

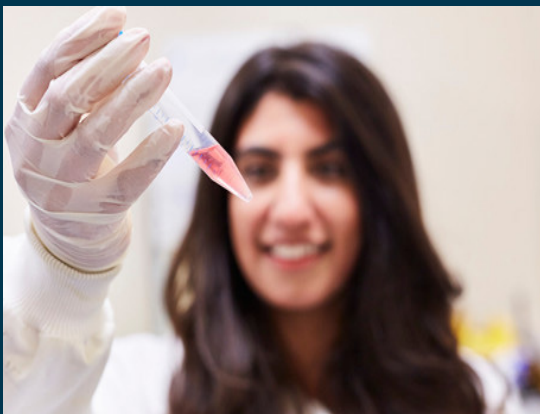


UNIVERSITY of
BRADFORD

Faculty of Engineering
& Informatics

Faculty of Engineering and Informatics Newsletter

June 2022



Welcome from the Dean

As we near the end of the academic year I would like to thank everyone in the Faculty for their hard work and dedication over the last 12 months. It has been a turbulent year in many ways, as we carefully emerged from coronavirus restrictions and re-established ourselves predominantly on campus. Chapeau (well done! You did it!) to you all, as they say to success at each challenging stage of the ongoing spectacular Tour de France!

Faculty graduation ceremonies take place on 21 and 22 July and I encourage you to participate and celebrate with our students and colleagues. I will lead the ceremony on 21 July and Professor Iqbal Mujtaba has agreed to do so on the 22 July, as I must attend my daughter's graduation at the University of Sheffield.

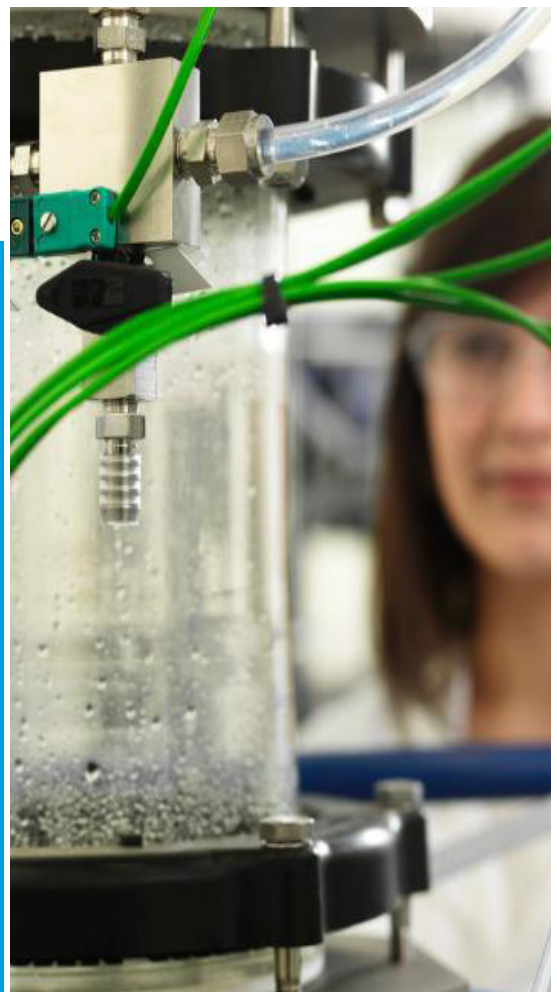
It is great to see the new initiatives in Architecture moving forward, with the development of student education spaces in the Horton and Richmond Workshop Buildings. Professor Claudia Trillo and Dr Jamal Alabid have recently joined us as specialists in this field, based in the Department of Civil and Structural Engineering.

The Bradford-Renduchintala Space Centre also gathers momentum with new facilities in the Horton Building and Dr Viktor Doychinov joining us soon to advance the newly launched MSc Satellite Systems Engineering and the broader research, student education and outreach objectives of the Centre. He will be based in the Department of Biomedical and Electronics Engineering.



Newsletter summary:

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



University of Bradford students' union in UK top 20

The StudentCrowd University Awards 2022 ranked Bradford as 17th best students' union in the UK among 140 institutions. UCAS has reported that online reviews by students are the second most important resource for prospective students when making a decision on which university to attend. Student university reviews on StudentCrowd regularly mention how valuable the students' union is for creating memorable experiences.

