ICCM24

24TH INTERNATIONAL CONFERENCE ON COMPOSITE MATERIALS

AUGUST 4-8, 2025

BALTIMORE CONVENTION CENTER

BALTIMORE, MARYLAND, USA

CONFERENCE
PROGRAM

Bristol UK: A world-leading hub for composites research and innovation

Partner

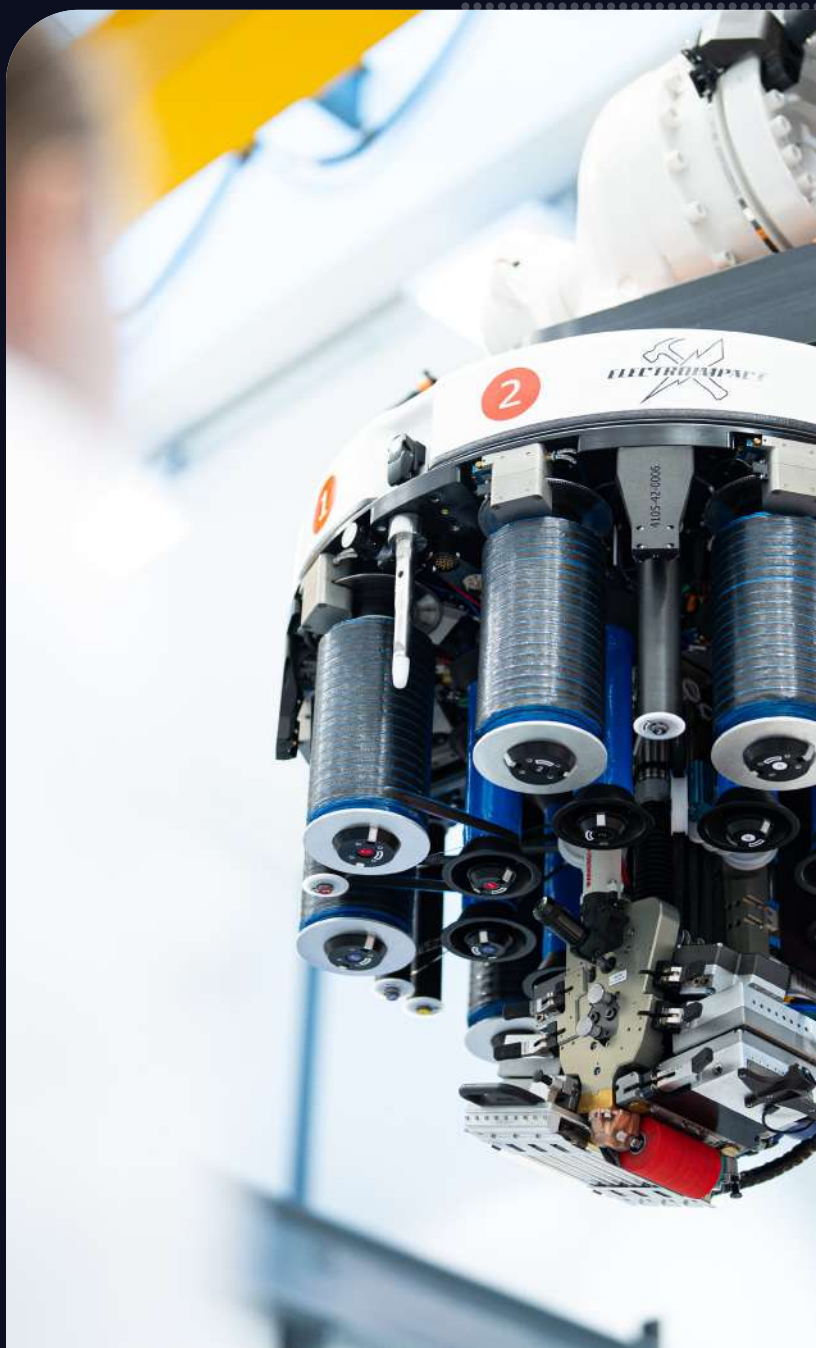
The Bristol Composites Institute (BCI) and NCC work in tandem to deliver cutting-edge research and innovation with demonstrable industrial impact.

Collaborate

Academic research at the Bristol Composites Institute benefits from industry partnerships, and generates new science and technology around novel material concepts, structural design and manufacturing of composites.

Innovate

NCC bridges the gap between academia and industry, helping companies of all sizes to capitalise on cutting-edge innovations to deliver more - at every stage of their journey and across the entire product lifecycle.



Visit stand 208

Email composites-institute@bristol.ac.uk

www.nccuk.com/ncc-and-bci

Welcome to ICCM24

The University of Delaware Center for Composite Materials (CCM) is pleased to host ICCM 24 as part of our 50th anniversary celebrations. This exciting conference is being held at the Baltimore Convention Center next to the Inner Harbor with its stunning waterfront views and is rimmed with spectacular museums. The conference features a dedicated industry track, international networking opportunities and cutting-edge research and insights.

CCM, based in nearby Newark, Delaware, has been a global leader in composites research for five decades. From our inception, we've pushed the boundaries and set the standard for advanced capabilities that have shaped the composites landscape.

We welcome you to Baltimore — a city renowned for its rich cultural and historical heritage and a strong manufacturing base. In the latter half of the 20th century, the defense industry began to expand its presence in and around Baltimore. New opportunities for advanced manufacturing and information technology have emerged here in the 21st century.

Today, Baltimore is known to be a diverse community with a lively arts and culture scene, historical landmarks, museums and attractions. Known for its skilled workforce, Baltimore leverages its strengths in advanced manufacturing and biotechnology to build a better future.

In addition to the conference, welcome reception, and banquet, we hope that you'll have time to celebrate our 50th anniversary at a social event on Wednesday, August 6 at the Power Plant Live! Baltimore Inner Harbor.

Along with my co-chair, Professor Erik Thostenson, I look forward to greeting you in Baltimore to participate in ICCM 24.

CONFERENCE CHAIR

Suresh Advani

Unidel Pierre S. du Pont Chair of Engineering
Professor, Mechanical Engineering and
Center for Composite Materials
University of Delaware

CONFERENCE CO-CHAIR

Erik Thostenson

Professor, Mechanical Engineering and
Center for Composite Materials
Joint Faculty, Materials Science and Engineering
University of Delaware

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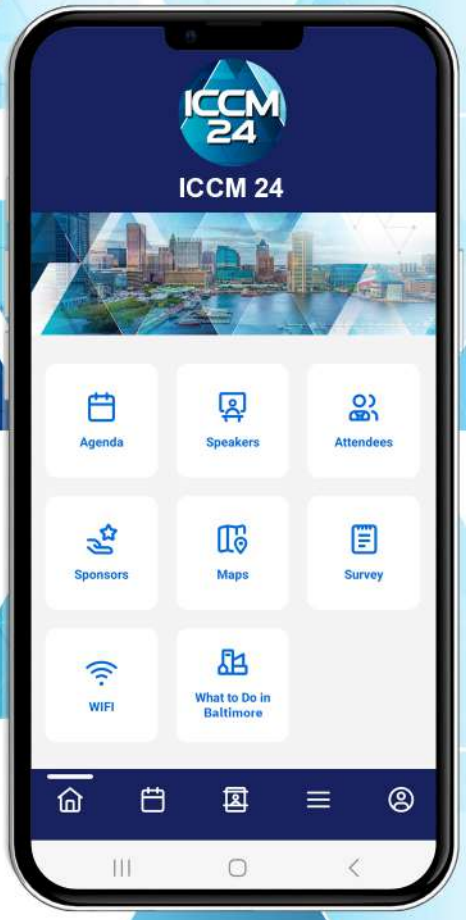

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To access the conference app, search for **ARCTOS EVENTS - CONFERENCE APP** in the App Store or Play Store and download to your smartphone. After Install, you will be prompted to create an account. **ATTENDEES MUST USE THE EMAIL ADDRESS THEY REGISTERED WITH TO CREATE THE ACCOUNT IN ORDER TO RECEIVE VERIFICATION CODE AND GAIN ACCESS INTO THE APP AND ITS CONTENTS.**

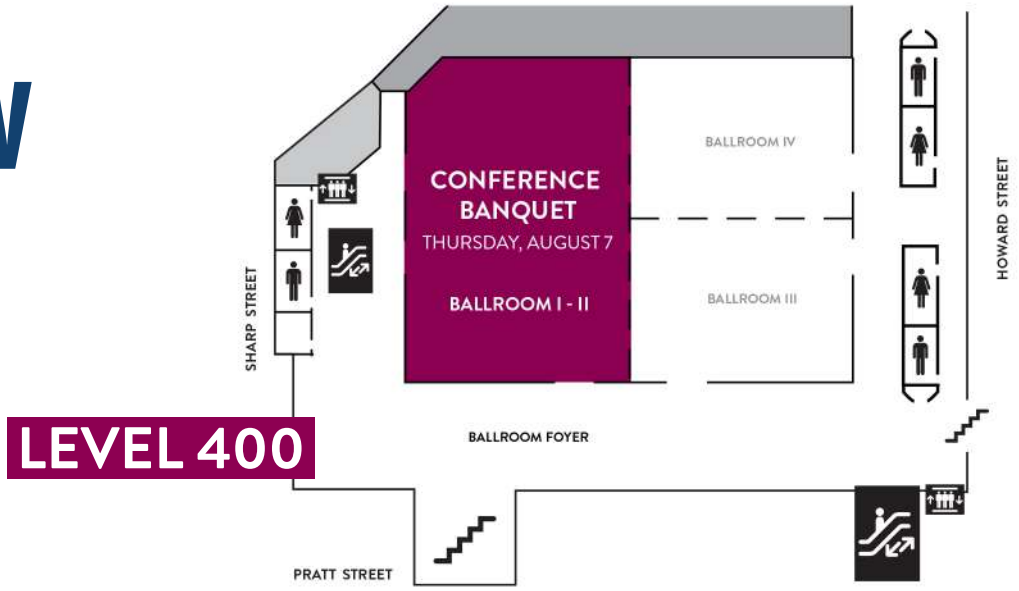
Search for **ICCM 24** and you'll have access to all the app has to offer.

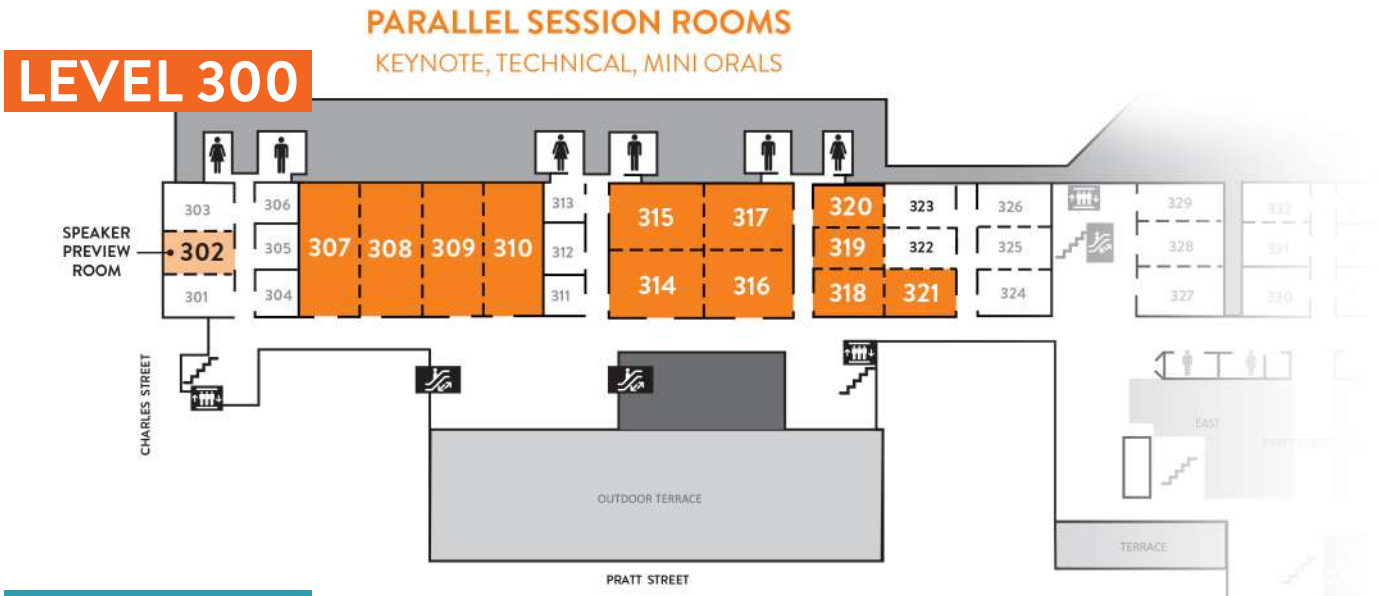
The entire conference is in the palm of your hand. Set-up your unique profile, build your own personalized agenda, connect with your colleagues, visit conference exhibitors, view speaker bios, and find your next session with venue maps.

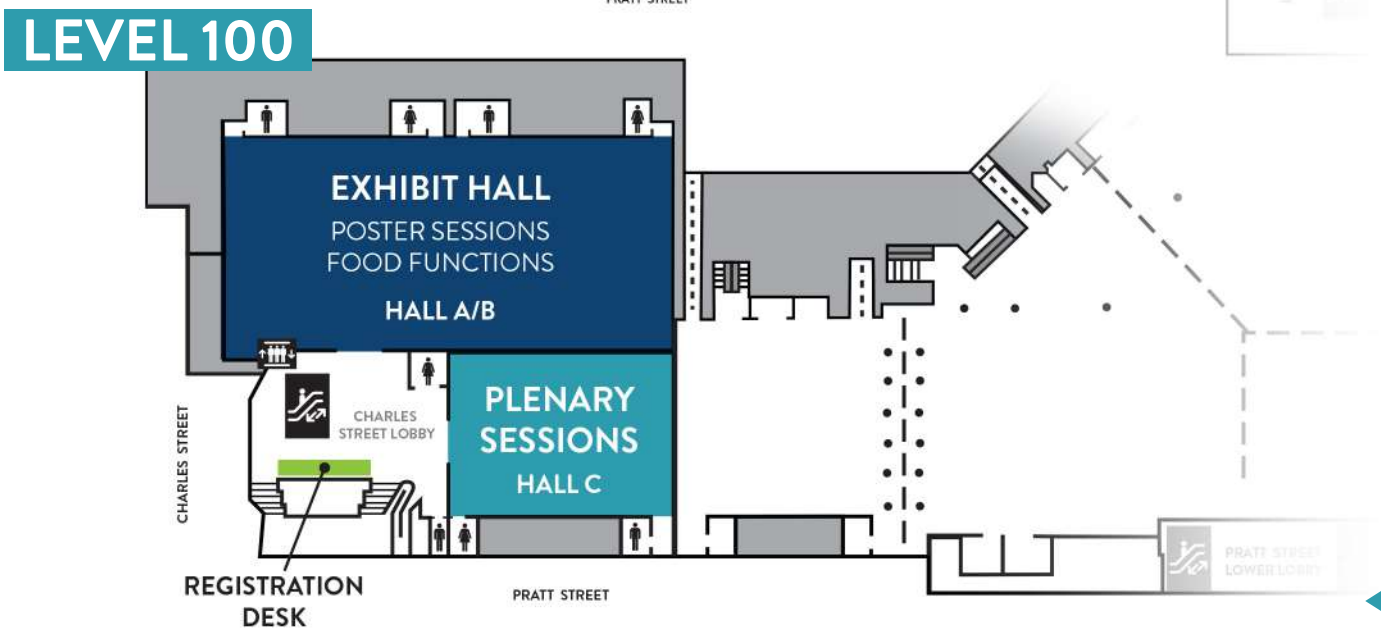
DOWNLOAD THE CONFERENCE APP FOR THE COMPLETE CONFERENCE EXPERIENCE.

Venue Overview

Baltimore Convention Center







General Information

REGISTRATION

Please ensure you collect your Conference Badge from the Registration Desk located in the Charles Street Lobby, Level 100 of the Baltimore Convention Center.

You are required to wear your Conference Badge at all times. The registration desk will be open during the following times:

Sunday, August 3:	2:00 PM - 6:00 PM
Monday, August 4:	7:30 AM - 6:00 PM
Tuesday, August 5:	7:00 AM - 5:30 PM
Wednesday, August 6:	7:00 AM - 6:00 PM
Thursday, August 7:	7:00 AM - 5:30 PM
Friday, August 8:	7:00 AM - 12:30 PM

EXHIBIT HALL HOURS

The ICCM24 Exhibit Hall is located on Level 100 in Hall A/B. Food functions and Poster Sessions will be held inside the Exhibit Hall.

The Exhibit Hall will be open during the following times:

Monday, August 4:	7:30 AM - 4:30 PM
Tuesday, August 5:	7:00 AM - 5:30 PM
Wednesday, August 6:	7:00 AM - 4:30 PM
Thursday, August 7:	7:00 AM - 5:30 PM
Friday, August 8:	7:00 AM - 11:00 AM

SPEAKER PREVIEW ROOM

For the program to run efficiently presentations will be preloaded on each session's laptop daily. Due to time constraints and to respect your fellow speakers, the use of individual laptops is prohibited.

The speaker preview room will provide you with a means of uploading the most up-to-date version of your presentation. You must stop by the Speaker Preview room at least one (1) day prior of your speaking session to make any necessary changes. The Speaker Preview Room will be located on Level 300 in room 302, staffed by AV technicians, and open during the following times:

Sunday, August 3:	2:00 PM – 6:00 PM
Monday, August 4:	7:30 AM – 4:30 PM
Tuesday, August 5:	7:30 AM – 4:30 PM
Wednesday, August 6:	7:30 AM – 4:30 PM
Thursday, August 7:	7:30 AM – 4:30 PM

WIFI

WIFI access is complimentary through the Baltimore Convention Center with no password required.

EMERGENCY / FIRST AID

In an emergency, dial 911 for fire, police, and ambulance. The nearest local Hospitals with After Hour care are:

University of Maryland Medical Center
Address: 22 S Greene St, Baltimore, MD 21201
Phone: (410) 328-8667

Mercy Medical Center Emergency Department
Address: 301 Saint Paul St, Baltimore, MD 21202
Phone: (410) 332-9477

University of Maryland Medical Center Midtown Campus
Address: 827 Linden Ave, Baltimore, MD 21201
Phone: (410) 225-8000

The Johns Hopkins Hospital Emergency Room
Address: 1800 Orleans St, Baltimore, MD 21287
Phone: (410) 955-5000

LANGUAGE

The official language of the 24th International Conference on Composite Materials is English.

