# The 12th eSTEeM Annual Conference: Enabling Student Success – Expanding Engagement in Scholarship
**19-20 April 2023**

**PROGRAMME**

**Day 1: Wednesday 19th April 2023**

| Time | Session | Room |
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| **9.15-10.00** | **Registration and Coffee** | **Medlar and Juniper** |
| **10.00-10.15** | **Welcome and Introduction** | **Hub Lecture Theatre** |
| | Mark Jones and Sue Pawley, eSTEeM Directors | |
| **10.15-10.30** | **Welcome Address** | **Hub Lecture Theatre** |
| | Diane Butler, Associate Dean (Academic Excellence) | |
| **10.30-11.15** | **Keynote Presentation** | **Hub Lecture Theatre** |
| | Harriet Dunbar-Morris, Dean of Learning and Teaching, University of Portsmouth | |

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| | **Co-Creation Success**

Approaches for staff-student co-creation will be presented. Attendees will be introduced to approaches that have been employed successfully at the University of Portsmouth and elsewhere to develop the student experience in partnership with students.

Firstly, during the keynote I will highlight relevant findings and practices from a QAA-funded collaborative enhancement project (Dunbar-Morris et al, 2021 and Dunbar-Morris et al, under review), which was focused on how student perceptions differed by ethnicity. To understand differing student perceptions of the quality of learning and teaching in the context of the Covid-19 pandemic, the universities of Portsmouth, Nottingham, Manchester Metropolitan, and Solent carried out a survey and conducted focus groups with students on a comparable set of courses across the four institutions. Recommendations included co-creating with students, taking account of student preferences, and providing scaffolding for independent distance learning.

In addition, I will present for example, the Charrette approach to curriculum design (Dunbar-Morris, forthcoming). This draws upon student experience data and promotes a research-based, evidence and data-informed approach to curriculum design/redesign by undertaking a staff-student workshop to tackle key issues together, such as the awarding gap. | |
| **11.15-11.30** | **Break** | **Medlar and Juniper** |
| **11.30-12.30** | **Parallel Session A: Workshop/Demonstration – Access, Participation and Success** | **CMR 1** |

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| | Nicole Lotz and Muriel Sippel | Designing and supporting more inclusive project modules | In an eSTEeM study involving students with a declared mental health disability, we identified tensions between student experiences and the requirements of the design and delivery of learning. The workshop will invite participants to discuss students' resolutions and possible further ideas to resolve such tensions through students support or curriculum design. | |
| **11.30-12.30** | **Parallel Session B: Workshop/Demonstration – Student Support** | | | **CMR 11** |
| | Vicki Brown and Cath Brown | "Personal tutor" pilot scheme on a Mathematics Level 1 module | We are trialling a "Personal Tutor" scheme on MST124. Students can self-refer or be referred by their tutors. The aim is to offer students more general support and advice. We are keen to learn from discussion and feedback in this workshop to inform this scheme's further development. | |
| **11.30-12.30** | **Parallel Session C: Workshop/Demonstration – Innovations in STEM Education** | | | **Online Session** |
| | Melanie Gregg and Vivien Cleary | Cultivating student led tutorials - The effects of a flipped online classroom | This study focused on developing a friendly online space where students were confident and comfortable to solve problems in a non-threatening environment. 86% of students surveyed found the activities enhanced their skills and many reported increased | *Delegates attending the conference in person are welcome to use CMR 15* |

