

5th DRaF
CONFERENCE



**5th International Symposium on
Dynamic Response and Failure
of Composite Materials**

DRaF 2024

**June 17-21, 2024
Island of Ischia, Italy**

Chair Person

Valentina Lopresto

Department of Chemical, Materials and Production Engineering
University of Naples Federico II

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PROGRAM

Monday, June 17th, Afternoon

15.00	16.00	Registration
Room "Aragonese"		
Pre-Conference Event		
Special Issue and General Info - V. Lopresto		
15.30	17.10	<p>CIRA – The Italian Aerospace Research Center (CIRA): A place where sky and space meet on the on ground, <i>S. Cantoni</i></p> <p>HEXAGON – Empowering the future of Manufacturing, <i>A. Mete</i></p> <p>ZEISS – Carl Zeiss: Research and Innovation, Advanced Solutions for Microscopy, <i>M. Antonucci</i></p> <p>FLIR-DES – FLIR: The InfraRed Company, <i>N. Genna</i></p> <p>MARTEC – Martec, the distribution as a value added of design and development processes, <i>P. Cozzolino</i></p> <p>DAC - The Campania Aerospace District - A journey of over 10 years through research, innovation and support for the enterprises in the Region, <i>G. Russo</i></p> <p>CARS – Center for Automotive Research and Sustainable mobility@PoliTO, <i>G. Belingardi</i></p> <p>J-TECH@POLITO - Advanced Joining Technologies at Politecnico di Torino, <i>M. Ferraris & J-Tech Team</i></p>
17.10	18.45	Session: Surface Treatment and Joints Chairs: A. Viscusi
17.10	17.25	ENHANCING COLD SPRAY COATING PERFORMANCES USING ARTIFICIAL INTELLIGENCE TECHNIQUES F. De Marco, A. Auriemma Citarella, L. Carrino, L. Di Biasi, <u>A.S. Perna</u> , G. Tortora, A. Viscusi
17.25	17.40	INVESTIGATING THE FEASIBILITY OF METALLIZING REPROCESSABLE VITRIMERIC COMPOSITES THROUGH COLD SPRAY TECHNIQUE <u>A.S. Perna</u> , A. Viscusi, A. Martone, B. Palmieri, F. Tucci, A. Astarita
17.40	17.55	EFFECT OF THE ATMOSPHERIC PLASMA TREATMENT PARAMETERS ON THE SURFACE AND MECHANICAL PROPERTIES OF CARBON FABRIC <u>S. Sampino</u> , R. Ciardiello, D. D'Angelo, D.S. Paolino
17.55	18.10	JOINING OF CERAMICS AND COMPOSITES: MAIN ISSUES AND ADVANCES <u>M. Ferraris</u>
18.10	18.25	Open Discussion
18.30	19.00	Newspaper Interview - Col. W. Villadei
19.30	21.00	<i>Welcome Cocktail</i>

Tuesday, June 18th, Morning

Room "Aragonese"

