

CONFERENCE PROGRAM

Advanced Composites Innovation Conference and Trade Exhibition

March 28 to 30
Intercontinental Sanctuary Cove Resort, QLD | 2017

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WELCOME

Shape your future at ACI-17!

Composites Australia is delighted to present the 2017 Advanced Composites Innovation Conference and Exhibition to be held at Intercontinental Sanctuary Cove, in Queensland on Wednesday and Thursday, 29 and 30 March 2017.

With the theme *Shaping the future with composites innovation*, the conference promises two days filled with stimulating discussion, technical and academic presentations from global and domestic composites thought-leaders plus unique networking, career and business development opportunities.

Notable presenters at ACI-17 include:

- Dr John D. Russell, Technical Director of the United States Air Force Research Laboratory's Manufacturing and Industrial Technologies Division
- Professor Peter Schubel, co-author of the 2016 UK Composites Strategy and newly appointed Director of the University of Southern Queensland's Centre for Future Materials
- Dr Jens Goennemann, Managing Director of the Advanced Manufacturing Growth Centre
- Mr Greg Williams, Senior Consultant with CSIRO Future
- Mr Frank Cristiano General Manager at Tricomposite and Hugh O'Donnell Director of High Performance Consortium - an interactive session on innovation, collaboration and

culture change.

- Mr Michael Kemp, General Manager Wagners CFT Pty Ltd
- Leading Finite Element researcher Professor Hubert Debski, from Poland
- Dr Lucy Cranitch, Director at PATH - a session on How to sell composites to potential clients
- Dr Rik Heslehurst, international composite engineering and training consultant - the popular pre-conference interactive workshop.

These are just a few of the distinguished industry, technical and academic speakers coming to ACI-17 from leading composite organisations across the globe. With three streams of presentations there is a blend of current market topics to appeal to a wide audience. Plus, there's plenty of time for networking and conducting business at the exhibition and networking functions.

I urge you to reserve your seat without delay and look forward to welcoming you and your colleagues on Tuesday March 28 for the welcome reception.



Kerry Caulfield
Executive Director
Composites Australia

PRE-CONFERENCE WORKSHOP

DETECTION AND REPAIR OF COMPOSITE COMPONENTS AND STRUCTURES

Tuesday 28 March | 12.45pm to 4.00pm

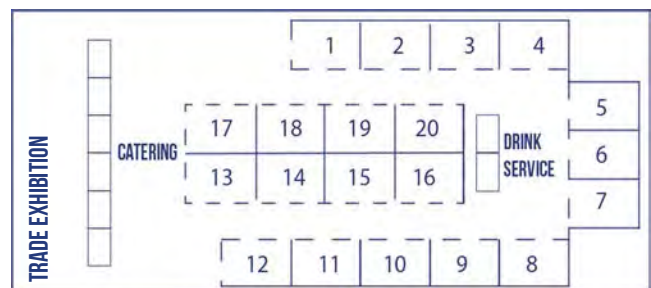
Presented by Dr Rik Heslehurst

This technology workshop with international composites engineering consultant and trainer, Dr Rik Heslehurst, will address the biggest challenge in the repair of composite components and structures: finding the damage/defect and determining the influence it has on structural performance and integrity. Rik will provide a detailed description of the various types of damage defects found in composites materials; review the common and developing NDI detection techniques and how to interpret results; as well as the stress analysis approach to identify loss of structural integrity.

The workshop will provide an indepth overview of the four fundamental repair schemes for composite structures; review the design/stress analysis methodology and the practical steps in the repair application for each scheme.

Participants will be provided with a list of guideline questions to aid in the development of effective and efficient composite repairs.

TRADE EXHIBITION



Agilent Technologies Pty Ltd



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CONFIRMED AT TIME OF PRINTING

