



December 2021 Newsletter

Virtual Meeting December 9th at 12 pm

featuring

Brian Churchill

Kaneka Texas Corporation

**Novel Toughening System for
Thermosetting Resins**



SAMPE NJ Chapter



@NJSAMPE

Web: <http://njsampe.org>

Meeting Details and Abstract

Virtual meeting log-in details will follow in an email announcement the week of the meeting.



Presentation Abstract:

Kaneka Kane Ace MX is a novel toughening system in which Core-Shell Rubber (CSR) particles are dispersed into various thermosetting resins. The nano-scale dispersion of CSR particles improve fracture toughness and adhesive strength while bringing a good appearance. This dispersion makes these performance improvements without depressing the Tg or other thermal properties related to the cross link density. We will discuss this novel toughening system and introduce several new MX products.

Brian Churchill graduated from Lycoming College with multiple degrees. He has worked in various technical and sales management positions for 40 years in the Adhesive, Coating, and Composite Industries. Brian joined Kaneka in 2006 as the Senior Marketing Manager for the MX product line.

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SAMPE Materials Forum Jan 2022

Huntington Beach, CA.



ALL NEW!
Materials Innovation & Advanced Technology Leadership Forum
Towards Industrialization of Composites Manufacturing

JANUARY 26-27, 2022
HUNTINGTON BEACH, CALIFORNIA

PLAN NOW TO ATTEND

SPONSORSHIPS AVAILABLE!
 Contact materialsforum@sampe.org

WEDNESDAY, JANUARY 26, 2022			
TIME	SESSION		
9:00am - 12:00pm	GrayMatter Robotics Tour - Limited to 50 registrants		
1:00 - 2:30pm	Track 1	Short Course	Advances and Challenges in Automated Fiber Placement (AFP), by Ramy Harik, University of South Carolina and Sayata Ghose, The Boeing Company
2:30 - 4:00pm			Pultrusion Technology, Commercialization and Industrialization, by Clement Hiel, Composites Support & Solutions, Inc.
1:00 - 2:30pm	Track 2	Short Course	Non-Destructive Evaluation (NDE) Integration Into Modern Aerospace Manufacturing, by David Forsyth, TRI Austin
2:30 - 4:00pm			Thermoplastic Composites: Opportunities and Challenges, by David Leach, ATC Manufacturing
1:00 - 2:30pm	Track 3	Market Overview	Overview of Additive Manufacturing (AM) Market: State of the Art, Current Challenges and Opportunities, and Path Forward, by Ahmed Arabi Hassen, Peeyush Nandwana and Vidya Kishore, Oak Ridge National Laboratory
2:30 - 4:00pm			Market Overview of eVTOL and Urban/Advanced Air Mobility (UAM/AAM), by Johnny T. Doo, Leviation Technology, Inc./NVR/NASA TVF-WG
4:00 - 6:00pm	Welcome Reception		

ROBOTICS TOUR

See for yourself how GrayMatter Robotics makes AI-Brains for robots by taking commercially available robots and connecting them to artificial intelligence software, creating smart robotic assistants for high-mix surface treatment applications. **Tour attendance is limited to 50 registrants, register today.** Visit materialsinnovationforum.org/tour.



VENUE & LOCATION — HUNTINGTON BEACH, CA

The forum will be held at the **Kimpton Shorebreak Resort**, 500 Pacific Coast Highway, Huntington Beach, CA 92648. Book your room at materialsinnovationforum.org/hotel-registration. Huntington Beach is located in Southern California, within driving distance to numerous manufacturing companies and offers a plethora of activities for visitors — live entertainment, iconic bonfire pits, beautiful sandy beaches, and oceanfront dining year-round.

SEATS ARE LIMITED. REGISTER AT: materialsinnovationforum.org

FORUM SPEAKERS & PRESENTATIONS

MaterialsInnovationforum.org
 THURSDAY, JANUARY 27, 2022

SESSION 1 — CHALLENGES

8:10am - 9:40am

- Air Mobility - Economy of Scale, *John Gerigus and Nobuya Kawamura*
- Recycling and Circular Economy of Automotive Composite Parts, *Hendrik Mainka*
- Composite Material Opportunities and Challenges for Air Mobility and Unmanned Systems, *Robert Yancey*



John Gerigus,
Joby Avlation



Nobuya Kawamura,
Toyota Motor North America, Inc.



Hendrik Mainka,
Volkswagen Group of America, Inc.