8.45	9.00	Welcome by Symposium Chairperson
9.00	11.00	Session: Perspectives on Additive manufacturing for dynamic response improvement Chair: A. Riccio
9.00	9.15	A NUMERICAL-EXPERIMENTAL STUDY ON THE IMPACT BEHAVIOUR OF ADDITIVE MANUFACTURED BCC LATTICE STRUCTURES <u>G. Maisto</u> , V. Acanfora, A. Garofano, A. Riccio, M. Zarrelli, A. Alaimo, D. Tumino, G. Catalanotti
9.15	9.30	ON THE PRINTABILITY OF A HIGH STRENGTH ALUMINUM MATRIX FOR THE PRODUCTION OF COMPOSITES THROUGH LASER-POWDER BED FUSION <u>A. El Hassanin</u> , A.S. Perna, N. Sicignano, D. Borrelli, A. Caraviello, A. Astarita
9.30	9.45	PASSIVE SAFETY IMPROVEMENTS IN AIRCRAFTS BY INNOVATIVE ENERGY ABSORBING DEVICES DESIGNED FOR ADDITIVE MANUFACTURING <u>A. Garofano</u> , A. Riccio
9.45	10.00	NUMERICAL INVESTIGATION ON THE STATIC AND DYNAMIC BEHAVIOUR OF AN ADDITIVE MANUFACTURED UAV'S HORIZONTAL TAIL M. Battaglia, A. Riccio, <u>A. Sellitto</u>
10.00	10.15	INNOVATIVE HYBRID LATTICE INFILLED WING DESIGN WITH ADDITIVE MANUFACTURING <u>N. Khan</u> , A. Riccio
10.15	10.30	TORQUE INFLUENCE ON BOLT BEARING STRENGTH OF KEVLAR FIBER COMPOSITE PRODUCED BY ADDITIVE MANUFACTURING <u>M. Ravelli</u> , I. Papa, A. Silvestri, L. Giorleo, A. Squillace
10.30	10.45	LIFE CYCLE ASSESSMENT OF 3D PRINTED INNOVATIVE BIOCOMPOSITES <u>E. Cozzolino</u> , A. Astarita, V. Lopresto, F. Napolitano, P. Russo, I. Papa
10.45	11.00	Open Discussion
11.00	11.20	Coffee Break
11.20	14.30	Session: Innovations in Additive Manufacturing: Shaping the Future of Industrial and Functional Design Chair: A.L.H.S. Detry
11.20	11.35	ON THE FEASIBILITY OF FOAM ADDITIVE MANUFACTURING: AN OVERVIEW ON DIFFERENT POLYMER <u>L. Landolfi</u> , A.L.H.S. Detry, D. Tammaro, M. Villone, P.L. Maffettone, A. Squillace
11.35	11.50	FLEXIBLE COMPOSITE STRUCTURES FOR ENHANCED ENERGY ABSORPTION CAPABILITY UNDER IMPACT LOADS <u>A. Corvi</u> , L. Collini, C. Sciancalepore
11.50	12.05	3D-PRINTED STEEL LATTICE ELEMENTS FOR A NEW GENERATION OF SUSTAINABLE STRUCTURES <u>V. Laghi</u> , G. Gasparini, T. Trombetti
12.05	12.20	SHELL BUCKLING FOR PROGRAMMABLE METAFLOIDS <u>A. Djellouli</u> , B. V. Raemdonck, Y. Wang, Y. Yang, A. Caillaud, D. Weitz, S. Rubinstein, B. Gorissen, K. Bertoldi