PROGRAM & SPEAKERS

WEDNESDAY 29 MARCH

PEER-REVIEWED PAPER

8.00AM TO 8.45AM	REGISTRATION AND ARRIVAL TEA/COFFEE		
8.45AM TO 8.55AM	Ms Leona Reif, President of Composites Australia Welcome address		
8.55AM TO 9.35AM	Dr John Russell, Technical Director, Manufacturing and Industrial Technologies, Air Force Research Laboratory Carbon Fibre Composites for Next Generation Military Aircraft		
9.35AM TO 10.05AM	Prof. Peter Schubel, Director of the Centre for Future Materials, The University of Southern Queensland Overview of the UK Composites Strategy - Using a National Strategy to Drive Innovation		
10.05AM TO 10.35AM	Dr Jens Goennemann, Managing Director, Advanced Manufacturing Growth Centre Advancing Australian Manufacturing		
10.35AM TO 11.15AM	MORNING TEA		
	STREAM 1	STREAM 2	STREAM 3
11.15AM TO 11.45AM	Prof. Bronwyn Fox, Director, Manufacturing Futures Research Institute and Dr Nishar Hameed, Research Fellow, Swinburne University of Technology Automated Manufacturing of Next Generation Composites in an Industry 4.0 Environment	Dr Max Dehghan, Business Development Manager, ExcelPlas Characterisation and Failure Analysis of Composite Materials	Dr Nigel St John, Head Advanced Materials & Fabrication, Defence Science and Technology Group Dimensional Stability of Composite Materials
11.45AM TO 12.15PM	Prof. Gangadhara Prusty, Professor, UNSW Mechanical and Manufacturing Engineering, UNSW Australia Robotic Manufacture of Advanced Composites - Current Trends and Opportunities	Prof. Cheng Yan, Professor in the School of Chemistry, Physics and Mechanical Engineering, Queensland University of Technology Fabrication and characterisation of nano carbon composites	Prof. Hubert Debski, Researcher, Lublin University of Technology Nonlinear Stability Analysis of Composite Profiles Under Uniaxial Compression
12.15PM TO 12.45PM	Simon Karpeles, General Manager - Engineering, RPC Technologies Composites as Structural Cast-in-Place Formwork for Major Civil Sewer Applications	Peter Turner, PhD Student, University of Queensland Towards the Design of an In Situ Braiding System for the Manufacture of Confined Concrete Columns	Prof. Xiao-Ling Zhao, Chair of Civil Engineering, Monash University Hybrid Construction Using Seawater Sea Sand Concrete and FRP
12.45PM TO 1.45PM	LUNCH		
	STREAM 1	STREAM 2	STREAM 3
1.45PM TO 2.15PM	Helen Creagh, Customer Experience Manager, WorkCover Queensland Navigating Through Workplace Injuries- Best Practice and Practical Tips for Employers	Dr Rikard Heslehurst, Director, Heslehurst and Associates P/L Delamination Secondary Behaviour Under Axial Compressive Loading	Chengyuan Shang, Senior Engineer, Aerospace Research Institute of Materials & Processing Technology Study on Processability and Thermal Properties of a Novel Phthalonitrile Resin System
2.15PM TO 2.45PM	David Reid, Business Development Manager, Employsure Why Does Understanding your Obligations Under the Fair Work Act Matter?	Dr Chuang Feng, Research Fellow (ARC DECRA Fellow), RMIT University Eigenvalue Buckling Analysis of Functionally Graded Graphene Platelets Reinforced Cylindrical Shells	Dr Luke Djukic, Chief Technical Officer, Omni Tanker Pty Ltd Analysis and Testing of Thermoplastic Liners with Enhanced Chemical Resistance for Transport of Liquid Dangerous Goods
2.45PM TO 3.15PM	Steve Brennan, Managing Director, BI Glass Fibre Pty Ltd Let's Talk About the Wonderful World of Glass Fibre Reinforced Composites	Wahid Ferdous, PhD Candidate, University of Southern Queensland Performance of an Innovative Composite Railway Sleeper	Dr Xuesen Zeng, Senior Research Fellow & Centre Manager, University of Southern Queensland Modelling Enable Low Cost Composites Manufacturing and Design for Aerospace
3.15PM TO 3.45PM	AFTERNOON TEA		
	STREAM 1	STREAM 2	STREAM 3
3.45PM TO 4.15PM	Dr Floreana Coman, Managing Director, Fabrics and Composites Science and Technologies The Art and Science of Employing Carbon and Other Reinforcing Tows to Shape Composites in the Future	Ali A. Mohammed, PhD Student, University of Southern Queensland Composite Repair Systems for Damaged Concrete Columns	Mahdireza Yari Garravesh, PhD Candidate, Sharif University of Technology Effect of Alkaline and Sea Water Solutions on the Bond at the Interface Between Bidirectional Aramid Fiber and Masonry
4.15PM TO 4.45PM	Dr Michael Heitzmann, Group Leader Composite Materials and Processes, The University of Queensland High Temperature Composites: A Parallel Universe	Dr Rik Heslehurst, Director, Heslehurst and Associates P/L Successful Application of Composite Materials - A Deeper Materials Understanding	Christopher Kourloufas, Aeronautical Engineer Effect of Saltwater Absorption/ Desorption Cycling on Strength of Carbon Fibre/Epoxy Composites
4.45PM	CLOSE - DEPART FOR CONFERENCE DINNER		