Bradford's students' union, UBU, complements student life in Bradford, whether that is joining a cultural society or ensuring the safety and wellbeing of those studying in the city.

More [here](#)>>

Academic in profile:

Dr Raluca Lefticaru



Raluca is an Assistant Professor in Computer Science, a Fellow of the HEA and the Programme Leader of the BEng Software Engineering course. She received her PhD in Computer Science from the University of Pitesti (2011) with the thesis 'Testing methods based on formal specifications'. She has been a Lecturer at the University of Bucharest and has held several research positions in the UK, among them at the University of Sheffield, where she is currently a Visiting Researcher affiliated with the Testing group.

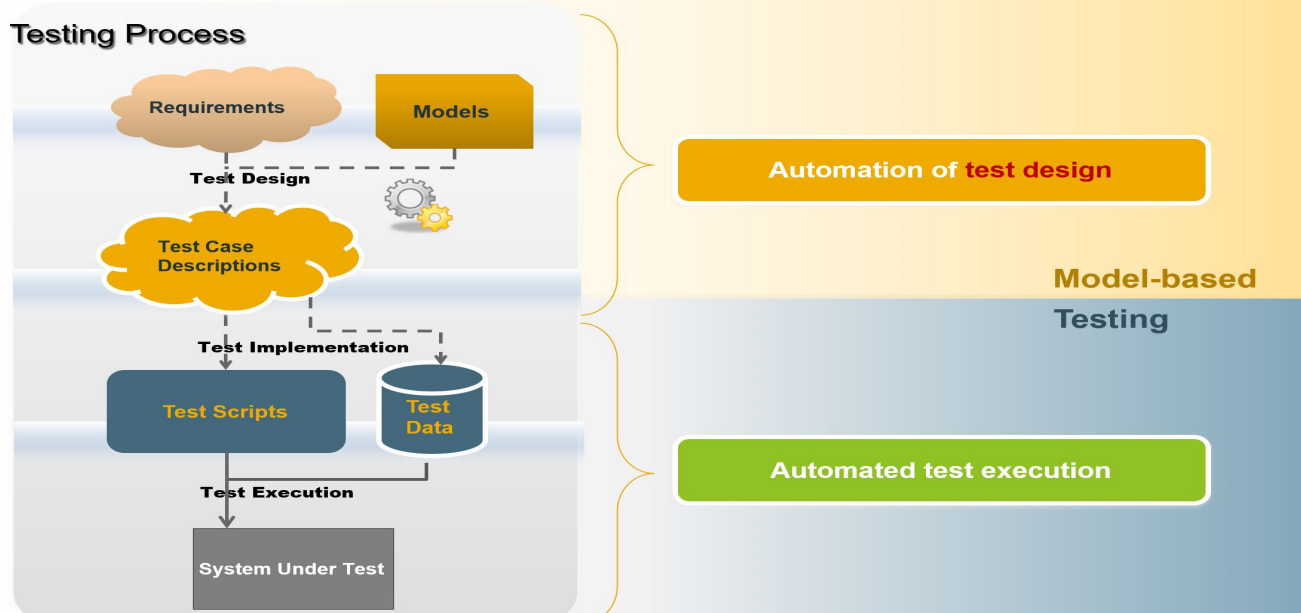
Her research interests include software testing, formal methods and membrane computing. She has published over 50 articles in prestigious journals and conferences. She has participated in various research projects, among them 4 EU projects (COSMOS, ATHENA, Broker@Cloud, DEPLOY) and she is currently collaborating with the team at the University of Sheffield in the EPSRC project RoboTest.

As an active researcher, she has been a Programme Committee (PC) member in over 25 conferences and workshops on Software Testing, Software Engineering, Formal Methods and Membrane Computing, and a reviewer for more than 15 journals. She has been the PC chair and organiser for the 16th and 17th editions of the Workshop on Advances in Model Based Testing (A-MOST 2020, A-MOST 2021) and for the 4th and 5th editions of the Annual Innovative Engineering Research Conference (AIERC 2021, AIERC 2022). Raluca is an invited speaker at the prestigious 23rd Conference on Membrane Computing (CMC 2022), which will take place 6-9 September 2022 in Trieste, Italy.

