



UNIVERSITY of
BRADFORD

Faculty of Engineering
& Informatics

Faculty of Engineering and Informatics Newsletter

May 2020



Welcome from the Dean

We are working at the moment on restoring on campus activity in the Faculty, with the research and knowledge transfer in laboratories being first, because COVID-19 control measures, such as social distancing, are simply easier to implement in this case, given the lower numbers in research groups, versus teaching groups.

We are also preparing various scenarios in student education, home and international, so that we resume our activity as soon as possible.

In the meantime take care and stay in touch!



Newsletter summary:

1. Academic in profile
2. RKT News (grants applications, open calls, presentations and awards)
3. Staff and Students' news

University of Bradford responds to concerns over 2020/2021 intake

The concerns are outlined in a new report by TSR Insight, which is part of The Student Room, the largest online student community in the UK. The report notes: "Despite the uncertainty of the current situation, almost three quarters of 2020 entry respondents felt they had enough information to make a decision about which university to go to. Clarity was wanted in terms of how flexible and lenient universities would be with those who do not achieve the entry requirements for their course."

For more information visit:
www.bradford.ac.uk/news/archive/2020/university-of-bradford-offers-advice-to-school-leavers-worried-about-covid-19-affecting-202021-intake.php



Academic in profile:

Dr Carlton Reeve



Carlton is the Head of Media Design & Technology and he first came to Bradford in 1991 to study the ground-breaking Electronic Imaging and Media Communications degree (not a title you would get away with now!). EIMC captured the new media revolution and was the precursor to the whole MDT department. He stayed on after graduating to lecture and start research into virtual environments, particularly their potential use in the performing arts.

Carlton left Bradford in 2000 to become a producer at the BBC and spent the next 15 years working in various capacities across the creative industries, including as a Commissioning Editor in BBC Factual and Learning and as a consultant for the UN, supporting schools in Palestinian refugees camps. His work has focussed on educational media and specifically designing optimal learning experiences across multiple platforms. His PhD described and evaluated a leadership simulation he produced for teachers at the National College.

Carlton's return to academia was driven by his desire to make more of his industrial research and he is developing a range of research activities across games, social media and, most recently, augmented reality.



Current research interests:

- purposeful games
- learning design
- narrative and storytelling.

Active projects:

Awesome Animals SafARi

A multi-sensory on-screen safARi, where the audience can meet and interact with their favourite animals. Using augmented reality and fun interactions, children and families explore fascinating facts about animals' habitat, environment and behaviours and find out what makes animals work on the inside.

Research and Knowledge Transfer

Projects in the pipeline:

- Environmentally benign polymer stretch-wrapping materials and system, John Sweeney, Adrian Kelly, EPSRC
- Precipitators of Ransomware Crime: An Empirical Investigation, Lena Yuryna Connolly, British Academy
- Microwave Enhanced Multilayer Delamination and Recovery (MEMDAR), Tim Gough, EPSRC Enabling Research in Smart Sustainable Plastic Packaging
- Visualising Risk Factors for COVID-19: A Web-enabled Tool for Feature Engineering, Mai Elshehaly, Research Capability Funding
- Anti-viral functionality: Soap-like polyurethane coatings to enhance and extend the usable life of Personal Protective Equipment (PPE), Phil Coates, Steve Rimmer, EPSRC



FEI Seminar Series:

6 May 2020 Oluwadamilola ‘Dami’ Abdullateef Agbabiaka presented his work on the fabrication and optimisation of electrospun PCL for ligament tissue reconstruction.

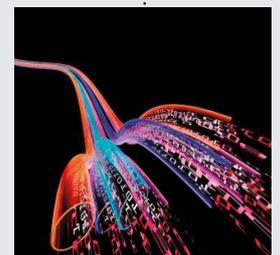
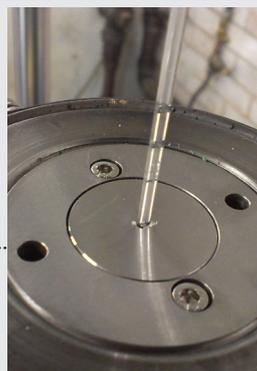
13 May 2020 Caroline Duvier gave us a presentation that looked into things that went right and things that went wrong during her PhD journey, starting from the topic selection process, through to the methodology selected for a cross-disciplinary PhD.

