**3 July 2025 – Day One of the EERN Annual Symposium at The University of Manchester**

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| **Registration** Nancy Rothwell Event Space 1, 9:00-10:00 | | | |
| **Welcome to EERN 2025 (Note: Overview of programme, key locations, health and safety)**  Nancy Rothwell Theatre B (2A.041), 10:00-10:30 | | | |
| **Break (Coffee, Tea & Biscuits)** Nancy Rothwell Event Space 1, 10:30-10:45 | | | |
| **Theme 1: Student Self-Identity & Experience**  Nancy Rothwell Theatre B (2A.041), 10:45-11:45 | **Theme 2: Student research projects**  Nancy Rothwell S1.011 (Cabaret), 10:45-11:45 | **Theme 3: Math**  Nancy Rothwell S1.012 (Cabaret), 10:45-11:45 | **Theme 4: Skills & Competencies**  Nancy Rothwell 2A.014 (Cabaret), 10:45-11:45 |
| Paper 1. What can neurodiverse students tell us about assessment anxiety? | Paper 1. Advanced research projects in taught master’s level programmes: a case study | Paper 1. Supporting engineering student attainment and continuation through targeted mathematics support | Paper 1. The Role of Student-Centred Learning in Engineering Laboratories |
| Prof Roger Penlington | Dr Liwei Guo, Dr Eral Bele | Dr Farhana Gokhool | Miss Angena Panaser |
| Paper 2. Tinkering Self-efficacy in Northern Ireland | Paper 2. The authenticity of the independent research project: examining the suitability of a dissertation to prepare engineering students for industry | Paper 2. Identifying At-Risk Students Through Mathematics Diagnostic Quiz Performance | Paper 2. Embedding Professional Practice in Transnational Engineering Education: The QMES PPS |
| Mrs Aine M McGreeghan | Dr Lauren Schrock and Dr Poonam Aulak | Pinar Ozbeser, Ellen Pope | Andrew Spowage |
| Paper 3. In what ways do self-efficacy, self-theories and dispositions impact the learning behaviour of Computer Science students? | Paper 3. Integrating Transferable and Employability Skills in Postgraduate Project Supervision: A Project-Based Learning Framework for Chinese EEE Postgraduates in UK Higher Education | Paper 3. Mathematics Anxiety: Engagement and performance in applied mathematical subjects. | Paper 3. Supporting International Students in Developing Essential Language Skills for UK Engineering Courses |
| Dr Maria Valera Espina, Ms Kate Ippolito | Dr Rola Saad, Ya He | Dr Alan Brown, Dr Louise Brown | Natalia Dozie |
| Paper 4. Exploring self-perception and experiences in a degree apprenticeship programme | Paper 4. Supporting colleagues to develop their research integrity: training project supervisors on research ethics | Paper 4. Exploring Synchronous and Asynchronous Delivery of Revision Materials for Enhanced Student Learning in Computer Science Mathematics Module (CS1MCP) | Paper 4. Embedding Technical and Transferable Competencies in Engineering Education: A Critical Analysis of Curriculum-Level Innovations |
| Dr Gloria Young | Dr Lauren Schrock and Dr Poonam Aulak | Pinar Ozbeser, Gareth Woods, Richard Lee | Dr Aled Wyn Davies |
| **Break** 11:45-12:00 | | | |
| **Workshop 1: Crafting Effective Prompts for ChatGPT: Revolutionising Revision Worksheets in Engineering Education**  Nancy Rothwell Theatre B (2A.041), 12:00-13:00 | **Workshop 2: Exploring Student Co-Design of Final Year Projects**  Nancy Rothwell S1.011 (Cabaret), 12:00-13:00 | **Workshop 3: 50% for the Future – Designing Effective Outreach for recruitment of under-represented groups into Engineering: “Lego Ducks and Hoppers!”**  Nancy Rothwell S1.012 (Cabaret), 12:00-13:00 | **Workshop 4: Play-testing workplace scenarios for an experiential learning course**  Nancy Rothwell 2A.014 (Cabaret), 12:00-13:00 |
