

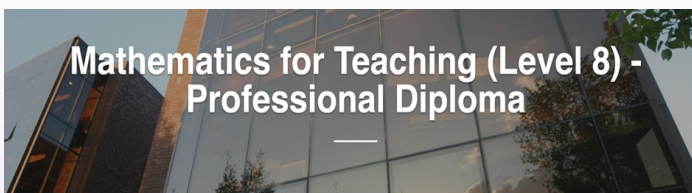
National Centre for STEM Education

UL leads successful bid to deliver the Professional Diploma in Mathematics for Teaching

On 4 November 2020 the Minister for Education Norma Foley TD and the Minister for Further and Higher Education, Research, Innovation and Science Simon Harris TD announced the launch of a new initiative that will see three new education programmes to upskill registered post-primary teachers to teach mathematics, physics and Spanish:

<https://www.education.ie/en/Press-Events/Press-Releases/2020-press-releases/PR20-11-04.html>

The Professional Diploma in Mathematics for Teaching (PDMT) was selected for funding over two cohorts of out-of-field teachers, with 115 places to be funded in the first cohort. The programme is designed by EPI*STEM in UL, leading a consortium comprising NUI Galway, Dublin City University, Technological University Dublin, Cork Institute of Technology, Letterkenny Institute of Technology, and Waterford Institute of Technology. EPI*STEM also led the design and delivery of the original version of the PDMT, which was offered from 2012-2020 and graduated 1078 teachers who now meet Teaching Council curricular subject requirements for teaching mathematics at the highest level. The award of this second round of funding, amounting to around €1.3 million, recognises the expertise of EPI*STEM and partner institutions in designing and delivering high-quality professional development for out-of-field teachers of mathematics.



Home | Course | Mathematics for Teaching (Level 8) - Professional Diploma

Course Details

Available: Part-Time	Contact(s):
Duration: 2 Years	Name: Ms Peggy Lynch
Award: Professional Diploma	Email: pdmt@ul.ie
Qualification: Level 8	Tel: +353 (0) 61 234786/234785
Faculty: Education and Health Sciences Science and Engineering	<input type="button" value="Apply Now"/>
Course Type: Taught Professional/Flexible	<small>Read instructions on how to apply</small>
Fees: For Information on Fees, see section below.	



NEWSLETTER

WINTER 20/21

International Commission on Mathematical Instruction

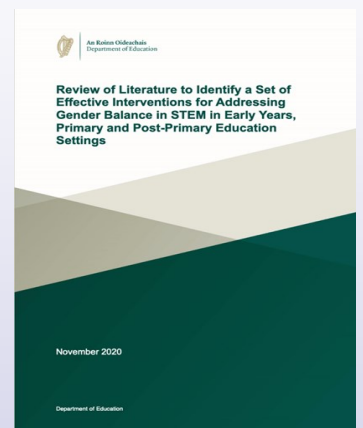
Director of EPI*STEM, Professor Merrilyn Goos, has been re-elected for a second 4-year term as Vice-President of the International Commission on Mathematical Instruction (ICMI). She joins the incoming Executive Committee comprising President Frederick Leung (Hong Kong SAR), Secretary-General Jean-Luc Dorier (Switzerland), second Vice-President Anjum Halai (Pakistan), and members-at-large Marta Civil (USA), Patricio Felmer (Chile), Mercy Kazima (Malawi), Nuria Planas (Spain), and Susanne Prediger (Germany). The Executive Committee also includes three ex officio members: ICMI past President Jill Adler (South Africa), President of the International Mathematical Union (IMU) Carlos Kenig (USA), and IMU Secretary Helge Holden (Norway). Paolo Piccione (Brazil) continues as ICMI liaison person from the IMU.

ICMI is a worldwide organisation devoted to research and development in mathematics education at all levels.