PROCEEDINGS

All accepted presentations will be included in the official ICCM proceedings. The proceedings will be available to registered ICCM24 attendees via the official website.

INSURANCE

The 24th International Conference on Composite Materials is unable to accept responsibility for accidents or damage to the private property of participants. Please ensure that you do not leave portable and valuable pieces of equipment unattended anywhere, and that you make your own arrangements for health, travel, general and other insurance.

Australian Composites Manufacturing CRC

ENABLING COMPOSITES MANUFACTURING R&D TO MEET AUSTRALIA'S NATIONAL SELF-SUFFICIENCY PRIORITIES

10
YEARS
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4
PROGRAMS
Composite material design to product realisation

acmcrc.com

Meet Scientia Professor Ganga Prusty at ICCM24 to learn more about ACM CRC!

Scientia Professor Gangadhara Prusty

Director, ARC Training Centre for Automated Manufacture of Advanced Composites (AMAC)
The University of New South Wales (UNSW)
Mechanical & Manufacturing Engineering

Scan the code to meet up with Scientia Professor Prusty at ICCM24

Australian Government
Department of Industry, Science and Resources

Cooperative Research Centres Program

Social Events

A ticket is required to attend each event.

WELCOME RECEPTION

Monday, August 4 - 7:00 PM - 9:00 PM

National Aquarium
501 E. Pratt St. Baltimore, MD 21202

GRAD STUDENT EVENT

Tuesday, August 5 - 7:00 PM

Luckie's Tavern at Power Plant Live!
34 Market Place, Baltimore, MD 21202

CCM 50TH ANNIVERSARY CELEBRATION

Wednesday, August 6 - 7:00 PM - 10:00 PM

Angels Rock Bar at Power Plant Live!
10 Market Pl, Baltimore, MD 21202

CONFERENCE BANQUET

Thursday, August 7 - 7:00 PM - 10:00 PM

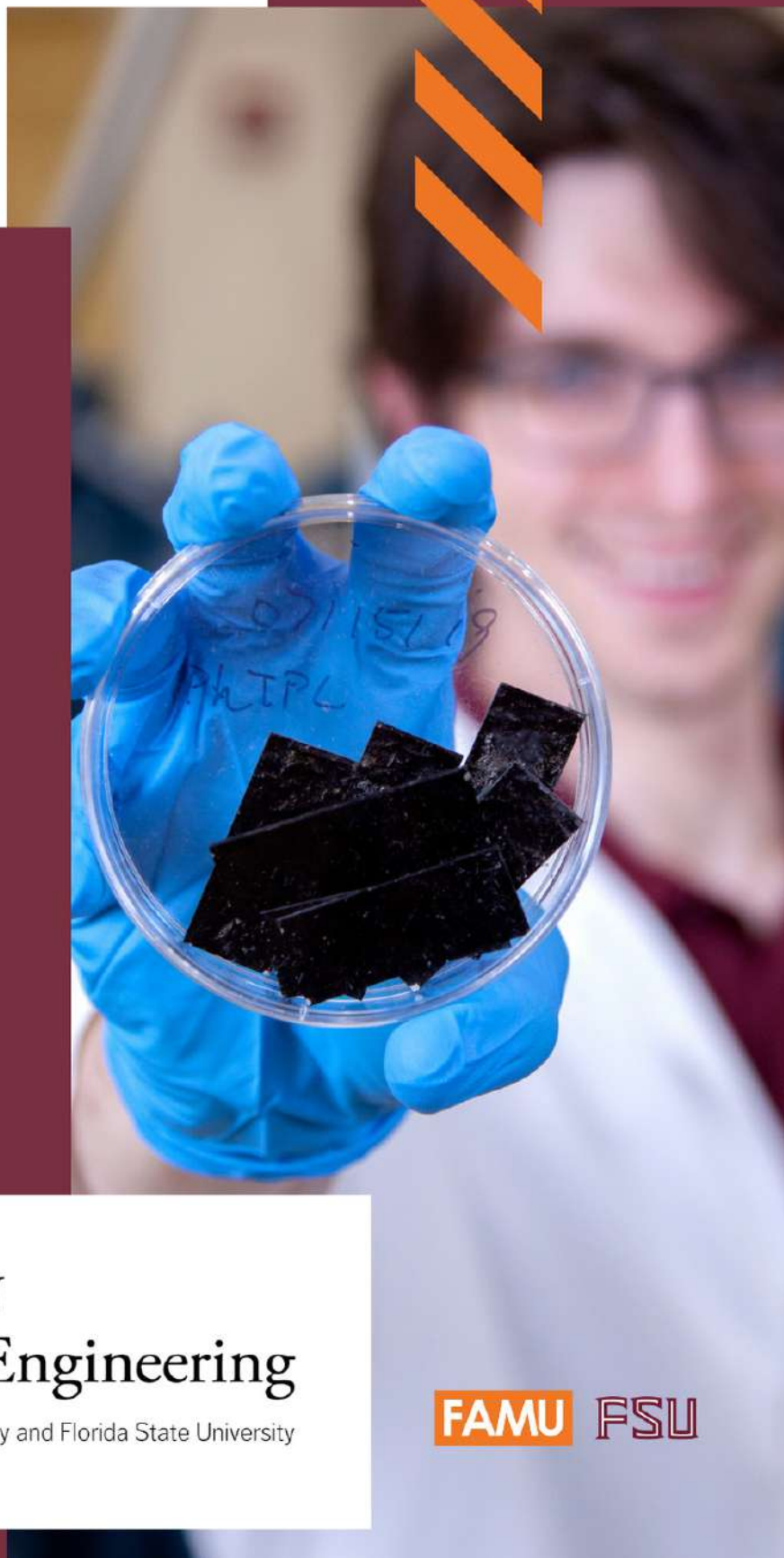
Ballroom 1 - Level 400
Baltimore Convention Center

TOUR OF UD-CCM

Friday, August 8 - 2:15 PM - 4:15 PM

Center for Composite Materials
University of Delaware
Bus departs at 12:45 PM
Bus departs UD-CCM for return at 4:15 PM

LEADERS IN ADVANCED COMPOSITE MATERIALS



High-Performance Materials Institute

Department of Industrial & Manufacturing Engineering

Innovation + research for:

- Aerospace composites & high-performance nanomaterials
- Advanced manufacturing and sensors
- Artificial intelligence/machine learning for engineering, transportation & health care applications
- Data science-driven materials research & manufacturing

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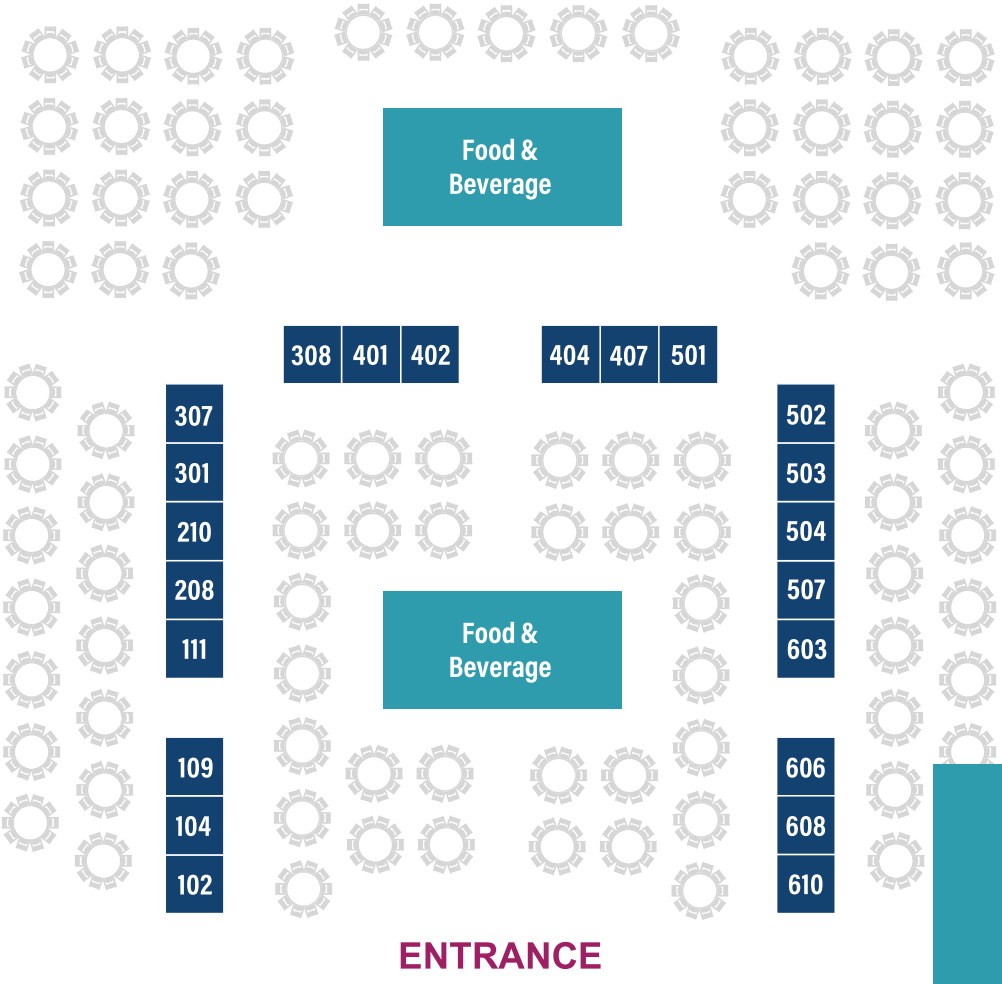
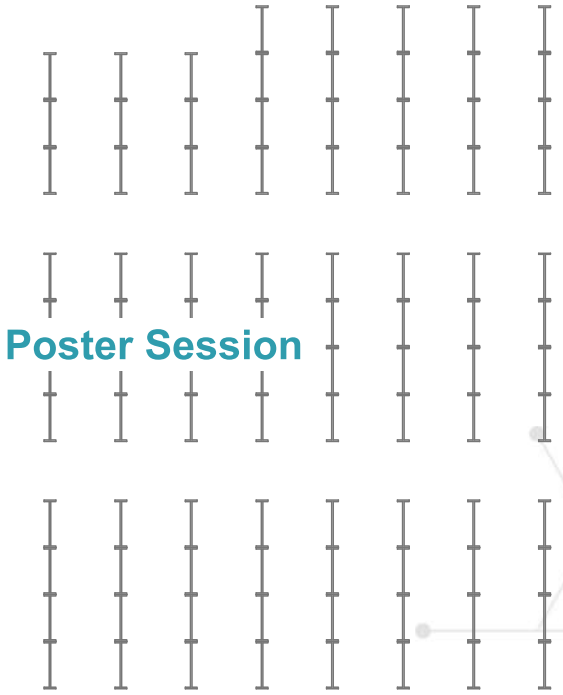
Exhibition





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Committees

ICCM EXECUTIVE COUNCIL

- Pascal Hubert, Canada — **President**
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- Martine Dubé, Canada — **Vice President, Region 3**
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- Chiara Bisagni, Italy
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- Yentl Swolfs, Belgium
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- Brian Falzon, Australia
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- Anoush Poursartip, Canada
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- Michael Wisnom, UK
- Paul Smith, UK
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- Stephen Tsai, USA

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- Nuno Correia, UK
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- Veronica Ambrogi, Italy
- Veronica Calado, Brazil

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- Erik Thostenson, USA
- Corinne Hamed, USA
- Joe Deitzel, USA
- John Gillespie, USA
- Navid Kermani, USA
- Sagar Doshi, USA
- Srikanth Pilla, USA
- Tom Cender, USA
- Sai Aditya Pradeep, USA
- Dae Han Sung, USA
- Alasahin, Seyda Naz, USA

UNIVERSITY OF DELAWARE

CENTER FOR COMPOSITE MATERIALS

Celebrating 50 Years

Honoring the Legacy of the University of Delaware Center for Composite Materials

Since its establishment in 1974, the University of Delaware's Center for Composite Materials (UD-CCM) has consistently positioned itself at the forefront of research, education, and technology transfer in the field of composite materials. As we commemorate our 50th anniversary, we take this opportunity to reflect upon a legacy characterized by pioneering innovation, interdisciplinary collaboration, and significant global impact.

UD-CCM is internationally recognized as a Center of Excellence and has been instrumental in advancing the science and engineering of composite materials. Through over five decades of groundbreaking research encompassing materials synthesis, multifunctional systems, processing science, mechanics and design, sensing and control, and software development, we have fundamentally shaped the future of composites across diverse industries.

Our mission is defined by three core objectives:

1. To conduct transformative research that bridges fundamental discovery and real-world application.
2. To educate and inspire the next generation of scientists and engineers through immersive, hands-on learning experiences.
3. To facilitate the transition of technology to industry, empowering over 350 companies with innovative solutions and skilled talent.

With more than 53,600 square feet of advanced facilities and an investment of over $30 million in equipment, UD-CCM continues to lead in AI-enabled composites, smart materials, and sustainable composite solutions. Our efforts are supported by a robust network of federal agencies, including the U.S. Army Research Laboratory, U.S. Air Force, Office of Naval Research, DARPA, NASA, the National Science Foundation, the United States Department of Agriculture, and the Department of Energy, as well as a diverse array of industrial partners.

As we celebrate this significant milestone during ICCM24, we extend our gratitude to the visionary faculty, students, researchers, staff, and partners who have contributed to this journey. From our foundational breakthroughs to contemporary technological advancements, UD-CCM remains steadfastly committed to "Pioneering Innovation Excellence," a guiding principle that will propel us into the next fifty years.

Enjoy an evening of celebration, networking, and reflection on five decades of innovation in composites. We look forward to celebrating with you!

Join us in Celebration

We invite all ICCM24 attendees to commemorate this historic occasion at the CCM 50th Anniversary Celebration Dinner.