| Dr Elizabeth G. Bishop | Matthew Cairns, Dr. Louise Pick, Dr Charlie McCartan, Dr. Eoin Cunningham | Dr Jennifer Thompson | Professor Timothy D. Drysdale, Ms Elena Ioannidou, Ms Anna Tong |
| **Lunch Buffet & Posters** Nancy Rothwell Event Space 1, 13:00-14:15 | | | |
| **Keynote 1: John Heywood -** In Search of Technological Excellence  Nancy Rothwell Theatre B (2A.041)  14:15 – 15:15  **Followed by CEO of Graide, Dr Manjinder Kainth**  15:15-15:30 | | | |
| **Break (Tea, Coffee & Biscuits)** Nancy Rothwell Event Space 1, 15:30-15:45 | | | |
| **Theme 5: Serious Play, Serious Games, Gamification**  Nancy Rothwell Theatre B (2A.041), 15:45-17:00  *CHAIR: TBC* | **Theme 6: Robots & Toolkits**  Nancy Rothwell S1.011 (Cabaret), 15:45-17:00  *CHAIR: TBC* | **Theme 7: In Critique of Engineering Education / Future of Engineering Education**  Nancy Rothwell S1.012 (Cabaret), 15:45-17:00  *CHAIR: TBC* | **Theme 8: Design Challenges & Technology-Enhanced Learning**  Nancy Rothwell 2A.014 (Cabaret), 15:45-17:00  *CHAIR: TBC* |
| Paper 1. Mapping Learning and Game Mechanics to Pedagogical Patterns for Serious Games Analysis and Design in Engineering Education | Paper 1. 'Squashing bugs not snakes': co-creating a Python toolkit to develop engineering students’ programming proficiency | Paper 1. Engineering Education: A Field in Need of Rebranding | Paper 1. Evidence-based multidisciplinary Design-Project Implementation for training industry ready engineering graduates |
| Michael Callaghan, Rémi Jorge, Antonio Cenci, Guillaume Dri, Raphaêl Salaün-Penquer | Mr Muhie Al Haimus, Mr Yash Vaghela, Mr Ilanthiraiyan Sivagnanamoorthy and Dr Rehan Shah | Ejike Ezeh | Dr Payam Soulatiantork, Professor Mo Zandi |
| Paper 2. Constructing Solutions: Using Hands-on Model Building to Address Programme Structural Challenges in Engineering Education | Paper 2. The control101 toolbox and a modern delivery of an introductory control course | Paper 2. The Engineering Education Conundrum | Paper 2. Embedding Sustainability in Engineering Education: Redesigning a Hydrogen Project to Foster Green Skills |
| Dr Becca Ferrari, Dr Jon Tew | John Anthony Rossiter | Prof Robin Clark and Dr Roger Penlington | Ms Sarah Bee, Mr Alex Kulbicki, Dr Ioanna Dimitriou and Dr Becca Ferrari |
| Paper 3. “Making Chemicals” – Using a Game to Introduce Process Economics to 1st Year Chemical Engineering Students | Paper 3. From Benchtop to Vehicle: A Scalable Approach to Teaching Control Algorithm Design for EV and AV Systems | Paper 3. Staff and Student Ideals for Engineering Education | Paper 3. Virtual Reality: An interactive tool to link theories to industrial applications |
| Maryam Malekshahian, Bernard J. Treves Brown | Dr James E. Pickering | Claudia Moorhouse | Dr Maryam Mohammad Zadeh |
| Paper 4. An Approach to Evaluate the Impact of a Gamified Simulation on the Skills Development of Postgraduate Students Studying Supply Chain and Logistics |  | Paper 4. How can students learn about inclusivity and inclusive engineering in a way that they value? | Paper 4. Case Study: The impact of interdisciplinary project-based learning on students in discipline-specific engineering degree programmes |