12.20	12.35	A NEW APPROACH TO PROMOTE CRUSHING IN THIN-WALLED FILAMENT-WOUND TUBES <u>T.Scalici</u> , D. Tumino, A. Alaimo, G. Catalanotti
12.35	13.45	Lunch
13.45	14.00	COMPARISON OF VARIOUS PROCESSING TREATMENTS ON UNIAXIAL COMPRESSION PERFORMANCE OF LARGE SCALE ADDITIVELY MANUFACTURED THERMOPLASTIC ABS CHOPPED FIBER COMPOSITE STRUCTURES <u>A.A. Perez</u> , K.H. Sehnawi, A.S. Chandar, D.E. Hardt
14.00	14.15	DYNAMIC RESPONSE OF 3D PRINTED BIO-INSPIRED LIGHTWEIGHT STRUCTURES <u>S. H. Siddique</u> , P. J. Hazell, G. G. Pereira, H. Wang, J. P. Escobedo
14.15	14.30	Open Discussion
Tuesday, June 18th, Afternoon		
Room "Aragonese"		
14.30	17.50	Session: Innovations and advancements in lowering the carbon footprint of composite materials to improve sustainability Chairs: S. Boria, R. Ciardiello
14:30	15.45	CHARACTERIZATION AND MODELING OF THE TENSILE AND SHEAR BEHAVIOR OF RECYCLED POLYPROPYLENE COMPOSITES <u>A. Iadarola</u> , P. Di Matteo, R. Ciardiello, F. Gazza, V. G. Lambertini, V. Brunella, D. S. Paolino
14.45	15.00	BIOREINFORCEMENTS ACHIEVED FROM DWARF PALM FOR THE FABRICATION OF GREEN COMPOSITES WITH STIFFNESS-TOUGHNESS BALANCE <u>M. Gammino</u> , A. Maio, R. Scaffaro
15.00	15.15	NUMERICAL AND EXPERIMENTAL STUDY OF FLAX-BASALT COMPOSITES IMPACT BEHAVIOR V. Giammaria, M. R. Ricciardi, I. Papa, V. Lopresto, A. Langella, S. Boria, <u>V. Antonucci</u>
15.15	15.30	ASSESSING THE GEOMETRIC INFLUENCE ON IMPACT BEHAVIOR OF FLAX AND HYBRID COMPOSITES: EXPERIMENTAL AND NUMERICAL ANALYSIS <u>M. Capretti</u> , V. Giammaria, G. Del Bianco, S. Boria, V. Castorani
15.30	15.45	ADVANCING SUSTAINABLE SOLUTIONS: BIO-COMPOSITES FOR GREEN AUTOMOTIVE APPLICATIONS <u>P. Di Matteo</u> , A. Iadarola, R. Ciardiello, D. S. Paolino, F. Gazza, V. G. Lambertini, V. Brunella
15.45	16.00	EFFECT OF SYMMETRIC GLASS/FLAX FIBRE WOVEN ON THE OUT-OF-PLANE IMPACT BEHAVIOUR <u>R. Ciardiello</u> , A. Ciampaglia, D. Paolino
16.00	16.20	Coffee Break
16.20	16.35	A MACHINE LEARNING APPROACH TO HOMOGENIZE MECHANICAL METAMATERIALS WHEN SUBJECTED TO DYNAMIC LOADING SCENARIOS <u>G. Catalanotti</u> , T. Scalici, D. Tumino, A. Alaimo
16.35	16.50	CRASHWORTHINESS OF C-SHAPED CFRP COMPOSITES: A NUMERICAL AND EXPERIMENTAL STUDY <u>M. Capretti</u> , M.R. Ricciardi, I. Papa, V. Lopresto, S. Boria, V. Antonucci
16.50	17.05	EFFECT OF WATER IMMERSION ON MECHANICAL PROPERTIES OF EPOXY/BASALT FIBER REINFORCED COMPOSITES: NEW PERSPECTIVES <u>M. Russo</u> , A. Langella, I. Papa, V. Lopresto, V. Antonucci, M.R. Ricciardi
17.05	17.20	CRYOGENIC MECHANICAL RECYCLING PROCESS OF UNCURED CFRP PREPREG SCRAPS <u>M. Panico</u> , L. Boccarusso, M. Russo, A. Langella

17.20	17.35	STRUCTURAL SANDWICH PANELS FOR ROOFING SYSTEMS IN CIVIL APPLICATIONS <u>A. Ferrarese</u> , M. Corrado, D. Acquesta Nunes, A. Scattina, A. Strino, G. De Vita, M. Italiano
17.35	17.50	3D DIGITAL IMAGE CORRELATION ANALYSIS OF BIRD STRIKE TESTS ON LAMINATED COMPOSITE <u>O. Dorival</u>
17.50	18.05	Open Discussion

Wednesday, June 19th, Morning

Room "Aragonese"