We have continued using the Wednesday, 12 noon slot to discuss with PGR students their questions, worries/anxieties, and for information sharing.

Dr Dhaval Thakker said: “in my opinion, our PGR cohort has shown a great deal of resilience and attitude to adapt to difficult circumstances.”

Open calls for funding:

- EPSRC New Horizons Call, Closing Date: 18 June 2020 at 16:00
- Transforming foundation industries network plus, Closing date: 08 Jun 20
- ISCF Transforming Foundation Industries Network Plus, Closing Date: 01 July 2020 at 16:00
- Hardware for Efficient Computing (call pre-announcement) Closing Date: 23 July 2020 at 16:00



Covid-19 - Visor manufacture project

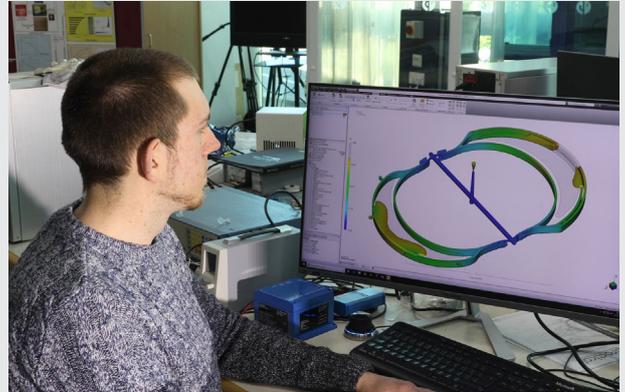
Ben Whiteside, Tim Gough, Glen Thompson, Michael Hebda, David Barker and John Hornby have been working for the past couple of weeks to mass manufacture protective visors for the NHS

The need for Personal Protective Equipment (PPE) at the moment is at its highest around the world and for our NHS. The University of Bradford answered the call for help by making available our facilities and by supporting companies requiring our expertise at this difficult time.

The prototypes were requested by ActionPlas (ActiveCell), recognised suppliers to NHS procurement. The company was involved in the different phases of product design, development and manufacturing.

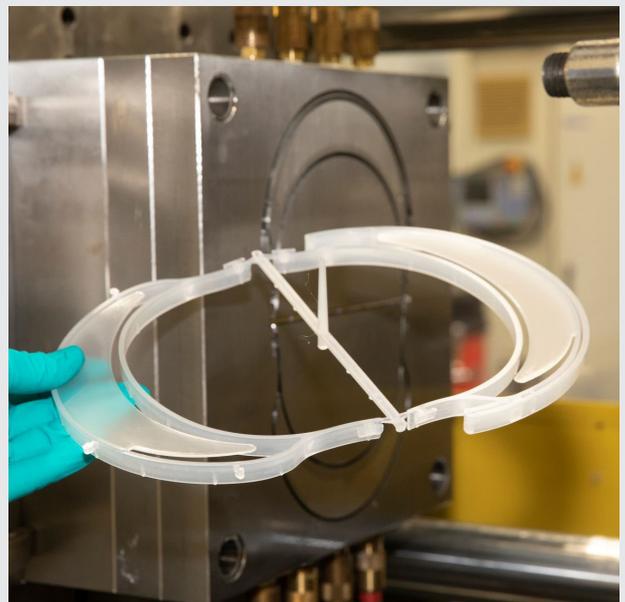
Today our labs run fully automated and produce around 250 headpieces (125 of each design) in about an hour and a half. We are looking to supply 400,000 units and we are investigating further possibilities for other designs, and have explored access to social care providers and other areas requiring PPE.