Wednesday, August 6, 2025

7:00 PM

Power Plant Live!
Baltimore Inner Harbor

Scan QR code for tickets.
Attendee: $50
Student: $25 *(Student ID Required)*

Scientific Program

MONDAY, AUGUST 4

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
7:30 AM	**Registration Desk Open** *(closes at 6:00 PM - located in Charles Street Lobby, Level 100)*						
7:30 AM	**Continental Breakfast** *(until 8:30 AM - located in Exhibit Hall A/B Level 100)*						
7:30 AM	**Exhibit Hall Open** *(closes at 4:30 PM - located in Exhibit Hall A/B, Level 100)*						
8:30 AM	**Opening Ceremony**						
8:50 AM	**SCALA Lecture: Composite Manufacturing Comes Full Circle** Prof Nancy Sottos, *Swanlund Endowed Chair, Head of the Department of Materials Science and Engineering, University of Illinois Urbana-Champaign*						
9:35 AM	**Plenary Speaker: Sustainability Driven Composite Development** Prof Véronique Michaud, *École Polytechnique Fédérale de Lausanne (EPFL)*						
10:20 AM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						
	Move to Level 300 for Parallel Keynotes and Technical Sessions						
10:50 AM - 11:20 AM		**Keynote Speakers** **What 3D Printing Can't Achieve: Rethinking Composites in Additive Manufacturing** Prof Kelvin Fu - University of Delaware	**Permeability of Porous Media - A Mathematical Complexity Spanning Multiple Length-Scales** Prof Krishna Pillai - University of Wisconsin-Milwaukee	**A Review of Frontal Polymerization with Consideration of Future Directions** Prof John Pojman - Louisiana State University	**Fatigue Damage Evolution in Glass-Epoxy Laminates with Stress Concentrations Experiments and Modelling** Prof Marino Quaresimin - University of Padova Management & Engineering		
		Manufacturing: Resin Transfer Molding 1	**Materials and Precursors**	**Physical and Structural Behavior**	**Multifunctional Composites**	**Additive Manufacturing**	**Fatigue and Damage Mechanics of Composites**
11:25 AM - 11:45 AM		**Simulating the Resin Transfer Molding Process with Graph Neural Networks** Mr Jimmy Jean - Delft University of Technology	**Prepreg Surface Morphology: A Key Factor in Minimizing Interfacial Air and Interlaminar Voids** Mr Jaewoong Kim - Korea Advanced Institute of Science Technology	**Determination of Mechanical Properties of Polyimide Silica Nanocomposite using Micromechanical Modeling** Dr Nithin Kaliyath Parambil - University of Delaware	**Multifunctional Thermally Responsive Hydrogels Integrating Silver Nanoparticles and Herbal Medicines for Enhanced Diabetic Wounds** Ms Phuong Le - Institute of Applied Materials Science	**Effect of Compaction Force on Fiber Volume Fraction and Voids in Additively Manufactured Continuous Carbon Fiber Thermoset Composites** Mr Shaharear Md Emtiaz - University of Delaware	**Characterization of Mixed-mode Fracture Toughness and Traction Separation Laws for Woven S2 Glass/ Epoxy Composites** Ms Ankita Bisht - University of Delaware
11:45 AM - 12:05 PM		**Numerical Analysis of Macrovoid Formation Process in a Single-layered Woven Fibre Bundle Confined Between Parallel Plates** Mr Masaki Inagawa - Tokyo University of Science	**Behaviour of High Fibre Volume Ratio Polymer Composites in Response to Laser Exposure** Mr George Holiday - National Composites Centre	**Microscale Simulation for Nonlinear Stress-Strain Behavior of Unidirectional Carbon Fiber Phenyl-Ethynyl Terminated Polyimide Triax Composites** Mr Tatsuya Kobayashi - Tokyo University of Agriculture Technology	**Simultaneous Electromechanical Testing of a Structural Battery** Prof Tong-Earn Tay - National University of Singapore	**Analysis of Void Size and Void Distribution in Continuously Fiber Reinforced Filaments for Additive Manufacturing** Mr Jan-Uwe Schmidt - German Aerospace Center	**Characterisation and Prediction of Failure in Injection Moulded Short Fibre Composites, From Coupons to Components** Dr Soraia Pimenta - Imperial College London
12:05 PM - 12:25 PM		**Qualitative and Quantitative Benchmarking Comparison of Resin Infusion Simulation Software** Mr Kieran Guoite - National Composites Centre	**Validation Method for Film-based Sensor for In-situ Monitoring of the Curing of Fibre-Reinforced Plastics Based on Raman Spectroscopy and DSC Analysis** Mr Christian Lauter - PHWT	**Prediction and Validation of Crush Behaviors in Advanced Glass Mat Thermoplastic Tubes Using Innovative Simulation Technology** Dr Geunsu Joo - Korea Institute of Materials Science		**In-situ Foaming in the Material Extrusion Process: Development of a Nozzle Concept** Mr Wilfried Liebig - Karlsruhe Institute of Technology	**Direct Approach for Experimental Determination of Mixed-Mode Cohesive Tractions of Composites with Large-Scale Fiber Bridging** Mr Ruben Erives Anchondo - Technical University of Denmark
12:25 PM - 1:20 PM	**Group Lunch** *(located in Exhibit Hall A/B, Level 100)*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Registration Desk Open *(closes at 6:00pm - located in Charles Street Lobby, Level 100)*						7:30 AM
Continental Breakfast *(until 8:30am - located in Exhibit Hall A/B, Level 100)*						7:30 AM
Exhibit Hall Open *(closes at 4:30pm - located in Exhibit Hall A/B, Level 100)*						7:30 AM
						8:30 AM
						8:50 AM
						9:35 AM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						10:20 AM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
						10:50 AM - 11:20 AM
Aerospace Structures		**Frontal Polymerization**	**Computed Tomography**	**Permeability Measurement of Textiles**		
A Vibration Based SHM Model for Damage Detection and Monitoring in Curved Beam Aerostructures Dr Sindhu Bushpalli - Collins Aerospace Ireland		**A Mechanism-Based Reaction-Diffusion Model for Frontal Polymerization (FP) of Thermoset Polymers Towards Rapid Screening of New FP-Chemistries** Mr Donald Bistri - University of Illinois Urbana-Champaign	**Differences in Interfacial Damage Between Single, Double, and Multi-Fibre Composites Unravelled via In-situ Synchrotron Holo-Tomography** Mr Thanasis Chatziathanasiou - KU Leuven	**A Comparison of Various Methods for the Permeability Prediction of Textile-based Fiber Structures** Mr Patrick Nowakowski - Faserinstitut Bremen eV		11:25 AM - 11:45 AM
Efficient Failure Prediction Methodology for High Aspect Ratio Composite Wings with High Bend-Twist Coupling Mr Mario Miranda - Imperial College London		**Influence of Kinetic Models on the Simulation of Frontal Polymerization** Mr Ke Wang - Vrije Universiteit Brussel	**Unravelling Links Between Fibre Misalignment Resin-rich Pockets and the Fibre Break Development via In-Situ Holotomography** Miss Yeajin Lee - University of Southampton	**Characterisation of Heterogeneous Permeability in Liquid Composite Moulding Processes Using Stochastic Inversion and Neural Surrogates** Mr Andreas Endruweit - University of Nottingham		11:45 AM - 12:05 PM
		Controlled Frontal Polymerization and Direct Writing of Cyclooctadiene-Based Inks Dr Brandon Clarke - Harvard University	**Damage Evolution in Multilayer Braided Composite Tubes Under Torsion Studied by Time-Lapse X-ray Computed Tomography** Mr Dongze He - The University of Manchester	**In-plane Permeability of VARI Consumables: A Comparison of Experimental and Virtual Estimation Methods** Mr Ewald Fauster - Montanuniversitat Leoben		12:05 PM - 12:25 PM
Group Lunch *(located in Exhibit Hall A/B, Level 100)*						12:25 PM - 1:20 PM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
1:20 PM	**Plenary Speaker: Toward Simpler Design and Manufacturing of Composite Laminates** Prof Daniel Melo, *Federal University of Rio Grande do Norte (UFRN)*						
	Move to Level 300 for Parallel Keynotes and Technical Sessions						
2:10 PM - 2:40 PM		**Keynote Speakers**					
		Additive Manufacturing - Enabled Architected Cellular Composites Prof S. Kumar - University of Glasgow	**Toward Predictive Process Modeling of Polymer and Polymer-Derived Composites: Challenges and Emerging Approaches** Dr Marianna Maiaru - Columbia University	**Investigation of Particle Size Effect on the Fracture Behavior of Polymer-Graphene Nanocomposites via Crack Tip Shielding** Prof Samit Roy - University of Alabama	**Incorporating Nanostructures into Next Generation (sustainable) Fibres** Prof Milo Shaffer - Imperial College	**Energy Absorption Strategies for Occupant Protection Systems Using Cellular Materials and Smart Composites** Prof Norman Wereley - University of Maryland	
		Manufacturing: Forming 1	**Materials and Precursors**	**Physical and Structural Behavior**	**Multifunctional Composites**	**Additive Manufacturing**	**Fatigue and Damage Mechanics of Composites**
2:45 PM - 3:05 PM		**Induction Heating of Thermosetting CFRP Molds for Commingled PPGF Composite Forming** Ms Eunjung Kim - Korea Institute of Science & Technology	**Dual-surface Engineering of Carbon Fibers by Grafting Carbon Nanotubes and Chemical Functionalization** Mr Hassan Almousa - Imperial College London	**Model Fracture in Plainweave Glass Epoxy Composites Fracture Toughness Resistance Curve and Traction Separation Relationships** Mr Paul Dason Samuel - University of Delaware	**Self-healing of Structural Damage in Thermoplastic Composite Laminates via Incorporated Nano-engineered Heating Architecture** Mr Hyungmin Kim - KAIST	**A Magnetic Field Assisted Accelerated Composites Volumetric Manufacturing** Dr Hamed Yazdani Nezhad - University of Leeds	**Fatigue Limit of Unidirectional Fibre Composites - Comparison of Experimental Data from the Literature with Model Predictions** Mr Ashish Kumar Bangaru - DTU Wind & Energy Systems
3:05 PM - 3:25 PM		**Characterising the Interply Behaviour During Multi-ply Single Diaphragm Forming Process for Noncrimp Fabric Materials** Mr Yilong Li - University of Cambridge	**Electrospun Nanofibrous Interleaves for Improving the Permeability Resistance of Cryo-cycled Composite Laminates** Dr Othman Laban - The University of New South Wales	**Curvilinear Anisotropy for Notch Insensitive and Damage Tolerant Structures: An Analytical and Numerical Study** Dr Marco Salviato - University of Washington	**Externally Activated Self-healing in Structural Composites via Embedded Conductive Networks** Mr William Martin - North Carolina State University	**Microstructure Fiber Orientation Fiber Length and Porosity Control via Nozzle Design in Large-format Extrusion Process** Ms Brittany Rodriguez - Oak Ridge National Lab	**On and Off-axis Tension-compression and Self-heating Behavior of a Woven Carbon-fiber Reinforced Polymer Composite up to the Very High Cycle Fatigue** Mr Aravind Premanand - Albert Ludwigs University Freiburg
3:25 PM - 3:45 PM		**Thermoforming of Load-path-optimised Recycled Thermoplastic Composites Development of an AI-supported Emitter Technology and Process Evaluation** Mr Matthias Froning - Institut für Textiltechnik Augsburg gGmbH	**Graphene Coated Natural Fiber Composites for Marine Applications** Dr Marie Jonsson - Linköping University	**Influence of Consolidation Pressure on Tensile Strength of UHMWPE Composites** Mr Molla Ali - University of Delaware	**Autonomous Self-healing and Self-sensing in an Optovascular Structural Thermoset** Mr Zachary Phillips - NC State University		**Investigation of Thermomechanical Behaviour of Composites Under Vibration Fatigue Testing** Mr Friso Oude Tanke - University of Twente
3:45 PM - 4:10 PM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
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Move to Level 300 for Parallel Keynotes and Technical Sessions						
						2:10 PM - 2:40 PM
Aerospace Structures		**Frontal Polymerization**	**Computed Tomography**	**Permeability Measurement of Textiles**		
Structural Integrity of Loadcarrying H2 Pressure Tanks for Small Aircraft Ms Nicole Motsch-Eichmann - Leibniz Institut für Verbundwerkstoffe		**Out-of-autoclave Manufacturing of Thermoset Composites using Frontal Polymerization: An Overview** Prof Philippe Geubelle - University of Illinois Urbana-Champaign	**3D Observation of Delamination in Carbon Fibre-reinforced Composites Under Remote Mode II Loading Through In-situ Computed Tomography** Ms Panayiotis Tsokanas - KU Leuven	**Permeability Modeling for BD Fabric** Mr Mayur Godbole - Auburn University		2:45 PM - 3:05 PM
A Doublewall CFPR Hydrogen Storage and Distribution System as a Structural Component in Aircraft Applications Ms Nithya Sindhe Narayana Rao - Leibniz Institut für Verbundwerkstoffe GmbH IVW		**Internal Stresses in Vacuum-Infused Composite Plates Manufactured by Frontal Polymerization** Mr Clement Broggi - TU Delft	**High-speed X-ray Multi-Projection and Ultra High-Speed Radiography Imaging to Capture Transverse Cracking in Glass Fibre-Reinforced Composites** Dr Christian Breite - KU Leuven	**A Practical Approach to Uncertainty and Validation of Process Simulation for LCM Manufacture** Dr Ana Yong - NPL		3:05 PM - 3:25 PM
Pi-Preform Joint Revolutionary Improvement for Bonded Composite Structures Dr Felix Nguyen - Lockheed Martin Co		**Curing Time-Energy Optimization of Frontal Polymerization of Fiber-Reinforced Polymer Composites** Mr Sanghun Shin - University of Illinois Urbana-Champaign	**In-situ Synchrotron X-ray Microtomography of Void Evolutions During Nanoporous Network-Enabled Out-of-Autoclave Manufacturing of Aerospace-Grade Woven** Dr Jingyao Dai - University of Oklahoma			3:25 PM - 3:45 PM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						3:45 PM - 4:10 PM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
	Tsai Award Symposium	Manufacturing: Modeling and Applications	Materials and Precursors	Physical and Structural Behavior	Multifunctional Composites	Additive Manufacturing	Fatigue and Damage Mechanics of Composites
4:10 PM - 4:30 PM	**Experimental and Numerical Compression Analysis of 3D X-ray CT Scanned Uni-Directional Pultruded Carbon Fiber Composites** Ms Pinelopi Mageira - Technical University of Denmark	**Modeling the Impact of Void Distribution on Mechanical Properties of Short Fiber Recycled CFRTP Integration of Experimental Analysis and Finite Element Analysis** Mr Takumi Morishima - The University of Tokyo	**Electron-Beam and Gamma-Ray Radiation Treatments to Achieve High Strength in Carbon Nanotube Laminates** Mr Cecil Evers - Florida State University HPMI	**Orthotropic Impact Response of Unidirectional Glass/Epoxy Composites: A Yarn-Level Finite Element Analysis** Dr Shubham Shubham - Indian Institute of Technology Bombay	**Multifunctional Graphene-based Nanocomposites with Synergistic Effects of Chemical and Physical Interactions** Dr Seira Morimune-Moriya - Chubu University	**Additive Manufacturing Process for Fabricating Complex and Dynamic Poss-based 4D Structures** Ms Nicole Gorohovsky - Tel Aviv University	**The Discrete Model for Composites DM4C Mesoscale Modeling of Composites Via Physics-Based Discrete Mathematical Models of Fibers and Matrix** Dr Marco Salviato - University of Washington
4:30 PM - 4:50 PM	**Partially Carbonised Carbon Fibres as an Improved Multifunctional Structural Battery Electrode** Mr Ruben Tavano - Chalmers University of Technology	**High Resolution Induction Sensing for Feature Detection in Thin-Ply Carbon Fiber Reinforced Polymer** Mr Ehshan ul-Haq - Delft University of Technology	**Plasma-Treated PET Nanofibers Veils a Novel Interface Enhancement for Cryogenic Composite Applications** Mr Jeho Jin - Korea Advanced Institute of Science & Technology	**Testing and Progressive Failure Modelling of a Wind Turbine Blade Spar Capweb Joint Substructure** Dr Tobias Laux - University of Bristol	**Soft Composites for Charge Transport and Storage to Synergistically Enhance Energy Harvesting Performance of Triboelectric Generators** Miss Ziyan Gao - University of New South Wales	**Predicting and Optimizing FDM Print Performances: An AI Approach to Mechanical Property Optimization** Mr Marcello Laurenti - Sapienza	**Fatigue Simulation of Laminated Composites Under Mixed Mode Cyclic Loading Using a Damage-Mechanics-Based Fatigue Accumulation Model** Mr Rong-Can Hong - The University of Tokyo
4:50 PM - 5:10 PM	**Moisture Effects on Impact Strength and Recovery in Carbon Fiber Reinforced Vitrimers** Mr Jun Young Choi - Seoul National University	**Viscoelastic Biscale Modeling of Process-Induced Deformation in Noncrimp Fabric Composite** Ms Sera Koo - Tohoku University	**Multifunctional Carbon Nanotube-Based Composite Carbon Fibers for Enhanced Mechanical Properties** Dr Bon-Cheol Ku - Korea Institute of Science & Technology KIST	**Improving the Computational Efficiency of Impact Simulations on Woven FRP Composite Plates** Mr Jakov Ratkovic - University of Zagreb FAMENA	**Designing Novel Composite Structural Supercapacitors with Discrete Carbon Nanotube Electrodes and Polymer Electrolyte Separator Membranes** Dr Alex Harman - Defence Science & Technology Group	**Model Order Reduction Methods for Real-Time Prediction of Thermomechanical Properties of Additively Manufactured Composite Structures** Mr Pablo Castello Pedrero - Universitat Politicnica de Valencia	**Progressive Damage Behavior of Plain-Woven CFRP under Tensile-tensile Cyclic Loading** Mr Chihaya Hoshikawa - Nagoya University
5:10 PM - 5:30 PM	**A Structure-Integrated Nanocomposite Sensor System Capable of Simultaneous Measurement of Omnidirectional Strain and Temperature** Mr Sumin Lee - Korea Advanced Institute of Science & Technology	**Damage Tolerant Graphene-Metal Nanocomposite Thin Films by Chemical Vapor Deposition Synthesis** Dr Kaihao Zhang - The Hong Kong University of Science & Technology	**Unravelling the Effect of the Addition of a New Carbon Allotrope in Polymeric Composites: Investigation of Electrical Properties** Miss Silvia Zecchi - Politecnico di Torino	**Towards an Accelerated Nonlinear Solution Method Inspired by Multiscale and Multigrid Methods** Dr Ryan Whitehead - Bluehalo	**Polymer Nanocomposite Triboelectric Nanogenerators for Antimicrobial and Electrical Stimulation Platforms** Prof Yong Tae Park - Myongji University	**One Go Approach on Developing Topologically Interlocked Materials TIMs Via Fused Filament Fabrication Process** Dr Sabarinatham Palaniyappan - King Fahd University of Petroleum Minerals	**Strength Evaluation of Twill Woven CFRP Laminated Structure, Considering Knee Point** Dr Masataka Kawaguchi - Doshisha University
5:30 PM - 5:50 PM	**Prepreg Development for Rapid On-Orbit Composites Manufacturing via Frontal Curing** Mr Tyler Price - University of Illinois Urbana Champaign	**Insights from a Manufacturer Dedicated to Expanding the Role of Structural Composites in Commercial and Residential Construction** Dr Richard Rydin - Building Composites LLC	**Optimizing Hierarchical Carbon Nanotube-Grafted Carbon Fiber Production** Dr David Anthony - Imperial College London	**Strip Buckling Analysis to Predict Skin-Stiffener Debonding in Postbuckled Panels** Prof Richard Butler - University of Bath	**Wearable Body Temperature Sensing with Autonomous Self-Regulated Joule Heating and Passive Cooling for Healthcare Applications** Mr Hongxu Guo - Loughborough University	**Feasibility Study of a 3D-printed Honeycomb Core Structure as Thermal Vacuum Insulation for Liquid Hydrogen Composite Pressure Vessels** Mr Andreas Scherer - University of the Bundeswehr Munich	**High Temperature Fatigue Performance Evaluation of Fibre-Reinforced Polymer (FRP) Composites Utilizing Monotonic and Dynamic Mechanical Analysis** Dr Shoab Ahmed Chowdhury - TA Instruments
5:50 PM - 6:10 PM	**Surrogate Model-driven Automation for RVE Design and Validation of Long Discontinuous Carbon Fiber Composite Structures** Mr Akshay Zaveri - University of Connecticut	**Optimization of Processing Conditions for UHMWPE Composites in Body Armor Applications** Mr Alex Vanarelli - University of Delaware		**Influence of the Fiber Curvature on the Mechanical Properties of Long Fiber Reinforced Composites** Ms Celine Lauff - Karlsruhe Institute of Technology		**Effects of 3D Printing Orientation and Infill Patterns on the Impact Strength and Fracture Behavior of PLA-CFRP Hybrid Structures for Robotics** Mr Cheonghwa Lee - University of Connecticut	**Mechanical Characterization of MWCNT Based BFRP Composite by using the Mode I and Mode II** Dr Kalyan Singh - Indian Institute of Technology ISM Dhanbad
7:00 PM - 9:00 PM	**Welcome Reception** - *National Aquarium*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Aerospace Structures	**AI Empowered Paradigm**	**Frontal Polymerization**	**Computed Tomography**	**Permeability Measurement of Textiles**	**Self Healing**	
Analysis of the Mechanical Behaviour of CFRP Bosses in Composite Pressure Vessels Considering Different Stiffness Distributions Mr Gerrit Rehs - University of the Bundeswehr Munich	**Semantic Interoperable Data Model and Stochastic Multiscale Analysis of Short Fibre Composites** Dr Joerg Hohe - Fraunhofer-Institut fuer Werkstoffmechanik	**Multiphysics Modeling of Frontal Polymerization-Based Manufacturing of Woven Composites** Mr Michael Zakoworotny - University of Illinois Urbana-Champaign	**Deep Learning-Driven Segmentation of Resin-rich Areas in 3D CT Imaging of CFRTP-SMC** Mr Cheng Jin - The University of Tokyo	**Material Characterization for Particle-filled RTM in 3D Fibrous Preforms** Ms Leonie Marchand - GeM Lab	**Sustained Self-Sensing and Autonomous Self-healing via Electrothermal Coupling in Fiber-composites** Mr Jack Turicek - NCSU	**4:10 PM - 4:30 PM**
Improving Aeroelastic Performance of Hale Geometrically Nonlinear Flexible Wings Ms Najwa Zaqirah Binti Taufik - King Fahd University of Petroleum & Minerals	**A Data-Driven AI-Enabled Approach to Predict Crystal Morphology Evolution in Heterogeneous Semicrystalline Thermoplastic Composites** Mr Amit Makarand Deshpande - University of Delaware	**Energy-Efficient UV Curing of Non-Transparent Fibers in the VARI and RTM Process** Mr Jens Take - Universitut Stuttgart	**Prior Shape Analysis for Yarn Segmentation in XCT Images** Ms Hafsa El Herichi - Safran Group	**Can We Reliably Predict In-Plane and Out-of-Plane Permeability of a Reference Permeable Medium** Mr Andreas Endruweit - University of Nottingham	**Influence of the Addition of Thermoplastic Healing Agent to Epoxy Resin** Mrs Ana Paula Cysne Barbosa - Federal University of Rio Grande do Norte	**4:30 PM - 4:50 PM**
Ultrasonic Reconsolidation at 20 KHz: A Potential Repair Approach for Aerospace Composites Mr Balaji Ragupathi - University of Freiburg	**Graph Neural Networks for Effective Prediction of Mechanical Response in Composite Structures with Models using Unstructured Meshes** Mr Luca Patrignani - Imperial College London	**Buoyancy-Driven Convection in Adiabatic Horizontal Frontal Polymerization** Ms Laurence Rongy - Universite libre de Bruxelles ULB	**Robust Image Registration for Periodic Materials Application to 3D Woven Textiles** Mr Arturo Mendoza Quispe - Safran		**Self Healing Composites Influence of Self Healing Agent Fraction** Prof Maria Cioffi - UNESP	**4:50 PM - 5:10 PM**
Manufacturing Process for Large Space Structures and Supporting Long-Duration Human Space Mission Prof Susanna Laurenzi - Sapienza Universita di Roma	**AI-Based Generation of Simulation Models for Material Development from CT Data** Dr Oliver Rimmel - Math2Market GmbH	**Scaling Up the Efficient Manufacturing of Carbon Fiber Epoxy Composites Using Frontal Polymerization** Dr Yeqing Wang - Syracuse University	**Local and Global Strain and Defect Analysis of Discontinuous Glass Fiber Reinforced Polymers** Ms Julia Maurer - FHOOE Forschungs und Entwicklungs GmbH			**5:10 PM - 5:30 PM**
In-Situ Resource Utilization for Sustainable Space Exploration: 3D Printing PEKK-Space Regolith Composites Prof Mehdi Hojjati - Concordia University	**Hybrid 1D Convolutional Neural Network and Fuzzy Clustering for Damage Detection in Composite Plates Using Laser Ultrasonic Guided Waves** Mr Shain Azadi - Politecnico di Milano		**Mechanical Characterisation of Carbon Fibre-Reinforced Sheet Moulding Compounds and Introduction to X-ray In-situ Biaxial Testing of Composite Materials** Mr Salaheddine Madi - KU Leuven			**5:30 PM - 5:50 PM**
	A Bayesian Inference Approach for Estimating Heat Transfer Coefficients for Thermal Management in Composites Manufacturing Processes Prof Reza Vaziri - The University of British Columbia		**Fibre-Simulator: An Open-source Python Tool for Generating Fiber Phantoms** Ms Mary Chris Go - Universiteit Leiden			**5:50 PM - 6:10 PM**
Welcome Reception - *National Aquarium*						**7:00 PM - 9:00 PM**

