UNIVERSITY of BRADFORD

Faculty of Engineering & Informatics

# Faculty of Engineering and Informatics Newsletter

## August 2020

# Welcome from the Dean

After a couple of relatively quiet weeks in the University, on campus and virtual, Clearing started last week and is unusually still in full flight, due to the external major shifts in A level and BTEC results nationally. I would like to thank all of you involved in the Clearing and I hope colleagues do not mind if I particularly mention Andrew Carruthers, who has been vital to our engagements with students in this very atypical Clearing cycle. His communication skills with applicants are outstanding and he is still busy on the phones today revisiting cases that have been affected by the move to Centre Assessed Grades from the original A-level algorithm. Thank you Andrew. I have been providing summaries of our Clearing position daily to the Faculty Management Committee for dissemination in the Faculty. The Vice Chancellor has also been sending email updates to you all.

The Faculty Coronavirus Recovery Plan reaches Phase 4, with the major change being the part-time return of further staff on campus to prepare on campus materials and activities for the blended learning of students in the new academic year. In Phase 4, the Associate Deans and I will be attending campus on a part-time basis in a rota to oversee the increased activity. You will have been consulted by your line manager about your own personal plans in Phase 4 and Phase 5.

Academic staff are receiving requests to check and amend module, programme and timetable data so we can give as clear a picture as possible to new and returning students of their blended learning. IT are also very busy trying to implement the software solutions we need for the blended learning, either through the Horizon remote access platform or standalone.

Finally, please note that the University is closed, campus and virtually, for an extended public holiday weekend from Thursday 27 to Monday 31 August 2020 inclusive as a thank you to all of you for your hard work during the pandemic.

Please take a well-earned break and accept my personal thanks for your efforts in the last few very difficult months.

## Newsletter summary:



# Academic in profile:

# Prof Daniel Neagu

Professor Daniel Neagu joined the University of Bradford in 2002, and was promoted Professor of Computing in 2011, having previously served with Politecnico di Milano (Italy) and University of Galati (Romania). He leads the Artificial Intelligence Research (AIRe) Group, continuing the long tradition of the Department of Computer Science at Bradford in Artificial Intelligence and Machine Learning. The main theme throughout his academic work is to develop models of multidisciplinary knowledge systems by the algorithmic fusion of human expertise and digital information.

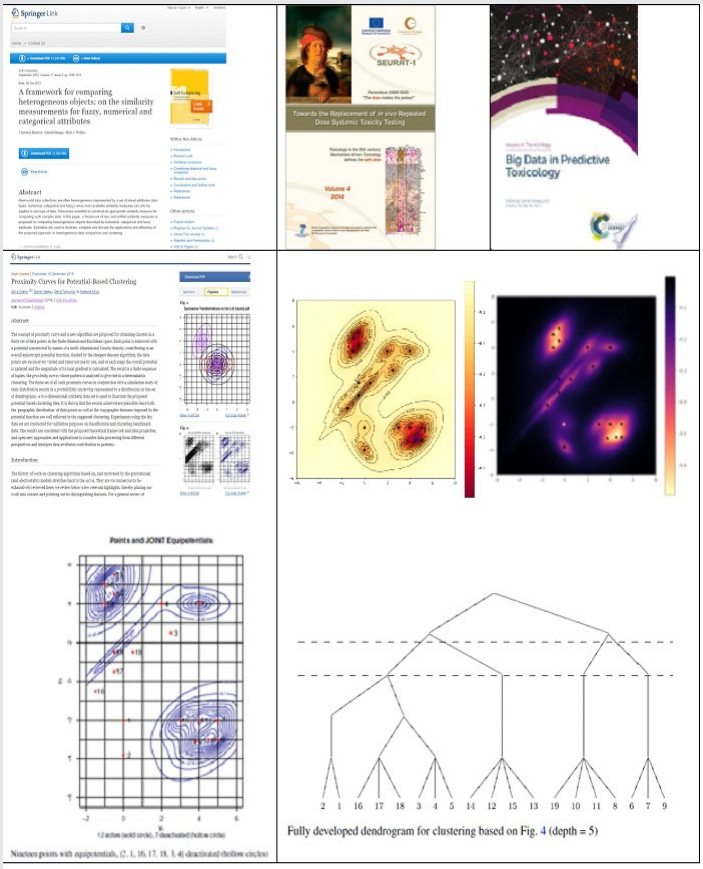
Building on 20+ years of research, notable contributions to data and machine learning model governance for Predictive Toxicology, with impact in the development of alternative methods (to replace laboratory experiments on animals) for toxicity modelling, have been funded in collaborative projects by RCUK, European Commission, and industry (Cosmetics Europe, Syngenta, LHASA). His current work extends such innovative AI techniques to Advanced Automotive Analytics, Responsible AI, Social and Health Care.

Daniel is Associate Editor for Wiley's Expert Systems: The Journal of Knowledge Engineering, an independent expert evaluator for EC H2020 & IMI, and a number of national research councils, and sits on a number of international conferences programme committees (UKCI, BCS SGAI, ICMLA, AI4I, EDMA series).