8.30	9.15	Plenary Lecture Back on Earth, looking to the future. Opportunities from the new space economy Col. W. Villadei – Italian Astronaut
9.30	13.20	Session: Aerospace Chairs: M. Guida, F. Marulo
9.30	10.00	Plenary Lecture LIFE for Aeronautics F. Marulo – University of Naples Federico II
10.00	10.15	SAFETY DESIGN APPROACH FOR STRUCTURAL BATTERIES INTEGRATION IN COMPOSITE STRUCTURES BY MEANS OF MULTIPHYSICS ANALYSIS <u>G. Di Mauro</u> , M. Guida, L.M. Gomez, G. Olivares
10.15	10.30	VIBRATION TESTING OF THE NEXT GENERATION CIVIL TILTROTOR TECHNOLOGICAL DEMONSTRATOR COMPOSITE WING A.D. Marano, <u>G.M. Gagliardi</u> , M. Miano, M. Belardo, F. Marulo
10.30	10.45	DESIGN OF COMPOSITE PLATES UNDER LOW-VELOCITY IMPACT USING CONTINUUM SENSITIVITY ANALYSIS G.M. Gagliardi, V. Kuncak, <u>M.D. Kulkarni</u>
10.45	11.05	Coffee Break
11.05	11.20	METHODOLOGY TO SIMULATE IM RESPONSE OF A PYRO EQUIPMENT <u>R. Manfellotto</u> , S. Gubbioni, <u>E. Cofani</u> , M. Guida
11.20	11.35	GENERAL DAMAGE DETECTIONS ON COMPOSITE PANELS USING COMPUTER VISION ALGORITHMS <u>S. Merola</u> , M. Guida, F. Marulo
11.35	11.50	ANALYSIS OF THE ATOMIC OXYGEN FLUX AND ITS EFFECTS ON A VERY LOW EARTH ORBIT CUBESAT MISSION <u>T.A. La Marca</u> , M.D. Graziano, M. Grassi
11.50	12.05	COMPOSITE SPACECRAFT MATERIALS ANALYSIS IN LEO AND VLEO ORBITS UNDER ATOMIC OXYGEN INTERACTION <u>S. Rea</u> , M. Guida
12.05	12.20	EVOLUTION OF UNSTABLE SKIN-STRINGER DEBONDING PROPAGATION IN COMPOSITE AIRCRAFT STRUCTURES: IMPLICATIONS ON DAMAGE TOLERANT DESIGN A. Riccio, M. Zarrelli, C. Toscano, V. Vinti, L. Trinchillo, P. Perugini, R. Castaldo, <u>A. Russo</u>
12.20	12.35	DYNAMIC BEHAVIOR OF A NON-EXPLOSIVE ACTUATOR WITH SHAPE MEMORY COMPOSITES <u>L. Santo</u> , F. Quadrini

12.35	12.50	RECENT ADVANCES IN SMART COMPOSITES FOR SPACE APPLICATIONS <u>D. Nogra</u> , L. Iorio, D. Bellisario, F. Quadrini, L. Santo
12.50	13.05	THE ROLE OF COMPOSITES IN THE STRUCTURES OF URBAN AIR MOBILITY VEHICLES: THE DIVA PROJECT <u>C. Voto</u>
13.05	13.20	Open Discussion
13.20	14.30	Lunch
Wednesday, June 19th, Afternoon		
Room "Aragonese"		
14.30	16.15	Session: Hexagon Chair: A. METE
14.30	14.45	EMBRACE INNOVATION WITH DIGITAL MATERIALS SOLUTIONS: PREDICTING WITH PRECISION, REDUCING PROTOTYPES AND ENHANCING PRODUCT PERFORMANCE <u>M. Giugliano Auricchio</u>
14.45	15.00	METAL CASES STUDY IN ADDITIVE MANUFACTURING: VIRTUAL ANALYSIS WITH SIMUFACT ADDITIVE <u>F. Defina</u>
15.00	15.15	ALLOWABLE DETERMINATION FOR COMPOSITE MATERIAL AND SIMULATION OF THE CURING PROCESS <u>A. Copponi</u> , <u>A. Giugliano</u>
15.15	15.30	THERMAL PROPERTIES PREDICTION OF LATTICE STRUCTURES FILLED WITH PARAFFIN WAX THANKS TO DIGIMAT ADVANCED HOMOGENIZATION TECHNIQUE <u>A. Salvagni</u>
15.30	15.45	PROGRESSIVE FAILURE ANALYSIS APPROACH FOR COMPOSITE AIRCRAFT STRUCTURES <u>F. Romano</u>
15.45	16.00	NEW TRENDS AND DIFFERENT APPROACH FOR MATERIALS <u>M. Mottola</u>
16.00	16.15	Open Discussion
16.15	16.35	Coffee Break
Room "Aragonese"		
16.35	18.05	Session: Modelling Chair: P. Navarro
16.35	16.50	A RATIONAL FAILURE CRITERION FOR GENUINELY ORTHOTROPIC MATERIALS AND ITS CONSISTENT FORMS FOR MATERIALS IN A RANGE OF DIFFERENT CATEGORIES <u>S. Li</u> , E. Sitnikova
16.50	17.05	EXPERIMENTAL AND NUMERICAL STUDY OF HYBRID UD/WOVEN COMPOSITE LAMINATES UNDER LOW VELOCITY IMPACT <u>P. Navarro</u>
17.05	17.20	LOW VELOCITY IMPACT (LVI) SIMULATION OF A CFRP PLY-DROP LAMINATES: A NUMERICAL ANALYSIS <u>M. Russo</u> , E. Pappa, A. Baroni, S. Corvaglia, V. Lopresto, I. Papa
17.20	17.35	GENERALISATION OF INCUBATION TIME CRITERION FOR COMPUTATIONAL MODELLING OF DYNAMIC FAILURE <u>S. Li</u> , <u>E. Sitnikova</u>