| | | | engagement, enjoyment and confidence. | |
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| **12.30–13.30** | **Lunch** | | | **Medlar and Juniper** |
| **13.45–14.45** | **Parallel Session D: Short Oral Presentations – Access, Participation and Success** | | | **CMR 1** |
| **Chair: Daphne Chang** | Sarah Davies, Elaine McPherson, Mary Keys, Debra Croft and Russ Rimmer | Pathways and Intersections: Investigating awarding gaps on cross-faculty modules and degrees | Awarding gaps are evident for students who take the same module but who are on different degree pathways. In this project, we reviewed awarding gaps and explored student and staff experiences for three environment modules. The project yielded information on student preparedness, learning motivations, conceptions of learning and processing strategies. | |
| | Christopher Hutton and Fiona Aiken | Evaluation and improvement of print pack use for Environmental Science students | We will report progress from an ongoing project evaluating how students in secure environments or with a disability make use of print packs to address challenges with online study. We surveyed students, held focus groups with SST and ALs, and trained AL champions to help address the challenges identified. | |
| | Petra Wolf and Mary Keys | Improving gender balance through a combined STEM degree | UK universities have consistently reported gender imbalances in some STEM subjects.  The 'BSc (Hons) | |

| | | | Combined STEM' degree (R28) allows students who want to retrain in STEM access to funding and a flexible degree structure.  Findings from this project suggest that perceived 'flexibility' and choice are particularly valued by women when choosing STEM degrees. | |
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| **13.45-14.45** | **Parallel Session E: Short Oral Presentations – Continuation and Completion & Student Support** | | | **CMR 11** |
| **Chair: Arosha Bandara** | Sue Pawley and Cath Brown | Building a sense of community through social activities on the Maths and Stats Study Site | Research shows a strong sense of community can make a real difference in students' retention and success. But this is harder at a distance! In an extension to our 2021 project, we look larger communities and promoting vertical connections. Additionally, we present a deeper dive into student perceptions. | |
| | Rachel Slater, Elaine McPherson, Anne Campbell and Christine Pearson | Tailored tuition: Associate Lecturer examples of responding to students' needs | This presentation will discuss findings from a scholarship project on Accessibility and Inclusion in Tuition which explores the practices that STEM ALs employ to tailor their tuition to respond to the needs of individual students as they encounter them, focusing on the tutor perspective. | |

| | Michael Bowkis, Christine Gardner and Alexis Lansbury | Early Start for TM470 project students | Computing degrees have a compulsory capstone-project, but students face challenges if they've had a study-break. This project provides insight into the effectiveness of early-start interventions to aid progression and completion. Three successive cohorts have been analysed. Preliminary results will be presented together with a discussion of the key themes established. | |
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| **13.45-14.45** | **Parallel Session F: Short Oral Presentations – Assessment and Feedback** | | | **Library Seminar Rooms 1-2** |
| **Chair: Andrew Norton** | Gemma Warriner, Becca Whitehead and Fiona Moorman | Can we reduce anxiety of students sitting online exams? Sharing best practice between SPS and LHCS | Our project was a response to the anxiety expressed by students sitting remote exams. We will report on the exam preparation sessions and the post exam survey that we ran. We will discuss students' accounts of running out of time, explore potential causes and further support put in place. | |
| | Harriet Kopinska and Jenny Duckworth | Tutor and student experiences of marking grids for assessment on a L3 interdisciplinary module | Assessment criteria require clarity to allow consistent application by markers and easy interpretation by students. We investigated the use of marking grids for applying assessment criteria according to learning outcomes on the L3 module SDT306. We will discuss the results and | |

| | | | consider their implications for STEM modules using criterion-based marking. | |
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| | Anton Dil, Sharon Dawes, Lindsey Court, Richard Walker and Matthew Nelson | A demographic analysis of automated assessment feedback use for coding, with an examination of areas where students experience difficulty | In an online environment, students often rely on asynchronous feedback and tutor support to help make progress in their work. We report on the impact of automated feedback in the Java module M250 with respect to student attainment and satisfaction, and on demographic differences in use of this feedback. | |
| **14.45–15.00** | **Break** | | | **Medlar and Juniper** |
| **15.00–16.30** | **Student Engagement in Scholarship Workshop** | | | **Hub Lecture Theatre** |
| | In this plenary workshop, the eSTEeM Directors will be joined by members of the Student Research Project Panel (SRPP) to discuss the issues impacting students' participation in research, explore strategies to improve response rates, and consider how collaborations with students could enhance the Scholarship of Teaching and Learning in STEM. | | | |
| **16.30–17.15** | **Impact of Scholarship of Teaching and Learning Publication Launch and Networking** | | | **Hub Lecture Theatre** |
| | Join us in celebrating the launch of our Scholarship of Teaching and Learning Publication over some light refreshments with other conference delegates. | | | |
| **17.15** | **Close of Day One** | | | |