More about Daniel's scholarship here: https://scholar.google.co.uk/citations?user=DeqT2SQAAAAJ

http://orcid.org/0000-0002-7038-106X

https://www.linkedin.com/in/daniel-neagu-9652965/




## Current research interests:

Dan's research focuses on fundamentals of Data Quality, Machine Learning and Big Data algorithms, and their innovative applications in Toxicology, Product Safety, Automotive Engineering, Healthcare, Smart Cities and Social Media.

## Active projects:

1. JLR: Advanced Powertrain Reliability R&D - Intelligent Personalised Powertrain Health Care (InPowerCare)

2. National Breakdown: Transportation Logistics

3. HEIF COVID-19 Advocatus Diaboli: a Responsible AI Perspective for Reliability Ranking of Data Resources Relevant to COVID-19 Pandemic

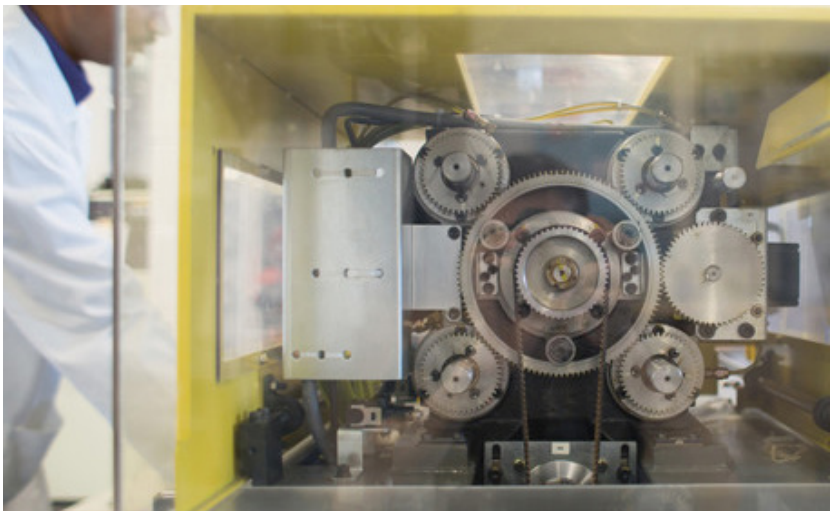
4. ERDF InterReg NorthSea: Smart Cities and Open Data Re-use (SCORE)

5. A number of Computing Enterprise Centre KT projects

# Research and Knowledge Transfer

## Submitted Projects:

- Microwave Enhanced Compression and Injection Moulding (MECAIM),EPSRC, Tim Gough
- NextGen Drive interview invite, Innovate UK, Arrival, Felician Campean
- Accurate Approach of Patient Monitoring For Indoor and Outdoor Environments, Royal Academy of Engineering, Raed Abd-Alhameed



## FEI Seminar Series:

We have continued using the weekly Wednesday, 12 noon timeslot to discuss with PGR students their questions, worries/anxieties, and other information generally.

## PhD Viva success

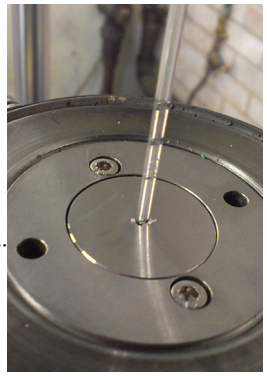
Shelina Jilani, 23 June 2020, Supervisor: Professor Hasan Ugail

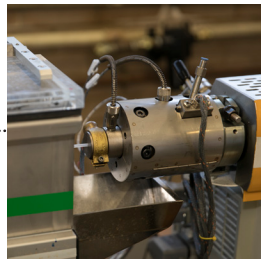
Robert Norvill, 16 July 2020, Supervisor: Professor Irfan Awan

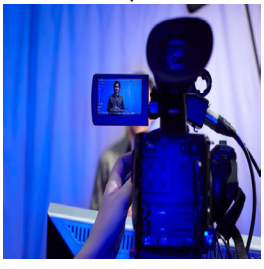
Congratulations!

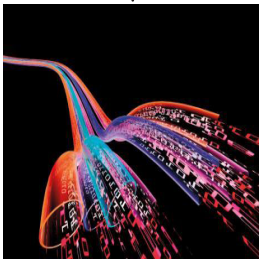
## Open calls for funding:

- Future Electrical Machines Hub 1st Call for Feasibility Studies, closing date: 30 September 2020 at 17:00
- Decarbonising Heating and Cooling 2, closing date: 01 October 2020 at 16:00
- EPSRC Future Manufacturing CMAC Research Hub is offering funding to support four Feasibility Studies at TRLs 1 – 4. The funding is available for novel short-term research studies of advanced manufacturing technologies, closing date: 01 October 2020 at 16:00
- ARCHER 2 Pioneer Projects, 12 October 2020 at 16:00









# Staff and Students' news

## Dr Geev Mokryani working on the feasibility study into solar and wave power in Africa

Engineers from the University of Bradford will investigate whether electricity 'mini-grids' powered by sustainable energy could be installed in Nigeria.

