



UNIVERSITY of
BRADFORD

Faculty of Engineering
& Informatics

Faculty of Engineering and Informatics Research and Knowledge Transfer Newsletter

April 2020



Welcome from the Dean

Academic members of the Executive Board today reviewed progress with the emergency regulations needed to progress and graduate our students during the coronavirus pandemic, incorporating the well-publicised safety net for students. These should be ready in the near future and then will require exceptional approval by Senate before they can be implemented. The regulations and the time needed to enact them in the main assessment cycle and the supplementary assessment period will then define the end of the 2019/20 academic year. In the meantime stay safe, keep active and keep in touch virtually during this social distancing period. Your well-being is our main focus at the university!



Our Virtual Open Day is on Saturday 20 June

Following the Government's advice regarding large gatherings, the University has postponed all events that were planned to take place on campus until the end of May in the first instance.

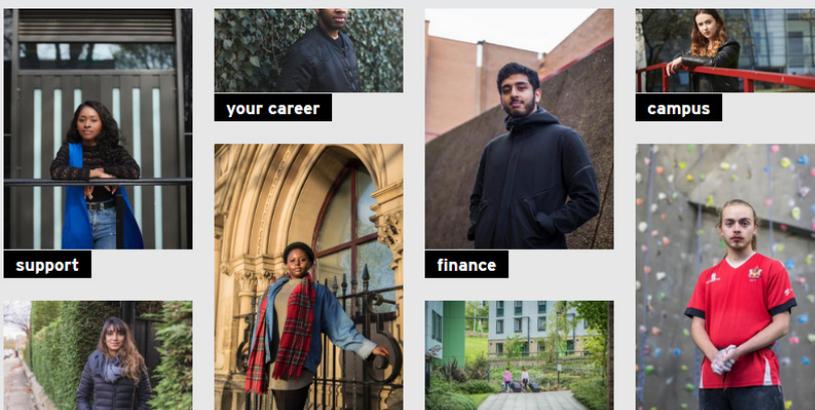
We understand the level of anxiety that the current Coronavirus (COVID-19) situation is causing. We want to assure our University community that the health, welfare and safety of our staff, students and everyone involved with the University of Bradford, is our number one priority.

Our Open Day on 20 of June is one of the currently unchanged Events but in preparation we have the virtual tour available here:

www.bradford.ac.uk/virtual-experience/

Newsletter summary:

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



Academic in profile:

Professor Hassan Ugail



Professor Hassan Ugail is the director of the Centre for Visual Computing at the University of Bradford. He is a recognised expert in geometric design and visualisation, computer-based physical analysis, design optimisation and machine learning. He is an advocate of artificial intelligence for helping to tackle real-world issues in the areas of digital health, innovative engineering and sustainable societies in general. More specifically, and more recently, he has been working in the field of human biometrics, especially the development of cutting edge machine learning solutions for biometric face recognition and facial emotion analysis. His recent work in this area includes helping to unravel the real identity of the two Russian spies at the heart of the Salisbury Novichok poisoning case - one of the biggest international stories of 2018.

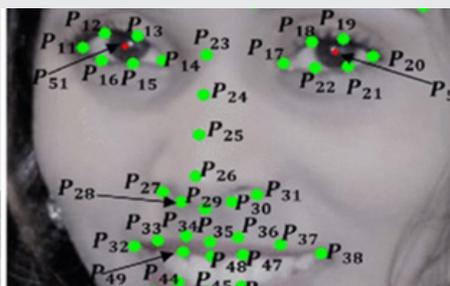


Current research areas include:

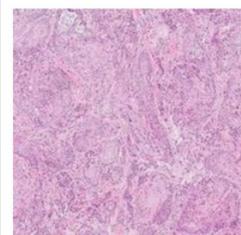
- Geometric modelling, design and visualisation
- Numerical methods and computer based simulation
- Image processing and machine learning applications particularly for biometric and digital healthcare applications.

