

Digital Technologies (DT) for **Doing**, Learning and Teaching Mathematics

AMET Webinar

Wednesday, 17th July 2024

4pm – 5pm



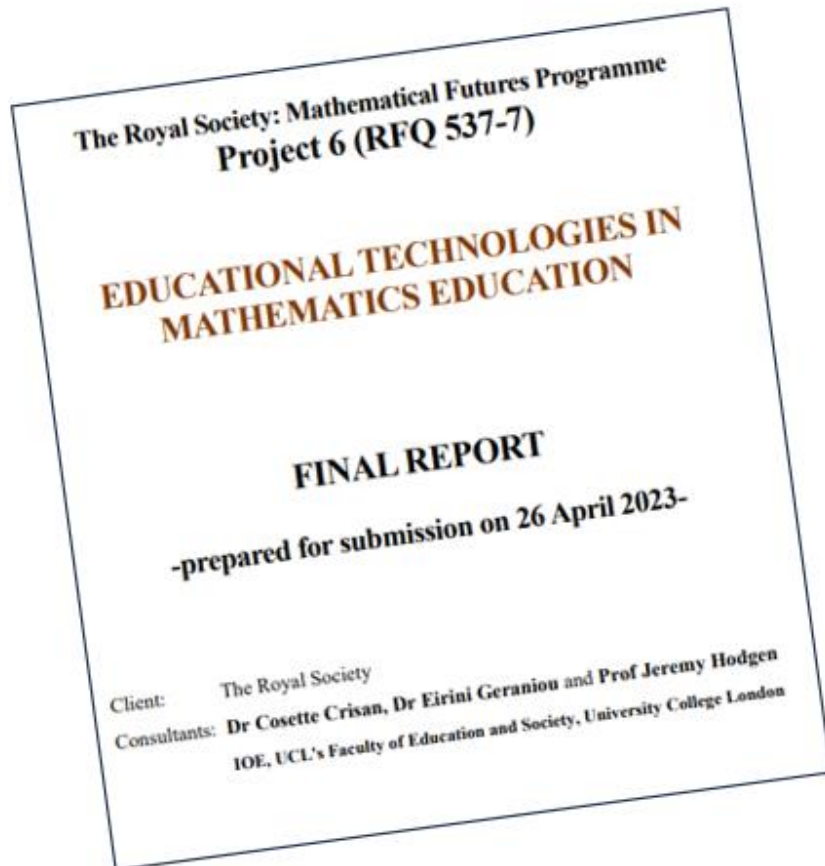
webinars to follow

Cosette Crisan and **Eirini Geraniou**
c.crisan@ucl.ac.uk and e.geraniou@ucl.ac.uk

UCL Institute of Education
University College London



Educational technologies in mathematics education



The Royal Society's
[Mathematical Futures programme](#)

link to [report](#)