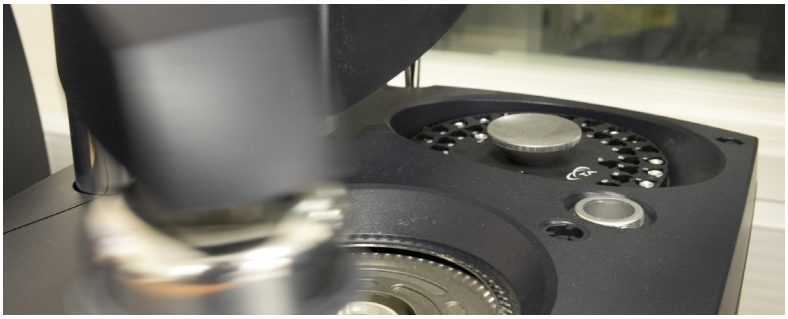
The University of Bradford is working with Nortech Management Ltd, Bayero University, Kano and Renewable Energy Agency, Africa on a £300,000 feasibility study funded by Innovate UK to ascertain whether such schemes could be viable.

Geev Mokryani, Senior Lecturer in Electrical Power Systems in the Faculty of Engineering & Informatics, said "At the moment, we are conducting a feasibility study to look at whether it's possible to install a series of electricity 'mini-grids' powered by sustainable energy and then stored in units. The work will be looking at where mini-grids could be installed and how big they could be.

"There are lots of challenges to overcome, for example finding suitable battery technology to store electricity and ensuring mini-grids do not adversely impact existing grid networks."

It is hoped the Pi-CREST tool will enable access to cleaner, low cost and sustainable energy to unserved and underserved regions across sub-Saharan Africa, starting with Nigeria.

The project is funded by Innovate UK under the Energy Catalyst competition round 7.



## Bradford graduate who realised her dream of working in F1 urges students to seize the moment

'Bradford was willing to take me and guide me and they got me to where I am today'

For prospective students worried about not getting the grades they expected or securing their first choice of university, PETRONAS Trackside Fluid Engineer Stephanie Travers has some advice: seize the moment.

Stephanie, who graduated with a BEng in Chemical Engineering in 2016, said accepting a position at the University of Bradford was the best decision she ever made. She now works for PETRONAS, the title and technical partner of the Mercedes-AMG PETRONAS F1 team, a childhood dream for Stephanie, who recalls getting up at 6am to watch televised races with her family. She cites support provided by the University of Bradford as one of the factors in her success.
More about this story here:
https://www.bradford.ac.uk/news/archive/2020/bradford-graduate-who-realised-her-dream-of-working-in-f1-urges-students-to-seize-the-moment.php

# Staff and Students' news

## New Staff:

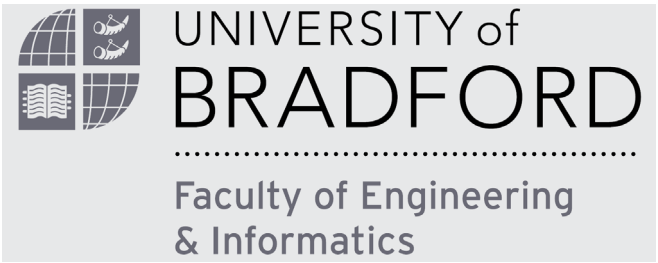
**Dr. Rameez Asif** received his B.Eng. degree in Electronics and Computer engineering from the University of Delaware, Newark, DE, USA, in 2010, and the M.Sc. degree (with Distinction) in 2012 and PhD in 2018, both in Electrical and Electronics engineering from the University of Bradford, West Yorkshire. During his PhD he worked on several academic and industrial projects and served as a casual lecturer, during the same period he organized, and delivered professional training courses and assisted Masters and Bachelors students with their final year projects under the supervision of Prof. Raed Abd-Alhameed. In 2016 he joined Visibility Asset Management Solution Ltd; an RFID based asset tracking solutions provider as an RF Design Engineer. After 4 years working in the industry, he returned to academia to follow his passion of research and teaching as a Post-Doctoral Research Assistant for Future Ubiquitous Networks group led by Prof Fun Hu. His research focus includes radio frequency identification, angle of arrival, beamforming, antennas and antenna arrays, spatial multiplexing, polarization division multiplexing, electromagnetic band gaps, artificial intelligence, cybersecurity, and security critical networks. He is a member of the Institution of Engineering and Technology and Institute of Electrical and Electronics Engineers since 2012. He has published several peer-reviewed journals and conference papers. He was awarded with the best paper presentation award in the "ITA 2017 - 7th International conference on Internet Technologies & Applications". He is also an inventor and patent holder of the "Radiation Shield", a passive device to reduce the specific absorption rate.

## Early Career Research Seminar (ECRF):

Dr Daniele Scrimieri talked about his research and industrial experience in the area of Manufacturing Informatics.

The group discussed grant funding applications in a session led by Prof Felician Campean

Our next meeting is on 19 August 2020, 12 noon.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