Active projects:

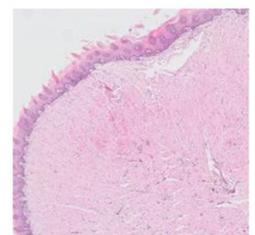
- Game theory based approach to modelling optimal social distancing (Bradford)
- Liver organ quality assessment using photographic imaging analysis - LiQu (Grow MedTech)
- MotiVar: Motivating weight loss through a personalised avatar (NIHR)
- PDE-based geometric modelling, image processing, and shape reconstruction - PDE-GIR, (H2020)



Head and Neck Cancers



tumour



non-tumour

Research and Knowledge Transfer

Projects in pipeline:

- A Cross-Platform Smart Reality Architecture for Supporting Smart Museum Immersive Experience for Future Audiences, Tao Wan, MScA Research & Innovation Exchange (RISE)
- Working title: 'Project code-named Humpty: Exhibition, Kate Johnson, Arts and Humanities Research Council (AHRC)
- Microwave Enhanced Multilayer Delamination and Recovery (MEMDAR), Tim Gough, Engineering and Physical Sciences Research Council (EPSRC)
- Beyond 5G for Inflight Broadband Connectivity Services, Raed Abd-Alhameed, Innovation Action (IA)
- Progress in Adsorbents and Engineering for Nuclear Decommissioning, Tim Gough, EPSRC
- KTP Tough Water Solutions, Raed Abd-Alhameed
- KTP Nylacast Kavian Cooke/ Felician Campean
- KTP Siddall & Hilton Products Ltd, Kit Qichun Zhang/ Felician Campean
- KTP A & Y Law Ltd, Dhaval Thakker



The Personal Research and Impact Plans (PRIP)

PRIP are designed to plan for and support research across the University. The data can be used to inform both the Work Load Model and Performance Development Reviews (PDRs) within Faculties, as well as helping with planning for our REF submission this year.

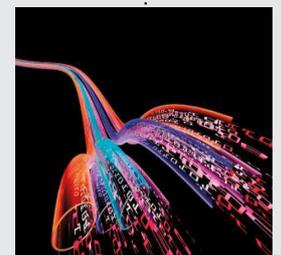
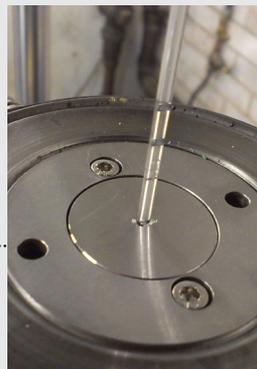
This year's survey will open on 16th April 2020 and close on 28th June 2020 and you can go into it at any time during that period to complete it.

You can save the form and return to it at a later date; however once you submit your form you cannot amend any details.

You can access the 2020 PRIP Survey at: <https://bradford.onlinesurveys.ac.uk/university-of-bradford-personal-research-innovation-plan-5>

Open calls for funding:

- Newton institutional links grants – UK, Indonesia, Thailand and Turkey, closes 12 Jun 20 (recurring)
- Sustainability in plastics design competition, closing date unknown
- Cultural heritage, identities and perspectives – responding to changing societies joint call, closing 22 Sep 20
- EXTENDED DEADLINE: New horizons call, closing date: 18 Jun 20
- EPSRC NetworkPlus in Digitalised Surface Manufacturing, closing date: 20 May 20



Staff and Students' news

New Staff/Students

Esmaeil Habib Zadeh

He gained his BSc in Electronics Engineering from KNTU, Iran, and MSc in Computer Science from IUST, Iran. Having previously worked in industry for 15+ years, he then returned academia and received his PhD in Performance and Security Trade-offs in Computer Networks from University of Bradford (UoB). Alongside his studies, Esmaeil also enjoyed working as a part-time lecturer at UoB and Bradford College, where he designed and delivered several computer science and mathematics modules at both Undergraduate and Postgraduate levels. Following his PhD, Esmaeil worked as a PDRA at UoB for 3 years, conducting research and developing data analytics solutions. He is now a KTP Associate in data science where he leads collaborative research and developments towards delivering to university's industrial partners in the areas of Artificial Intelligence, Machine Learning, Big Data and Cyber Security.