Current research interests:

- Model-based testing for robotics
- Testing self-driving cars
- Machine learning testing
- Membrane computing

Current research project: RoboTest - Systematic Model-Based Testing and Simulation of Mobile Autonomous Robots



Research and Innovation

Project Pipeline:

- Development of demountable steel composite beam using sustainable concrete, Xianghe Dai
- Enabling urban flood risk quantification considering spatially distributed uncertainties, Yakun Guo
- A Neural-Network / CFD Multi-Scale Method for Activated Sludge Numerical Modelling, Davide Dapelo
- Development of a digital twin for the manufacture of bespoke medical implants with improved tribomechanical characteristics, Daniele Scrimieri

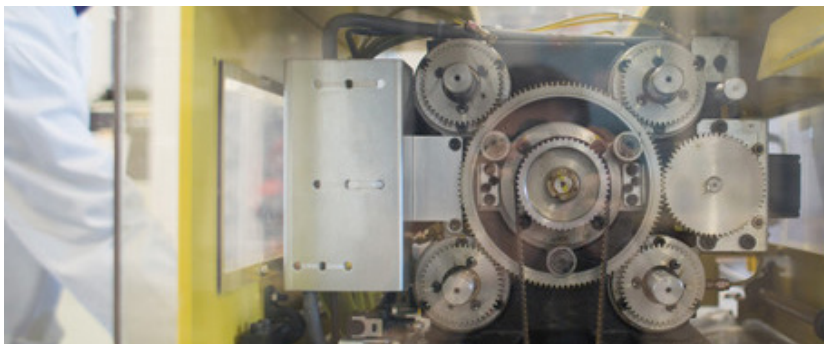


Ian MacKay – a short appreciation

Ian Mackay is probably the longest serving member of our staff. He joined the University as an apprentice on 1 July 1974 – a couple of years before me.

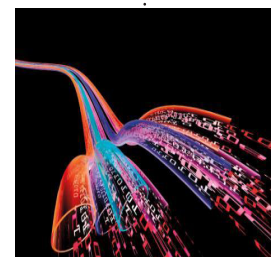
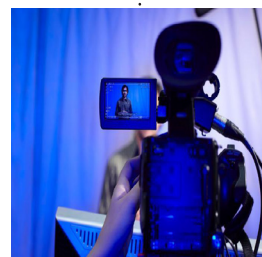
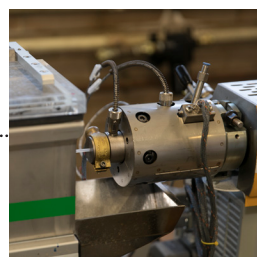
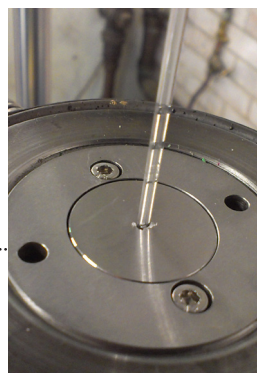
His initial department was Chemical Engineering where he was a laboratory technician but he then developed his role as a technician in the engineering workshops. I think it is fair to say that everyone I speak with has a good word for Ian – he is the epitome of helpfulness and a can-do spirit. He tells me that he delights to help people, and to do a range of tasks in our Faculty. No task seems to be too lowly for Ian. He takes on a wide range of supportive activities (AV, photography, portering, amongst many) with characteristic good humour. His work-ethic and personal support for all of us are superb. Such colleagues as Ian are invaluable, and vital to our wellbeing. A diamond!

Prof Phil Coates



Open calls for funding:

- Preannouncement: Ernest Rutherford Fellowship: research core science independently, Closing date: 13 September 2022 16:00 UK time
- Young Innovators Awards 2022 to 2023, Closing date: 27 July 2022 11:00 UK time
- Future Leaders Fellowships: round 7, Closing date: 6 December 2022 16:00 UK time
- Equality, diversity and inclusion caucus, Closing date: 8 September 2022 16:00 UK time



Staff and Students' news

Team Bradford Festival

The Team Bradford Festival returned after two years on Wednesday 25 May 2022 and it was filled with lots of fun activities. The day was a similar format to previous years, with the ever-popular Team Bradford Tournament at its heart. Teams of students and staff competed in a day of sports, puzzles, quizzes and games with one aim; to be crowned Team Bradford champions.

