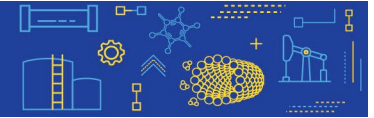




# FUTURE COMPOSITES WORKSHOP



## Day 1 – Monday, May 24, 2021

Session	Speaker	KSA local time (UTC+3)		Title
Opening	<b>Dr. Lawrence Carin</b> [KAUST - KSA]	2:00 PM	2:15 PM	
	<b>Dr. Najah Ashry</b> [KAUST – KSA]			
Welcome	<b>Prof. Gilles Lubineau</b> [KAUST - KSA]	2:15 PM	2:30 PM	Opening remarks, Introduction to Saudi Society for Composite Materials
Keynote 1	<b>Dr. Jamil Al-Bagawi</b> [Saudi Aramco - KSA]	2:30 PM	3:15 PM	Saudi Aramco's non-metallic program - Journey and ambition
Break 5 min		3:15 PM	3:20 PM	

## Growing industry in a digital era

1A	<b>Dr. Enrique Garcia</b> [National Composite Center - UK]	3:20 PM	3:50 PM	D4C: Digital for Composites
1A	<b>Dr. Fahad Al-Khodairi</b> [SABIC - KSA]	3:50 PM	4:20 PM	Carbon fiber downstream manufacturing opportunities in Saudi Arabia
1A	<b>Dr. Muneer Bakhsh</b> [GDC Middle East - KSA]	4:20 PM	4:50 PM	Carbon fiber in the aerospace industry
1A	<b>Dr. Recep Yaldiz</b> [SABIC - Netherlands]	4:50 PM	5:20 PM	Mass-scale production of Composites via Automation and Digitalization - DCML "A breakthrough technology to address an industry need"
Break 10 min		5:20 PM	5:30 PM	
Round table	<b>Prof. Wesley Cantwell</b> [Khalifa University – UAE]	5:30 PM	6:15 PM	Future of composites in Kingdom of Saudi Arabia
	<b>Dr. Nikhil Verghese</b> [SABIC – USA]			
Break 5 min.		6:15 PM	6:20 PM	

## Cont'd Day 1 – Monday, May 24, 2021

Session	Speaker	KSA local time (UTC+3)		Title
<b>e-poster session (Researchers / Professionals)</b>				
1E	<b>Prof. Boualem Merabet</b> [University Mustafa Stmboli – Algeria]	6:20 PM	6:25 PM	Improving Dielectric and Magnetic Properties of (Cr, Fe, Ni)-doped SiC Microwaves Absorbents: A DFT study
1E	<b>Prof. Abdul Rahim Arafath</b> [SABIC – KSA]	6:25 PM	6:30 PM	Design and Analysis of Spoolable Reinforced thermoplastic Pipes (RTP) for On-shore Oil and Gas Application
1E	<b>Prof. Adnan Memic</b> [KAU - KSA]	6:30 PM	6:35 PM	Antioxidant, Antibacterial, Injectable Bio-waste Based Composite Cryogels for Wound Healing
1E	<b>Prof. Mohammad Rezaul Karim</b> [KSU – KSA]	6:35 PM	6:40 PM	Development of PAni-TiO <sub>2</sub> nanocomposites based 1,2-diaminobenzene electro-chemical sensor
1E	<b>Prof. Tamer Sebaey</b> [PSU – KSA]	6:40 PM	6:45 PM	Crashworthiness of Composite Structures for High Safety Standard
1E	<b>Mr. Ahmed A. Said</b> [KAU – KSA]	6:45 PM	6:50 PM	Effect of Infill Density and Build Orientation on the Mechanical Properties of PLA CF & PETG CF Composites in 3D Printing
1E	<b>Mr. Wael Badeghaish</b> [KAUST – KSA]	6:50 PM	6:55 PM	The Future of Nonmetallic Composite Materials in Upstream Applications

## Day 2 – Tuesday, May 25, 2021

Session	Speaker	KSA local time (UTC+3)		Title
Keynote 2	<b>Prof. Michael Wisnom</b> [University of Bristol - UK]	2:00 PM	2:45 PM	Thin-ply hybrid composites with pseudo-ductile response in tension, compression and bending
Break 5 min		2:45 PM	2:50 PM	

### Modeling and tailoring the composite integrity

2A	<b>Prof. Gilles Lubineau</b> [KAUST - KSA]	2:50 PM	3:20 PM	Towards high performance adhesive bonding by substrate and/or adhesive texturing
2A	<b>Prof. Tong Earn Tay</b> [NUS - Singapore]	3:20 PM	3:50 PM	High-Fidelity Computational Failure Analysis of Composite Structures
2A	<b>Prof. John Botsis</b> [EPFL - Switzerland]	3:50 PM	4:20 PM	Experiments and analysis of delamination of carbon epoxy composites
2A	<b>Prof. Vassilis Kostopoulos</b> [University of Patras - Greece]	4:20 PM	4:50 PM	An Innovative Material Model Calibration Procedure for Enhancing the Fidelity of Numerical Solution in the Case of Impact Loading of Composites
Break 30 min		4:50 PM	5:20 PM	

