

2nd Annual Materials Innovation & Advanced Technology Leadership Forum

January 25-26, 2023 | Huntington Beach, CA

Composites for Sustainability, Energy and Transportation Applications

Wednesday, January 25, 2023

Onsite tour - Axiom Materials (Limited to 30 participants), space still available

Lunch (on your own)

Welcoming Comments

- Jeff Baur - University of Illinois Urbana-Champaign & Forum Organizer
- Scott Stephenson - SAMPE NA President

Keynote Presentation *Christian Keun - SAMPE Global President*

Session: Composites for Sustainability

- Don't look up: How Increasing demand for sustainability will impact the future for Composite Material suppliers. - *Adam Harms, Ruhl Strategic Partners*
- Carbon Engineering for Automotive Exterior Applications - *Arun Ramanathan, Rivian*
- Sustainable Composites in the UK: A critical step for the Net Zero Economy - *Enrique Garcia, Ph.D., National Composites Centre UK*
- How Victrex Brings Transformational & Sustainable Solutions : a focus in Transportation with Thermoplastic based applications. - *Gilles Larroque, Victrex*
- U.S. Department of Energy's H2@Scale Vision - *Ned T. Stetson, Ph.D., DOE*

Coffee Break & Networking - Sponsored by UAMMI

Panel: Composites in a Hydrogen World

- Moderator - *Kevin Simmons, Ph.D., Pacific Northwest National Laboratory*
- Hydrogen Hub - *Claire Behar, Hystor Energy*
- Advanced Carbon Fiber for Compressed Hydrogen Storage Tanks - *Asha-Dee Celestine, Ph.D., DOE*
- Carbon fiber development for pressure vessels - *Amit Naskar, Ph.D., Oak Ridge National Laboratory*
- Enabling superior storage efficiency for composite tanks with Fiber Patch Placement dome reinforcements - *Thorsten Groene, Cevotec*
- Transportation and delivery of hydrogen - *Dylan Winter, Evonik*

Welcome Reception - Sponsored by Boston Materials

Thank You to Our Sponsors

Thursday January 26, 2023

Breakfast - Sponsored by IACMI

Panel: Automotive Structural Component Design Analysis & Manufacturing

- Moderator - Srikanth Pilla, Ph.D., Clemson University
- Presentation - Yarlagadda Shridhar, Ph.D., University of Delaware
- Design and development of an ultra-lightweight carbon fiber reinforced thermoplastics composites automotive closure system. Aditya Yerra, Ph.D., Tesla
- Finite element analysis and performance evaluation of an ultra-lightweight continuous carbon fiber thermoplastics composite door assembly. - Gang Li, Ph.D., Clemson University
- Digital lifecycle: a radical redesign of automotive product development for continuous fiber thermoplastics composite - Sai Aditya Pradeep, Ph.D., Clemson University

Panel: Sustainable Aerospace - Visions for 2050

- Moderator - Enrique Garcia, Ph.D., National Composites Centre UK
- Speaker - Maria Tamara Blanco, Airbus
- Speaker - Kevin Lutke, Boeing

Coffee Break & Networking - Sponsored by JEC

Panel: Multi-Functional Composite Material Systems for Vehicle Battery Enclosures

- Engineering Multifunctional Composite Materials with Enhanced Ductility and Highly Permeable Reinforcements Via Tailored Fiber Placement - Adam Burley, Ph.D., Teijin
- Multifunctional FRP composites for self-damage detection and memory - Maria Q. Feng, Ph.D., Columbia University
- Modeling of HP-RTM process - Doug Bradley, Columbia University
- Model validation and analytical certification of composite material systems - Zhiheng Wang, Ph.D, University of Southern California
- Multi-scale modeling of hybrid fiber composites - Venkat Aitharaju, Ph.D., General Motors
- Machine learning for the multiscale modeling and analysis of inelastic - Zhengtao Yao, University of Southern California

Lunch - Sponsored by KraussMaffei

Session: Composites Towards Circularity

- Composites Towards Circularity Novel Methods for Composites Recycling via Pyrolysis - Matt Jacobs, Northrop Grumman
- Forwarding Looking at Wind Turbine Blade Recycling in the United States - Mitchell Rencheck, Ph.D., Oak Ridge National Laboratory
- Sustainability in Carbon Fiber Reinforced Thermosets - Wenbin Kuang, Ph.D., Pacific Northwest National Laboratory
- Building a Circular Carbon Fibre Industry—Turning Waste Carbon Fibre Into Valuable Raw Material - Frazer Barnes, Gen2 Carbon

Coffee Break & Networking

Session: Multifunctional Applications

- Structural batteries composites for mass-less energy storage -Johanna Xu, Ph.D., Chalmers University of Technology
- Technologies for multifunctional lightweight design and their Applications - Sebastian Schmidhuber, Krauss Maffei Technologies GmbH
- High Pressure Resin Transfer Molding: A Sustainable Approach for High-rate Manufacturing of Aerospace Composite Parts - Rebecca Blackham, Henkel
- Helicoid™ advanced composite materials for sustainable, high impact performance automotive applications - Lorenzo Mencattelli, Helicoid Industries Inc.

Next Steps: SWOT Analysis & Wrap Up - Kevin Simmons and Jeff Baur