More about this here:
www.bradford.ac.uk/news/archive/2020/university-of-bradford-begins-making-thousands-of-face-shields-as-part-of-covid-19-response.php



Prof Tim Gough explains:

“After injection moulding some initial headpieces using the original mould we found a few issues with ejection of the parts meaning that we couldn’t run an automated process.”



Prof Ben Whiteside said:

“The challenge has been to review the problem, finalise designs and manufacture tooling at time scales that are far quicker than industry norms, while also offering significant benefits over existing solutions for our NHS staff.”



Staff and Students' news

Special Issue “Sustainable Hydrocarbon Processing”

Dr Nejat Rahmanian is the Guest Editor for the special issue of Sustainability (ISSN 2071-1050), belonging to the section “Environmental Sustainability and Applications”.

This Special Issue will explore how the current oil and gas processes can be run more sustainably with a low- or zero-carbon footprint. Papers from both academia and industry are welcome”

Deadline for manuscript submissions: 31 January 2021

More information here: www.mdpi.com/journal/sustainability/special_issues/Hydrocarbon_Processing

Special Issue “Decision-Making Methods and Applications in Occupational Safety Problems”

Dr Sohag Kabir is the Guest Editor for the special issue of Mathematical Problems in Engineering journal.

Deadline for manuscript submissions: 07 Aug 2020

More information here: www.hindawi.com/journals/mpe/si/380214/

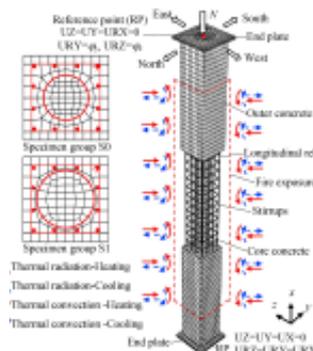


Dr John Steele joins the faculty to support Knowledge Transfer grants

John will support projects in connection with the LEP funding schemes, Innovate UK and contract funded research.

John has extensive experience in this area and has a substantial external network.

Get in touch with John on: j.e.steele2@bradford.ac.uk



Early Career Research Seminar (ECRF):

Dr Kan Zhou spoke about the importance of reclaiming structural components from end-of-life buildings for a circular economy.

The group discussed in depth the working from home present status and the challenges and opportunities that this brings for the academic and research environment.

Our next meeting is on 17 June 2020, 12 noon.

Staff and Students' news

Publications:

Dr Farshid Sefat, in his new paper, evaluates the most appropriate and suitable scaffolds applied in urogenital reconstruction.

Urogenital disorders are an important group of diseases that greatly affect the patient's life expectancy and quality. Reconstruction of urogenital defects is one of the current challenges in regenerative medicine. Regenerative medicine, as well as tissue engineering, may offer suitable approaches while the tools needed are appropriate materials and cells. In this paper, authors present and evaluate the most appropriate and suitable scaffolds (naturally derived and synthetic polymers) and cells applied in urogenital reconstruction.

Authors: Saeed Heidari Keshel, Azam Rahimi, Zoe Hancox, Maryam Ebrahimi, Arash Khojasteh, Farshid Sefat

Link to the publication: <https://onlinelibrary.wiley.com/doi/epdf/10.1002/jbm.a.36942>

Email: F.Sefat1@bradford.ac.uk



New PhD projects:

1. Waqas Ahmed,
Proposed Methodology: Design an Intrusion Detection Systems (IDS) for Networking and IoT Protocols
2. Chinedu
Design and Implementation of a Machine Learning based online Virtual Classroom System
3. Seyedeh Tabatabaee
Social networks and knowledge sharing in communities of practice: a developing societies' perspective (This might require working with social science/business studies colleagues)
4. Pam Joseph Jazat
Environmental Hazards in Mining Minerals Resource and Potential Remediation Strategy in Nigeria
5. Sumbeye Kapena
Climate change impact and resilient practices/technologies/procedures/design for buildings or infrastructure projects used by construction companies to reach net-zero carbon footprint