| Dr Ahmed Tarek El-Said, Dr Lauren Schrock |  | Dr Michael Zivojin Trikic, Dr Tara Baldacchino and Fudial Ajaz | Professor Emanuela Tilley, Dr Fiona Truscott, Professor John Mitchell |
| **Day 1 Finish,** 17:00  Those interested in continuing discussions over informal dinner or drinks are welcome to gather in the Nancy Rothwell Event Space to coordinate their plans. | | | |

**4 July 2025 – Day Two of EERN Annual Symposium at The University of Manchester**

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| **Workshop 5: Post-digital laboratories – doing practical work differently**  Nancy Rothwell S1.011 (Cabaret), 9:00-10:00 | **Workshop 6: Inclusive Teaching and Learning in STEM Higher Education**  Nancy Rothwell S1.012 (Cabaret), 9:00-10:00 | **Workshop 7: Empowering Engineers to Support their Wellbeing**  Nancy Rothwell 2A.014 (Cabaret), 9:00-10:00 |  |
| Professor Timothy D. Drysdale, Dr David P. Reid, Ms Sijie Zhou, Mr Henry Zeballos, Ms Yiwen Xu | Dr Alison Harvey, Dr Elika Aminian, Aurelie Le Normand, Mr Simon Raw, Dr Martin Simmons, Professor Louise Walker | Dr Jo-Anne Tait and Dr Jan Peters |  |
| **Break (Coffee, Tea & Biscuits)** Nancy Rothwell Event Space 1, 10:00-10:15 | | | |
| **Theme 9: Student employability**  Nancy Rothwell Theatre B (2A.041), 10:15-11:15  *CHAIR: TBC* | **Theme 10: Foundation Year & Undergraduate Education**  Nancy Rothwell S1.011 (Cabaret), 10:15-11:15  *CHAIR: TBC* | **Theme 11: Pedagogic innovation**  Nancy Rothwell S1.012 (Cabaret), 10:15-11:15  *CHAIR: TBC* | **Theme 12: Student Engagement, Student-Centred, Student-Partners**  Nancy Rothwell 2A.014 (Cabaret), 9:00-10:00  *CHAIR: TBC* |
| Paper 1. Enhancing student employability with reflection and employer collaboration | Paper 1. Engaging engineering education: How can public engagement and outreach benefit undergraduate teaching? | Paper 1. A co-development approach to include authentic problems in the early Bioengineering curriculum | Paper 1. How Maker Clubs and Practical Projects Improve Engagement in Engineering Education with a Focus on Foundation Degrees |
| Dr Eleni Routoula, Claire Brooke, James Zeller | Dr Phil Jemmett, Dr Ishwar Kapoor, Prof. Margaret Low | Dr Maria Parkes, Dr Ian Radcliffe, Dr Tweety Tang, Aiza Asif, Lina Benchekroun, Zhongjing Guo | Elizabeth G. Bishop, Xzara Foster |
| Paper 2. EPC EDGE Toolkit to aid inclusive engineering student employability progression | Paper 2. Understanding knowledge building from virtual to actual laboratories in engineering: A study of Foundation Year students using Legitimation Code Theory | Paper 2. Accident storytelling: a case study in synoptic learning, engagement and unintended learning outcomes using aircraft accidents | Paper 2. Supply Chain Education though a Collaborative and Innovation Driven Culture |
| Anne Nortcliffe, Ellie Martin, Pamela Lithglow and Johnny Rich | Ada Lai and Josh Robertson | Prof Hugo Williams, Prof Paul Withey | Dr Georgios Kapogiannis, Dr Maria Triantafyllou |
| Paper 3. Towards Global Engineers: A practical approach to enhancing global competencies | Paper 3. University portrayal of undergraduate engineering: variation and implications | Paper 3. From Classroom to Workforce: Developing Digital Capabilities for the Engineers of the Future | Paper 3. Students as Course Creators: Maximizing Agency Through Authentic Technical Communication |