17.35	17.50	DEVELOPMENT OF A NUMERICAL METHODOLOGY ABLE TO SIMULATE THE UNSTABLE MIXED MODE DELAMINATION GROWTH IN STIFFENED COMPOSITE PANELS UNDER CYCLIC LOADING CONDITIONS A. Riccio, <u>R. Castaldo</u> , A. Russo
17.50	18.05	Open Discussion
19.00	<i>Nice Dinner</i> - Departure from Hotel Hermitage	
Thursday, June 20th, Morning		
Room "Aragonese"		
8.30	11.50	Session: CIRA - Structural Integrity Assessment of Aerospace Composite Structures Chair: F. Romano
8.30	8.45	HOMOGENIZATION TECHNIQUES FOR NANOCOMPOSITES: A COMPREHENSIVE REVIEW <u>D. Angelini</u> , E. Cestino, P. Piana, F. Mallamo
8.45	9.00	ADVANCEMENTS IN COMPOSITE HYBRID AIRCRAFT THROUGH NANOTECHNOLOGY APPLICATIONS <u>E. Cestino</u> , V. Martilla, V. Sapienza, D. Angelini
9.00	9.15	DIMOSS, A NOVEL STRUCTURAL SHAPE AND STRESS MONITORING SOFTWARE: THEORETICAL BACKGROUND AND APPLICATIONS REVIEW <u>M. Esposito</u> , M. Sorrenti, R. Roy, C. Surace, M. Gherlone
9.15	9.30	DYNAMIC ASSESSMENT OF THICK SANDWICH BEAMS USING A MIXED-REFINED ZIGZAG THEORY: EXPERIMENTAL VALIDATION USING LASER DOPPLER VIBROMETRY <u>M. Sorrenti</u> , M. Gherlone, S. Carvalho
9.30	9.45	MESH AND HOMOGENIZATION EFFECTS OF SIMULATED HIGH STRAIN RATE DELAMINATION IN CFRP USING VCCT N. Pournoori, J. Jokinen, M. Isakov, M. Hokka, <u>M. Kanerva</u>
9.45	10.00	DESIGN, MANUFACTURING AND TESTING OF INTERCONNECTING TITANIUM-ALUMED FLANGES FOR CFRP GRID STRUCTURE F. Di Caprio, <u>D. D'Agostinis Rinaldi</u> , S. Franchitti, R. Borrelli, G. Giusto, F. De Nicola, A. Langella
10.00	10.15	UPSCALING OF THE STRUCTURAL BATTERIES TO HYBRID ELECTRIC AIRCRAFT <u>F. Romano</u> , U. Mercurio, A. Pagano, H. Kühnel
10.15	10.35	Coffee Break
10.35	11.50	MULTIFUNCTIONAL STRUCTURAL BATTERIES IN COMPOSITES – TOWARDS A MORE EFFICIENT ELECTRIFICATION OF AVIATION <u>A. Treceno Fernández</u>
10.50	11.05	ON THE DAMAGE TOLERANCE OF STRUCTURAL BATTERIES INTEGRATED IN SANDWICH STRUCTURES UNDER LOW VELOCITY IMPACT CONDITIONS <u>F. Di Caprio</u> , F. Laurin, I. Dimino
11.05	11.20	ANALYSIS OF THE CRUSHING BEHAVIOR OF FLAT COMPOSITE PLATES PRODUCED BY SHEET MOLDING COMPOUND M. P. Falaschetti, F. Rondina, J. B. Hernandez, <u>L. Raimondi</u> , N. Zavatta, E. Troiani, L. Donati