Our Pi of the Tiger team, led by team captains Joanna Wood and Ayesha Javed, came 8th out of 17 teams registered. Joanna aimed for an even mix of staff and students. The enthusiastic team was Ben Whiteside, Adrian Kelly, Therese Sheehan, Amir Khan, Robert Redman, Kate Johnson, Rob Innes, Ayesha Javed, Joel Appiah, Sana Riaz, Bernice Ramstedt, Light Castells, Zainuddeen Mohammed, Ali Malik and Zahra Rashid. If you see them around the Faculty, please congratulate them for their effort in making the event a success.

Well done to all!



Staff and Students' news

The Fifth Anniversary of the Technician Commitment

The Technician Commitment team recently celebrated five successful years on 31st May, and technicians from all around the country helped celebrate by spreading the word on social media. The group now has over 100 signatories.

The University joined the commitment in 2019 and also celebrated on Twitter, "We're proud to be part of a growing community of signatories and supporters, promoting visibility, recognition, career development & sustainability for technicians".

The National Technician Development Centre also had an online event on 18th May to showcase the breadth and diversity of the technical community, where technicians put a photo of themselves at work with #Iamatechnician, helping to raise technicians visibility across the UK.

CELEBRATING

5 YEARS

Technician **Commitment**

Dr Jaan Pu outreach activity

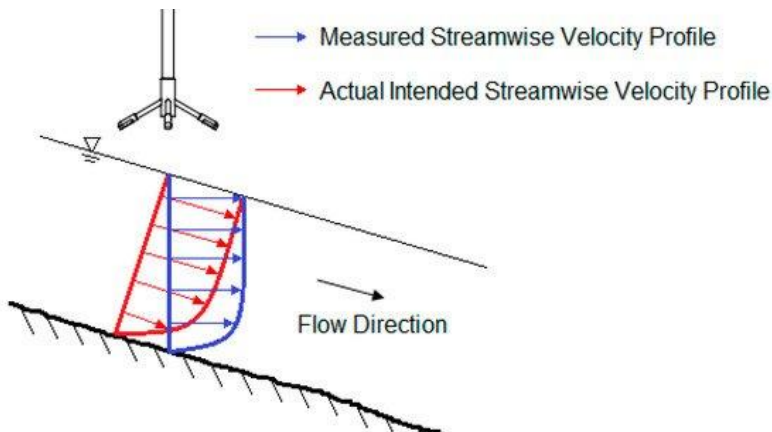
Jaan gave a presentation at Loughborough University, invited by their Associate Dean in Research of School of Architecture, Building and Civil Engineering, Prof Qiuhua Liang. The presentation title: 'Rainwater Reuse Project (RRP) at Nigeria: Worth the Effort?', and it is about the RRP project in collaboration with Nigerian authority of Lagos State Water Corporation.

Dr Pu's article selected as Editors' Choice in Fluids

Also Jaan's publication has been selected as Editors' Choice of Top Cited and Viewed paper. Title: 'Velocity Profile and Turbulence Structure Measurement Corrections for Sediment Transport-Induced Water-Worked Bed'.

Read full paper [here](#)>>

Coverage of the paper [here](#)>>



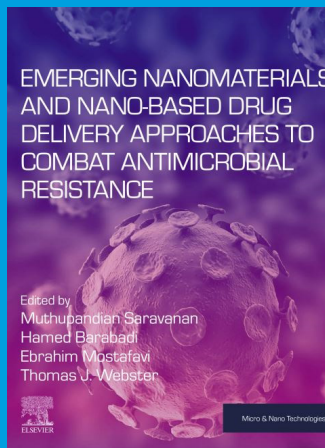
Staff and Students' news

Dr Farshid Sefat new Book Chapter

Dr Farshid Sefat published a book chapter entitled Nano-targeted drug delivery approaches for bacterial infections in book entitled 'Emerging Nanomaterials and Nano-based Drug Delivery; Approaches to Combat Antimicrobial Resistance'.

This book chapter was prepared in collaboration with colleagues from University of Groningen (Netherland) and Beheshti University (Iran).

Read more [here](#)>>



MDT are working with Qingdao University of Science and Technology (QUST) to deliver 1/3 of their animation programme

The co-delivered animation programme between MDT and QUST (China) recently received approval from the Chinese Ministry of Education (MoE) as a "national first-class UG programme construction site" (8th June 2022). The 'double 10,000 plan' for the development of first-class UG programmes is part of measures being taken by the MoE to revitalise UG education, improve talent development, and implement the longer-term plans for higher education. The Sino-British cooperative animation programme (our joint programme) is the core component of the 'national first-class professional construction site'. Peter Lassey, who leads the MDT delivery team, was delighted to note that this recognition is excellent news for the MDT team who have worked hard to ensure the continued delivery of this course during Covid restrictions over the last couple of years.