Gender Balance in STEM project

EPiSTEM was contracted by the Department of Education and Skills to review literature to identify a set of effective interventions for addressing gender balance in STEM in primary and post primary education settings. The research team led by Professor Merrilyn Goos included Dr Veronica Ryan; Prof John O'Donoghue; Dr Ciara Lane; Dr Keelin Leahy; Dr Gráinne Walshe; Tracey O'Connell (Masters student) and Achmad Nizar (PhD candidate).



The Gender Balance in STEM report was launched on 17 November 2020 by Minister for Education Norma Foley TD:

<https://www.education.ie/en/The-Education-System/STEM-Education-Policy/>

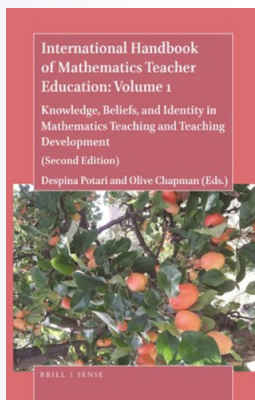
The chair of the Gender Balance in STEM group, Margie McCarthy, a Chartered Engineer and Head of Education and Public Engagement with Science Foundation Ireland said: “The goal of the Gender Balance in STEM group is to guide national actions that will ensure STEM education in Ireland is world class in improving gender balance and inclusion effectively for our young people.

“This isn’t easy, otherwise the problem would have been solved many years ago. This review is the foundation to ensuring these actions are evidence-based and informed by the knowledge of why these imbalances are happening and what works best in addressing them.”

Lead author of the research, Merrilyn Goos, Professor of STEM Education and Director of EPI*STEM at University of Limerick said: “STEM education is a shared responsibility across education departments and other government agencies, schools, teachers, families, industry and business, and Communities.”

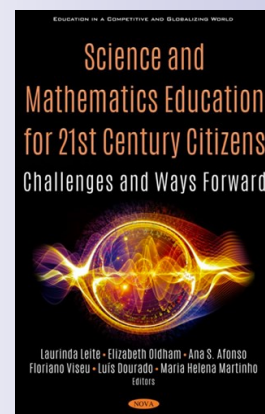
Latest Publications

Goos, M., Bennison, A., Quirke, S., O’Meara, N., & Vale, C. (2020). Developing professional knowledge and identities of non-specialist teachers of mathematics. In D. Potari & O. Chapman (Eds.), *International handbook of mathematics teacher education* (2nd ed.), Volume 1: Teacher knowledge, beliefs and identity in mathematics teaching and its development (pp. 211-240). Rotterdam, The Netherlands: Brill.



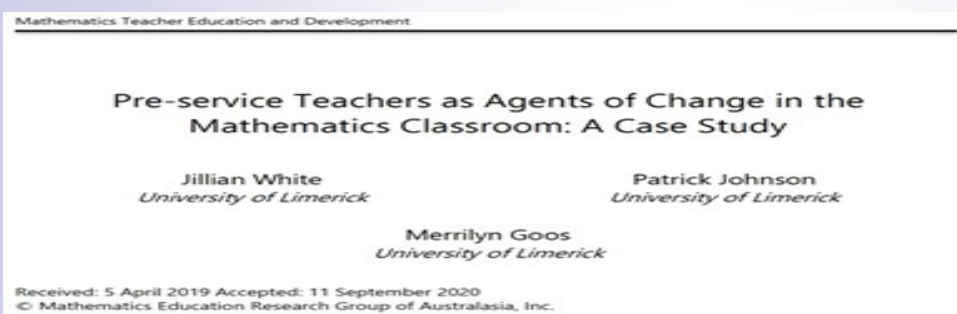
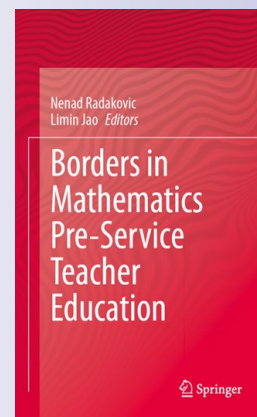
This first volume of the International Handbook examines teacher knowledge, beliefs, identity, practice and relationships among them. These important aspects of mathematics teacher education continue to be the focus of extensive research and policy debate globally.