11.20	11.35	DETECTION OF IMPACT DAMAGES ON FULL SCALE WING USING DISTRIBUTED FIBER OPTICS SENSORS NETWORK M. Ciminello, <u>L. Pellone</u> , F. Romano
11.35	11.50	Open Discussion
11.50	15.30	Session: Industrial needs and future perspectives Chair: V. Antonucci
11.50	12.05	CS25 CLASS LANDING GEAR SYSTEM MULTIBODY SIMULATIONS: LEONARDO EXPERIENCES FROM THE MODEL CERTIFICATION TO THE FUTURE DEVELOPMENTS E. Bottone, <u>C. Mascolo</u> , Leonardo
12.05	12.20	EVOLUTION OF METAL ADDITIVE MANUFACTURING: ENABLING INDUSTRIAL PRODUCTION AND BRINGING IT TO THE NEXT LEVEL <u>V. Abbatiello</u> , EOS
12.20	12.35	DESIGN AND PRODUCTION WITH ADDITIVE MANUFACTURING TECHNOLOGY <u>A. Manzo</u> , 3DnA
12.35	12.50	MITIGATION OF THERMAL INJURIES IN COMPOSITE PARTS WITH INTEGRATED BATTERY PACK BY NANOMATERIALS: A PRELIMINARY INVESTIGATION F. Cilento, B. Palmieri, M. Giordano, A. Petriccione, A. Pozzi, G. De Tommaso, <u>A. Martone</u> , ATM
12.50	14.00	Lunch
14.00	14.15	REQUIREMENTS TRADE-OFF IN THE WHOLE WARSHIP DESIGN OF THE FREMM PROGRAM - CASE STUDY: SONAR DOME <u>L. Ottonello</u> , Orizzonte Sistemi Navali (OSN)
14.15	14.30	ADVANCED APPLICATIONS OF CLEM AND X-RAY MICROSCOPY FOR COMPOSITE MATERIALS INVESTIGATION <u>F. Cognigni</u> , Zeiss
14.30	14.45	COOLED CAMERAS VS UNCOOLED CAMERAS: THE 5S'S <u>N. Genna</u> , Flir
14.45	15.00	AUTOMATIC INSPECTION OF BUILDINGS AND INDUSTRIAL STRUCTURES <u>G. Basile</u> , Martec
15.00	15.15	ADDITIVE MANUFACTURING LABORATORY EXPERIENCE AT THE UNIVERSITY OF CAMPANIA "LUIGI VANVITELLI" <u>A. Riccio</u> , AM Lab Univ. L. Vanvitelli
15.15	15.30	Open Discussion
Thursday, June 20th Afternoon		
Area Sponsor		
15.30	17.00	SPONSOR: Interactive Activities and Sponsor Demonstrations
16.15	16.35	Coffee Break
17.00	18.15	Poster Session 5 minutes presentation

Friday, June 21st, Morning

Room "Aragonese"