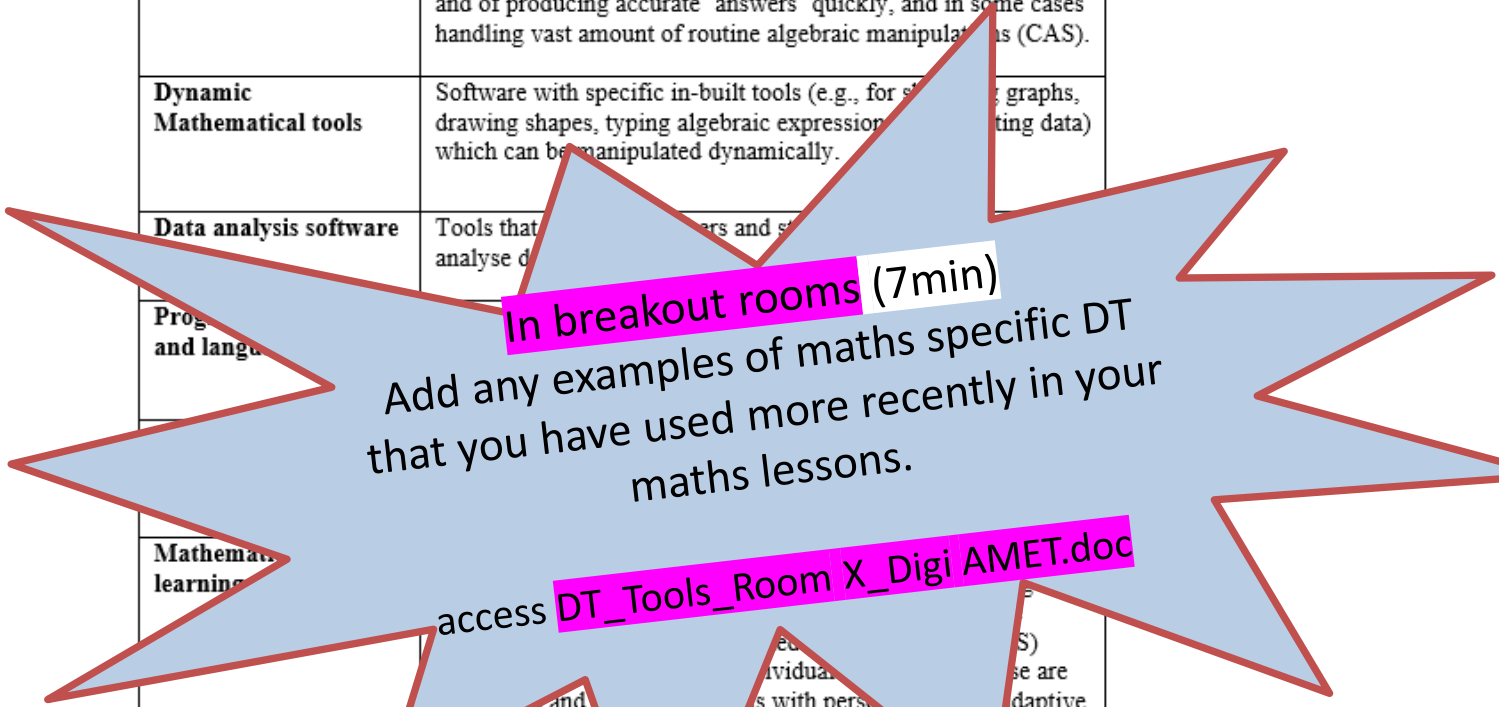
In this workshop you will:

- ❖ learn out about various *types* of digital technologies (DT) intrinsic to mathematics education
- ❖ find out about the potential contributions of each of these *types* of tools with respect to the doing, learning and teaching mathematics
- ❖ reflect upon the potential value of *mathematics-specific DT tools* via hands-on mathematics activities

Take aways

- ✓ **Your learning in this session 😊**
- ✓ **Our Royal Society Report**
- ✓ **Classification tables *Types of DT for mathematics education & Contributions of DT to mathematics education activities* for sharing in department**
- **Contacts for a Digi Community of Practice (CoP)**

Types of DT - Tools	Categories	A brief description of their potential for maths education
Mathematics-specific DT tools	Tools for outsourcing the <u>maths</u>	Tools that outsource processing power and are capable of performing numerical calculations and algorithmic processes and of producing accurate 'answers' quickly, and in some cases handling vast amount of routine algebraic manipulations (CAS).
	Dynamic Mathematical tools	Software with specific in-built tools (e.g., for sketching graphs, drawing shapes, typing algebraic expressions, plotting data) which can be manipulated dynamically.
	Data analysis software	Tools that help learners and students to analyse data.
Programs and languages	Programming languages	Tools that help learners and students to analyse data.
	Mathematics learning tools	Tools that help learners and students to analyse data.
AI tools	AI-based calculators	AI-based calculators that take mathematical notation as input as text, translates it and returns the answers in numerical form.
	AI-based learning tools	ChatGPT is an OpenAI language model which could be used to answer parts of questions, to check, and offer support for learners' mathematical reasoning.



In breakout rooms (7min)

Add any examples of maths specific DT that you have used more recently in your maths lessons.

access [DT_Tools_Room X_Digital MET.doc](#)

DT tools for Doing, Learning and Teaching Mathematics

In breakout rooms (10min)

Do some maths with a DT tool, do
some reading, take some notes

access [DoingMaths_Room X Digi AMET.doc](#)

Using Digital Technologies for doing, *learning* and *teaching mathematics* - an evidence-based and research-informed asynchronous three-hour online workshop, to support an understanding of the value of digital technologies in mathematics education.



Coming up
@UCL IOE