Scientific Program

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
7:00 AM	**Registration Desk Open** *(closes at 5:30 PM - located in Charles Street Lobby, Level 100)*						
7:00 AM	**Continental Breakfast** *(until 8:00 AM - located in Exhibit Hall A/B, Level 100)*						
7:00 AM	**Exhibit Hall Open** *(closes at 5:30 PM - located in Exhibit Hall A/B, Level 100)*						
8:00 AM	**Welcome Remarks**						
8:05 AM	**Plenary Speaker: Composites Science and Technology Empowered by Physics Informed and Augmented Learning** Prof Francisco Chinesta, *Arts et Métiers Institute of Technology*						
	Move to Level 300 for Parallel Keynotes and Technical Sessions						
9:00 AM - 9:30 AM		**Keynote Speakers**					
		Understanding Pore Formation in Reactive Acrylic Thermoplastic Resin Upon Polymerization Dr Olivier De Almeida - Institute Clement Ader IMT Mines Albi	**Multiscale and Multiphysics Modelling and Characterisation of Structural Batteries** Prof Leif Asp - Chalmers University of Technology	**Thermoplastic Composites for Demanding Energy Environments: Solutions in Design and Challenges in Monitoring** Prof Gilles Lubineau - KAUST	**Shift the Paradigm of Composites Modeling Using Artificial Intelligence** Prof Wenbin Yu - Purdue University		
	Certification for Analysis Workshop	**Manufacturing: AFP/ATP 1**	**Materials and Precursors**	**Physical and Structural Behavior**	**Multifunctional Composites**	**AI Empowered Paradigm**	**Fatigue and Damage Mechanics of Composites**
9:35 AM - 9:55 AM	**9:35 AM - Welcome Remarks and Introductions** Prof Ole Thomsen - University of Bristol **9:45 AM - Integration of Multi-Scale Modeling, High-fidelity Experimentation and Bayesian Learning - Towards Certification by Analysis** Prof Richard Butler Dr Andrew Rhead - University of Bath **10:10 AM - Imaging Based Sub-Structure Testing and Data Fusion Methodologies for Integration of Virtual and Physical Data** Prof Janice Barton Prof Ole Thomsen - University of Bristol	**Investigation of the Mechanisms of Fuzzball Formation and Growth in Automated Fiber Placement AFP of Thermoset Composites** Mr Genki Matsubara - University of Washington	**Optimizing Oxidation Resistance of CC Composites with Multilayer SiC-Based Coatings for High Temperature Application** Mr Mosiur Rahaman - The University of Tulsa	**Simulation and Validation of Delamination Propagation and Migration in Composite Panels Subjected to Out-of-plane Bending** Miss Alice Pagnanini - KU Leuven	**Shape Memory Behaviour of Re-entrant Unit Cell Structure Based on 3D Printed Polyurethane Nanocomposites** Dr Yu Dong - Curtin University	**A Fast Uncertainty Quantification Method for Failure Prediction of Large Composite Structural Elements** Mr Mario Miranda - Imperial College London	**Effect of Cooling Rate on Mode II Fatigue Crack Growth Behavior in Carbon Fiber Reinforced Polyphenylene Sulfide** Dr Yu Zusho - The University of Tokyo
9:55 AM - 10:15 AM		**Enhancing Quality and Productivity in Automated Fiber Placement: Strategies for AFP Programming, In-process Inspection, and Process Optimization** Dr Jihua Chen - National Research Council Canada	**Biobased Composite Fibers and Films with Keratin from Chicken Feathers as Matrix and Calcium Carbonate as Nanoreinforcement Materials** Dr Yiqi Yang - University of Nebraska-Lincoln	**Effect of Clamping Force and Environmental Conditioning on the Mechanical Performance of Bolted Composite Laminates** Dr Neha Chandarana - University of Bristol	**Direct Ink Writing EM Radiator for Conformal Load Bearing Antenna Structure** Mr Jeaan Jeon - Inha University	**AI-Driven Method for Predicting Fibre Orientation in Composites** Mr Cesar Garcia-Gascon - Universitat Politecnica de Valencia	**Modified Curing Cycles and Accompanying Polymer and Adhesion Changes in Fiber Metal Laminates** Mr Andreas Baumann - Leibniz Institut für Verbundwerkstoffe GmbH
10:15 AM - 10:35 AM		**Smart Roller: An Essential Tool for Automated Fiber Placement** Mr Charles Picciotto - University of British Columbia	**Protein Based Bio-Composites from Cottonseed Meals Reinforced with Chitin-Nanoparticles** Miss Yuanyi Shao - University of Nebraska-Lincoln	**Numerical Simulation for Frequency Dependence of Fatigue Failure for Polymer and Polymer Composite** Dr Jun Koyanagi - Tokyo University of Science	**4D-printed Composite Structures for Space Applications Towards Multi-Axis Structural Shape-changing** Mr Julien Deschamps - Research Institute Dupuy De Lume	**Digital Twin Using Nested Machine Learning for Sintering Deformation of Ceramic Matrix Composites** Prof Jingzhe Pan - School Of Engineering University Of Leicester	**Conductive Superhydrophobic Coating on Gas Diffusion Layer for Enhanced Proton Exchange Membrane Fuel Cell Performance** Mr Myungjin Hong - Inha University
10:35 AM - 11:00 AM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Registration Desk Open *(closes at 5:30pm - located in Charles Street Lobby, Level 100)*						7:00 AM
Continental Breakfast *(until 8:00am - located in Exhibit Hall A/B, Level 100)*						7:00 AM
Exhibit Hall Open *(closes at 5:30pm - located in Exhibit Hall A/B, Level 100)*						7:00 AM
						8:00 AM
						8:05 AM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
						9:00 AM - 9:30 AM
Thermoplastic Composites	**Frontal Polymerization**		**Computed Tomography**	**Design, Repair and Life Cycle**		
Modeling and Control of Exothermic Polymerization of an Acrylic Thermoplastic Resin in the Pultrusion Process Mr Farouk Zreika - IMT Mines Albi	**Optimization of Cationic Frontal Polymerization Experiments: An Analysis of Compositions Reproducibility and Materials** Mr Brecklyn Groce - Vrije Universiteit Brussel		**Alternative Reconstruction and Acquisition Techniques for Imaging Large CFRP Samples** Mr Ford Collins - University of Warwick	**Manufacturing Fiber Reinforced Recycled Pet Tapes: A Capillarity-Based Approach** Ms Elise Mathouillot - IMT Mines Ales		9:35 AM - 9:55 AM
Polymerization Induced Defects in Type IV Hydrogen Storage Tank Produced from Recyclable Liquid Thermoplastic Polymer and Carbon Fiber Dr Biltu Mahato - Luxembourg Institute of Science & Technology	**Photothermal Initiation of Frontal Polymerization for Additive Manufacturing of Discontinuous Fiber-Reinforced Thermoset Composites** Prof Mostafa Yourdkhani - Arizona State University		**Modeling the Folding and Stowing Behavior of Origami-Inspired Structures Based on the Real Composite Microstructure** Mr Israr Uddin - Khalifa University	**Reprocessing Thermoplastic Composite Trim Waste with High Temperature Compression Moulding** Dr Andi Haris - Singapore Institute of Mfg Technology		9:55 AM - 10:15 AM
Modelling Residual Stresses in Thick Section Thermoplastic Composites for Wind and Tidal Blades Ms Anastasia Tsavea - University of Sheffield			**Helical µCT Insights into Compaction Effects on Resin Distribution and Porosity in Thermo-Compressed Non-Crimp Polypropylene-glass Fiber Composites** Dr Abderrahmane Ayadi - IMT Nord Europe	**Transforming Thermoplastic Waste through Manufacturing into Engineering Products** Mrs Shristi Ghosh - Georgia Institute of Technology		10:15 AM - 10:35 AM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						10:35 AM - 11:00 AM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
	Certification for Analysis Workshop	Manufacturing: Process Physics	Materials and Precursors	Physical and Structural Behavior	Multifunctional Composites	AI Empowered Paradigm	Fatigue and Damage Mechanics of Composites
11:00 AM - 11:20 AM	11:00 AM - Aero Industry Building Block Certification Logic Dr Carl Rousseau - Lockheed Martin Co	The First European Benchmark Exercise on Squeeze Flow Testing of High-Performance Carbon Fibre Sheet Moulding Compounds Prof Thomas Neumeyer - Leibniz Insitut für Verbundwerkstoffe GmbH	Synthesis of Bio-Based Foams Derived from Birch Bark Extract Ms Heather LaFrance - Rowan University	Adhesion Mechanism Between Epoxy Resin and Thermoplastic Interlayers Modifying VARTM Processing Conditions to Improve Fracture Toughness Dr Sagar Doshi - University of Delaware	PEEK-Based Polymer Electrolyte with Tailored Morphology for Structural Battery Composites Ms Mia Carrola - USAF AFRL	A Simulation-Based Machine Learning Approach for Optimizing Preform Charges in Sheet Molding Compound Manufacturing Dr Mikhael Tannous - Arts et Metiers Institute of Technology	Development of a Height-tapered Double Cantilever Beam for Mode I Interlaminar Fatigue Testing Mr Shagata Das - University of Delaware
11:20 AM - 11:40 AM	11:25 AM - Smarter Testing Application to Composite Structures Mr Adam Sawicki - The Boeing Co	Rapid Curing of Composites by Filament Winding Technique Mr Soroush Dashtizad - Arizona State University	Rheology as a Rapid Method for Simple and Precise Determination of the Percolation Threshold in Shortfiber Polymeric Bio-composites Insights into Sus Prof Giovanni Filippone - University di Napoli Federico II	Influence of Laminate Surface Resin Depth on the Interface Strength of Overmoulded Composites Dr Ruaraidh MacLennan - Queen's University Belfast	Examination of a Novel Structural Supercapacitor Subjected to Compressive Loading Dr Alex Harman - Defence Science & Technology Group	Advanced Machine Learning Techniques for RTM Injection Surrogate Modeling Ms Sofia Fernandez Leon - IMDEA Materials	Influence of Fabric Architecture and Sizing on ILFT and LVI Property for Improving Durability and Damage Tolerance of GFRP Composites Mr Munetaka Kubota - University of Delaware
11:40 AM - 12:00 PM	11:50 AM - The Role of Analysis and Testing in the Engineering of Wind Turbine Rotor Blades Mr Kyle Wetzel - Wetzel Wind	Fabrication of SiC Fiber-Reinforced 3D Woven Composites Using Tow Sizing and Optimized Preform Structures Mr Yoon-Min Oh - Seoul National University	Bone-inspired Self-adaptive Composites with Reprogrammable Self-folding Behaviors Prof Sung Kang - Korea Advanced Institute of Science & Technology	Experimental and Numerical Investigation on Lap Shear Fracture of Additively Manufactured Thermoplastic CFRP64 Titanium Dr Keiichi Shirasu - Tohoku University	Ultralow-Voltage High-Performance Soft Actuators using Polysulfonated Covalent-Organic Frameworks as Common Electrolyte-Electrode Hosts Dr Manmatha Mahato - Korea Advanced Institute of Science & Technology	A Neural Network Based Bayesian Method for Estimating and Predicting Resin Flow in Resin Transfer Moulding Mr Nicholas Wright - University of Auckland	Accelerated Fatigue Characterization of Advanced Composites Using Infrared Thermography Dr Suhasini Gururaja - Auburn University
12:00 PM - 12:20 PM			Sustainable Polymer Materials Effect of Agricultural Waste Reinforcement on the Performance of PBS and PBAT Composites Dr Irene Bavasso - Sapienza University of Rome	Uncertainty Quantification of a Ductile Damage Evolution Model in an Adhesively Bonded Single Lap Shear Joint Dr Marcus Stanfield - SwRI	Tailoring the Chemistry and Morphology of Vertically Aligned Carbon Nanotube Sponges Implications for Smart Electrodes Mr Lev Rovinsky - Tel Aviv University	Modeling Crack Propagation in Composites using Constitutively Informed Particle Dynamics Dr Venkatesh Ananchaperumal - Clemson University	Mechanical Properties and Damage Analysis of Braided CFRP Composite Rods Dr Mazhar Peerzada - The University of Southern Queensland
12:20 PM - 1:15 PM	**Group Lunch** *(located in Exhibit Hall A/B, Level 100)*						
1:15 PM	**Plenary Speaker: Industrial-Scale Nano-Integration Strategies for Aerospace-Grade Fiber-Reinforced Polymer Composites: from Functional Coatings and Interface to Prepreg Manufacturing and Composite Repair** Prof Mehmet Yildiz, *Sabanci University*						
	Move to Level 300 for Parallel Keynotes and Technical Sessions						
2:10 PM - 2:40 PM		**Keynote Speakers**					
		Kelly Prize: Challenges and Opportunities in Synchrotron Computed Tomography Imaging of Composites Prof Yentl Swolfs - KU Leuven	Crystallization Hybrid Modeling and Simulation of Robotic 3D Printing of Continuous Carbon Fiber Reinforced Thermoplastic Composites Prof Chady Ghnatios - University of North Florida	Process Monitoring for Defect Control – from RTM to Sandwich Panel Co-cure Prof Steven Nutt - University of Southern California	Manufacturing of Cellulose Composites Where the Reinforcing Fibers are Aligned in Multiple Scales Mrs Kristiina Oksman - Lulea University of Technology	Toward Autonomous Qualification of Aerospace Composites: From AI-Driven Calibration to Digital Estimation of Allowables Dr Navid Zobeiry - University of Washington	

