, China
Song, Jianyong (623151019@qq.com), Research Institute of Highway Ministry of Transport, China
Li, Wanheng (108824858@qq.com), Research Institute of Highway Ministry of Transport, China
Zhang, Jinquan (mitcivil@sina.com), Research Institute of Highway Ministry of Transport, China

12h00

9396 | MECHANICAL CHARACTERIZATION OF A CARBON FIBRE COMPOSITE THROUGH A COMBINED EXPERIMENTAL AND NUMERICAL APPROACH

Sbarufatti, Claudio (claudio.sbarufatti@polimi.it), Politecnico di Milano, Italy
Gilioli, Andrea (andrea.gilioli@polimi.it), Politecnico di Milano, Italy
Manes, Andrea (andrea.manes@polimi.it), Politecnico di Milano, Italy
Giglio, Marco (marco.giglio@polimi.it), Politecnico di Milano, Italy

12h20

9374 | Constituent materials micro-damage modeling in predicting progressive failure of braided fibre composites

Nadeesh Singh Nobeen (n.nobeen@ntu.edu.sg), Nanyang Technological University, Singapore
Yucheng Zhong (yczhong@ntu.edu.sg), Nanyang Technological University, Singapore
Elvin S. M. Chia (cserming@hotmail.com), DSO National Laboratories, Singapore
Sunil C. Joshi (MSCJOSHI@NTU.EDU.SG), Nanyang Technological University, Singapore
Zhong Chen (ASZChen@ntu.edu.sg), Nanyang Technological University, Singapore

Session 11.4 | Chairs: Marques, António T. (marques@fe.up.pt), FEUP, Portugal

14h00

9337 | Design of structural columns using composite systems

Varajão, Joana F. D. (em10142@fe.up.pt), FEUP, Portugal
Costa, Mariana I. M. (em10154@fe.up.pt), FEUP, Portugal
Sá, José M. C. (cesarsa@fe.up.pt), FEUP, Portugal
Marques, António T. (marques@fe.up.pt), FEUP, Portugal
Parente, Marco (mparente@fe.up.pt), FEUP, Portugal

14h20

7729 | Concrete Compression Struts Strengthened using Carbon Fiber Reinforced Polymers (CFRP)

Changhyuk Kim (changhyuk@utexas.edu), The University of Texas at Austin, United States America
James O. Jirsa (jirsa@utexas.edu), The University of Texas at Austin, United States America
Wassim M. Ghannoum (ghannoum@mail.utexas.edu), The University of Texas at Austin, United States America

14h40

7670 | Study of the performance of concrete to water and salt freeze-thawing conditions

B. Li (sktm1@163.com), Harbin Engineering University, China
J. Z. Mao (maojize@hrbeu.edu.cn), Harbin Engineering University, China
J. F. Lv (21100563@qq.com), Harbin Engineering University, China
L. M. Zhou (mmlmzhou@polyu.edu.hk), The Hong Kong Polytechnic University, Hong Kong

Thursday 18 June Room Morus II

Session 19.6 | Chairs: Rafiee, Roham (Composites Research Laboratory, Faculty of New Sciences & Technologies)

11h00

7895 | An effect of epoxy laminate composites modified using metallic powders

Kita, Paweł (pkita@agh.edu.pl), AGH University of Science and Technology, Poland
Pociecha, Daniel (danpoc@agh.edu.pl), AGH University of Science and Technology, Poland
Głodzik, Marcin (mar_glo@wp.pl), AGH University of Science and Technology, Poland
Krzysztof, Żaba (krzyzaba@agh.edu.pl), AGH University of Science and Technology, Poland

11h20

8544 | Sulfur Doped Graphene/Polystyrene Nanocomposites for Electromagnetic Interference Shielding

Shahzad, Faisal (faisal@kist.re.kr), Korea Institute of Science and Technology, Korea, South
Koo, Chong Min (koo@kist.re.kr), Korea Institute of Science and Technology, Korea, South
Hong, Soon Man (smhong@kist.re.kr), Korea Institute of Science and Technology, Korea, South

11h40

9358 | Influence of Granule Size on Thermal Characteristics of Protein Based Silica-Aerogel Composites

Mahesh Sachithanadam (mahesh2@e.ntu.edu.sg), Nanyang Technological University, Singapore
Sunil C.Joshi (MSCJoshi@ntu.edu.sg), Nanyang Technological University, Singapore