PROGRAM & SPEAKERS

THURSDAY 30 MARCH

8.00AM TO 9.00AM ARRIVAL TEA/COFFEE			
9.00AM TO 9.40AM	Greg Williams, Senior Consultant CSIRO Futures, CSIRO Advanced Manufacturing – Unlocking Future Growth		
9.40AM TO 9.50AM SHORT BREAK			
	STREAM 1	STREAM 2	STREAM 3
9.50AM TO 10.20AM	Michael Kemp, General Manager - Engineering, Wagners CFT Manufacturing Pty Ltd Utilising Composites to Extend Performance Capability of Aging Infrastructure - a Case Study on the Chesterhope Bridge Cycleway Project, Hastings NZ	Hongfei Zheng, Engineer, China Aerospace Research Institute of Materials & Processing Technology Study on Cryogenic Carbon Fiber Reinforced Composite Pressure Vessel	Hossein Mohammad Khanlou, PhD Student, Griffith University Process Boundaries of the Degradation of Mechanical Properties for Natural-Fibre Bio-Polymer Composites
10.20AM TO 10.50AM	Dr Charles MacDonald, Strategic and Technical Advisor, Sydney Motorway Corporation An In Depth Analysis of WestConnex Project	Flight Lieutenant Chris Kourloufas, F/A-18A/B Structural Integrity, Defence Aviation Safety Authority Managing Composite Structural Integrity Hazards – A RAAF F/A-18A/B Case Study	Dr Ying Li, Senior Lecturer, Nanyang Polytechnics Reinforcing Capability of Hierarchical Structures in Starch-Based Biocomposites
10.50AM TO 11.20AM MORNING TEA			
	STREAM 1	STREAM 2	STREAM 3
11.20AM TO 11.50AM	Frank Cristiano, General Manager, Tricomposite & Hugh O'Donnell, Managing Director, High Performance Consortium Tricomposite - Looking Outside our Industry for a Breakthrough in our Thinking and Performance	Prof. Thiru Aravinthan, Professor of Structural Engineering, University of Southern Queensland Civil Composites in Australia - Past, Present and Future	Yueyou Wang, Graduate Student, Aerospace Research Institute of Materials and Processing Technology High Performance Quartz/Cyanate Ester Composites Fabricated by RTM Process at Ambient Temperature
11.50AM TO 12.20PM		Dr Sylwester Samborski, Researcher, Lublin University of Technology Strain Energy Release Rate Distribution Along Delamination Front in CFRP Laminates with Mechanical Couplings	Dr Peiluo Shi, Senior Engineer, Aerospace Research Institute of Materials and Processing Technology M55J Carbon Fiber-Cyanate Ester Composites' Properties and Application
12.20PM TO 12.50PM	Dr Lucy Cranitch, Materials Scientist, PATH Selling Composites, Answers to Common Customer Questions	Dr Allan Manalo, Senior Lecturer in Civil Engineering, University of Southern Queensland Developments and Applications on FRP Reinforcing Bars in Concrete Structures	Dr Chuang Feng, Research Fellow (ARC DECRA Fellow), RMIT University Vibration of Functionally Graded Trapezoidal Nanocomposite Plates Reinforced with Graphene Nanoplatelets
12.50PM TO 1.45PM LUNCH			
	STREAM 1	STREAM 2	STREAM 3
1.45PM TO 2.15PM	Andreas Horbach, Technical Services Manager, Alliancys Let's Talk Innovation	Simeon Cheuk, PhD Candidate, Monash University Effect of Carbon Black Powder Protective Layer on Reusable Carbon Fibre Epoxy Resin Composite Rocket Combustion Chamber	Dr Si-Woo Park, Division Manager, Korea Textile Machinery Research Institute Compression Molding Analysis of LFT-D System for Vehicle Trailing Arm
2.15PM TO 2.45PM	Manny Tesfaye, Director of Technical Services, SCIGRIP Structural Adhesives Innovative Adhesive Technologies for Composite Marine Structures	Dr Dae Kyu Park, Director, Korea Textile Machinery Research Institute A Study on the Tensile Properties of CFRP Composites Using Long Fiber Thermoplastic-Direct (LFT-D) Process	Jianbao Zhang, Senior Engineer, Aerospace Research Institute of Materials and Processing Technology Study on the Mechanical Properties of Intersection Ply Composite Laminate
2.45PM TO 3.15PM	Raymond Ten Broeke, Field & Customer Support Engineer, AkzoNobel Polymer Chemistry Recent Developments in Polyester Curing Systems	Anita Hajetian, Senior Application Engineer, 3M Ultralight TPO Technology Enabled by Long Polymer Fibres, 3MTM Glass Bubbles and MuCell® Microcellular Foam Injection Molding	Dr Mazhar. H. Peerzada, Associate Professor, Mehran University of Engineering Bi-Axial Bias Weave Method for Preform
3.15PM TO 4.00PM	Dr Rik Heslehurst, Director, Heslehurst and Associates P/L Future Opportunities		
4.00PM FAREWELL DRINKS & CLOSE			

The organisers have made every attempt to ensure the information is correct at time of publishing. The program is subject to change.

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