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Thermoplastic Composites		**Computational Modeling**	**Invariants and Double-Double Laminate**	**Design, Repair and Life Cycle**		
Effects of Activator and Catalyst Concentration on Reaction Kinetics and Polymer Properties in Reactive Thermoplastic Pultrusion of Nylon 6 Ms Hannah Decker - Fraunhofer Institute for Chemical Technology		**Numerical Simulation for Prediction of Residual Strength for CFRP After Cyclic Loading Considering Entropy Damage Criterion** Mr Takumi Sekino - Graduate School of Tokyo University of Science	**A Double Angle-Ply Laminate Approach to Designing for Controlled Near Zero Coefficient of Thermal Expansion** Dr Christopher York - Singapore Institute of Technology	**Artificial Neural Network-Based Sequential Approximate Optimization for Free Fiber Path Design in Variable-axial Composites** Mr Xin Wang - Hokkaido University Japan		**11:00 AM - 11:20 AM**
Leveraging In-situ Anionic Polymerization of Polyamide 6 for High Performance Basalt- and Flax-Fiber Thermoplastic Laminates Dr Giulia Fredi - University of Trento		**Experimental and Numerical Study on the Bending Behavior of Glass Fabric Rubber Composites** Mr Oguz Genc - Airbus Operations SAS Ecole des Mines d'Albi	**Double-Double (DD) Laminates: Homogenisation Mechanical Performance and Compression After Impact** Mr Aidan Hawkins - Queen's University Belfast	**Optimal Design of Seamless CSiC Composite with Multicooling Channels using a Data-Driven Model** Mr Kyeongmo Kang - Seoul National University		**11:20 AM - 11:40 AM**
High-Speed Reactive Processing of Thermoplastic Carbon Fiber-Reinforced Polyamide-6 Composites Mr Sang-Woo Kim - Korea Institute of Material Science		**Modeling High Temperature Cross-Linking Between Graphitic Surfaces and Glassy Carbon** Prof Jacob Gissinger - Stevens Institute of Technology	**Study of the Impact and Compression After Impact Behaviour of Double-Double Laminate** Mr Geoffrey Gisclon - Institut Clement Ader	**Deep Learning Guided Particle Filter for Remaining Useful Life Estimation of Composite Materials** Ms So Young Oh - UNIST		**11:40 AM - 12:00 PM**
Thermoplastic Infusion In-situ Polymerisation TPIIP and Double Diaphragm Forming DDF for Complex Parts at Scale Dr Gabrielis Cerniauskas - University Of Edinburgh		**Mesostructure-Informed Numerical Modelling of Post-Consolidation Architecture in Advanced Placed Ply Laminates** Mr Saral Mittal - University of New South Wales	**Probabilistic Approach to Evaluate Design Allowables for a Tailored Aircraft Composite Wing using Quad and Double-Double DD Laminates** Prof Carlos Cimini - UFMG Federal University of Minas Gerais	**Generative Model-Driven Design of Long Discontinuous Carbon Fiber Composites for Targeted Mechanical Properties** Dr Hyunsu Lee - University of Connecticut		**12:00 PM - 12:20 PM**
Group Lunch *(located in Exhibit Hall A/B, Level 100)*						**12:20 PM - 1:15 PM**
						1:15 PM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
						2:10 PM - 2:40 PM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
	Certification by Analysis Workshop	Manufacturing: Machine Learning	Materials and Precursors	Physical and Structural Behavior	Multifunctional Composites	AI Empowered Paradigm	
2:45 PM - 3:05 PM	**2:45 PM - Composite Structural Testing and Analysis, an FAA Perspective** Ms Cindy Ashforth - FAA	**High-Fidelity Digital Twin Autoclave Tool for Quality Informed Composite Fabrication** Dr Yuanjie Lua - Global Engineering & Materials Inc	**Enhancing Mechanical Properties and Moisture Durability of Flax Fibre Composites by Plasma Treatments** Mr Jianqun Hao - KU Leuven	**Precise Mode II Fracture Toughness Control in High-Performance Composites by Perforated Release Film Interleaves** Dr Gergely Czel - Budapest University of Technology & Economics	**Quasi-Distributed Pressure Sensors Embedded Into Surface Materials on Composite Laminates** Dr Per Hallander - Saab AB	**Inverse Design of Manufacturing Process using Physics-Informed Neural Operator Learning** Dr Zhen Li - Clemson University	
3:05 PM - 3:25 PM	**3:10 PM - Towards Certification by Analysis - Some Pragmatic Considerations** Mr Mike Hinton - High Value Manufacturing Catapult	**Smart Composite Production Line Planning using AI Based Digital Twin to Optimize the Production Planning under Uncertainty** Ms Shiva Abdoli - University of New South Wales	**Machine Learning-Based Pyrolysis Characterization in Ceramic-Matrix Composites** Ms Paulina Portales Picazo - University of Washington	**Assessment of Numerical Approaches for Quasistatic Fatigue and Dynamic Delamination Propagation in Curved Laminates** Mr Maikel Khella - Politecnico di Milano	**Comparative Study of Graphene Coated Glass Fibres and Vertically Aligned Carbon Nanotube Forests as Embedded Structural Health Monitoring Systems** Mr Tobias Karlsson - KTH Royal Institute of Technology	**Multiscale Modeling of Additively Manufactured Short Fiber Reinforced Thermoplastic Polymer Composites** Dr Taejoon Park - The Ohio State University	
3:25 PM - 3:45 PM		**Enhancing Cure Kinetics Estimation for Thermosetting Carbon Fiber-Epoxy Prepregs Through Chemistry-Informed Machine Learning** Mr Geun Young Kim - Georgia Institute of Technology	**The Effect of Functionalized Cellulose Nanocrystals on Glass Fibers Glass Fiber-Epoxy Composite Performance** Ms Kim Anh Pham - Georgia Institute of Technology		**Real Time Monitoring of Composite Laminated Structures with Embeddable Sensing Layers** Mr Joao Correia - Universidade do Minho	**Multifidelity Neural Network Approach for Warpage Prediction and Optimization in Injection Molding** Ms Elham Kianiharchegani - Brown University	
3:45 PM - 4:10 PM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						
4:10 PM - 4:40 PM	**4:10 PM - Panel Discussion with Q&A** Dr Sayata Ghose - The Boeing Co Ms Isabelle Paris - Bombardier Aviation **4:55 PM - Wrap Up/Closing Comments** Prof Ole Thomsen - University of Bristol	**Mini-Orals** *See page 48 for detailed presentation schedule*					
4:10 PM - 5:30 PM	**Poster Session** *(located in Exhibit Hall A/B, Level 100)*						
7:00 PM	**Student Only Event** - *Luckie's Tavern at Power Plant Live!*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Thermoplastic Composites		**Computational Modeling**	**Bio Mass**	**Design, Repair and Life Cycle**		
Importance of Shearing Deformation in Dynamical Mechanical Tests for Viscoelastic Properties of Continuous Fiber Thermoplastic Composites Dr R Byron Pipes - Purdue University		**Simulating Additively-Manufactured Composite Structural Joints using FastDM4C** Dr Antonio Alessandro Deleo - ES3	**White-Rot Fungi Oxidative Cocktail as a Tool for Modifying Kraft Lignin into Sustainable Carbon Fiber Precursors** Prof Veronica Calado - Federal University of Rio de Janeiro	**Deployable Fiber-Reinforced Polymer for Robotics Application** Mr Seung Mo Son - Pusan National University		2:45 PM - 3:05 PM
A Mesoscale Model of Woven Fabric Thermoplastic Composites for Large Deformation Prof Vincent Tan - National University of Singapore		**Characterization of Additive Manufacturing Caused Defects and Their Impacts on Mechanical Properties of Polymeric Lattice Structures Fabricated by SLS** Mr Amirali Amirian - The University of Auckland	**Lignin as a Candidate for Flame-Retardant Composite Applications** Prof Veronica Calado - Federal University of Rio de Janeiro	**Framework for Optimization of AFP Composite Structures** Dr August Noevere - Collier Aerospace		3:05 PM - 3:25 PM
Tracking Ply Deformation during Thermoplastic Stamp Forming using Embedded Shape Sensor Mr Shu Minakuchi - The University of Tokyo		**Attack Angle Influence on Growth Efficiency of Vertically Aligned Carbon Nanotubes** Mr Lev Rovinsky - Tel Aviv University	**Development of High-Performance Biomass Composites using a PA11-Glycol Lignin Matrix** Dr Jonathon Tanks - National Institute for Materials Science	**Next Generation Wind Turbine Blade Repair Residual Stress and Void Analysis in UV-Cured Scarf Patches** Prof Puneet Mahajan - Indian Institute of Technology		3:25 PM - 3:45 PM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						3:45 PM - 4:10 PM
						4:10 PM - 4:40 PM
Poster Session *(located in Exhibit Hall A/B, Level 100)*						4:10 PM - 5:30 PM
Student Only Event - *Luckie's Tavern at Power Plant Live!*						7:00 PM

Scientific Program

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
7:00 AM	**Registration Desk Open** *(closes at 6:00 PM - located in Charles Street Lobby, Level 100)*						
7:00 AM	**Continental Breakfast** *(until 8:00 AM - located in Exhibit Hall A/B, Level 100)*						
7:00 AM	**Exhibit Hall Open** *(closes at 4:30 PM - located in Exhibit Hall A/B, Level 100)*						
8:00 AM	**Welcome Remarks**						
8:05 AM	**Plenary Speaker: A Ride with Automotive Composites** Prof Srikanth Pilla, *University of Delaware*						
	Move to Level 300 for Parallel Keynotes and Technical Sessions						
9:00 AM - 9:30 AM		**Keynote Speakers** **New Research Avenues, Metrologies, and Ideas for Optimizing Glass & Carbon Fiber Epoxy/Amine Composites** Dr Gale Holmes - National Institute of Standards & Technology	**Study of the Longitudinal Compressive Strength of Laminated Composites Using Various Classical and Innovative Tests at Different Temperatures** Mr Frederic Laurin - ONERA Paris-Saclay University	**Monitoring The Structural Condition of Composite Industrial Parts Through Embedded Optical Sensorization** Ms Helena Rocha - PIEP Centre for Innovation in Polymer Engineering	**Progress in Highly Aligned Discontinuous Fiber Composites** Dr Shridhar Yarlagadda - University of Delaware		
		Manufacturing: Resin Transfer Molding 2	**Materials and Precursors**	**Physical and Structural Behavior**	**Multifunctional Composites**	**AI Empowered Paradigm**	**Thermoplastic Composites**
9:35 AM - 9:55 AM		**Analysis of the Image-Based Evaluation of the Permeability of Carbon/Carbon Composites** Ms Tania Lavaggi - University of Delaware	**Studies on Cut-Protective Performance of Composites Yarn Based Knitted UHMWPE Textiles in Real-World Industrial Applications** Mr Shubham Singh - Indian Institute of Technology Delhi IIT Delhi	**Consideration of the Influencing Variables of Peel Plies on the Reaction Process of CFRP Samples Under Liquid Oxygen Environment at Impact Load** Mr Philipp Marin - University of the Bundeswehr Munich	**Nature Materials: Enhanced Functional Composites** Prof Jonghwan Suhr - Sung-Kyun-Kwan University	**Development of a Noniterative Artificial Neural Network Model for Enhanced Finite Element Analysis of Short Fiber-Reinforced Plastics** Mr Minjun Kwak - Seoul National University	**Inline Plasma Modified Carbon Fibre for Enhanced Thermoplastic Tape Manufacturing – Repurposing PA6PP Waste in New Zealand** Mr Maximilian Pitto - The University of Auckland
9:55 AM - 10:15 AM		**Monitoring RTM Infiltration Behavior of TFP Preforms Using Near-Net-Shaped Transparent Cavities** Mr Cameron Welker - Liebniz-Institut für Polymerforschung Dresden e.V.	**Single Carbon and Glass Fibre Tensile Properties and the Correlation with Their Geometry** Ms Elise Van Vlierberghe - KU Leuven	**Multidirectional Laminates with Ultrathin Plies for Cryogenic Environments Mechanical Testing and Permeability** Mr Serafn Sanchez-Carmona - University of Seville	**Self-sensing Technology for Dynamic Behavior Analysis and Damage Classification in Rotating Rotor Blades** Ms Juhyeong Jang - Ulsan National Institute of Science Technology	**Deep Learning-Based Geometrical Analysis and Tension Strain Mapping of Bamboo Fibre Microstructure** Mr Carlos Ivan Cardona Garcia - Luxembourg Institute of Science & Technology	**Mechanical Behavior of 3D Printed Carbon Fiber Reinforced Nylon Composite** Dr Siavash Sattar - Randolph College
10:15 AM - 10:35 AM		**Modelling the Polymer Resin Flow Through Fibres During Resin Transfer Moulding** Mr Rajinth Shanthar - The University of Manchester	**Tailoring Surface Chemistry and Interfacial Interactions of Carbon Fibrepolymer Composites** Prof Luke Henderson - Deakin University		**Enhanced Flow Monitoring in Resin Transfer Molding using Electrical Impedance Tomography with Embedded Carbon Nanotube Sensors** Ms Seyda Naz Alasahin - University of Delaware	**Bayesian Calibration of Finite Element C-spar Models using Digital Image Correlation** Dr Carl Scarth - University of Bath	**Influence of Specimen Geometry and UD Ply Layup on Thermoplastic Welded Double Notched Tension Test Specimen by use of Mechanical and Virtual Testing** Mr Sebastian Hamedinger - University of Applied Sciences Upper Austria
10:35 AM - 11:00 AM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Registration Desk Open *(closes at 6:00pm - located in Charles Street Lobby, Level 100)*						7:00 AM
Continental Breakfast *(until 8:00am - located in Exhibit Hall A/B, Level 100)*						7:00 AM
Exhibit Hall Open *(closes at 4:30pm - located in Exhibit Hall A/B, Level 100)*						7:00 AM
						8:00 AM
						8:05 AM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
						9:00 AM - 9:30 AM
Aligned Discontinuous Fiber Composites	**Compressive Failure**	**Computational Modeling**	**Experimental Techniques**	**Design, Repair and Life Cycle**	**Industrial Applications**	
Characterization and Modeling of Toolply and Plyply Friction of Aligned Discontinuous Fiber Prepreg During Forming Ms Lauren Thomas - University of Delaware	**Is There a Hybrid Effect in Tensile and Compressive Failure of Carbon Fibre Composites** Prof Michael Wisnom - University of Bristol	**Lunar: A Tool for Setting Up Process Modeling Based on Molecular Dynamics Simulations** Dr Joshua Kemppainen - Michigan Technological University	**Uncertainty Quantification of X-ray CT Segmentation of Multiclass Microdamage in Advanced Composites via Deep Learning** Dr Reed Kopp - ATA Engineering Inc	**Virtual Testing of Recycled Glass Fiber Reinforced Polymer Sandwich Cores** Mr Michael Paulitsch - University of Applied Sciences Upper Austria	**Development and Manufacturing of a Conformable CFRP Tank Demonstrator with Tension-Strut-Reinforcement** Ms Elisabeth Gleis - Technical University of Munich	9:35 AM - 9:55 AM
Characterization and Modeling of Deformation Mechanisms of Aligned Discontinuous Fiber Prepreg During Thermoforming Mr Aidan Ford - University of Delaware	**FE Simulations of Large UDFRP Microstructures Under Longitudinal Compression** Dr Dimitrios Bikos - Imperial College London	**Incorporation of High-Fidelity Experimental Data into Finite Element Models for Enhanced Comparison and Analysis** Dr Meng Yi Song - University of Bristol	**A New Approach for Quantifying the Transverse Coefficient of Thermal Expansion in PAN-based Carbon Fibres at Low Temperatures via X-ray Diffraction** Mr Jiraphant Srisuriyachot - University of Bath	**Fatigue Life Prediction of Dissimilar Material Joints Using Neural Networks** Mr Young Bin Kim - Yonsei University	**Advanced Graphene-Enhanced Polyethylene Liners for Type IV Hydrogen Storage Tanks Enhancing Mechanical Properties and Gas Containment** Dr Jefferson Andrew Jeyakumar - Khalifa University	9:55 AM - 10:15 AM
Modeling Transvers Shearing Viscosity and Material Tool Friction Interaction with Rectangular Squeeze Flow Mr Rafe Garcia-Hidalgo - University of Delaware		**Simulating Particle-Based Interface Toughening Mechanisms of Laminated Composites** Dr Shiyao Lin - The University Of Texas At Arlington		**Predicting Material Properties of Shredded Recycled Carbon Composite using a Detailed Simulation Approach** Mr John Finder - TU Braunschweig Institut für Flugzeugbau und Lei	**Composite Materials Handbook CMH17: An Introduction and Overview** Mrs Teresa Vohsen - Wichita State University NIAR	10:15 AM - 10:35 AM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						10:35 AM - 11:00 AM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
		Manufacturing: AFP/ATP 2	Materials and Precursors	Physical and Structural Behavior	Multifunctional Composites	Industrial Applications	Thermoplastic Composites
11:00 AM - 11:20 AM		**Development and Control of Residual Stresses and Warpage During the ATP Process** Dr John Tierney - University of Delaware	**Dynamic Crush of Hollow Glass Microsphere Reinforced Polyurethane Foams** Dr Colleen Murray - University of Maryland	**Effect of Simulated Hygrothermal Ageing on the Interfacial Shear Strength of Carbon/Epoxy Composites** Mr Abdullah Iftikhar - University of Southern Queensland	**Sensing of Resin Flow and Cure in Continuous Fiber Additive Manufacturing** Mr Mohammad Tofayel Ahmed - University of Delaware	**A Novel Sleeve Assembly Method for SPM Motors using CFRP with Atypical Layup** Dr Kazunori Takagaki - Mitsubishi Electric Corp	**Effects of Fiber Type and Cooling Rate on the Crystallization Behavior of Low-Melt PAEK Thermoplastic Composites** Prof Anoush Poursartip - The University of British Columnia
11:20 AM - 11:40 AM		**Material Behavior of Prepregs in Automated Robotic Sheet Layup: A Comparative Study** Mr Moritz Lennartz - Institut for Textiltechnik of RWTH Aachen Uni	**Wearable Electronic Textiles for the Detection of Loneliness in Older Individuals** Dr Jingqi Liu - University of Leeds	**Degradation in Bio-epoxy Composites Under Hygrothermal Ageing** Ms Zaneta Senselova - University of Southern Queensland	**Featherweight Wearable Electronics Based on a PAN Electrospun Substrate** Professor Yu Shi - University of Leeds	**Feasibility of Developing Fiber-reinforced Thermoplastic Composite Couplers for Hydrogen Transmission Pipelines** Dr Chen Wang Dr Andi Haris - Singapore Institute of Mfg Technology	**Improved Thermal Conductivity and Structural Integrity in Thermoplastic Composites Using h-BN/PEEK Films and Resized Carbon Fibers** Ms Burcu Saner Okan - Sabanci University
11:40 AM - 12:00 PM		**An Investigation of Thermoplastic Tape-to-Tape Bonding Using Xenon Flash Lamp Heating** Prof David Williams - University of Bath	**Evaluation on Recession Behaviors of B4C Containing Porous Carbon Material as an Advanced Thermal Protection System** Mr Tatsuki Koshikawa - Japan	**Systematically Adapting Processing, Flame Retardancy, and Flexural Properties of Epoxy Glass Fiber Reinforced Composites for Railway Applications** Ms Sruthi Sunder - University of Bayreuth	**Electrical Impedance Tomography for Self-Sensing 3D Printed Cellular Composites** Mr Akash Deep - University of Glasgow	**In-Space Manufacturing of High-Performance Fiber Reinforced Composites Tubes** Dr Jeff Baur - University of Illinois	**Influence of Transient Radiative Heat Flux on Degree of Crystallinity in Thermoplastic Composites** Dr Paul Davidson - The University Of Texas At Arlington
12:00 PM - 12:20 PM		**A Comprehensive Approach to a Digital Twin Based on Asset Administration Shells for a Process Chain of Automated Tape Laying and Thermoforming** Prof Thomas Neumeyer - Leibniz Insitut für Verbundwerkstoffe GmbH	**Interlaminar Fracture Toughness Enhancement in Carbon Fiber Composites Via Asymmetric Flax Fiber Hybridization** Prof Jungil Song - Changwon National University	**Effect of Hygroscopic Aging on the Transverse Damage Behavior of Fiber-Reinforced Composites: A Computational Micromechanics Study** Dr Vaishakh Kottila Veedu - Brown University	**Embedding of Fiber Optic Sensors Under Industrial Conditions and Distributed Strain Sensing in Type 4 Composite Pressure Vessels** Mr Bartosz Popiela - Bundesanstalt für Materialforschung und -prüfung		
12:20 PM - 1:15 PM	**Group Lunch** *(located in Exhibit Hall A, Level 100)*						
1:15 PM	**Plenary Speaker: Assuring Safety of Composite Structures in Aviation** Ms Cindy Ashforth, *Federal Aviation Administration*						
Move to Level 300 for Parallel Keynotes and Technical Sessions							
2:10 PM - 2:40 PM		**Keynote Speakers** **Overcoming Processing Hurdles in Multifunctional Polymers and Polymer (Nano) Composites** Prof Emiliano Bilotti - Imperial College London	**Liquid Composite Moulding Research as a Nucleus for Interdisciplinary Innovation in Composites** Prof Nuno Curado Correia - INEGI	**Generative Design of Additively Manufactured Composites with AI/ML Models** Prof Kishore Pochiraju - Stevens Institute of Technology	**Sustainable Composites Start with LCA: Seeing the Whole Picture** Prof Martina Salzano de Luna - University of Naples Federico II		

