



NEW MODELS

Engineering Academics Network
Annual Congress 2023

Programme

Monday 12th June 2023

13:45 Delegate registration

Main Hall, NMITE Blackfriars Campus, Blackfriars Street Hereford, HR4 9HS

Meet point for tour and blacksmith forging workshop. The team will be on hand from 13:30. Only those with confirmed registration to these sessions should attend; formal registration will be on Tuesday 13th at Skylon Campus.

14:00 Tour of NMITE

NMITE Blackfriars Campus, Blackfriars Street Hereford, HR4 9HS

- **Prof Dave Allan, Founding Faculty Professor of Engineering Education and Head of Programme Development, NMITE**

As part of NMITE's mission to integrate into the City of Hereford through the reuse and repurpose of unused buildings, they have transformed their City centre campus, Blackfriars, into a state of the art facility. Join us for a guided tour of lecture hall-free learning, NMITE style.

14:45 Transport from NMITE Blackfriars Campus to Holme Lacy

Private hire transport to the Rural Crafts Centre departs Blackfriars Street, doors adjacent to Premier Inn, at 14:45.

15:00 Blacksmith forging workshop

The Rural Crafts Centre, Herefordshire and Ludlow College, Holme Lacy, Hereford, HR2 6LL

Herefordshire and Ludlow College Rural Crafts Centre Blacksmith School is a world centre of metal-bashing and for many years was the only place to learn it. This is a three-hour, uniquely Herefordian, hands-on workshop available to full Congress delegates on a first-come, first-served basis.

17:30 Transport from Holme Lacy to NMITE Blackfriars Campus

Private hire transport from the Rural Crafts Centre to Blackfriars Street departs at 17:30.

19:00 Public lecture: Innovation: new ideas and new people

Hereford Cathedral, 5 College Cloisters, Cathedral Close, Hereford HR1 2NG

- **Prof Dame Athene Donald DBE, FRS**
- **Karen Usher DL (Chair), Ambassador, NMITE**

Prof Dame Athene Donald DBE, FRS HonFInstP is Master of Churchill College, Cambridge and a distinguished physicist. In this lecture that will appeal to people of all ages and backgrounds, she will explore how today we face new challenges – sustainability, equality, and the speed of innovation in





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computing, medicine and technology – need new kinds of engineers and scientists, particularly women.

Doors open 18:45, shortly after Evensong.

20:15 All weather drinks reception and curry, The Shack Revolution

Bastion Mews Union Street, Hereford HR1 2BT

An urban industrial indoor / outdoor venue built into Saxon city wall in the heart of Hereford City Centre. Expect great food and atmosphere and the famed EPC pub quiz. From 20:15 for 20:30.



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Tuesday 13th June 2023

08:50 Transport: NMITE Blackfriars Campus to NMITE Skylon Campus

Private hire transport to the NMITE Skylon Campus departs Blackfriars Street, doors adjacent to Premier Inn, at 08:50.

09:00 Registration and breakfast, introducing the Hammermen Award poster exhibition NMITE, Skylon Campus, Canary Drive, Skylon Park, Hereford, HR2 6JT

The registration desk and The Hammermen award poster exhibition will be open from 08:30. We also welcome exhibitors and our supporters: the IET and MathWorks. Breakfast will be provided.

The coveted EPC Hammermen Student Award celebrates the achievements of different engineering students each year. We are delighted to showcase their work live in a poster exhibition available throughout Congress. The five finalists are invited to join us to discuss their work.

09:30 Welcome: New models

Welcome to EPC Congress 2023, New Models

- **Prof Mike Sutcliffe, President, Engineering Professors' Council and Head of School of Engineering, Arden University**

09:45 Keynote introduction: Why do we need new models?

- **James Newby, President and Chief Executive Officer, NMITE**

10:15 Panel: New models in recruitment: pathways into Engineering

Bringing together experts across a range of pathways into Engineering, this panel will discuss entry channels into Engineering higher education that might offer better routes for more diverse students. Think design and technology, T levels, Engineering apprenticeships, RPL and new models of recruitment. They will tell us why and how they've broken the mould of entry qualifications, while highlighting what Engineering academics need to know to support their recruitment and their students.