8.30	10.45	<p style="text-align: center;">Session: SIMPCO - Sustainable and innovative manufacturing processes for composites</p> <p style="text-align: center;">Chair: Luca Boccarusso</p>
8.30	8.45	<p>ANALYSIS OF DYNAMICAL BEHAVIOUR OF PP/FLAX LAMINATES SUBJECTED TO HAIL IMPACT</p> <p><u>G. Parodo</u>, A. Ceccacci, G. Iannitti, A. Ruggiero, L. Sorrentino, S. Turchetta</p>
8.45	9.00	<p>DESIGN AND LIFE CYCLE ANALYSES OF A CFRP TUBULAR COMPONENT FOR COMMERCIAL PASSENGER AIRCRAFT</p> <p>I. Bianchi, A. Forcellese, <u>C. Mignanelli</u>, M. Simoncini, T. Verdini</p>
9.00	9.15	<p>INFLUENCE OF PROCESS PARAMETERS ON THE STRENGTH OF REACTIVE PPMA WELDED JOINTS</p> <p><u>B. Palmieri</u>, A. Petriccione, I. Papa, V. Lopresto, A. Pozzi, G. De Tommaso, A. Martone</p>
9.15	9.30	<p>OPUNTIA FIBER EXTRACTION AND THERMO-MECHANICAL CHARACTERIZATION FOR SUSTAINABLE COMPOSITE MATERIALS</p> <p><u>F. Rechsteiner</u>, F. Napolitano, I. Papa, A. Fiorentino, P. Russo, V. Lopresto, I. Taha</p>
9.30	9.45	<p>THERMOMECHANICAL ASSESSMENT OF RECOVERED PA12 POWDERS WITH BASALT FILLER FOR AUTOMOTIVE COMPONENTS</p> <p><u>F. Napolitano</u>, F. Cimino, I. Papa, V. Lopresto, P. Russo</p>
9.45	10.00	<p>RECYCLING OF CFRP OFF-CUTS BY MECHANICAL AND LOW TEMPERATURE METHODS</p> <p><u>D. De Fazio</u>, L. Boccarusso, A. Formisano, B. Vitolo, M. Durante</p>
10.00	10.15	<p>CHALLENGES & CHANCES OF CIRCULARITY IN AIRCRAFT SEATING AND INTERIORS</p> <p><u>B. Vitolo</u></p>
10.15	10.30	<p>LIGHTWEIGHT BIO-COMPOSITE HONEYCOMB MADE OF HEMP FIBRES AND EPOXY RESIN</p> <p>D. De Fazio, <u>L. Boccarusso</u>, M. Durante</p>
10.30	10.45	Open Discussion
10.45	12.00	<p style="text-align: center;">Session: Innovative materials and Characterization</p> <p style="text-align: center;">Chair: I. Papa</p>
10.45	11.00	<p>CORRELATION BETWEEN QUASI-STATIC AND IMPACT BEHAVIOUR OF SANDWICH STRUCTURES</p> <p><u>D. Rizzo</u>, G. Palomba, L. S. Sutherland, G. Epasto</p>
11.00	11.15	<p>THERMOGRAPHIC CHARACTERIZATION OF GRAPHENE NANOPATELET DISPERSION IN NANOCOMPOSITES</p> <p><u>L. Maio</u>, M. Ahmed, P. Potluri</p>
11.15	11.30	<p>COLD METAL TRANSFER OF INCONEL 718: PROCESS SIMULATION AND EXPERIMENTAL STUDY</p> <p><u>A.T. Silvestri</u>, A. El Hassanin, G. De Mase, M. Marchetti, G. Abete, A. Squillace</p>
11.30	11.45	<p>A BENCHMARK BETWEEN CONVENTIONAL AND CUSTOM HEAT TREATMENTS FOR INCONEL 718 ALLOY PROCESSED THROUGH COLD METAL TRANSFER TECHNOLOGY</p> <p><u>A. El Hassanin</u>, A. Teresa Silvestri, G. Giaccio, P. Panariello, G. de Mase, M. Marchetti, G. Abete A. Squillace</p>
11.45	12.00	Open Discussion