12h00

9473 | Preparation and Properties of poly (acrylamide-co-alginate)/gold nanocomposites for inactivation of bacteria

Zhang, Yanan (zyn3648@163.com), Nanjing University of Aeronautics and Astronautics, China

12h20

9424 | Synthesis and Tribological Properties of Copper-alumina Nanocomposites Prepared by Coprecipitation Technique

Fu Xuelong (308851010@qq.com), Nanjing University of Aeronautics & Astronautics, China
Tao Jie (taojie@nuaa.edu.cn), Nanjing University of Aeronautics & Astronautics, China

12h40

9023 | Flexible field emission lamps made using BaO nanowires emitters

Cui, Yunkang (njcyk@163.com), Nanjing Institute of technology, China
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Lei, Wei (lw@seu.edu.cn), Southeast University, China
Yunsong Di (diyunsong@njnu.edu.cn), Southeast University, China

Session 27 - Modeling Nano Composites

Session 27.1 | Chairs: Roy, Samit (sroy@eng.ua.edu), University of Alabama, United States America and Tita, Volnei (voltita@sc.usp.br), Escola de Engenharia de São Carlos - Universidade de São Paulo, Brazil

14h00

8993 | Viscoplastic model analysis about the influence of Graphene Nanoplatelets in the Poly(Lactic Acid) time-dependent mechanical behaviour under hydrolytic degradation

Vieira, André C. (avieira@inegi.up.pt), Escola de Engenharia de São Carlos - Universidade de São Paulo, Brazil
Pinto, Viviana C. (vpinto@inegi.up.pt), Faculdade de Engenharia da Universidade do Porto, Portugal
Pinto, Artur (arturp@fe.up.pt), Faculdade de Engenharia da Universidade do Porto, Portugal
Magalhães, Fernão D. (fdmagalh@fe.up.pt), Faculdade de Engenharia da Universidade do Porto, Portugal
Guedes, Rui M. (rmguedes@fe.up.pt), Faculdade de Engenharia da Universidade do Porto, Portugal
Tita, Volnei (voltita@sc.usp.br), Escola de Engenharia de São Carlos - Universidade de São Paulo, Brazil

14h20

7817 | PREDICTING FRACTURE BEHAVIOR IN NANO-GRAPHENE REINFORCED POLYMERS

Roy, Samit (sroy@eng.ua.edu), University of Alabama, United States America
Akepati, Avinash (arakepati@crimson.edu), University of Alabama, United States America
Unnikrishnan, Vinu (VUnnikrishnan@eng.ua.edu), University of Alabama, United States America

14h40

7979 | Predicting Mechanical Properties of Fuzzy Fiber

Rafiee, Roham (roham.rafiiee@ut.ac.ir), Composites Research Laboratory, Faculty of New Sciences & Technologies, University of Tehran, End of The North Karegar St., Tehran, Iran, Iran
Ghorbanhosseini, Amin (amingh1368@gmail.com), Composites Research Laboratory, Faculty of New Sciences & Technologies, University of Tehran, End of The North Karegar St., Tehran, Iran, Iran

15h00

7540 | Finite element modeling of carbon nanotube agglomeration in polymers

Chanteli, Aggeliki (aggelikichanteli@mech.upatras.gr), University of Patras, Greece
Tserpes, Konstantinos (kit2005@mech.upatras.gr), University of Patras, Greece

Thursday 18 June Room QUERCUS

Session 36.4 | Chairs: Dai Gil Lee (dglee@kaist.ac.kr), KAIST, Korea, South And Sola Cyril (cyril.sola@airbus.com), Airbus Helicopter, France

11h00

7188 | BEARING RESPONSE OF CFRPs: COMPARATIVE STUDY OF WOVEN AND UD FABRIC QUASI ISOTROPIC LAMINATES UNDER STATIC AND FATIGUE LOADS

Sola Cyril (cyril.sola@airbus.com), Airbus Helicopter, France
Laurent Michel (laurent.michel@isae.fr), Institut Clément Ader, France
Lachaud Frédéric (frederic.lachaud@isae.fr), Institut Clément Ader, France
Castanié Bruno (bruno.castanie@insa-toulouse.fr), Institut Clément Ader, France
Delabie Arnaud (arnaud.delabie@airbus.com), Airbus Helicopter, France
Mermoz Emmanuel (emmanuel.mermoz@airbus.com), Airbus Helicopter, France