- **Prof Kay Bond, Academic Director, TEDI-London**
- **Dr Steve Bullock (Chair), Associate Professor of Aerospace Engineering, University of Bristol**
- **Mr Philip Holton, Senior Qualification Manager, the Extended Curriculum, Pearson UK Schools**
- **Dr Anne Nortcliffe, Head of School of Engineering, Technology and Design, Canterbury Christ Church University**





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- **Neil Raynor, Assistant Professor (Apprenticeships), Warwick Manufacturing Group, University of Warwick**
- **Lily Raynor-Blundell, Head of Faculty - Engineering, Automotive and Motorsport, Wiltshire College and University Centre**

11:00 Break and networking

Hammermen exhibition and exhibitor stands. Refreshments will be available.

11:30 Presentation series: New models in curriculum / values led engineering

Traditionally, Engineering courses have tended, like so many other vocational courses, to focus on the knowledge, skills and competencies needed for a career as an engineer. This session will consider how we should embed a greater sense of purpose into our higher education courses. We want to create a generation of engineers with a mission to make the world a better place and to tackle the climate emergency. How do we go about adapting the curriculum to promote values-led engineering? How do we assure the quality of such an education?

- **Jennifer Bradford, Global Curriculum Management Leader, Siemens Digital Industries Software**
- **Prof Sarah Jayne Hitt, Visiting Professor Edinburgh Napier University and Project Manager, Engineering Professors' Council**
- **Prof John Mitchell (Chair), Director, UCL Centre for Engineering Education and Vice President / President Elect Engineering Professors' Council**
- **Vicki Stott, Chief Executive, Quality Assurance Agency for Higher Education**

12:45 Lunch

Hammermen exhibition and exhibitor stands. A buffet lunch will be provided.

13:45 Panel: New models in assessment

Change has long been overdue in many of our models of assessment, but then along came ChatGPT and the need for an overhaul has become critical. Our expert panel will outline the challenges and opportunities surrounding assessment: Are exams still a viable approach? How can we better assess teams? Is there a role for peer assessment? For orals and vivas? For project work? What difference will AI make? Through learner analytics might it usher in a new age of fairer more sophisticated assessment? What can we learn from assessment in other disciplines like Medicine?

- **Prof Mike Bramhall (Chair), Professorial Teaching Fellow, TEDI-London**
- **Rod Bristow, Visiting Professor, UCL Institute of Education and former President, Pearson UK**
- **Rinkal Desai, Assistant Professor, Warwick Manufacturing Group, University of Warwick**





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- **Dr Sue Moron-Garcia, Principal Lecturer Education and Student Experience, Oxford Brookes University**
- **Prof Phil Newton, Professor of Medical Science Education, Swansea University Medical School**

14:30 Panel: New models in employability

Employment outcomes for engineering graduates are strong, but even so, employers complain that students aren't job-ready. Meanwhile Industry 4.0 and the pace of technological change are likely to mean that the skills that make a student employable today may be obsolete in just a few years. Our expert panel will consider what lifelong employability looks like and how can we better embed its teaching into Engineering degrees. In particular, we will explore how best to level the employment gap between those from affluent and disadvantaged backgrounds.

- **Nick Bent, Chief Executive Officer, upReach**
- **Stuart Norton, Senior Consultant (Education), Advance HE**
- **Andrew Redfearn, Academic Customer Success Engineer, MathWorks**
- **Johnny Rich (Chair), Chief Executive, Engineering Professors' Council**
- **Prof Lisa Taylor, Professor of Employability and Learning Innovation, University of East Anglia**
- **Juliet Upton, Head of Education and Skills Policy, Royal Academy of Engineering**

15:15 Break and networking

Hammermen exhibition and exhibitor stands. Refreshments will be available.

15:45 Hammermen competition

The coveted EPC Hammermen Student Award celebrates the achievements of different engineering students each year. And this year you get to decide who wins. Our five finalists will each give a five-minute, elevated pitch before delegates are invited to vote for the winner in a secret ballot.

- **Kadiri Adebawale Abioye, Manchester Metropolitan University**
- **Thomas Churchill, The Open University**
- **Haritha Jayasinghe, University of Cambridge**
- **Ahmed Faraidoon Sidiq, Teesside University**
- **Charlie Wilson, University of Strathclyde**

16:15 Keynote: Institutions as place

- **The Rt Hon Jesse Norman MP, Minister of State (Decarbonisation and Technology)**

16:50 Hammermen award poster exhibition and networking

The five finalists will be available to discuss their work.





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17:30 Transport: Skylon Campus to NMITE Blackfriars Campus

Private hire transport to the NMITE Blackfriars Campus departs Skylon Campus at 17:30. Cars may be left at Skylon campus overnight.