### Advancing processing through models and data

2B	<b>Prof. Suresh Advani</b> [University of Delaware - USA]	5:20 PM	5:50 PM	Emerging Role of Process Models and Simulations in Composites Manufacturing
2B	<b>Prof. Gerard Fernando</b> [University of Birmingham - UK]	5:50 PM	6:20 PM	Chemical Process Monitoring and Structural Integrity Assessment using Optical Fibre Sensors
2B	<b>Prof. Carlos González</b> [IMDEA - Spain]	6:20 PM	6:50 PM	Machine learning methods to detect flow disturbances in liquid moulding of composites
2B	<b>Prof. Pedro Camanho</b> [UPorto - Portugal]	6:50 PM	7:20 PM	Generation of statistical design allowables of composite laminates using machine learning

## Day 3 – Wednesday, May 26, 2021

Session	Speaker	KSA local time (UTC+3)		Title
<b>e-poster session</b>				
<b>(Mechanics of Composites for Energy and Mobility)</b>				
2E	<b>Dr. Ragesh Chellattoan</b> [KAUST – KSA]	2:00 PM	2:08 PM	A compact thermofluidic soft actuator
2E	<b>Yangyang Xin</b> [KAUST – KSA]	2:08 PM	2:16 PM	A highly-stretchable yet strain-insensitive temperature sensor exploiting Seebeck effect in nanoparticle-based printed circuits
2E	<b>Dr. Hussein Nesser</b> [KAUST – KSA]	2:16 PM	2:24 PM	Ultrasensitive wireless strain sensor for structural health monitoring
2E	<b>Dr. Liping Yu</b> [KAUST – China] <b>Nurlat Bekdullayev</b> [KAUST – KSA]	2:24 PM	2:32 PM	Smartphone-based single-camera stereo-vision system
2E	<b>Mjed Hashem</b> [KAUST – KSA]	2:32 PM	2:40 PM	Laser-based pre-treatment of secondary bonded composite T-joints for improved energy dissipation
2E	<b>Dr. Ran Tao</b> [KAUST – KSA]	2:40 PM	2:48 PM	Strategy for toughening interfaces in adhesively bonded composite joints
2E	<b>Dr. Ahmed Wagih</b> [KAUST – KSA]	2:48 PM	2:56 PM	Mimicking biological adhesion systems with improved fracture toughness by embedding sacrificial cracks inside adhesive joint
Break 4 min		2:56 PM	3:00 PM	
Keynote 3	<b>Prof. Martin Dunn</b> [University of Colorado - USA]	3:00 PM	3:45 PM	Design and Additive Manufacture of Composite Materials and Structures
Break 5 min		3:45 PM	3:50 PM	

## Cont'd Day 3 – Wednesday, May 26, 2021

Session	Speaker	KSA local time (UTC+3)		Title
<h3>Opening new paths with additive manufacturing</h3>				
3A	<b>Prof. Jinsong Leng</b> [Harbin Institute of Technology - China]	3:50 PM	4:20 PM	Shape memory polymer composites and 4D printing for aerospace and biomedical applications
3A	<b>Prof. Eric Feron</b> [KAUST - KSA]	4:20 PM	4:50 PM	Artisan Engineering re-invented: 3D printing with structural requirements
3A	<b>Prof. Kumar Shanmugam</b> [University of Glasgow - UK]	4:50 PM	5:20 PM	Multifunctional Performance of Engineered Composites Enabled by Additive Manufacturing and Nanoengineering
3A	<b>Prof. Jerry Qi</b> [Georgia Tech - USA]	5:20 PM	5:50 PM	Multimaterial Additive Manufacturing for Printed Active Composites
Break 10 min		5:50 PM	6:00 PM	
Round Table	<b>Véronique Michaud</b> [EPFL - Switzerland] <b>Prof. Jerry Qi</b> [Georgia Tech - USA]	6:00 PM	6:45 PM	From smart material concept to industry

## Day 4 – Thursday, May 27, 2021

Session	Speaker	KSA local time (UTC+3)		Title
<h3>Recyclable composites</h3>				
4A	<b>Prof. Véronique Michaud</b> [Switzerland]	2:00 PM	2:30 PM	Composites for a more sustainable future...tough, healable, recyclable?
4A	<b>Prof. Sanjay Rastogi</b> [KAUST – KSA]	2:30 PM	3:00 PM	One-component recyclable high performance composites
Break 10 min		3:00 PM	3:10 PM	

### Developing carbon-based industry

4B	<b>Prof. Wesley Cantwell</b> [Khalifa University – UAE]	3:10 PM	3:40 PM	The Aerospace Research and Innovation Center (ARIC) – A Model for Industry-University Collaboration in the UAE
4B	<b>Dr. Celine Largeau</b> [RT Jules Verne - France]	3:40 PM	4:10 PM	The FORCE project: Biobased low-cost carbon fiber for a more intensive use of composites
4B	<b>Prof. Majed Alrefae</b> [Royal Commission Yanbu - KSA]	4:10 PM	4:40 PM	The Future of Composites with Graphene Nanopetals: Scalable Deposition of Graphene Nanopetals on Carbon Fiber
4B	<b>Prof. Pedro Da Costa</b> [KAUST - KSA]	4:40 PM	5:10 PM	Thin films of graphite grown on Ni foils by chemical vapor deposition
4B	<b>Dr. Sadath Khan</b> [ISECC - KSA]	5:10 PM	5:40 PM	GRP - Usage from 1977 onwards - 42 years of Usage in Oil, Gas, Water, and Petrochemicals in Middle East
Closing	<b>Prof. Gilles Lubineau</b> [KAUST - KSA]	6:35 PM	6:45 PM	