

NANAMIC Annual Conference

Tuesday 25 June 2024 9.50am – 4.00pm

Free to members via ZOOM

**Keynote Speaker:
Emma Bell**

Standing on the Shoulders of Giants

In this session we will explore the richness of professional development in FE maths through time, showing how the current work in the sector is informed and enriched by what has gone before. We will also peer into the future - what could (and should) FE Maths CPD look like in 10 years' time?

Emma has taught and managed maths in secondary schools and Further Education, as well as leading PGCE studies for teaching in the lifelong learning sector. She was Centre Lead for the Centres for Excellence in Maths (CfEM) programme at Grimsby Institute.

She delivers training both nationally and internationally and is especially proud of her award-nominated development of the Focused 15 scheme of learning for GCSE maths resit.



Emma Bell is the programme leader for FE CPD with MEI, and is also NCETM's Director for Post-16 GCSE/FSQ.

See the following pages for planned workshops

The conference will include a short AGM with an update on progression towards a single association.

Please complete the booking form to save your place

<https://forms.gle/SZ7ANoMUYgvMXBwh6>

Payments can be made using a credit/debit card through our website

: [Donations \(nanamic.org.uk\)](https://nanamic.org.uk/donations)

Cost: Members FREE, Non-members £20 inclusive of membership fee

Please note: this is the **only** maths subject association conference particularly for teachers in the FE and Skills sector!

Fun with Platonic Solids

In this session we will participate together in a range of activities centred around the Platonic Solids. These five solids have been studied and written about for thousands of years. As we get to know these better, we will be motivated to engage in approaches from a range of mathematics, utilising at most KS4 mathematical skills.

David Martin is a retired mathematician and mathematics educator. He has been a mathematics researcher; mathematics education consultant; FE teacher, teacher trainer and external examiner. In retirement he works nationally with the retired to engage and reengage them in mathematics.



This worked for me – GCSE resit maths

The presentation will include a roundup of the content of the book and include detail of some of the resources and ideas that have been shared. Finally, there may be a follow up so, if time allows, what has worked for you? Contact details will be supplied!

Jenny Stacey has worked in FE for almost 20 years, teaching mathematics and occasionally ESOL to both adults and 16- to 18-year-olds. She has recently completed a Doctorate in Education at Sheffield Hallam University, entitled 'Adults studying GCSE mathematics in FE: self-efficacy, anxiety and examination grades.' Her research interests the delivery of mathematics to learners on non-traditional pathways in education, especially those whose first language is not English. Jenny has two chapters in a new publication, edited by Fiona Allan, titled "This worked for me!" from the ATM which is designed to help GCSE resit maths teachers.



Teaching Adult Learners

Join us for a dynamic session designed to stimulate maths teachers of adult learners or those who just want to find out more about the government's Multiply initiative. Through collaborative discussions and practical activities, participants will investigate enrichment techniques and innovative ways that Multiply has ignited interest in maths for hard-to-reach adults.

Martin is a Maths Education Support Specialist with MEI and leads on adult maths and multiply development. After spending 20 years teaching and leading maths in an FE college, he now leads on CPD with adults and 16-19 students. Martin also leads on the FE Maths Challenge a competition for FE students that are still working towards a grade 4 GCSE, over 32,000 students have competed this year.



The archive: STEM Learnings' maths resources collection

STEM Learning is home to thousands of free-to-access, quality-assured classroom resources to support the teaching and learning of science, technology, engineering and mathematics (STEM) subjects. In 2024, STEM Learning celebrates turning 20. Join us for a whistle-stop tour of our favourites in the collection: from SMILE Cards to The Standard Units; GAIM to Graphing Stories and many, many more.

An experienced teacher of secondary mathematics, Michael is the Education Lead for Mathematics at STEM Learning, based at the National STEM Learning Centre in York. He provides mathematics expertise to support many aspects of STEM Learning's work, including resource development and curation, CPD delivery, enrichment and careers activities and through our STEM Ambassador programme.