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Aligned Discontinuous Fiber Composites	**Compressive Failure**	**Computational Modeling**	**Experimental Techniques**	**Design, Repair and Life Cycle**		
Stamp Forming of Highly Aligned Discontinuous Fiber Composite Blanks via Epoxy Matrix Staging Mr Matthew Abraham - University of Delaware	**Unusual Effect of the Degree of Cure of Some Epoxy Resins on the Compressive Strength of Continuous Fibre Composites** Mr Vincent Keryvin - University Bretagne Sud	**Prediction of Microcrack Networks in Cryogenic Carbon Fibre Composite Hydrogen Tanks** Dr Wenkai Chang - University of New South Wales	**Detection of Progressing Material Defects with FMCW Radar Signals** Mr Florian Puch - Technische Universitat Ilmenau	**Composite 3D Printed Plate-Based Mechanical Metamaterials** Ms Aya Hosoi - Imperial College London		**11:00 AM - 11:20 AM**
Efficient Microstructural Models to Homogenize Anisotropic Viscoelastic Parameters of Highly Aligned Discontinuous Fiber Composites Mr Miguel de Carvalho Dr Nuno Curado Correia - INEGI	**Improving Fibre Reinforced Polymer Compressive Performance Through Intermittent Matrix Property Modification** Ms Hwei Linn Khoo - Imperial College London	**Compaction and Mechanical Performance of AFP Composites with Fiber Tow Gaps Experimental Investigation and Multiphysics Modeling** Mr Ahmadreza Ravangard - Old Dominion University	**Optimisation of 3D Woven Composite Structures for Bearing Performance in Single and Double Lap Joints Using Acoustic Emission Monitoring** Mr Callum Montgomery - Ulster University	**From Waste to Value Creating Composite Blends Out of Waste Low-density Polyethylene and Polystyrene for Fused Deposition Modeling Printing** Mr Ahmed Afzal - Texas A&M		**11:20 AM - 11:40 AM**
Tensile Behavior and Stress Relaxation of Uncured Prepreg of Aligned Discontinuous Fiber Materials Constitutive Model Development for Stretch Forming Dr Navid Niknafs Kermani - University of Delaware	**Polymer Composites Reinforced by Continuous Irregular Networks from Bioinspired Design to Fracture** Prof Tommaso Magrini - Eindhoven University of Technology	**Accelerating Progressive Damage and Failure Analysis of Composites using a Hybrid Implicit-Explicit Approach** Dr Shiyao Lin - The University Of Texas At Arlington	**Combined In-Situ Microscopy and Acoustic Emission Monitoring of Transverse Cracking in CFRP Cross-ply Laminates** Mr Spyridon Spyridonidis - University of Bristol	**Mechanical Recycling of Glass Fiber Reinforced Wind Turbine Blade Components into Reinforced Filaments for use in Additive Manufacturing** Mr Dimitrij Seibert - Leipzig University of Applied Sciences		**11:40 AM - 12:00 PM**
Impact of Fiber Aspect Ratio on Mechanical Performance of Short Fiber Composites Mr Uday Kiran Balaga - University of Delaware	**Bicontinuous Silica-Epoxy Interfaces** Dr Charles Shaw - Imperial College London	**Molecular Dynamics Simulation on the Failure Behavior of Carbon-Polycarbonate-carbon Structure-sensitivity Analyses of Interfacial Potential Parameter** Ms Bowen Cao - Clemson University	**Assessing the Effects of Edge-Reflections on Propagating Acoustic Waves in CFRP Panels** Ms Andrea Martinez - Delta Engineering Corp	**Enabling All-Composite Pressure Vessels Through Integrated Electrospun Nanofiber Architectures** Mr Jaejun Bae - Korea Advanced Institute of Science & Technology		**12:00 PM - 12:20 PM**
Group Lunch *(located in Exhibit Hall A, Level 100)*						**12:20 PM - 1:15 PM**
						1:15 PM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
						2:10 PM - 2:40 PM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
		Manufacturing: Process Monitoring	Materials and Precursors	Physical and Structural Behavior	Multifunctional Composites	Industrial Applications	Thermoplastic Composites
2:45 PM - 3:05 PM		**On Line Optimisation and Active Control of the Cure Process of Thick Composite Laminates** Dr Konstantinos Tifkitsis - Kalero Ltd	**Bio-Inspired Micropatterned Fibre Surfaces Alternating Adhesion Zones for Tougher Composites** Dr Carlos Fuentes - Luxembourg Institute of Science & Technology	**Study on Construction of Short Carbon Fiber Secondary Dispersion System and Its Strengthening Cement-Based Composites** Mr Dazhi Jiang - Sun Yat-Sen University	**GNP-Based Pyro-Resistive Eskin Integrated With Temperature Sensing and Self-Controlled Joule Heating Function** Mr Yansong Li - Queen Mary University of London	**PLA Reinforced with Tungsten Disulfide Nanotubes for 3D-Printed Bone Scaffold: In Vitro Assessment of Biocompatibility and Degradation** Mr Ofek Golan - Tel Aviv University	**Cooling-Rate Independent PEEK Composites via Oatmeal for High-Rate Processing** Mr Joseph Kirchhoff - University of Texas at Austin
3:05 PM - 3:25 PM		**Localised Convection Heat Transfer Coefficients in Curing Environments: A Heat Flux Approach** Mr Andrew Che - Swinburne University of Technology	**Evaluation of the Effect of Z-threaded Carbon Nanofibers on the Improvement of Flexural Properties of Carbon Fiber-Reinforced Polymer Laminates** Prof KuangTing Hsiao - University of South Alabama	**Characterization of Fiber Reinforced Thermoplastic Composites Fabricated by Composites-Based Additive Manufacturing CBAM Technology** Mr Gavin Stoker - Utah State University	**Characterisation of Embedded Channel Networks in CFRPs for Active Cooling** Mr Toby Wilcox - University of Bristol	**Friction and Wear Characteristics of 3D-Printed Carbon Fiber-Reinforced Polyamide Under Dry and Seawater Lubrication Conditions** Dr Amir Hamza Nazir Ahmed Siddiqui - Technical University of Denmark DTU	**Benchmarking of AM-CM System Capabilities: To Make Parts with Amorphous and Semi-Crystalline Composites** Dr Ahmed Hassen - Oak Ridge National Lab
3:25 PM - 3:45 PM		**Flow Analysis of the Capillary-Driven Underfill Process for the Use of Thermally Conductive Epoxy Composites in Semiconductor Packaging** Ms Jeeeun Lee - Korea Advanced Institute of Science & Technology	**Prevention of Dispersion in Flexural Strengths of Unidirectional Carbon Fiber Reinforced Composites by Applying Prepregs Containing Cellulose Nanofibe** Mr Shoutaro Shimora - Doshisha University	**Effect of Fiber Volume Fraction and Material Homogeneity on the Mechanical Performance of Recycled Woven Thermoplastic Composites** Mr Fausto Visser - TPRC	**Manufacturing Patterned Carbon Fiber Cathodes by Supercritical CO2 Spray Simultaneous Enhancement of Electrochemical and Mechanical Properties of Str** Prof Amir Asadi - Texas AM University	**Demonstration of a Novel High Pressure Vessel Structure Consisting of CFRP Overwrapped Cylinder and Belt Shaped Load Members for Fuel Cell Vehicles** Mr Ikumi Matsumoto - Tokyo University of Agriculture Technology	
3:45 PM - 4:30 PM	**Refreshment Break** *(located in Exhibit Hall A, Level 100)*						
4:30 PM - 6:30 PM	**ICCM General Assembly**						
7:00 PM - 9:00 PM	**CCM 50th Anniversary Celebration** - *Angels Rock Bar at Power Plant Live!*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Aligned Discontinuous Composites	**Compressive Failure**	**Computational Modeling**	**Experimental Techniques**	**Design, Repair and Life Cycle**		
Volumetric Quantification of Bridging and Wrinkling Defects in Composite Laminates Mr Cooper Williams - Montana State University	**Cure-induced Wrinkles and Compression Strength Knockdown in Unidirectional Composites** Dr Lars Mikkelsen - DTU Wind & Energy Systems	**Role of Modeling and Simulation in the Development and Application of Digital Twin for Liquid Composites Molding Processes** Dr Pavel Simacek - University of Delaware	**Application of Infrared Imaging to Reveal Hidden Defects in CFRP Laminates** Prof Janice Barton - University of Bristol	**Comparing the Local Predictions of the Strain Energy Release Rate by CZM and VCCT in Large and Curved Delaminations** Dr Luca Michele Martulli - Politecnico di Milano		**2:45 PM - 3:05 PM**
Interply Friction Characterization of Stretch Broken Carbon Fiber SBCF Composites During Forming Ms Tasnia Javin Nur - Montana State University	**Mechanics of Kinking in Fiber Reinforced Composites Under Compressive Loading** Dr Paul Davidson - The University Of Texas At Arlington	**Numerical Modeling of Fiber Bundle Architecture in the Robotic Coreless Filament Winding Process** Mr Sebastian Huegle - University of Stuttgart	**Combining Thermographic and Lamb Waves Investigation Data for the Characterisation of CFRP Delaminations** Dr Lea Lecointre Isaka - The University of Tokyo	**CFRP Recycling Method Compatible with a Wide Range of Epoxy Matrices** Mr Naoki Mori - Institute of Science Tokyo		**3:05 PM - 3:25 PM**
Sustainable Aligned Short Carbon Fibre Reinforced Composites with Electrospun Polymer Matrix Dr Shivdarshan Sherugar - University of Bath	**Fiber Waviness in Thermoplastic CFRP Mechanisms of Formation and Mechanical Influence** Mr Takayu Nishioka - The University of Tokyo	**Numerical Simulation for Thermal Cycle Fatigue Failure for Composite Materials Based on Entropy Damage Criterion** Mr Takumu Sugiyama - Graduate school of Tokyo University of Science	**Probability of Detection Analysis of Simulated Defects in Long Discontinuous Fiber Composites Via Transient Thermography** Mr Marco Didone - University of British Columbia			**3:25 PM - 3:45 PM**
Refreshment Break *(located in Exhibit Hall A, Level 100)*						**3:45 PM - 4:30 PM**
						4:30 PM - 6:30 PM
CCM 50th Anniversary Celebration - *Angels Rock Bar at Power Plant Live!*						**7:00 PM - 9:00 PM**

Scientific Program

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
7:00 AM	**Registration Desk Open** *(closes at 5:30 PM - located in Charles Street Lobby, Level 100)*						
7:00 AM	**Continental Breakfast** *(until 8:00 AM - located in Exhibit Hall A/B, Level 100)*						
7:00 AM	**Exhibit Hall Open** *(closes at 5:30 PM - located in Exhibit Hall A/B, Level 100)*						
8:00 AM	**Welcome Remarks**						
8:05 AM	**Plenary Speaker: Perspectives on the Application of Composite Failure Theories Since the World Wide Failure Exercise** Mr Adam Sawicki, *The Boeing Company*						
	Move to Level 300 for Parallel Keynotes and Technical Sessions						
9:00 AM - 9:30 AM	**Societal and Industrial Impact Workshop** **9:00 AM - Keynote: IACMI-The Composites Institute - Enabling US Competitiveness in Advanced Composites Manufacturing - Convene, Connect & Catalyze** Dr Uday Vaidya - IACMI The Composites Institute	**Keynote Speakers** **Structural Fire Response of Polymer Composites** Prof Scott Case - Virginia Polytechnic Institute	**Next Generation Composites: Pushing the Boundaries of Performance and Sustainability** Prof Kyriaki Kalaitzidou - Georgia Institute of Technology	**Accelerating Airframe Development Tasks** Mr Carl Rousseau - Lockheed Martin	**Rapid Manufacturing Pathways for High-Performance Thermoplastic Composites** Prof Mehran Tehrani - University of California San Diego		
		Manufacturing: Forming 2	**Materials and Precursors**	**Physical and Structural Behavior**	**Multifunctional Composites**	**Industrial Applications**	**Additive Manufacturing**
9:35 AM - 9:55 AM	**9:30 AM - Fraunhofer- Applied Research for Lightweight Innovation** Dr Frank Henning - Fraunhofer Institute for Chemical Technology	**Forming Wrinkle-Free Curved C Channel with Unidirectional Fiber Reinforced Composites** Mr Suk Young Chey - Seoul National University	**Time-Dependency Phenomena in BOPP and SRPP Laminates** Miss Anna Kandinskaia - KU Leuven	**Effects of Cooling Rate on the Mechanical and Thermal Properties of Self-Reinforced Polyethylene Composites** Dr Yelin Ni - Pacific Northwest National Lab	**Evaluation of Multifunctional Properties of 2D-Materials Films Embedded Glass Fiber Reinforced Composites** Mr Muhammad Yasir Khalid - Khalifa University of Science Technology	**Design and Prototyping of Composite Deployable Booms for Solar Sails** Prof Susanna Laurenzi - Sapienza Universita di Roma	**Durability of Conventional vs 3D-printed Carbon Fiber in Harsh Saline Environments** Mr Omar El Arwadi - Texas AM University
9:55 AM - 10:15 AM	**9:50 AM - Carbon Nexus 10 years on – Lessons Learnt and Current Research Highlights** Prof Luke Henderson - Deakin University	**Draping Tool Generation for Image-Based Surrogate Draping Models using Free Form Deformation and Topography Modification** Ms Sophia Keller - University of Applied Sciences Upper Austria	**Understanding Towpreg Manufacturing — Combining Advanced Resin Formulation and Improved Processing Techniques for the Next Generation of Pressure Vess** Mr Marius Luik - University of Bayreuth	**Thermomechanical Property Evolution and Virtual Curing of an Aerospace Bismaleimide Resin via Experimentally Validated Molecular Dynamics Simulation** Mr Trevor Wavrunek - Michigan Technological University	**Fabrication of Aramid-Fiber Reinforced Composite for Improving the Shock-Wave Protection by Incorporating Polydimethylsiloxane** Mr Tae Kyeom Kim - Pusan National University	**Characterization and Mitigation of Droplet-Induced Impact Damage in Wind Blade Leading-edge Coatings** Mr PoWen Wang - University of Illinois Urbana-Champaign	**Additive Preform Molding of 3D High-Performance Continuous Carbon Fiber Thermoset Composites** Dr Kaiyue Deng - University of Delaware
10:15 AM - 10:35 AM	**10:10 AM - Fraunhofer Innovation Platform for Composites Research at Western University - High Performance Composites: Trends and Impact** Dr Frank Henning - Fraunhofer Institute for Chemical Technology *"on behalf of Prof Andrew Hrymak, University of Western Ontario"*	**Compaction and Fluid-structure Interaction Leading to Fiber Displacement in Resin Infusion of Composite Manufacturing** Dr Debabrata Adhikari - DTU Lyngby	**Modeling the Property Evolution of Cyanate Ester with Crosslinking, Strain-Rate, and Temperature** Dr Sagar Patil - Michigan Technological University	**Thermomechanical Properties Of Polybenzoxazine Resin in a Molecular Dynamics Model as a Function of Degree of Cure and Temperature** Mr Tristan Muzzy - Michigan Technological University	**Novel Recoverable Fiber Metal Laminates Based on NiTi/CFRP Thermoplastic Composites Subjected to Flexural Loading at Different Temperature Conditions** Mr Muzafar Hussain - Khalifa University	**Numerical and Experimental Analysis of Residual Deformations in Composite Plates Integration of Part/Mold Interaction and Compensated Mold Design** Prof Philippe Olivier - Clement Ader Institute	**Topology Optimization and Manufacturing of 3D Architected Composites using Additive Fiber Tethering** Mr Md Habib Ullah Khan - University of Delaware
10:35 AM - 11:00 AM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Registration Desk Open *(closes at 5:30pm - located in Charles Street Lobby, Level 100)*						7:00 AM
Continental Breakfast *(until 8:00am - located in Exhibit Hall A/B, Level 100)*						7:00 AM
Exhibit Hall Open *(closes at 5:30pm - located in Exhibit Hall A/B, Level 100)*						7:00 AM
						8:00 AM
						8:05 AM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
						9:00 AM - 9:30 AM
	Compressive Failure		**Experimental Techniques**	**Design, Repair and Life Cycle**		
	Arrest and Compartmentalisation of Unstable Compressive Failure in Carbon-Fibre Reinforced Polymer Laminates using a Ply-Discontinuity Feature Mr Bruno Santos - Imperial College London		**Experimental Characterization of Interface Failure Between Flexible and Rigid Additively Manufactured Materials** Prof Behrad Koohbor - Rowan University	**Vacuum-Assisted Techniques for Improved Repair Performance in Legacy Fibre-Reinforced Composites** Dr James Quinn - The University of Edinburgh		9:35 AM - 9:55 AM
	Effect of Heat Treatment on Compressive Strength of 3D Printed Onyx Mr Ertugrul Sari - Queen's University Belfast		**Comparative Evaluation of Size and Stacking Sequence Effects on the Performance of Thin Ply Laminates** Mr Joseph McDonald - Toray CMA	**SF6 Plasma Surface Engineered Spent Coffee Ground Derived Carbon Reinforced Waste HDPE Composites** Dr Sushrisangita Sahoo - Tuskegee University		9:55 AM - 10:15 AM
	Integration of Fuzzy Carbon Overbraids into Structural Members for Improved Compressive Performance Dr Laura Rhian Pickard - University of Bristol		**Quantitative Evaluation and Comparison of Terahertz and Ultrasonic Testing of Glass-fiber Reinforced Plastics** Mr Jens Schuster - University of Applied Sciences Kaiserslautern	**Enhancing the Mechanical and Thermal Properties of Recycled EVOH Films with Nano-Silica Incorporation** Ms Kowsar Rezvanian - Tuskegee University		10:15 AM - 10:35 AM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						10:35 AM - 11:00 AM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
	Societal and Industrial Impact Workshop	Manufacturing: Resin Transfer Molding 3	Materials and Precursors	Physical and Structural Behavior	Multifunctional Composites	Industrial Applications	Additive Manufacturing
11:00 AM - 11:20 AM	**Panel Discussion with Audience Q&A** Moderator: Prof Mike Hinton - High Value Mfg Catapult Panelist: Dr Uday Vaidya - IACMI The Composites Institute Dr Frank Henning - Fraunhofer Institute for Chemical Technology Prof Luke Henderson - Deakin University	**Assessing the Influence of Flax Fibers Humidity on the Properties and Processing of Composites with Infusion at Controlled Capillary Number** Dr Jean Baptiste Jouenne - ABTE	**Exfoliation and Dispersion of MXene in Epoxy Resin Using Dispersing Agents and Three-Roll Milling** Ms Kristina Zukiene - Kaunas University of Technology	**Tensile Cyclic Behaviour of Open-hole CFRP Laminates with Ultra-Thin Plies** Mr Carlos Sandino - Universidad de Sevilla	**Programmable Shape Transformation in Multilayer Fiber Composites Through 4D Printing** Mr Erdem Yildiz - University of Bristol	**Manufacturing and Experimental Testing of Carbon Fiber/Epoxy Composites using Advanced Induction Heating System** Mr Andrejs Pupurs - Riga Technical University	**Enhanced Structural Performance of Additively Manufactured 2D-Lattice Sandwich with Tailored Fiber Orientation using Hot Powder Bed Compaction** Mr Jimesh Bhagatji - Old Dominion University
11:20 AM - 11:40 AM		**Effect of Anisotropy in Fibre Bundle Spacing on Macrovoid Formation in Viscous-Fluid Impregnation to Woven Glass Fibre Bundles** Mr Tomoki Ito - Tokyo University of Science	**Identification of Cure Kinetic Parameters to Model Multiphysic Behavior of Thermoset Laminate Composite** Mr Quentin Marechal - LTDS Ecole Centrale Lyon	**Effect of Weave Architecture and Stuffer to Binder Ratio on Mechanical Performance of 3D-Woven Composite Core-Based Sandwich Panels** Mr Prabhjot Singh - Indian Institute of Technology Delhi	**Sustainable Phase Changing Fiber-Reinforced Composites** Mr Aidan Holihan - University of Tennessee	**Development of Multicell Bipolar Plate Composite Structures via Electrode Integration for Vanadium Redox Flow Batteries** Prof Jun Woo Lim - Jeonbuk National University	**Effect of Heat Treatment on the Tensile Performance of 3D-Printed Continuous Fiber-reinforced Composites** Mr Zizhao Peng - Swinburne University of Technology
11:40 AM - 12:00 PM		**RTMWorx Twins for Racetracking Classification** Mr Arjen Koorevaar - Polyworx BV	**Molecular Dynamics-Derived Mode I Traction Laws for Crystalline UHMWPE Fibrils** Dr Nuwan Dewapriya - University of Delaware	**Advanced Thermoplastic Honeycomb Cores: Efficiency Gains Through Coextruded Foamed Cell Walls in Sandwich Structures** Mr Gregor Jesse - Leipzig University of Applied Sciences	**Mechanical and Electrical Performance of Conformal Load-bearing Antenna Structures under Mechanical Loading** Dr Mitchell Dunn - The University of Queensland	**Sustainable Oxide/Oxide Ceramic Composites with Atomic Oxygen Protection for VLEO Satellite Applications** Mr Chaehwan Lim - Korea Aerospace University	**Effect of Process Parameters on Mechanical Performance of Additively Manufactured PCCF with Integrated Fiber Reinforcement using ATLAM** Mr Benjamin Steva - University of Maine
12:00 PM - 12:20 PM		**Real-Time Predictive Monitoring and Adaptive Control in Vacuum Infusion Development of a Physics-Based Digital Twin** Mr João Machado - INEGI	**Effect of Consolidation Pressure on the Deformation and Void Content Reduction within a Uniform Array of UHMWPE Fibrils** Dr Abdalsalam Fadeel - University of Delaware	**Impact and Damage Resistance of Sandwich Beams Made from Sustainable Materials at Low Temperatures** Mr Gabriel Sanchez Escudero - Universidad Carlos III de Madrid		**Electrical Insulation for Nb3Sn Superconducting Cables: Fibre Selection, Braiding Process, and Epoxy System Performance** Mr Roland Piccin - CERN	**Effect of Overlap Distance on Bead Geometry and Thermal Conductivity in Extrusion-Deposition Additive Manufacturing** Mr Eonyeon Jo - University of Tennessee Knoxville
12:20 PM - 1:15 PM	**Group Lunch** *(located in Exhibit Hall A/B, Level 100)*						
1:15 PM	**Plenary Speaker: Composites are for Bonding** Ms Michelle Johnson, *Lockheed Martin*						
	Move to Level 300 for Parallel Keynotes and Technical Sessions						
2:10 PM - 2:40 PM	Societal and Industrial Impact Workshop **2:10 PM - Challenges and Opportunities of Translational Research** Mr Mark Summers - NCC **2:30 PM - From PhD Thesis to Industry Standard: The Power of Collaboration** Dr Sayata Ghose - The Boeing Co	Keynote Speakers **From Waste to Circularity: Vitrimerization in Thermoset Composites** Prof Veronica Ambrogi - University of Naples Federico II	**Integrating Machine Learning and Physics-Based Models for Probabilistic Design and Certification of Composite Laminates** Dr Roger Ghanem - University of Southern California	**Innovative Sustainable Composites for Lighter and Flame Retardant Electric Vehicle Parts to Boost Climate Benefits** Prof Manjusri Misra - University of Guelph	**Weaving Resilience: Engineering Damage-Tolerant Textile Composites** Prof Pavana Prabhakar - University of Wisconsin Madison		