11h20

7774 | Flexible cell culture device made of organically modified montmorillonite (OMMT) reinforced silicone rubber composites

Han, Min-Gu (loded@hanmail.net), Chung-Ang University, Korea, South
Jung, Kyung-Chae (kongche1@naver.com), Chung-Ang University, Korea, South
Bae, Ji-Hun (ghunb16@gmail.com), Chung-Ang University, Korea, South
Chang, Seung-Hwan (phigs4@cau.ac.kr), Chung-Ang University, Korea, South

11h40

7808 | Preparation of Al₂O₃/CaAl₁₂O₁₉/ZrO₂ composite ceramic material by the hydration and sintering of Ca₇ZrAl₆O₁₈-reactive alumina

Madej, Dominika (dmadej@agh.edu.pl), AGH University of Science and Technology, Faculty of Materials Science and Ceramics, al. A. Mickiewicza 30, 30-059 Krakow, Poland, Poland
Szczzerba, Jacek (jszczerb@agh.edu.pl), AGH University of Science and Technology, Faculty of Materials Science and Ceramics, al. A. Mickiewicza 30, 30-059 Krakow, Poland, Poland

12h00

9559 | Light weight hybrid composite tie bars for PEMFC and VRFB

Soohyun Nam (namsu0615@kaist.ac.kr), KAIST, Korea, South
Dongyoung Lee (missingnum@kaist.ac.kr), KAIST, Korea, South
Minkook Kim (magicicada@kaist.ac.kr), KAIST, Korea, South
Jinwhan Kim (jinwhan@kaist.ac.kr), KAIST, Korea, South
Dai Gil Lee (dglee@kaist.ac.kr), KAIST, Korea, South

12h20

7898 | Benefit of a Damage Tolerant Design consideration and the role of SHM in the Structural Analysis of a Large Civil Aircraft Spoiler

Karna, Nitesh K. (nitesh_kumar.karna@jku.at), Institute of Constructional Lightweight Design, Johannes Kepler University Linz, Altenberger Straße 69, 4040 Linz, Austria: Christian Doppler Laboratory for Structural Strength Control of Lightweight Constructions, Johannes Kepler University Linz, Altenberger Straße 69, 4040 Linz, Austria, Austria
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Schagerl, Martin (martin.schagerl@jku.at), Institute of Constructional Lightweight Design, Johannes Kepler University Linz, Altenberger Straße 69, 4040 Linz, Austria: Christian Doppler Laboratory for Structural Strength Control of Lightweight Constructions, Johannes Kepler University Linz, Altenberger Straße 69, 4040 Linz, Austria, Austria

12h40

9082 | Hygro-thermo-elastic behavior of composite plates by the higher shear deformation theory

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B.Boukert (bilanosky@hotmail.fr), Institut d'Aéronautique et des Etudes Spatiales, University of Blida1, Algeria, Algeria

Session 35.2 | Chairs: Lauter, Christian (christian.lauter@uni-paderborn.de), University of Paderborn, Germany

And Abouhamzeh, Morteza (m.abouhamzeh@tudelft.nl), Delft University of Technology, Netherlands

14h00

7906 | Intrinsic Manufacturing of Metal-FRP-Hybrid Structural Automotive Components by Resin Transfer Moulding

Wang, Zheng (zheng.wang@uni-paderborn.de), University of Paderborn, Germany

Lauter, Christian (christian.lauter@uni-paderborn.de), University of Paderborn, Germany

Sanitther, Bamned (bamned.sanitther@uni-paderborn.de), University of Paderborn, Germany

Frantz, Meike (meike.frantz@uni-paderborn.de), University of Paderborn, Germany

Troester, Thomas (thomas.troester@uni-paderborn.de), University of Paderborn, Germany

14h20

8088 | Closed Form Solution to Estimate the Residual Stresses and Warpage During Cure of GLARE

Abouhamzeh, Morteza (m.abouhamzeh@tudelft.nl), Delft University of Technology, Netherlands

Sinke, Jos (J.sinke@tudelft.nl), Delft University of Technology, Netherlands

Benedictus, Rinze (R.Benedictus@tudelft.nl), Delft University of Technology, Netherlands