| Manajit Chakraborty, Dr. Farzaneh Hafezi, Dr. Muhammad Ikhlaq | Kate Bellingham, Professor John Mitchell, Professor David Guile | Dr Becca Ferrari, Dr Luis Neves, Mr Jeremy Turner | Dr James Brooks |
| **Break** 11:15-11:30 | | | |
| **Keynote 2: Stella Fowler -** Policy and Research Director at the Engineering Professors’ Council  Nancy Rothwell Theatre B (2A.041)  11:30-12:15 | | | |
| **Lunch Buffet & Posters** Nancy Rothwell Event Space 1, 12:15-13:30 | | | |
| **Theme 13: Feedback**  Nancy Rothwell Theatre B (2A.041), 13:30-14:45  *CHAIR: TBC* | **Theme 14: Assessment**  Nancy Rothwell S1.011 (Cabaret), 13:30-14:45  *CHAIR: TBC* | **Theme 15: Sustainability**  Nancy Rothwell S1.012 (Cabaret), 13:30-14:45  *CHAIR: TBC* | **Theme 16: Artificial Intelligence & Computer Science**  Nancy Rothwell 2A.014 (Cabaret), 13:30-14:45  *CHAIR: TBC* |
| Paper 1. Assessment design – enhancing formative feedback during module delivery – a vision, current plans and initial findings | Paper 1. Authentic assessments in civil engineering design coursework: the use of video submissions for technical calculations | Paper 1. Assessing Sustainability Self-Efficacy in Engineering Students using an Expectancy-value Framework | Paper 1. A critical evaluation of learning, teaching and assessment theories as applied to Computer Science |
| David Pontin | Dr Aled Wyn Davies | Charlene Clinton | Dr Kaniz Fatema |
| Paper 2. Supporting Engineering Educators: Improving Student Feedback Through Peer Action Learning | Paper 2. Evaluating the Impact of Assessment Methods Through Data-Driven Analysis | Paper 2. MAKERS: Providing real-world practice-based learning for students in a repair café to enable a just transition to net zero. | Paper 2. Integrating Generative AI in Design Education: Enhancing Creativity and Efficiency in Computer Aided Design (CAD) |
| Dr James Brooks | Dr Negar Riazifar and Mr Amir Cheshmehzangi | Dr Laura Fogg Rogers, Kat Corbett, Dr Joe Butchers | Dr Elizabeth G. Bishop |
| Paper 3. Enhancing the Analysis of Student-Provided Feedback through Large Language Models | Paper 3. Flipping Numerical Methods: Integrating Automated Assessment Tools in a Blended Learning Environment | Paper 3. Implementing Sustainable, Ethical and Inclusive Teaching into Undergraduate Engineering courses | Paper 3. Beyond Coding: Lean Learning for Real-World Software Engineering |
| Dr Matthew Blacklock | Dr. Masoud Seifikar | Harry Spears | Dr Robert Chatley, Dr Jason Bailey, Dr Estibaliz Fraca, Ivan Procaccini, Zaki Amin |
| Paper 4. Chatbots for Dialogic Feedback during Self-Study: The Importance of Contextual Information | Paper 4. Revolutionising Engineering Education: Authentic Learning, Industry-Driven Assessment, and Global Impact | Paper 4. Winning is for losers – re-discovering the lost art of incorporating failure into learning and assessment design. | Paper 4. Physics Education in the era of Generative AI |
| Alexandra Neagu, Dr. Peter B. Johnson, Dr Rhodri Nelson | Dr Mouna Chetehouna, Dr Eldad Avital | David Pontin, Tilimbe Jiya, Sabarinath Krishnan, Lydia Adigun | Dr Charanjit Kaur |
| **Break** 14:45-15:00 | | | |
| **Panel Discussion: Management Education in Engineering Schools – is there a distinctive difference?**  Dr Ian Stewart, Dr Kun Wang, Prof. Callum Kidd  Nancy Rothwell Theatre B (2A.041)  15:00-16:00 | | | |
| **Closing Remarks (Coffee, Tea & Biscuits)**  Nancy Rothwell Event Space 1, 16:00-16:30 | | | |
| ***EERN Network Meeting (optional)***  *16:30-17:00* | | | |