Background:

In 2019 the MoE started the "double 10,000" project to push development of new engineering, medicine, agriculture, and liberal arts theory. The project aims to build 10,000 national first-class UG programmes and 10,000 provincial first-class UG programmes. The 'double 10,000' (focus on UG, all universities can apply) is different from the 'double first-class' (focus on research to build world class universities). Our contribution to the joint programme is the key for QUST animation to receive the title of 'national'. There will be further investment from the MoE and government levels to support future development of the programme.

Staff and Students' news

Erasmus+ International Staff Week at University of Jordan

The University of Jordan Erasmus+ International Staff Week took place from the 15-19 May 2022. Dr Nejat Rahmanian and Dr Eduardo Munive participated in this staff mobility training to exchange ideas and practices related to enhancement of internationalisation of education, global citizen skills, Erasmus student experience, etc. Staff from 14 different European universities attended this conference. Another four Bradford staff members from other faculties also attended this multidisciplinary event.

Dr Rahmanian delivered a presentation entitled 'Climate Change: Technological and Policy Solutions' during international staff week held on 14-19 May 2022 at the University of Jordan. He also visited the Department of Chemical Engineering and Water, Energy and Environment Center at the university. [More here>>](#) about the two presentations, which give further information on our FoEI active research areas.

Dr Munive also delivered a presentation about the approach of our Faculty to embed the sustainability theme in Engineering Programmes, emphasizing our research-informed teaching and project-based modules initiatives. Dr Munive also attended the Jordan Alumni Meetup organised by Hani Suwwan, who is our Alumni Ambassador for Jordan.

Dr Munive and Dr Rahmanian are very pleased to discuss potential collaboration with Jordanian partners and with other University staff who have research interest in the oil/gas and Zero Carbon themes.

We are very grateful to the University of Jordan for being an extraordinary host.



New Staff Dr Jamal Alabid

Jamal recently joined the University of Bradford as a Lecturer in Architectural Technology. He has rich experience in this field for over 10 years, with an MArch in Architecture and an MA in Architectural Design and a PhD in Architectural Technology at De Montfort University.

He taught Architectural Technology for about 4 years at DMU, 15 months at Heriot Watt University as an Assistant Professor in Architectural Technology (course leader for BEng and MEng). He also has some industrial experience working for Kishron Specialist Contractors for 15 months employed by Robert Gordon University as an Associate in Building Thermal Performance and Envelopes.

He is also a Certified Passivhaus Designer & Consultant, MAECB, PAS:2035 Retrofit Coordinator and a FHEA with a PGCE in HEA. His research and teaching interests are in Building Technology, Net-Zero Buildings, Retrofit to EnerPHit Standard and Indoor Environmental Quality.



Staff and Students' news

Pupils take on engineering challenge at the University

Primary school children from across Bradford attended the finale of the Primary Engineer competition to build the best battery-powered 'shoe-box car'. The event was organised by training provider Primary Engineer, paid for by Bradford Council and hosted by the University of Bradford, with Northern Rail and Schneider Electric engineers helping with the judging. The project has involved children from nine primary schools and is intended to inspire children and encourage them to consider engineering as an education pathway and a career. Children have been competing to make the best battery powered model car, using bits of wood, cardboard, rubber bands, motors and pulleys - they then had to test the cars on various tracks and slopes.

Dr Elaine Brown, from the University of Bradford, said: "It was wonderful to see ingenuity at work in this exciting competition, and for entrants to be rewarded for their designs and creations, in addition to their skills at communicating with the judges – essential qualities for an engineer. The children's enthusiasm was fantastic. It is so important that we introduce young children to engineering activities, help them to understand the huge variety of opportunities there are in engineering and realise how fulfilling it is to work in a profession that helps build a sustainable world for us all."

More [here](#)>>



Early Career Research Seminar (ECRF)

Dr Gurkan Yildirim gave a presentation on 'High Performance Multifunctional Cementitious Composites for a Sustainable Civil Infrastructure'.

Dr Cristina Tuinea-Bobe gave an introduction to RGAP and its importance.

Our next meeting is on 20th July 2022, 13.00.

More [here](#)>>