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Sustainability	**Compressive Failure**	**Computational Modeling**	**Experimental Techniques**	**Design, Repair and Life Cycle**	**Fire Performance**	
Structural Integrity Assessment of Reused Wind Turbine Blade Composite Components using Acoustic Emission Testing and Ib-value Analysis Mr Philipp Johst - HTWK Leipzig	**Compression Behavior of Unidirectional Carbon Fiberfiller Reinforced Plastics** Dr Masahito Ueda - Nihon University	**Perforation and Penetration Mechanics of Composites: Theory, Experiment, and Finite Element Analysis** Dr Bazle Gama Haque - McLaurin Aerospace	**Mechanical and Shearographic Inspections of Stacking Sequences in Plydrop Composite Layups** Dr Hatice Sas - University of Sheffield	**Circular Economy Opportunities for Waste Glass Fibre Reinforced Sucker Rod Guides** Ms Chundu Tamang - University of Southern Queensland	**Development of Flame-Retardant Medium Density Wood Fibreboards Using Phosphorylated Casein and Polyamidoamine-epichlorohydrin Resin** Dr Nam Kyeun Kim - University of Auckland	**11:00 AM - 11:20 AM**
Validation of Possible Applications of Flake Laminates for Recycling of PA6-CF Production Scrap Ms Johanna Beckmann - University Paderborn	**Raman Spectroscopic and FIB-SEM Insights into Compressive Fragmentation of High Modulus Carbon Fibres Model Composites** Mr Cameron Woodgate - Imperial College London	**Finite Element Modeling of the Thermo-Oxidation Gradients in Organic Matrix Composites** Mr Juan Pablo Marquez Costa - PIMM ENSAM	**The Effect of Optical Fibre Cross-Sectional Shape and Microstructure on Out of Plane Strain Sensitivity in Flexible Photonic Sensors** Dr Robin Hartley - University of Bristol	**Life Cycle Assessment of PLA-based Green Composites Reinforced with Natural Fibers** Dr Martina Salzano de Luna - University of Naples Federico II	**Development and Synthesis of Novel DOPO-modified Epoxy Resin and its Glass and Sisal-Based 3D Woven Fiber-Reinforced Composite** Mr Shubham Agnihotri - Indian Institute of Technology Delhi	**11:20 AM - 11:40 AM**
Recycling of End-of-Life Wind Turbine Blades into Polymer Composites Effect of Reprocessing on Secondary Composites Mr Shashank Tumkur Karnick - Eindhoven University of Technology	**Methodology for Validating and Generating Micromodels to Predict Fiber-direction Compressive Failure in CFRPs** Dr Guillaume Seon - The University Of Texas At Arlington	**Numerical Analysis of Viscoelastic Creep and Transverse Cracking in Fiber-Reinforced Composites** Dr Yamato Hoshikawa - Tohoku University	**3D-Printed Core Reinforced with Unidirectional Tailored Fiber Placement and Braided Structures for use in Custom-Made Composite Knee Orthoses** Mr Marcin Barburski - Lodz University of Technology	**Comparison and Recycling of Uniquely Manufactured Flax Composites** Dr Monis Kazmi - University of Auckland	**Enhancing Fire Resistance of Carbon Fibre Composites Using Functionalised Ammonium Polyphosphate Nanoparticles** Prof Chun Wang - University of New South Wales	**11:40 AM - 12:00 PM**
Tin-catalyzed Epoxy Vitrimer Matrix: An Approach to Waste Reduction in Epoxy Composites Ms Emeline Waechter - Monash University	**Computational Investigation of Microstructural Instabilities using Discrete Model for Composites DM4C** Dr Mark Flores - ES3	**Characterization of Highly Filled Thermosetting Composite for the Numerical Prediction of Residual Stresses Development During the Production Process** Ms Joana Malheiro - PIEP Centre for Innovation in Polymer Engineering			**Effect of Halloysite Nanotubes and Waste Chicken Feathers as Fire Retardants in Green Composites** Dr Anil Netravali - Cornell University	**12:00 PM - 12:20 PM**
Group Lunch *(located in Exhibit Hall A/B, Level 100)*						**12:20 PM - 1:15 PM**
						1:15 PM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
						2:10 PM - 2:40 PM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
	Societal and Industrial Impact Workshop	**Manufacturing: Urban Air Mobility**	**Smart Composite Materials**	**Physical and Structural Behavior**	**Multifunctional Composites**	**Industrial Applications**	**Additive Manufacturing**
2:45 PM - 3:05 PM	**2:45 PM - Building a Global Extended Research Ecosystem** Mr Peter Wilkins - Baker Hughes UK **3:00 PM - The Innovation Pipeline: Collaborative Research Frameworks for the Future of Flight** Mr Tim Gaur - Airbus	**Flexible and Efficient Manufacturing of Tailored Cabin Interior Panels for Urban Air Mobility Applications** Mr Johannes Baur - Institute of Aircraft Design Stuttgart	**Multifunctional Flexible and Biodegradable Phase Change Composites for Dual-mode Thermal Management of Lithium-ion Batteries** Mr Lichang Lu - Loughborough University	**Design and Optimization of Functionally Graded Honeycomb Structures for Out-of-Plane Stiffness and Energy Absorption** Dr Kaan Yildiz - Istanbul Technical University	**Evaluating the Impact of Carbon-Based Nanomaterials on the Thermomechanical Properties of High Performance Polymer Fibers** Prof Stergios Goutianos - Norwegian University of Science & Technology	**Optimum Boundaries for Maximum Load-Carrying Capacity of Misaligned Water-Lubricated Composite Journal Bearings Based on Elastohydrodynamics** Mr Wonvin Kim - KAIST	**Vertical Axis Wind Turbine Blade Made by 4D Printing of Composites** Dr Suong Hoa - Concordia University
3:05 PM - 3:25 PM	**3:15 PM - Stronger Together: Victrex's Collaborative Journey in Advanced Materials** Dr Claire Steggall-Murphy - Victrex	**Hollow Ball Core HBC Technology: A Novel Manufacturing Approach for Thermoplastic Sandwich Honeycomb Core with Design Flexibility** Mr Won Gyo Seo - Utah State University	**Detection of Delamination in CFRP Laminates by Integrated Fiberoptic Strain Distribution Sensors** Mr Tatsuro Kosaka - Kochi University of Technology	**Applicability of Gamma Irradiation for the Production of UHMWPE Composites for Joint Implant Inserts** Mr Istvan Nemes-Karoly - Budapest University of Technology & Economics	**Electrophoretic Deposition of Carbon Nanotube on Highly Aligned Short Carbon Fibers and Influence of Carbon Nanotube Coating on Piezoresistivity** Dr Amit Chaudhari - University of Delaware	**Lightweight Composite Materials for Radiation Shielding via Electrospinning Fabrication** Prof Maria Gabriella Santonicola - Sapienza University of Rome	**Toolpath Optimization of Polymer Composite Additive Manufacturing AM Printed Mold to Improve Performance for Compression Molding Applications** Dr Madhura Limaye - Oak Ridge National Lab
3:25 PM - 3:45 PM	**3:30 PM - From Fundamental Research to Implementation: How Public-private Participation Drives Thermoplastic Composite Innovation in the Netherlands** Ms Vanessa Marinosci - TPRC ThermoPlastic Composites Research Center	**Hyperconnected Simulation Ecosystem Supporting Probabilistic Design and Predictive Manufacturing of Next Generation Aircraft Structures – CAELESTIS Pr** Dr Elena RodríguezSenín - AIMEN Tecnology Ctr	**Out-of-oven Manufacturing for Natural Fiber Composites with Integrated Sensing Capabilities and Water Barrier** Ms Yushen Wang - Queen Mary University of London	**Stochastic Modelling of the Spatially Distributed Viscoelasticity of Short Fibre-reinforced Composites by using Random Fields** Mr Eduard Klatt - Helmut Schmidt Univesity Hamburg	**Processing and Characterization of 3D Vascular CF/CM Composites** Mr Henry Holman - The University of Tulsa	**Innovating for a Sustainable Future: A New Class of Bare Overhead Aluminum Conductors Reinforced with Carbon Composite Strength Members** Mr Clement Hiel - CSSI New Composite Products Development	**3D-printed Stealth-Honeycomb Conductive-Nanoparticles-Filled PEEK Thermoplastic Resin Curve-Patch Composite for Enhanced RCS Reduction** Mr Jaewon Shim - Korea Aerospace University
3:45 PM - 4:10 PM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						
4:10 PM - 4:40 PM	**4:10 PM - Sustainable Materials Driven Composites at Royce, 2D Materials to Textile Composites** Prof Prasad Potluri - University of Manchester **4:30 PM - How Translational Research Shapes the Future of Dental Composites from Innovation to Commercialisation** Prof Gangadhara Prusty - Australian Composites Manufacturing CRC **4:45 PM - Harnessing the Basic Research, Technical Innovation and Industrial Implementation: The Role of Chinese Society for Composites Materials** Mr Huaxin Peng - Zhejiang University **5:00 PM - Fraunhofer Innovation Platform for Composites Research at UNIST – Harnessing Global Partnership in Bridging Academia and Composites Industry in Korea** Prof YoungBin Park - Ulsan National Institute of Science Technology **5:15 PM - Beyond Academia, How ICC is Transforming Innovation into Commercial Impact** Mr Kiyoshi Uzawa - Knazawa Institute of Technology	**Mini-Orals** *See page 49 for detailed presentation schedule*					
4:10 PM - 5:30 PM		**Poster Session** *(located in Exhibit Hall A/B, Level 100)*					
7:00 PM - 10:00 PM	**ICCM 24 Conference Banquet** - *Ballroom 1, Level 400*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Sustainability	**Compressive Failure**	**Vitrimer Matrix Composites**	**Experimental Techniques**	**Design, Repair and Life Cycle**	**Fire Performance**	
Sustainable Alternatives to Thermoset Polymers for Aerospace Composites: A Comparison using LCA Mr Andrea Bologna - Politecnico di Milano	**A New Test for the Mechanical Characterisation of Composite Pultruded Rods Under Compression** Dr Gustavo Quino - Imperial College London	**Effect of Epoxy Amine Stoichiometry on the Structure Property and Reprocessing Relationships in Imine Based Vitrimer Polymer Networks and Their Compos** Prof Russell Varley - Deakin University	**Challenges and Recommendations for Longitudinal Tensile Testing of Unidirectional Composites Based on a Round-robin Programme** Prof Yentl Swolfs - KU Leuven	**Cost-Effectiveness of Structural Health Monitoring on the Lifecycle of Composite Aerospace Elements** Dr Pietro Ballarin - Politecnico di Milano	**Effect of Thermal Modification on the Fire Performance of Strand-based Mass Timber Composite Panels** Dr Avishek Chanda - Washington State University	2:45 PM - 3:05 PM
Mapping the Global Material and Energy Flows of Fiber Reinforced Polymer Composites Ms Zhuoer Li - University of Michigan	**The Experimental Investigation of the Compressive Performance of Pultruded Rod Composite Struts** Dr Bohao Zhang - University of Bristol	**Substitution Effects on Reprocessable Highly Aromatic Imine-Containing Epoxy Vitrimers** Ms Sharine Noelle Bendulo - Deakin University	**Advanced Characterization of Polymers and Composite Materials using Axial-Torsional Dynamic Mechanical Analysis** Mr Gunther Arnold - Anton Paar Germany GmbH	**Performance Improvement of Type-4 Hydrogen Pressure Vessel using Progressive Ply Failure Mechanism** Mr Akash Burolia - Indian Institute of Technology Kharagpur	**Burning Behaviour of Thermoplastic Glass Fibre Composites for a Bumper Beam Application** Ms Joana Malheiro - PIEP Innovation in Polymer Engineering	3:05 PM - 3:25 PM
Multistep Recycling of ElumT700 Composites via TuFF Technology Dr Joseph Deitzel - University of Delaware		**Cure Kinetics of a Transesterification-Type Vitrimer Derived from a Commercial Epoxy-Anhydride Thermoset** Mr Joshua Ilse - McGill University	**Identification of the Through-Thickness Orthotropic Stiffness Components of Thick Filament-Wounded Composite Tubes in an Industrial Context** Dr Isabella Jacobsen - MatchID US Inc	**Determination of Recycled Carbon Fiber Strength Distribution using Bundle Fiber Tensile Test** Mr Yoshiki Sugimoto - National Institute of Advanced Industrial Science	**Hydrochar-Based Flame Retardants from Brewers' Spent Grain for High-Performance NFRCs** Ms Alessia Pantaleoni - Sapienza University of Rome	3:25 PM - 3:45 PM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						3:45 PM - 4:10 PM
						4:10 PM - 4:40 PM
Poster Session *(located in Exhibit Hall A/B, Level 100)*						4:10 PM - 5:30 PM
ICCM 24 Conference Banquet - *Ballroom 1, Level 400*						7:00 PM - 10:00 PM