14h40

9391 | The Preparation and Properties of Novel Fiber Metal Laminates Based on Aluminum-lithium Alloy

LI, Huaguan (lihuaguan@nuaa.edu.cn), Nanjing University of Aeronautics and Astronautics, China

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LIU, Hongbing (lhongbing@163.com), Shanghai Aircraft Manufacturing Company Limited, China

TAO, Jie (taojie@nuaa.edu.cn), Nanjing University of Aeronautics and Astronautics, China

15h00

9384 | Effect of thermal cycling on the mechanical behaviors of Fibre Metal Laminate based on carbon fibre reinforced polyimide

Hu, Yubing (huyubing@nuaa.edu.cn), Nanjing University of Aeronautics and Astronautics, China

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Xu, Jiang (nuaa335@126.com), Nanjing University of Aeronautics and Astronautics, China

Thursday 18 June
Room OLIVA

Session 39 - Glass Composite Structures

Session 39.1 | Chairs: Speranzini, Emanuela (emanuela.speranzini@unipg.it), Department of Engineering, University of Perugia, Italy and Galuppi, Laura (laura.galuppi@unipr.it), Department of Industrial Engineering, University of Parma, Italy

11h00

6959 | Post-cracking response of hybrid beams consisting of glass-GFRP and glass-SRP

Speranzini, Emanuela (emanuela.speranzini@unipg.it), Department of Engineering, University of Perugia, Italy
Agnetti, Stefano (stefano.agnetti@gmail.com), Department of Engineering, University of Perugia, Italy

11h20

8063 | A study on the mechanical properties of insert molded FRP with different inserting laminations of silk fabric

Kiyoshi FUJIWARA (fujiwara.k@mazda.co.jp), Mazda Motor Corporation, Japan
Erika SUZUKI (erika-suzuki@toyugiken.co.jp), Toyugiken Co., Ltd., Japan
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Yuqiu YANG (amy_yuqiu_yang@dhu.edu.cn), Donghua University, China
Hiroyuki HAMADA (hhamada@kit.ac.jp), Kyoto Institute of Technology, Japan

11h40

8114 | Optimal cold-bending and cold-lamination-bending of glass

Galuppi, Laura (laura.galuppi@unipr.it), Department of Industrial Engineering, University of Parma, Italy
Royer-Carfagni, Gianni (gianni.royer@unipr.it), Department of Industrial Engineering, University of Parma, Italy

12h00

8714 | On the experimental determination of dynamical properties of laminated glass and a comparison with a theoretical model

Lenci, S. (lenci@univpm.it), Polytechnic University of Marche, Italy
Consolini, L. (laura.consolini@alice.it), Polytechnic University of Marche, Italy
Clementi, F. (f.clementi@univpm.it), Polytechnic University of Marche, Italy

12h20

8727 | Experimental analysis of laminated glass with different interlayers

Agnetti S. (agnetti.stefano@gmail.com), Department of Engineering - University of Perugia, Italy
Speranzini E. (emanuela.speranzini@unipg.it), Department of Engineering - University of Perugia, Italy

12h40

9189 | The strength of GFRP gratings under fatigue loading

Habib, Amir Izzuddin Hasani (amerdeen89@gmail.com), Universiti Teknologi PETRONAS, Malaysia
Akbar, Ibrism (ibrisam_akbar@petronas.com.my), Universiti Teknologi PETRONAS, Malaysia

Session General | Chairs: Gavardinas, Ioannis D. (gavardinas@uth.gr), of Thessaly, Volos, Greece
And Öktem, Ahmet S. (sinan.oktem@gtu.edu.tr), Gebze Technical University, Turkey

14h00

7704 | The Barenblatt analogue of dipolar gradient elasticity

Gavardinas, Ioannis D. (gavardinas@uth.gr), of Thessaly, Volos, Greece
Giannakopoulos, Antonios E. (agiannak@uth.gr), Laboratory for Strength of Materials and Micromechanics, Department of Civil Engineering, University of Thessaly, Volos, Greece