E-mail: E.Habibzadeh1@bradford.ac.uk



Nejat Rahmanian

Appointed as a member of the Advisory Board of €13.8m Horizon 2020 Advanced Carbon Capture for steel industries integrated in CCUS Clusters (C4U)

This strategic partnership led by University College London involves 22 partners in 7 European countries, Canada, China and USA, and looks to develop two novel solid based capture technologies for CO₂, followed by pipeline transportation and storage under the North Sea. The project UK partners are Universities of Manchester and Sheffield and industrialists from British Steel, Climate Strategies and JohnsonMatthey.

More information here:
<https://cordis.europa.eu/project/id/884418>



University of Bradford response to Covid-19:

- Supported the early deployment of 400 staff into NHS
- Issued an open invitation to businesses requiring help to tackle the Covid-19 outbreak
- Work on the manufacturing of accessories for face shields
- Shipped large amounts of ethanol to local health services to use as hand sanitiser



Staff and Students' news

Special Issue “From Grey and Green Hydrogen to Blue Hydrogen: Zero Emission Buildings and Industrial Sites”

Dr. Panagiota Pimenidou and Prof. Dr. Sofoklis Makridis are this special issue's Guest Editors

“Black”, “grey” and “brown” refer to the production of hydrogen from nonrenewable hydrocarbons, such as coal, natural gas, and lignite. “Blue”, on the other hand, represents the transition toward “green” hydrogen production and uses renewable hydrocarbons, leading to CO₂ emissions being reduced via carbon capture, use and storage (CCUS). “Blue” is currently experiencing an upscale in production and supply logistics at an industrial scale.

More information here:

www.mdpi.com/journal/challenges/special_issues/Zero_Emission_Buildings_Industrial_Sites



PhD success:

Halimatu Sadiyah Abdullahi, supervised by Fatima Mahieddine and Prof Raed Abd-Alhameed, successfully defended her PhD.

Warmest congratulations!



Early Career Research Seminar (ECRF) goes virtual!

Dr Amr Rashad Ahmed Abdullatif talked us through the Artificial Intelligence and Machine Learning challenges and applications.

Professor Felician Campean and Dr Cristina Tuinea-Bobe stressed the necessity to use the Research and Innovation System to create up to date academic profiles and register the intention to submit a funding application.

Our next meeting is on 20 May 2020, 12.00.



Staff and Students' news

Outreach and recruitment online

Dr. Elaine Brown took the initiative to organise a webinar to maintain our recruitment activities and reach students who will be looking for ideas and guidance for their upcoming applications.

Many of the outreach and recruitment activities that we had scheduled over coming months have been cancelled or postponed due to schools and colleges closure.

Elaine said: 'I have had discussions with colleagues in our Central University Recruitment teams regarding new opportunities to replace our face-to-face talks and workshops, and there are suggested activities that are under development. These target 2021 entry (as we are usually speaking to Year 12 students at this stage of the year) but they could also be made available to students looking at 2020 entry'.

Elaine stressed that the University now needs input from all of us. If you are happy to run a webinar based on your research please contact Elaine by email at E.Brown@bradford.ac.uk.



FEI Seminar Series:

February winner of the seminar series award Ahmed Maan Abdulkhaleq Abdulkhaleq shares with us his experience

How did presenting at the seminar help you?

I got a new experience, where presenting my research at this seminar with multidisciplinary audience was a challenging one, since the audiences of most of my presentations were working within the same field. So, I had to simplify my terminologies that I used and keep the importance of my talk at the same time.

How would you use the award money?

This award money will be used for my professional development activities such as attending a conference.

What advice would you give to future presenters?

My advice to students is: presenting is a skill so you need to practice, practice and practice.

Please join us on Canvas for the PGR Seminar Series every Wednesday from 12.00.

Publication award

Prof Raed Abd-Alhameed won the Research Development Fund Monthly Publications Award for March 2020

Publication Title: High-Gain Metasurface in Polyimide On-Chip Antenna Based on CRLH-TL for Sub-Terahertz Integrated Circuits,

Authors: Mohammad Alibakhshikenari, Bal S. Virdee, Chan H. See, Raed A. Abd-Alhameed, Francisco Falcone & Ernesto Limiti

More about this publication here: www.nature.com/articles/s41598-020-61099-8



