Bristol Composites Institute - NCC

2019 Joint Conference

Michael Wisnom
Director,
Bristol Composites Institute

bristol.ac.uk/composites
Bristol Composites Institute (ACCIS)

- Brings together composites work across University
- Established as a Specialist Research Institute in 2017
- Building on ACCIS, the Advanced Composites Collaboration for Innovation and Science
- Core team of 25 academic staff
- Over 30 further affiliated academics in Engineering, Science and Medicine
- Focus for collaboration between academia and industry
- Around 200 people overall

Our Vision:
A world leading institute for composites education and research, combining cutting edge fundamental science with strong industrial links for exploitation and technology transfer
New appointments this year

Ole Thomsen
NCC Professor of Composites Design and Manufacture, Aerospace Engineering

Janice Barton
Professor of Experimental Mechanics, Mechanical Engineering

Clare Thresher
Institute Manager

Simon Wadey
Composites Research & Impact Manager
Research Themes

• Materials
  Prof. Fabrizio Scarpa

• Structures
  Prof. Stephen Hallett

• Manufacturing and Design
  Prof. Ole Thomsen
Major Partnerships

EPSRC Future Composites Manufacturing Research Hub
(Prof. Nick Warrior, Nottingham)
Prof. Ole Thomsen now Deputy Director, leading Bristol contribution

UTC with Rolls-Royce
(Prof. Stephen Hallett)

Wind Blade Research Hub with the Offshore Renewable Energy Catapult
(Prof. Paul Weaver and Dr. Alberto Pirrerra)
EPSRC Centre for Doctoral Training

- 4-Year PhD in Advanced Composites with integrated taught component; Cohort driven
- Further 5 years funding from EPSRC for new CDT in Composites Science, Engineering and Manufacturing
- Led by Steve Eichhorn, Ian Hamerton, Alberto Pirrera
- 11th cohort in Sept ’19
- Strengthened Advisory Board:
  - Prof. Pedro Camanho, University of Porto (Chair)
  - Prof. Chiara Bisagni, Delft University
  - Dr. Tim Dodwell, University of Exeter
  - Prof. Ahmer Wadee, Imperial College
  - Prof. Sondipon Adhikari, Swansea University
  - Prof. Beverley Inkson, Sheffield University
- 130+ PhD students since 2009 - substantial contribution to the national need
EPSRC IDC in Composites Manufacture

- Integral activity of the EPSRC Future Composites Manufacturing Research Hub
- Director Prof. Ivana Partridge
- Prof. Janice Barton Deputy Director
- Industry based projects, TRL 3-5
- Over 30 Research Engineers
- Next Open Day for IDC with ICMAC2020 conference 25th August 2020 in Edinburgh

www.iom3online.org/icmac2020

Current sponsors include: Airbus, Airborne, Albany Engineered Composites, Hereaus, Hexcel, Jo Bird & Co., Mark Wright & Sons, National Composites Centre, National Physical Laboratory, NOV Elmar, OREC, QinetiQ and Rolls-Royce.
Workforce development

Bristol – Plymouth HEFCE Catalyst programme on Composites Curriculum Development

- Led by Kevin Potter and John Summerscales
- Multi-university framework for collaboration on Masters level training
- 59 unit descriptions produced
- Several full courses developed and trialled at NCC
- Full report available by email or at the link below
- Working to find a route to build on this important activity

http://hdl.handle.net/10026.1/15146
Collaboration with Imperial

Successful completion of EPSRC Programme Grant with Imperial last year on High Performance Ductile Composites Technology

Now working with RR, Imperial and Oxford in FANDANGO ATI programme on applications

New Programme Grant submitted, led by Milo Shaffer and Richard Trask

Next Generation Fibre-Reinforced Composites (NextCOMP): a Full Scale Redesign for Compression
Agenda

Prof. Emile Greenhalgh, Imperial College – Future Challenges for Structural Power Composites

Prof. Ole Thomsen - Update on Manufacturing & Design Research

Dr. Dmitry Ivanov - Local Approaches in Composites Manufacturing

Dr Giuseppe Dell’Anno – Introducing the NCC Technology Pull-Through Quick-fires

1105-1135 coffee break

Prof. Stephen Hallett - Update on Structures Research

Prof. Janice Barton - Developments in Imaging Approaches for Composite Structures

Prof. Fabrizio Scarpa - Update on Materials Research

Prof. Steve Eichhorn - Cellulose-based Composites: From Tunicates to Timber

Prof. Richard Trask and ACCIS Researchers – Quick-fire introductions to posters

12.45 Lunch and posters

13.45 NCC Core Programme – introduced by Dr. Giuseppe Dell’Anno

15.00 Recruitment event
Work with us

- Patenting/licensing
- Spin-outs
- Secondments and placements
- Fund a PhD student working on your dedicated project
- Summer internships
- Propose Masters and undergraduate student projects
- Engage with our Doctoral training centres
- Use our lab facilities
- Collaborative research – new funding opportunities
- Knowledge Transfer Partnerships
- Impact Acceleration Projects
- Tap into the academic expertise

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