14h20

9523 | DYNAMIC BEHAVIOR OF COMPOSITE DEEP CURVED TIMOSHENKO BEAMS UNDER BLAST LOAD WITH NUMERICAL METHODS

Kalbaran, .zgür (kalbaran@gtu.edu.tr), Gebze Technical University, Turkey
Kurtaran, Hasan (hasan@gtu.edu.tr), Gebze Technical University, Turkey
Öktem, Ahmet S. (sinan.oktem@gtu.edu.tr), Gebze Technical University, Turkey

14h40

8570 | Analysis of Cf/SiC composite/304 stainless steel joints brazed with Ti-Zr-Be

Dongyu Fan (fandongyu3652@sina.com), University of Science and Technology Beijing, PR China, China
Jihua Huang (jhhuang62@sina.com), University of Science and Technology Beijing, China
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Shuhai Chen (duibuqi88888@163.com), University of Science and Technology Beijing, China
Xingke Zhao (duibuqi88888@163.com), University of Science and Technology Beijing, China

15h00

9369 | Fabrication of complex-curved composite parts by using shape memory polymer mandrel

Liu, YJ (yj_liu@hit.edu.cn), Harbin Institute of Technology, China
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Liu, LW (liuliwu_006@163.com), Harbin Institute of Technology, China
Leng, JS (lengjs@hit.edu.cn), Harbin Institute of Technology, China

15h20

9204 | Failure prediction and high-strain-rate behaviour of composite and hybrid fastened joints through physical and virtual testing methods with an aim to develop an idealised shear-tension macro model for large-scale structural simulations

Baruah, Eju (Eju.Baruah@airbus.com), Airbus Operations GmbH, Germany

15h40

8582 | AMPEROMETRIC BIOSENSORS BASED ON OXIDOREDUCTASES IMMOBILIZED ON NANOPARTICLES OF NOBLE METALS

Gonchar, Mykhailo V. (gonchar@cellbiol.lviv.ua), University of Rzeszow; Institute of Cell Biology, NAS of Ukraine, Ukraine
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Synenka, Maria M. (maria-swntozelska@ukr.net), Institute of Cell Biology, NAS of Ukraine, Ukraine
Gayda, Galina Z. (galina.gayda@gmail.com), Institute of Cell Biology, NAS of Ukraine, Ukraine

Thursday 18 June Room CASTANEA

Session 25.9 | Chairs: Černý, Ivo (Ivo.Cerny@seznam.cz), SVÚM a.s., Czech Republic

11h00

9147 | Numerical evaluation method for crack initiation and growth phenomena of polyurethane foam-based insulation structures under dynamic cyclic pressures using damage-coupled finite element analysis

Chi-Seung Lee (victorich@pusan.ac.kr), Pusan National University, Korea, South
Kwang-Ho Choi (rupang3se@pusan.ac.kr), Pusan National University, Korea, South
Myung-Sung Kim (dover@pusan.ac.kr), Pusan National University, Korea, South
Jae-Myung Lee (jaemlee@pusan.ac.kr), Pusan National University, Korea, South

11h20

9098 | Influence of Nd3+:YAG laser irradiation on the structure of composites with carbon fibers

Kaludjerović, Branka V. (branka@vin.bg.ac.rs), Vinča Institute of Nuclear Science, Serbia
Srećković, Milesa (esreckov@etf.rs), University of Belgrade, Serbia
Janićijević, Milovan (janicije@eunet.rs), Metalac A D, Serbia
Kovačević, Aleksander (Aleksander.Kovacevic@ipb.ac.rs), University of Belgrade, Serbia

11h40

9061 | Determination of Characteristic Lengths for open-hole and pin-loaded Composite Joints by Means of 3D Progressive Damage Analysis

Taheri-Behrooz, F. (taheri@iust.ac.ir), Iran University of Science and Tehcnology, Iran
Bakhshan, A. (h_bakhshan@mecheng.iust.ac.ir), Iran University of Science and Tehcnology, Iran

12h00

9062 | Load-displacement behavior simulation of shape memory alloy hybrid composites

Taheri-Behrooz, F. (taheri@iust.ac.ir), Iran University of Science and Technology, Iran
Kiani, A. (a.k.alikiani@gmail.com), Iran University of Science and Technology, Iran

12h20

8969 | An evaluation of mechanical properties and failure modes of multi-layer glass reinforced polypropylene thermoformed composite material to be used in automotive industry