Robert Yancey,
Hexcel

SESSION 2 — SYNERGIES

10:00am - 12:00pm

- Synergy of Aerospace and Wind Energy Composites Technologies, *Wendy Lin*
- Pultrusion with Design Freedom, *Matthew Parkinson*
- Advances in Manufacturing Carbon-Carbon Composites for High Temperature Applications, *Adam Rawlett*
- Alternate Methods For Increasing Composite Part Throughput, *Sam Tollefsen*



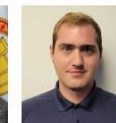
Wendy Lin,
GE Renewable Energy



Matthew Parkinson,
BASF Performance Materials



Adam Rawlett,
US Army Research Laboratory



Sam Tollefsen,
Toray Composite Materials America, Inc.

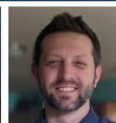
SESSION 3 — ADVANCEMENTS

1:30 pm - 3:00pm

- Rapid Large-Scale Structural Thermoplastic Parts, *Michael Assadi and Todd "TJ" Chase*
- NCC's Digital for Composites (D4C) – From Right First Time to Right Every Time, *Enrique Garcia*
- Aerospace Integral Structures by LRI Based in Automated Lamination of Fabrics with ADMP, *Peio Olaskoaga*



Michael Assadi,
Electroimpact Inc.



Todd "TJ" Chase,
Janicki Industries



Enrique Garcia,
National Composites Centre



Peio Olaskoaga,
IDEKO Research Center

SESSION 4 — SIMULATION/SOFTWARE CONTRIBUTORS

3:30 pm - 5:20pm

- AI-Based Production Scheduling And Process Optimization Drive Manufacturing Agility And Efficiencies, *Avner Ben-Bassat*
- How Credible Simulation Significantly Reduces Product Development Time and Cost, *Javad Fatemi*
- Software Platform Solutions for Composites Design, Manufacturing and Simulation 4.0, *William Ramroth*
- Efficient Manufacturing for 21st Century Composite Structures, *Alex Rubin*



Avner Ben-Bassat,
Plataine



Javad Fatemi,
Airbus Defence and Space



William Ramroth,
Dassault Systemes



Alex Rubin,
The Boeing Company

Announcements



Check out SAMPE's new virtual networking site, SAMPE 365!

This is year-round platform connects innovators of the advanced materials and composites community from the private sector, government, and academia.

Anyone can create an account, but certain premium content will only be accessible to SAMPE members.



[Click here for more information](#)

Thank you to our sponsors!



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Sponsor of the Month

Airtech Advanced Materials Group



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47 years ago, Airtech founder William “Bill” Dahlgren, an inspired engineer, started the business with four people in San Bernardino, California. Bill is still very much active in the family business.

His main goal of was to create a “one stop shop” and to manufacture vacuum bagging and composite tooling materials for the fiberglass and graphite parts industry. With a dream in mind, persistency, and lots of hard work, the company grew to over 800 employees, manufacturing in five different locations – Huntington Beach, CA (corporate headquarters); Springfield, TN; Differdange, Luxembourg; Chadderton ,England; and Tianjin, China.

Airtech is still privately owned and operated, and dominates the worldwide vacuum bagging market. Airtech President/CEO Jeff Dahlgren said, “From this humble beginning, we have grown into a world class company and leaders in the field of composites. A special thank you to our loyal employees, customers, and partners.”

Airtech continues to innovate and meet the demands of its growing markets. Airtech is an ISO 9001:2008/AS9100 RevC Certified Company.

Airtech has invested in new technology in the form of a Large Scale Additive Manufacturing (LSAM) 3D printing machine with integrated machining capability.

For more information on our new LARGE SCALE 3D PRINTING capability contact:

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2019 – Russell J. Caspe

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SAMPE Best Chapter Award Winner:

1990, 1991, 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001

SAMPE Chapter Service Excellence Award Winner:

2002, 2003, 2004, 2005, 2006 (award retired after 2006)

SAMPE Chapter Sponsored Conferences:

ISSE – 1990 (Anaheim), 1994 (Anaheim), 1996 (Anaheim), 1998 (Anaheim), 2002 (Long Beach)

ISTC – 1981 (Mt. Pocono), 1989 (Atlantic City), 2006 (Dallas), 2009 (Wichita), 2012 (Charleston)

ISEC – 1994 (Parsippany)



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New Jersey Chapter

Happy Holidays!

Our Chapter meetings will resume in February 2022.
Stay tuned for updates via our mailing list and social media.



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