## Day 2: Thursday 20th April 2023

| Time | Session | | | Room |
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| **9.30-10.00** | **Registration and Coffee** | | | **Medlar and Juniper** |
| **10.00-11.00** | **Parallel Session G: Short Oral Presentations – Access, Participation and Success** | | | **CMR 1** |
| **Chair: Trevor Collins** | Carlton Wood, Lynda Cook and Anactoria Clarke | Supporting students effectively in an online teaching environment at the beginning of their student journey | Introducing a single online teaching session on the Y033 Access module was found to encourage subsequent student participation in online sessions that they attended on subsequent modules. We will present quantitative data showing this effect and qualitative data based on interviews conducted on students who had experienced the on-line teaching session. | |
| | Sarah Daniell and Lorraine Waters | What holds students back from attending live tutorials and using online forums on S294 and SK299? | It can be disappointing when students don't come to our tutorials and post on our forums. We have asked students on level two modules about their reasons for not participating and will explore if there is anything we can do differently and whether students experiencing mental ill-health are particularly affected. | |

| | Fiona Aiken and Paul Collier | Typical Support Seeking Behaviour of STEM Students, their Outcomes and Successes | We will share findings from an investigation into STEM student-initiated interactions with the Student Support Team from the final enrolment date until the first assignment is due in 21J. In 22J we are investigating an intervention that has been made for black students by the personal learning advisors, a group we have identified as not preforming as well following a slow response to a query. | |
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| **10.00–11.00** | **Parallel Session H: Short Oral Presentations - Innovations in STEM Education and Assessment and Feedback** | | | **CMR 11** |
| **Chair: Shailey Minocha** | Abi Kirk | Interactive Online Problem-Solving Sessions | This project investigates how to design an interactive problem-solving session based on speech. The design was informed by individual support sessions, tested before modification, and tested again for final evaluation. | |
| | Anne Jay, Marcus Badger, Robert Barnes, Brian Richardson and Geoff Austin | High Resolution Virtual 3D Geological Outcrops for Teaching and Learning | High resolution virtual geological outcrops open up field geology allowing those new to geology to learn a key skill, linking observations of what a rock is made of to large geological features and processes. Our project investigates the methods and feasibility of | |

| | | | presenting these to students for teaching and learning. | |
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| | Martin Braun | What is known about how to write online maths heavy physics exams and how to prepare students for them? | The upheaval caused by Covid afforded an opportunity to reflect on traditional closed book exams resulting. This presentation will report on a systematic review of related academic and grey literature concentrating on math heavy physics examinations to summarize what guidance is given to exam writers, educators and HE examinees themselves. | |
| **10.00-11.00** | **Parallel Session I: Short Oral Presentations – Student Support & Continuation and Completion** | | | **CMR 15** |
| **Chair: Sally Jordan** | Anne-Katrin Klehe | Forming a sense of belonging to aid retention at a level 2 Physics module | The student drop-out rate in S217, a core level 2 module is high (30%-40%). Simultaneously, less than 50% of our Physics students report a sense of belonging (NSS survey '21). I investigate whether the offer of weekly meetings improves the students' sense of belonging, their retention and/or the student outcomes. | |
| | Rachel Hilliam, Emma Steele, Carol Calvert and Di Haigney | Statistics anxiety: what is it and how do we measure it? | Whilst there are many scales for measuring statistics anxiety these not particularly relevant for online and distance learning. The talk will outline a | |