Černý, Ivo (Ivo.Cerny@seznam.cz), SVÚM a.s., Czech Republic
Mikulová, Dagmar (dmikulova@svum.cz), SVÚM a.s., Czech Republic
Remar, Luboš (remar@svum.cz), SVÚM a.s., Czech Republic

12h40

9212 | Instability analysis of Shear Bands using the instantaneous growth-rate of a perturbation

Arriaga, Miguel (mta2122@columbia.edu), Columbia University, United States America
McAuliffe, Colin (cjm2176@columbia.edu), Columbia University, United States America
Waisman, Haim (waisman@civil.columbia.edu), Columbia University, United States America

Session 36 ANR VERTEX RESEARCH PROGRAM

Session 36 ANR VERTEX | Chairs: Bruno Castanié, Institut Clément Ader, France

14h00

7126 | THE VERTEX PROJECT: COMPLEX LOADING ANALYSIS AND VALIDATION OF COMPOSITE STRUCTURES

Castanié Bruno (bruno.castanie@insa-toulouse.fr), Institut Clément Ader, France

14h20

8941 | Definition of complex mechanical testing through numerical simulations and the use of an advanced behaviour law

JULIEN, Cédric (cedric.julien@onera.fr), ONERA, France
HUCHETTE, Cédric (cedric.huchette@onera.fr), ONERA, France
LAURIN, Frédéric (frederic.laurin@onera.fr), ONERA, France

14h40

8950 | Measurement of regularised boundary conditions on a composite plate with Stereo Digital Image Correlation

Jean-Emmanuel, Pierré (jepierre@insa-toulouse.fr), Université de Toulouse, Institut Clément Ader, France
Jean-Charles, Passieux (passieux@insa-toulouse.fr), Université de Toulouse, Institut Clément Ader, France
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Florian, Bugarin (florian.bugarin@univ-tlse3.fr), Université de Toulouse, Institut Clément Ader, France
Laurent, Robert (laurent.robert@mines-albi.fr), Université de Toulouse, Institut Clément Ader, France

15h00

7121 | Digital Image Correlation and Thermography analysis of notched CFRP under tension

Serra Joel (joel.serra@isae.fr), Institut Clément Ader, France
Bouvet Christophe (christophe.bouvet@isae.fr), Institut Clément Ader, France
Castanié Bruno (bruno.castanie@insa-toulouse.fr), Institut Clément Ader, France
Petiot Caroline (caroline.petiot@eads.net), Airbus Group Innovation, France

15h20

7123 | Discrete Ply Modelling analysis of notched CFRP under tension

Serra Joel (joel.serra@isae.fr), Institut Clément Ader, France
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Petiot Caroline (caroline.petiot@eads.net), Airbus Group Innovation, France

Thursday 18 June Room NUX

Session General | Chairs: Emdad, Reza (memdad@swin.edu.au), Swinburne University, Australia
And Zahr Viñuela, Jorge (jzahr@ing.uc3m.es), UC3M, Spain

11h00

8749 | On the use of the Anisotropic Yield Criterion of von Mises (1928) as a yield condition for Particle Reinforced Composites. A calibration procedure based on numerical analysis of multi-particle cells

Zahr Viñuela, Jorge (jzahr@ing.uc3m.es), UC3M, Spain
Pérez-Castellanos, J.L. (percaste@ing.uc3m.es), UC3M, Spain

11h20

8569 | Facile fabrication of graphene nanoribbon/silicone rubber nanocomposite as a conductive elastomer

Gan, Lu (lu.gan@connect.polyu.hk), The Hong Kong Polytechnic University, Hong Kong
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Jiang, Shouxiang (kinor.j@polyu.edu.hk), The Hong Kong Polytechnic University, Hong Kong

11h40

8704 | Experimental Investigation of Mechanical Properties of Al 2014 - SiCp Composites subjected to ECAP Processing

Dhanalakshmi .S (dhanalakshmisathishkumar@cvrde.drdo.in), Combat Vehicles Research & Development Establishment, DRDO, AVADI - 600 054., India
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Shanmuga Sundaram .K (kssundara@annauniv.edu), Anna University, Chennai - 600 025., India

12h00

8994 | Effect of Initial damage on CFRP retrofitted centre-notched steel plates

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Al-Mahaidi, Riadh (ralmahaidi@swin.edu.au), Swinburne University, Australia