

ETC22: Communication and Diversity in Mathematics Education: Exploring Language, Meaning Making and Methodologies

University College Cork

24th – 27th August 2026

Key Information – UCC

UCC is located in the western part of Cork city, 1 km from the city centre. The main parts of UCC's campus are along Western Road and College Road. The conference will be hosted in the historic Main Quadrangle (Main Quad, Number 59 on the campus map) at UCC. Located at the heart of the campus, the Main Quad is one of UCC's most iconic spaces and provides a unique setting for conference sessions. The venue is within easy walking distance of lecture theatres, catering facilities, water refill stations, and other campus amenities.

As part of UCC's commitment to sustainability, several environmentally responsible practices are in place across the campus. Conference materials are provided digitally, and printed programmes and handouts are not available. In addition, single-use and some plastic items are not sold on campus. Delegates are encouraged to bring a reusable water bottle and reusable coffee cup for use during the conference. Tea, coffee and water will be provided during conference breaks. Water refill stations are available throughout the campus, and reusable cups can be borrowed from UCC for the duration of the conference if required (€2 deposit required). We thank delegates for supporting UCC's sustainability practices and helping to reduce waste during the conference.

Some useful links:

- UCC Visitor Information: <https://www.ucc.ie/en/discover/visit/>
- Conference Website: <https://www.ucc.ie/en/etc22/>
- UCC Map:
https://www.ucc.ie/en/media/discoverucc/maps/UCCCampusMap_English_2023.pdf

Wi-Fi Access

University College Cork uses eduroam as its campus-wide Wi-Fi network. Delegates from institutions that participate in the eduroam network can connect using their home institution login credentials. If you do not have access to eduroam, temporary visitor Wi-

Fi will be arranged for the conference. Please speak to a member of the [ETC22 Local Organising Committee](#), who will assist you in obtaining visitor access for the duration of the conference.

Conference Rooms

Conference sessions will take place in a range of teaching rooms in the West Wing. All rooms are equipped with a whiteboard and standard presentation facilities. Room layouts vary. West Wing 3 (W3) accommodates up to 20 delegates and has tablet-chair seating. West Wing 5 (W5), West Wing 6 (W6) and West Wing 9 (W9) are larger lecture rooms with fixed, tiered seating and blackout facilities. All rooms are accessible to audience members using wheelchairs. Please note that the podium in West Wing 3 is wheelchair accessible, while the podiums in West Wing 5, West Wing 6 and West Wing 9 are not. If you require an accessible presenting arrangement or have any other accessibility requirements, please contact the [ETC22 Local Organising Committee](#) in advance so that appropriate arrangements can be made.

Audio-Visual Facilities

All conference rooms are equipped with a data projector, a lectern PC, and an HDMI connection for presenters wishing to use their own laptop. Please note that USB-C connections are not available. If your laptop requires a USB-C adapter or another video adapter to connect via HDMI, please ensure you bring this with you.

Presentation Software

The lectern PCs run Windows 11 and are equipped with standard Microsoft Office applications, including PowerPoint, Word and Excel, together with a PDF reader. Windows Media Player is available for the playback of standard video and audio files. If your presentation includes embedded video or audio, we recommend testing it in advance and bringing a backup copy of your presentation and media files on a USB drive. Presenters wishing to use their own laptop may connect via the HDMI connection provided in each room. Please note that USB-C connections are not available, so if your device requires an adapter, please bring this with you.

Paper Presentations

For each paper we plan 25 minutes. There will be a 10-minute presentation followed by 15 minutes of discussion. Each Paper session will also include 30-45 minutes for a more general and summarizing discussion.

In line with CERME and ETC tradition, all papers are available prior to the conference, so that everyone can read them beforehand. The papers are available via the relevant link in each session in the timetable. This means that there is no need for long presentations,

and we kindly ask you to plan for a maximum of 3 slides and to ensure that what you wish to share fits into the allocated 10 minutes. While you are free to focus on what you deem most important, the suggested approach is to organise the slides as follows: (1) explain the aim of the study and its motivation; (2) outline the key results / reflections; (3) pose questions that you wish to discuss with your colleagues OR pose challenging questions OR seek colleagues' advice about some point OR whatever you feel is most important to your research at this point.

Posters and Design-Posters

Posters and design posters will be presented in a joint poster session. Please bring your (design) posters printed out, preferably in DIN A0 format. You are welcome to let us know if you need a table, for example to present resources from your work. The poster contributions will be made available to all participants in advance so that everyone can read them before the conference.