Walshe, G., Johnston, J., & Goos, M. (2020). Promoting 21st century skills through STEM integration: A comparative analysis of national curricula. In L. Leite, E. Oldham, A. S. Afonso, F. Viseu, L. Dourado, & H. Martinho (Eds.), *Science and mathematics education for 21st century citizens: Challenges and ways forward*. Hauppauge, NY: Nova Science Publishers.



This book addresses the challenges that face science and mathematics education if it is to be relevant to 21st century citizens, as well as the ways that specialists from several countries around the world think it should deal with those challenges.

Goos, M. (2020). Mathematics crossing borders: A comparative analysis of models for integrating mathematics with other disciplines in pre-service teacher education. In N. Radakovic & L. Jao (Eds.), *Borders in mathematics pre-service teacher education* (pp. 91-115). Cham, Switzerland: Springer. Chapters include the following topics: explorations of mathematics across topics (e.g., geometry, algebra, probability) and with other disciplines (e.g., science, the arts, social sciences); challenging gender, cultural, and racial borders; exploring the structure and curriculum of teacher education programs; spaces inhabited by teacher education programs (e.g., university, community); and international collaborations and programs to promote cross-cultural sharing and learning.



White, J., Johnson, P., & Goos, M. (2020). Pre-service teachers as agents of change in the mathematics classroom: A case study. *Mathematics Teacher Education and Development*. <https://mtd.merga.net.au/index.php/mtd/article/view/477>



New Starters to EPI*STEM

Ciara Lane

Ciara's educational background comprises a BA (Joint Honours) Degree in Mathematical Studies and English from University College Cork (UCC) and a PhD in Mathematical Studies from UCC. Her PhD thesis was entitled: 'An Investigation of Post-Primary Students' Images of Mathematics'. Since 2013, Ciara has worked in a variety of roles at the University of Limerick and EPI*STEM including teaching various mathematics modules, tutor at the Mathematics Learning Centre, school placement tutor, teaching co-ordinator for the Professional Diploma in Mathematics for Teaching (PDMT) and mathematics projects officer at EPI*STEM.

Ciara is currently employed at EPI*STEM as a Postdoctoral Researcher in Mathematics Education leading a HEA funded project to design and develop professional development resources for mathematics teachers.

Ciara's research interests include affective issues in mathematics education, mathematics teacher education, teachers' action research and teacher professional development.



Martina Ryan

Martina started working in the University of Limerick in 2019, starting off as an Administrator in Information Technology Division and then moving onto a Programme Communication and Administration Support role for the Tactical Stabilisation project in Academic Registry. Martina is now the Administrator in EPI*STEM.



Tracey O'Connell

Since 2018 Tracey has been working at EPI*STEM, the National Centre for STEM Education at the University of Limerick. Previously she was the WiSTEM2D Programme Co-Ordinator and has been working as a research assistant since, where she works on projects with colleagues regarding STEM Education initiatives and research to aid in improving education of teachers and students. Tracey completed her undergraduate degree in Technology education in the University of Limerick. She is in the final stages of completing her studies with the EHS Structured Masters Programme in the University of Limerick.



Stephen Comiskey

Stephen completed his undergraduate degree in Science Education at Dublin City University. After this he took up a full-time teaching position in Co. Offaly before pursuing his PhD in DCU under Dr. Eilish McLoughlin. His PhD examined second level teachers' attitudes and beliefs towards technology integration. Stephen was also a Research Fellow in Trinity College Dublin working in the Innovative centre "Learnovate" where he worked with high performance start-ups, SMEs and other industry partners researching novel ways to leverage research into commercially viable businesses. Stephen has lectured on the Science Education programme in UL and is currently the Projects Officers for a Junior Cycle Physics Upskilling programme in EPISTEM. Stephen's research interest includes: Technology in Education; Gamification; Professional Development; Innovation; Technological Pedagogical Content Knowledge and Teachers' Attitudes and Beliefs Towards Technology.



www.epistem.ie

Please see our website www.epistem.ie for all news items, resources and events