12.00	Closure of the Symposium
12.15	Light Lunch

19.00	<i>Wine Tour</i> Departure from Hotel Hermitage
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Poster Session

INFLUENCE OF THICKNESS ON THE MECHANICAL BEHAVIOUR OF INNOVATIVE BIOCOMPOSITES

V. Lopresto, I. Papa, D. D'Agostinis Rinaldi, V. Di Stasio, F. Bossa, F. Argenziano, S. Di Giorgio, A. Autiero, M. S. De Gregorio, F. Donadio, L. Veneruso, P. Di Sarno, I. F. Fiengo, E. Cozzolino, M. Panico, I. Taha

COATING FOR IMPROVED ADHESION AND CORROSION RESISTANCE OF A NOVEL MULTIMATERIAL HYBRID AM ALSI10MG – CFRP JOINT FOR AVIATION

A. De Zanet, S. Varetti, E. Pappa, M. Spuller, J. Lackner, C. Annicchiarico, A. Kumar, N. Gallo, M. Russi, B. Destito, G. De Pasquale

FILAMENT EXTRUSION ROUTE DEVELOPMENT THROUGH THERMAL ANALYSIS OF RECYCLED PLA

F. Napolitano, F. Gagliardi, G. Serratore, P. Russo, M.E. Di Nardo, P. Carlone

REAL-TIME SHEAROGRAPHY MEASUREMENTS OF 3D PRINTED AUXETIC SPECIMENS DURING FLEXURAL TESTS

V. Pagliarulo, C. Saltarelli, M. Paturzo, I. Papa, F. Napolitano, P. Russo

EFFECT OF LAYER HEIGHT TREATMENTS ON UNIAXIAL COMPRESSION PERFORMANCE OF INDUSTRIAL LARGE-SCALE ADDITIVELY MANUFACTURED POLYMER COMPOSITE STRUCTURES

A. Perez, P. Arroyo, K.H. Sehnawi, A.S. Chandar, D.E. Hardt

BIODEGRADABLE FILAMENTS FOR 3D PRINTING FILLED BY BIOMASS OF MEDITERRANEAN AREA: PROCESSING AND CHARACTERIZATION

M.R. Ricciardi, I. Papa, M. Russo, R. Scaffaro, M. Gammino, A. Langella

COLD SPRAY DEPOSITION ON RECYCLEBLE EPOXY-VITRIMER MATERIALS

A. Viscusi, A.S. Perna, A. Martone, B. Palmieri, F. Tucci, A. Astarita

TRANSLATION CHALLENGES IN ENGINEERING: A COMPARISON OF HUMAN TRANSLATORS, NMT, AND CHATGPT

C. Cigliano

ETCHING OF CFRP TO INCREASE THEIR JOINTS' STRENGTH

A. Benelli, K.Pandey, M.Ferraris

DISCRETE EVENT SIMULATION FOR INCREASING PRODUCTIVITY AND ENERGY EFFICIENCY IN AN ADDITIVE MANUFACTURING FACTORY

E. Cozzolino, I. Papa, F. Defina, I. Teotino, A. Manzo, A. Astarita

MEASUREMENT ASSESSMENTS OF AN INERTIAL NAVIGATION SYSTEM BASED ON MEMS SENSORS AND MANUFACTURED WITH FUSED FILAMENT FABRICATION

G. de Alteriis, A.T. Silvestri, C. Conte, G. Rufino, A. Squillace, R. Schiano Lo Moriello, D. Accardo

IMPORTANT NOTES:

All registered participants at DRaF2024 must wear their name badge when attending luncheons, coffee breaks, conference dinner or any official DRaF2024 function.

All the speakers are asked to upload their presentations on the computer in the room, at least 15 minutes before the start of their session.

15 minutes are dedicated to the presentation. The open discussion at the end of the session is dedicated to questions and discussion. It will be moderated by the Chair of the session. We warmly ask you to be on time.

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