Supporting SEN Learners

In this session, we will look at ways of supporting our SEN learners in the FE Maths' classroom. We'll focus on things that are easy to put in place but that have the most impact over the academic year. We will look at the under-recognised effect cognitive load plays on learning and how to reduce this, retaining high expectations and adaptive learning vs differentiation. We'll also look at dyscalculia - an area many FE Maths' practitioners tell me they'd like further guidance on - with the aim of helping attendees feel more informed about this specific learning need and from where they can find more support. We will end the session with a few quick(ish) wins to take away and implement in our classrooms, questions and, time permitting, contributions from other attendees.

For a decade, Tom has worked as a Lecturer, Programme Lead and Curriculum Lead, teaching students on GCSE Maths' resit or Functional Skills in various colleges across the UK. Being dyslexic himself, Tom is an advocate for an inclusive and an adaptive classroom, and this experience has given him a strong insight into how best we can support our SEN learners to achieve in the Further Education context. Tom has contributed to CPD in this area both within the colleges he's worked at and to wider audiences to help practitioners support and include learners of all kinds.



The use of technology

Jude will explore how technology can be used effectively as a pedagogical tool to enhance teaching, learning and assessment in maths. She will also take a look at generative AI tools and how they can be used to support teachers and learners in a variety of ways.

Jude is a Maths Education Support Specialist at MEI. After university she worked as a computer programmer for several years before retraining and starting a teaching career in primary school. Following this she worked in an adult college in SE London teaching Core Maths, GCSE and Functional Skills to adults. She was an AMSP Area Coordinator for two years and now delivers and creates resources for FE CPD, Multiply and Core Maths within her role at MEI.



Approaches to mathematics: new insight into the practice of embedding

The relative value of different approaches to embedding and the impact on learning has long been debated. We will re-examine some of the issues, in the light of new evidence from a recent research project about mathematics in technical qualifications (T levels). By using a competency-based approach based on a framework of ten General Mathematics Competencies (GMCs), the intention in T levels is for all students to engage with mathematics through applications in authentic vocational contexts. Preliminary research findings suggest that the GMC framework is an effective tool for capturing the range of mathematics in different T levels but that there is variation in the embedded processes used and the visibility of mathematics for students. We will examine these processes, considering how teacher confidence and different environments affect learning, before discussing the wider implications for teaching mathematics in FE colleges.

Diane is a partially retired Assistant Professor in the School of Education at the University of Nottingham. She has worked on various mathematics education research projects over the last 12 years, including the Mathematics in FE Colleges (MiFEC) project, the Whole College Approach and the Teaching for Mastery trials. Previously Diane worked in Further Education colleges for over 20 years, in various management and teaching roles, before undertaking a full-time doctorate at the university and then progressing to a research position. She has researched and written about various aspects of post-16 mathematics but is particularly interested in how different teaching approaches, organisational strategies and leadership influence the student experience.



Making the most of NRICH: Maximising the potential of its Student Solutions

Did you know you can access hundreds of student solutions on NRICH? Join Director of NRICH Dr Ems Lord to explore the different ways that settings maximise the potential of its huge resource bank of student solutions, and its Live Problems, to help build and embed essential problem-solving skills as well as the key qualities required both within and beyond the mathematics classroom, especially being more resilient, developing a willingness to work flexibly and building better collaborative working skills.

Dr Ems Lord was appointed Director of NRICH in 2015, the award-winning mathematics outreach collaboration between the Faculties of Mathematics and Education at the University of Cambridge. Ems is also a Research Fellow in the Sciences at Clare Hall College, University of Cambridge, and the current Chair of The Mathematical Association (having previously been President). Ems is a fellow of The Institute of Mathematics and its Applications and a Founding Fellow of the Chartered College of Teachers as well as being a regular contributor to the All-Party Parliamentary Group for the Teaching Profession and a member of the Joint Mathematical Council. Ems has taught mathematics across the key stages, from Early Years to A Level Further Mathematics, and has worked in a variety of settings including a hospital school. Her previous roles include supporting schools as a Leading Mathematics Teacher, local authority consultant and as a Chartered Mathematics Teacher. Prior to joining NRICH Ems led one of the largest Masters-level Mathematics Specialist Teacher (MaST) programmes and has taught mathematics education on both BEd and PGCE teacher programmes.