Scientific Program

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
7:00 AM	**Registration Desk Open** *(closes at 12:30 PM - located in Charles Street Lobby, Level 100)*						
7:00 AM	**Continental Breakfast** *(until 8:00 AM - located in Exhibit Hall A/B, Level 100)*						
7:00 AM	**Exhibit Hall Open** *(closes at 11:00 AM - located in Exhibit Hall A/B, Level 100)*						
8:00 AM	**Welcome Remarks**						
8:05 AM	**Plenary Speaker: Quality Measurement and Control in High Volume Composites Manufacturing: A Combined Academic and Industrial Perspective** Prof Simon Bickerton, *University of Auckland*						
9:00 AM	**Lagace Lecture: New Concepts and Products of Double-Double Laminate** Prof Stephen Tsai, *Stanford University*						
	Move to Level 300 for Technical Sessions						
		Manufacturing: Welding	**Smart Composite Materials**	**Physical and Structural Behavior**		**Multiscale Behavior**	**Sustainability**
9:35 AM - 9:55 AM		**Sequential Resistance Welding of a Thermoplastic Composite Leading Edge Demonstrator from Laboratory Testing to Full-scale Welding** Mr Massimiliano Russello - AIMEN	**Effect of Atomic Oxygen Exposure on the Thermomechanical Properties and Shape Memory Behaviour of ±45° Glass Fibre Reinforced Cyanate Ester Based Shape Memory Polymer Composites** Prof Jayantha Epaarachchi - University of Southern Queensland	**Experimental Study on the Fatigue Performance of CFRP Beams with Structured Surface Load Introduction Under Cyclic Loading** Mr Torben Deutschmann - TUHH		**Multiscale Analysis for Woven Composite with Incomplete Periodicity** Mr Koki Tsuda - Nagoya University	**Composite Material Sustainability: Where are We Today and Where Do We Need to Go** Dr Edward Patton - Patton Engineering
9:55 AM - 10:15 AM		**Ultrasonic Welding of Metal and Fibre Reinforced Thermoplastics — Bond Formation and Joint Strength** Mr Moritz Liesegang - RPTU Kaiserslautern-Landau	**Performance Evaluation of Structural Behavior Monitoring using Smart Sensors** Dr Sung-Hwan Jang - Hanyang University ERICA	**Impact of Stacking Sequence on Tensile and Fatigue Performance of Quasi-isotropic Carbon/Epoxy Laminates** Mr Marc Gadinger - Friedrich Alexander Universitut Erlangen Nurnberg		**Multiscale Modeling for Bottom-up Prediction of Failure Parameters of Unidirectional Carbon-fiber-reinforced Composite Lamina from Atoms to Laminasc** Prof Yoshiaki Kawagoe - Tohoku University	**Untangling Decarbonization Strategies for Net Zero Carbon Fiber** Dr Kyle Pender - National Composites Centre
10:15 AM - 10:35 AM		**Development of Metal-carbon Composites from Poly(ether-ketone-ketone) for Ablative Thermal Protection Coatings** Ms Casey Barrett - Rowan University	**Rectifying Efficiency Measures for Vascular-based Thermal Regulation** Mr Sandeep Rajendra Kumar - North Carolina State University				**Production of Olefin-based Composite Materials by Recycling Discarded Carbon Fibres** Mr Corrado Sciancalepore - University of Parma
10:35 AM - 11:00 AM	**Refreshment Break** *(located in Exhibit Hall A/B, Level 100)*						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
Registration Desk Open *(closes at 12:30 PM - located in Charles Street Lobby, Level 100))*						7:00 AM
Continental Breakfast *(until 8:00am - located in Exhibit Hall A/B, Level 100)*						7:00 AM
Exhibit Hall Open *(closes at 11:00 AM - located in Exhibit Hall A/B, Level 100)*						7:00 AM
						8:00 AM
						8:05 AM
						9:00 AM
Move to Level 300 for Parallel Keynotes and Technical Sessions						
Experimental Techniques	**Compressive Failure**	**Vitrimer Matrix Composites**	**Fire Performance**			
Residual Strain Development in Carbon Fiber Reinforced Metal Hybrid Laminates: An Experimental Investigation using FBG Strain Sensors Mr Maximilian Pollak - Die FH OÖ Forschungs & Entwicklungs GmbH	**Laminate Hybridization using High Modulus Carbon Thin Plies for Enhanced Compressive Performance** Mr Yousef Rifai - University of Bristol	**Vitrimer Matrix Composites Manufactured by Filament Winding for Space Applications** Ms Josephine de Calbiac - Centre National d'Etudes Spatiales CNES	**Modeling and Prediction of Residual Strength of Polymer Composites Exposed to Heat** Mr Jianhua Huang - Luna Labs USA LLC			9:35 AM - 9:55 AM
Characterisation of Binder Powders in Glass Fibre Fabrics using Laser Microscopy and Deep Learning Segmentation Methods Mr Jesper Lisegaard - Technical University of Denmark	**Localized Hybridization using Boron Fibers: A Route to Improve Open Hole Compressive Performance** Dr Gursahib Singh Bhatia - Imperial College London	**Flexible and Recyclable Vitrimers for Sustainable Electronic Composites** Prof Aniruddh Vashisth - University of Washington Seattle	**Fire Modelling of Multifuel Composites with Varying Material Layers using Complex Stoichiometry** Prof Debes Bhattacharyya - University of Auckland			9:55 AM - 10:15 AM
Automated Construction of Viscoelastic Master Curves and Prony Series Models for Advanced Material Characterization Using DMA Data Mr Mahdi Tayyebati - Technical University of Denmark		**Rejuvenating Out-of-Date Carbon Fiber Prepregs with Imine-Epoxy Vitrimers** Ms Sharine Noelle Bendulo - Deakin University	**Experimental Evaluation of Interlaminar Shear Strength of Carbon Nanomaterial Z-threaded Carbon Fiber-Reinforced Polymer Laminates After Exposure to E** Prof Kuang-Ting Hsiao - University of South Alabama			10:15 AM - 10:35 AM
Refreshment Break *(located in Exhibit Hall A/B, Level 100)*						10:35 AM - 11:00 AM

Time	Ex Hall C - Plenary	Room 307	Room 308	Room 309	Room 310	Room 314	Room 315
		Manufacturing: AFP/ATP 3	Smart Composite Materials	Physical and Structural Behavior		Multiscale Behavior	Sustainability
11:00 AM - 11:20 AM		**Differential Eddy Current Sensing Probe and It's Implementation in Automated Composite Manufacturing Applications** Mr Ege Arabul - University of Bristol	**Energy Efficient and Tailored Out-of-Oven Composites Manufacturing Towards Sustainable and Smart Composites** Dr Han Zhang - University of Warwick	**Fastblade: A Fatigue Testing Facility for Full Scale Blades** Dr Sergio Lopez Dubon - The University of Edinburgh		**A Novel Multiscale Digital Image Correlation Approach for Monitoring Stable Skin-Stringer Delamination Growth in Post-Buckled Composite Panels** Mr Andres Pereira - Delft University of Technology	**Sustainable Biodegradable Composites for a Circular Economy** Dr Amar Mohanty - University of Guelph
11:20 AM - 11:40 AM		**Pass Frequency as a Means for Increased LATP Productivity** Ms Emma Tobin - University of Limerick	**rCF-based Pyro-Resistive E-Skin Integrated with Temperature Sensing and Self-Controlled Joule Heating Function** Mr Yansong Li - Queen Mary University of London	**Compression-Compression Fatigue of Glass-Fibre Non-Crimp Fabric Composites by Four-Point Flexure** Ms Nicola Shepherd - The University of Auckland		**Multiscale Modelling of Cryogenic Hydrogen Permeability in Polymer-Matrix Composites** Mr Mustafa Okumus - University of Warwick	**Self-Contained Cost-Effective Plastic Recycling Facilities** Dr Ranji Vaidyanathaan - Oklahoma State University
11:40 AM - 12:00 PM			**Inspired by Ice Skates: Smart Aqueous Self-lubricating Coatings for Icephobic Applications** Ms Gelareh Momen - University of Quebec at Chicoutimi	**The Role of Pore Distribution and Hierarchical Structure of Marine Mussel Plaque Cores** Dr Tao Liu - Queen Mary University of London			**Manufacturing and Characterisation of Continuous Recycled Carbon Fibre Unidirectional Composites** Dr Monali Dahale - National Composite Centre
Move to Level 100 for Closing Ceremony							
12:10 PM - 12:30 PM	**Closing Ceremony** *(Exhibit Hall C, Level 100)*						
12:30 PM	**Box Lunch Pick-up** *(located in Exhibit Hall A/B, Level 100)*						
12:45 PM	**Bus Departs for UD-CCM Tour**						
2:15 PM - 4:15 PM	**Tour of UD-CCM**						
4:15 PM	**Depart UD-CCM and return to Baltimore Convention Center**						

Room 316	Room 317	Room 318	Room 319	Room 320	Room 321	Time
						11:00 AM - 11:20 AM
						11:20 AM - 11:40 AM
						11:40 AM - 12:00 PM
Move to Level 100 for Closing Ceremony						
Closing Ceremony *(Exhibit Hall C, Level 100)*						12:10 PM - 12:30 PM
Box Lunch Pick-up *(located in Exhibit Hall A/B, Level 100)*						12:30 PM
Bus Departs for UD-CCM Tour						12:45 PM
Tour of UD-CCM						2:15 PM - 4:15 PM
Depart UD-CCM and return to Baltimore Convention Center						4:15 PM

Poster Session

Poster Title	Poster Presenter	Poster No.
Aerostructure Composites		
Filament Wound Carbon Fiber Reinforced Polymers Support Structures for Spacecraft Applications	Dr Abrar Ul Haq Khan Baluch	1
Aligned Discontinuous Fiber Composites		
Quantification of Alignment Quality of Discontinuous Fiber Composites Using 2D Fast Fourier Transform FFT	Dr John Tierney	2
Artificial Intelligence Empowering Composite S&T		
Specialized LLMs for Supporting Composite Material Processing and Equipment Operation	Dr Seokpum Kim	3
Composites AI: An AI-Powered Expert System for Composites Engineering	Prof Wenbin Yu	4
Biomass-Based Composite Materials		
Development and Characterisation of Bamboo and Natural Fibre Composite Wrapped Tow Reinforced Trusses	Mr Matthew Lillywhite	5
Biochar as an Alternative Filler for Composites	Prof Veronica Calado	6
Design, Repair and Life Cycle		
Machine Learning Based Residual Distortion Prediction for Extrusion-based Additive Manufacturing of Biocomposite	Ms Bhagyashree Prabhune Dr Madhura Limaye	7
AI Driven Methodologies for Advancing Composite Material Analysis and Applications	Mr Cesar Garcia Gascon	8
Designing Layered Composites for Improved Buckling Strength Using Auxetic Behavior	Dr Yeqing Wang	9
Observation of Bending Fractural Behavior of CFRTP Laminates with Fiber Discontinuity using DIC	Mr Kento Onozuka	10
Manufacturing and Mechanical Properties of Recycled Carbon Fiber Composites by Spinning Process	Mr Shinichi Tatsuta	11
A Non-Local Cohesive Zone Model for Delamination in Fiber-Reinforced Polymers Incorporating Extrinsic Energy Dissipation	Mr Xiaole Li	12
Determining Feasibility Bounds of Lamination Parameters using Neural Networks	Mr Swapan Madabhushi Venkata	13
Extension and Layup Optimization of Double-Double Laminates Based on Lamination Parameters	Mr Chen Du	14
Experimental Techniques		
Using Multiaxial Fatigue to Investigate the Anisotropic Performance in Additively Manufactured Material	Dr Peter Bailey	15
Nondestructive Assessment of Stiffness Degradation Owing to Mechanical Fatigue and Temperature-Accelerated Fatigue of GFRP by using NIR-spectroscopy	Mr Daniel Esse	16
Fire Performance of Composite Materials		
Development of Bench Scale Instrument for Testing Thermal Protective Performance in Different Orientations	Mr Sudhanshu Maurya	17
Thermal and Mechanical Analysis for Li-ion Battery Fire Containment	Dr Sindhu Bushpalli	18
Industrial Applications		
Glass Reinforced Epoxy GRE as an Alternative Pipeline for Onsite Surface Installations a Structural Integrity and Economic Feasibility Study	Mr Muhammad Tahir Waqas	19
Performance of Graphene Nanoplatelet Enhanced CFRP Composites under Post Cryogenic Thermal Cycling for Hydrogen Storage Applications	Dr Jabir Ubaid Parakkal	20
Development of Lightweight Sandwich Composites with Improved Reaction to Fire and UV Resistance	Ms Helena Rocha	21
Manufacturing		
Improving Interlayer Adhesion in Large Format Additive Manufacturing for Composite Tooling	Mr Nicolas Courion, Dr Pascal Hubert	22
Printing of Molten Metal Droplets Toward High Throughput Metal Matrix Composites Manufacturing	Dr Kaihao Zhang	23
An Anisotropic Constitutive Model for Carbon Fabric-Reinforced Shape Memory Polymer Composites Based on Phase Transition Concept	Mr Chen Jiajun	24

Posters will be on display in Exhibit Hall A/B, Level 100

Poster Title	Poster Presenter	Poster No.
Manufacturing *(continued)*		
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Mini-Oral Schedule

Each Mini-Oral presentation will be 3 minutes.

Time	Room 307	Room 308	Room 309
4:10 PM	**Effect of Incorporating Additional Thermoplastic into Carbon Fiber Epoxy Composites Prepared by Electrodeposition Resin Molding Method** Mr Md Tansirul Islam	**Development of Nanomaterials-Based Antiicing-Deicing Devices for Aviation Sector** Dr Muhammad Zahid	**Evaulation of Cryo TMADMA for Determingin the Stiffness Properties of Adhesives at Cryogenic Temperatures** Mr Patrick Nowakowski
4:15 PM	**Advanced Composite Bonding using Energy Efficient Localised Curing Based on Nanomodified Epoxy** Prof Daiva Zeleniakiene	**Novel Electrospinning PVDFBi2O3CeO2 Composite Yarns A Versatile Approach towards Functional X-ray Shielding Textiles** Miss Siyuan Zhao	**Construction of 3D Networked Epoxy Composite Using RGO and BPEI Coated Epoxy Microspheres for High Thermal Conductivity Applications** Miss Dayoung Kim
4:20 PM	**Friction Behaviors of Carbon Fiber Tows and their Effect on the Manufacturability and Mechanical Properties of Composite Pressure Vessels** Ms Su Hyun Lim	**Environmental Durability of Composites Characterization of Temperature and Strain Rate Dependent Properties of Toughened Epoxy Resins** Dr Sagar Doshi	**Helicobacter Pylori Detection via SERS Enhancement Using Synergistic Effects of Gold NanorodsNano Mica PlateletsZnO Quantum Dots** Mr MingChang Lu
4:25 PM	**Structural and Thermal Properties of 3D Printed Polylactic Acid Composites Filled with Bamboo Powder** Dr Chamil Abeykoon	**Multifunctional Stealthy Flexible Honeycomb Core and Lightning Protection Metamaterial Surface Composites for Lightning Strike Damage** Mr SeongHaeng Heo	**Effects of Dry Heat and Ultraviolet on the Tensile and Fatigue Strengths of Glass Fiber Reinforced Vinyl Ester** Mr Abdul Rahman Aravind
4:30 PM	**Realtime Flowfront Prediction in Resin Transfer Molding Using Electromechanical Behavior and Generative Adversarial Network** Mr Dahun Lee	**Insights into the Mechanical Degradation of Matrix and Fibre-Matrix Interface in Carbon Fibre-Reinforced Polymers (CFRPs) Under Hydrothermal Conditions** Dr Weizhao Zhang	**Tribological Investigation of the Interface Between Steel Pin and CFRP Tube** Mr Floyd Daniel Bischop
4:35 PM	**Designing Layered Composites for Improved Buckling Strength Using Auxetic Behavior** Dr Yeqing Wang	**Development and Modeling of Interfacially Engineered Composites with Designed Failure** Mr Gergo Zsolt Marton	**Effective Decomposition Rate of Epoxy Resin using a Modified Shrinkingcore Model Synergistic Hydrolysis and Glycolysis Reactions** Mr Jinsu Kim
4:40 PM	**Mini-Orals Conclude**		

Mini-Oral Schedule

Each Mini-Oral presentation will be 3 minutes.

Time	Room 307	Room 308	Room 309
4:10 PM	**Determining Feasibility Bounds of Lamination Parameters using Neural Networks** Mr Swapan Madabhushi Venkata	**Frequency-Selective Surface-Based Composite Radar Absorbing Structures Using Transferred Laser-Induced Graphene on Glass Fiber Fabric** Prof SangEui Lee	**Composites AI: An AI-Powered Expert System for Composites Engineering** Prof Wenbin Yu
4:15 PM	**Extension and Layup Optimization of Double-Double Laminates Based on Lamination Parameters** Mr Chen Du	**Enhancing Ablative Resistance of Carbon-Epoxy Laminates via Interlayer of Silicone Elastomer Microparticles** Mr Se Jun Wang	**Specialized LLMs for Supporting Composite Material Processing and Equipment Operation** Dr Seokpum Kim
4:20 PM	**Development of Bench Scale Instrument for Testing Thermal Protective Performance in Different Orientations** Mr Sudhanshu Maurya		**Development and Characterisation of Bamboo and Natural Fibre Composite Wrapped Tow Reinforced Trusses** Mr Matthew Lillywhite
4:25 PM	**Multi-Scale Modeling for the Curing-Induced Deformations of the Toughened Resin-Based Composite** Ms Meiyu Liu		
4:30 PM	**An Anisotropic Constitutive Model for Carbon Fabric-Reinforced Shape Memory Polymer Composites Based on Phase Transition Concept** Mr Chen Jiajun		
4:35 PM			
4:40 PM	**Mini-Orals Conclude**		

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