19:00: Annual Congress Dinner

The Left Bank Village, Bridge Street, Hereford HR4 9DG

20:00 Hammermen Award

Your vote for the five finalists will be realised before dinner. The Hammermen Award winner will be announced and the £500 prize fund presented in association with the Incorporation of Hammermen of Glasgow.

- **Dr Nina Baker OBE, DL, Deacon, Incorporation of Hammermen of Glasgow**

21:30 After dinner speaker

Dean Burnett is the author of the popular Guardian Science blog 'Brain Flapping' (now 'Brain Yapping' on the Cosmic Shambles Network), the bestselling books *The Idiot Brain*, *The Happy Brain*, *Why Your Parents Are Driving You Up The Wall And What To Do About It*, and *Psycho-Logical*. He has just released his 5th book, 'Emotional Ignorance'.

- **Dr Dean Burnett, Neuroscientist, author, blogger**





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Wednesday 14th June 2023

08:00 Transport: NMITE Blackfriars Campus to NMITE Skylon Campus

Private hire bus to the NMITE Skylon Campus departs Blackfriars Street, doors adjacent to Premier Inn, at 08:00.

08:15 Registration and breakfast, introducing the Hammermen award poster exhibition NMITE, Skylon Campus, Canary Drive, Skylon Park, Hereford, HR2 6JT

We are delighted to continue the Hammerman award poster exhibition. We also welcome exhibitors and our supporters, The IET and MathWorks. Breakfast will be provided.

09:00 Keynote and panel: New models of research funding

Research funding is in upheaval on all fronts: will the UK associate with Horizon Europe? Will the UK's proposed 'Pioneer' scheme be an adequate replacement? Will ARIA transform blue-sky research? Will the EPSRC's new TERC initiative (Tomorrow's Engineering Research Challenges) help us be future-fit? What's the future for REF? And will the Government meet its 2.4% of GDP target for investment in R&D by 2027? If so, how and will it be enough?

- **James Coe, Associate Editor for Research and Innovation, Wonkhe**
- **Dr Andrew Clark, Executive Director, Programmes, Royal Academy of Engineering**
- **Prof Catherine Hobbs (Chair), Academic Dean, Faculty of Engineering, Environment and Computing, Coventry University**

10:00 Panel: New models of delivery

As student numbers have risen, higher education become ever more diverse, catering to a wider ranges of students and modes of study. Circumstances such as the pandemic have driven online and hybrid models. Meanwhile Government policy and skills shortages have created a market for new models of delivery. As the forefront of this innovation, NMITE, the hosts of the EAN Congress, have forged a new offer to potential Engineering students. In this panel session, their experience will be contrasted with other institutions that are breaking the mould through remote learning, microcredentials, modular, stackable courses, earn-while-you-learn models and much more.

- **Matheus de Andrade, Assistant Professor (Teaching), University College London**
- **Prof Beverley Gibbs (Chair), Chief Academic Officer, NMITE**
- **Dr Annabel Kiernan, Pro Vice Chancellor Academic, Staffordshire University**
- **Prof Carl Lygo, Vice Chancellor and Chief Executive Officer, Arden University**
- **Rajay Naik, Chief Executive Officer, Skilled Education**

10:45 Panel: New models of academic employment and progression





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Strikes, casual and precarious contracts, REF-driven advancement models: the life of a working academic has become filled with insecurity and box-ticking. What do we need to do to make academia an attractive and fulfilling profession for academics while meeting the needs of students, universities and skills needs? Do we need more casual contacts or fewer? Our expert panel will discuss academic employment and progression. Expect fluid discussion with plenty of audience participation.

- **Prof Dave Allan (Chair), Founding Faculty Professor, Head of Programme Development, NMITE**
- **Dr Rob Deaves, Senior Principal Engineer, Dyson and Visiting Professor, Imperial College London**
- **Prof Ian Dunn, Provost, Coventry University**
- **Dr Ruth Graham, Higher Education Consultant**

11:30 Break and networking

Hammermen exhibition and exhibitor stands. Refreshments will be available.

12:00 EPC and the Engineering Academics Network

- **Johnny Rich, Chief Executive, Engineering Professors' Council**

12:30 Keynote: A path through the Woods: Higher education to 2030

- **Vivienne Stern MBE, Chief Executive, Universities UK**

13:10 Close: EPC Congress 2023: A better world

- **Prof John Mitchell, Vice President / President Elect, Engineering Professors' Council and Director, UCL Centre for Engineering Education**

13:20 Lunch and depart

A takeaway lunch will be provided.

14:00 Transport: Skylon Campus to Train station

Private hire transport to Hereford train station departs Skylon Campus at 14:00.