| | | | scale we have developed to measure statistics anxiety, based on eight key factors, including online engagement and software anxiety. | |
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| | Elouise Huxor and Theodora Philcox | The Postcard project – an intervention to improve student success on level 1 design | Our project aims to improve retention by ensuring students have regular engagement with their tutor at least once per week through the delivery of a digital postcard. These present bite-sized, visual information that highlights key learning points from the block materials on the planner for that week. | |
| **11.00–11.15** | **Break** | | | **Medlar and Juniper** |
| **11.15–12.00** | **Poster Presentations** | | | **Hub Lecture Theatre** |
| **12.00–13.00** | **Lunch** | | | **Medlar and Juniper** |
| **13.00–14.20** | **Parallel Session J: Short Oral Presentations – Employability, Post-graduate Student Experience and Student Engagement** | | | **CMR 1** |
| **Chair: Tom Olney** | Alan Cayless and Arabella Nock | Learning Logs: Employability skills for remote experiments | Learning Logs are a forum-based skills portfolio recording tool built into the module SXPS288 Remote Experiments in Physics and Space.  This study uses analytics and student feedback to assess the effectiveness of the Logs and | |

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| | | | looks at ways of encouraging and increasing student participation. | |
| | Janet Haresnape and Ruth Gilbert | Evaluation of a programme of employability-focussed workshops run in summer 2022 for biology students | We ran a series of employability-focussed workshops for biology students during summer 2022. Feedback collected from participants indicated these had helped students appreciate the skills required for biology-related jobs, and had also provided continuity of learning opportunity between modules and helped participants feel part of a community of biology students. | |
| | Ann Grand, Victoria Pearson, Iain Greenlees, Snezana Levic and Joanna Shelton | Collaborative leadership in a research group: what does it mean, how is it practised and what are its impacts on post-graduate students? | Research increasingly involves engagements among multiple communities that bring with them a variety of values and aims, which calls for both collaborative working and collaborative leadership. We aimed to understand what collaborative leadership means, how it is practised and its impacts on the post-graduate students who will be the next generation of research leaders. | |
| | Sarah Davies, Cat Cowie, | Embedding research into teaching: practices, motivations and impacts | Academics often embed their own research in their teaching – sharing their passion for the subject, connecting | |

| | | | students with cutting-edge knowledge, and enabling them to experience authentic practices. This project explores the practices and motivations of embedding environmental science research into teaching and the impacts on students and staff. | |
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| **13.00–14.00** | **Parallel Session K: Workshop/Demonstration – Access, Participation and Success** | | | **CMR 11** |
| | Karen Kear, Helen Donelan, Jon Rosewell | Online tutorials: addressing the challenges of active student participation | An interactive session exploring the challenges around active student engagement in online tutorials. Findings of the Synchronous Online Learning (SOL) project will be presented, followed by small group and plenary sessions exploring: why students do/don't actively participate; approaches to encourage engagement; and ways to support module teams, tutors and students. | |
| **13.00–14.00** | **Parallel Session L: Workshop/Demonstration – Inclusivity** | | | **CMR 15** |
| | Silvia Varognolo, Alice Moncaster, Hedieh Jazaeri, Fiona Gleed and Jo Smedley | Rehearsing with the Mechanicals: convenience and conventions in distance learning group work | Team projects are a core requirement for engineering, as a course and as a career, but pose challenges for inclusivity, particularly in distance-learning. Our workshop provides an opportunity to explore proposed guidelines by joining a team, working in- | |

| | | | person or online, to complete a task focused on sustainable design. | |
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| **14.20–14.30** | **Break** | | | **Medlar and Juniper** |
| **14.30–15.00** | **eSTEeM Scholarship Projects of the Year and Best Poster Presentation Awards followed by Closing Remarks** | | | **Hub Lecture Theatre** |
| **15.00** | **Conference Close** | | | |