Monday 24th August: Early Career Researcher Day

Time	Activity	Location
12.00-13.00	Registration	West Wing, Main Quad
13.00 – 14.30	Sharing Your Research: Presentation, Positioning and Professional Engagement. Facilitators: Prof Marie Therese Farrugia; Melina Fabian	W3
14.30 – 15.00	Tea/Coffee, Sandwiches	West Wing, Main Quad
15.00 – 16.30	Deepening Your Research Practice: Methodology, Publication and Impact. Facilitator: Prof Jenni Ingram	W3

Tuesday 25th August

Time	Activity			Location
9.00 – 10.00	Registration, Tea/Coffee			West Wing, Main Quad
10.00 – 10.30	Welcome & Opening			W6
10.30 – 12.00	Plenary 1 - Prof Hamsa Venkatakrishman Considering Instructional Communication Chair: Marie Therese Farrugia			W6
12.00 – 13.00	Lunch			Main Restaurant
13.00 – 15.00	Paper Session 1			
	Session 1 (Papers) 1. “Just say it” – Structures of collective argumentation in undisturbed block play situations.	Session 2 (Papers) 1. The pedagogical practices that bilingual teachers use to support multilingual	Session 3 (Papers) 1. Explaining a scalar product not equal to zero: An analysis of students’ explaining processes using the epistemic matrix.	Session 1: W3 Session 2: W5

	<i>Esther Henschen, Anna-Marietha Vogler, and Martina Teschner</i> 2. Error as shared object of meaning making: Epistemic framing in representational comparison. <i>Claire Poh</i> 3. The question of functionality: A methodological approach to learners' use of language in mathematical contexts. <i>Melina Fabian</i>	students' mathematical understandings. <i>Camilla Justnes, Danyal Farsani and Tamsin Meaney</i> 2. Relational dimension between mathematics and language: a case study with Chinese students in Italian multilingual classroom. <i>Giuseppe Bianco and Benedetto Di Paola</i> 3. Investigating learning-as-process in bilingual mathematics classrooms: Evidence, cognition and methodological challenges. <i>Máire Ní Riordáin</i>	<i>Olga Lomas, Kirstin Erath and Lena Wessel.</i> 2. Setting aside images and teacher sense-making in a Number Talk. <i>Marc Husband, Evan Throop-Robinson and Allison Tucker</i> 3. From image to language: Teachers' collective articulation of spatial reasoning. <i>Emily Macmillan and Jenni Ingram</i>	Session 3: W9
	Chair: Hanna Haydar	Chair: Petra Källberg	Chair: Pauline Tiong	
15.00 – 15.30	Tea/Coffee			West Wing, Main Quad
15.30 – 17.00	ST Session 1			
	ST1: Interaction and discourse in mathematics	ST2: Multilingualism and language varieties in mathematics learning	ST3: Methodological and theoretical approaches in mathematics education research	ST 1: W5 ST 2: W9 ST 3: W3
	Chairs: Ingó Gíslason & Anna-Marietha Vogler	Chairs: Frode Rønning & Alexander Schüler-Meyer	Chairs: Kirstin Erath & Melina Fabian	

Wednesday 26th August

Time	Activity			Location
8.30 – 10.30	Paper Session 2			
	Session 1(Papers) - It is much better to ask: Uncertainty and vagueness in mathematics teacher education. <i>Tamsin Meaney and Silke Lekaas</i> - Teachers' beliefs about multilingual approaches in primary (mathematics) education to newcomers. <i>Hanneke Baart, Arthur Bakker, Elma Blom and Jantien Smit</i> - Defining communication-responsive mathematics teaching and classrooms. <i>Jenni Ingram and Kirstin Erath</i>	Session 2 (Papers) - What mathematical symbols are not telling us. <i>Sandra Hughes, Sheena Tan and Pauline Tiong</i> - On classroom practices for negotiating the meaning of representations. <i>Sebastian Kollhoff</i> - Semiotic uses of the equal sign in Tamazight and school mathematics. <i>Veronica Albanese and Yusef Harrouch-Mohamed</i>	Session 3 (Papers) - Mathematics-related language self-efficacy among bachelor's students and master's students. <i>Swantje Wess</i> - Heuristics for conceptual development through multilingual mathematics activities. <i>Petra S Källberg and Ulrika Ryan</i> - A framework for evaluating small-group, student-to-student discourse. <i>Sarah Quebec Fuentes.</i>	Session 1: W3 Session 2: W5 Session 3: W9
	Chair: Marc Husband	Chair: Anthony Essien	Chair: Evan Throop-Robinson	
10.30 – 11.00	Tea/Coffee			West Wing, Main Quad
11.00 – 12.30	Plenary 2 - Prof Ove Gunnar Drageset Communication in Mathematics: Big Ideas and the Challenge of Impact Chair: Kirstin Erath			W6

12.30 – 13.30	Lunch	Main Restaurant
13.30 – 15.30	Data Session – Prof Jenni Ingram, Prof Kirstin Erath, Dr Elizabeth Kimber and Dr Emily Macmillan Data sessions are a collaborative practice and an opportunity for researchers with different methodological and theoretical backgrounds to share their perspectives and experiences in studying interactional data. Everyone approaches data differently, with each researcher bringing a distinctive style, analytic experiences and ways of working. A data session allows for a rich exchange of ideas and empirical observations that embraces these differences. Further information is available here.	W9
Option 1: 16.00-17.15; Option 2: 17.15 – 18.30	Walking Tour	
19.00	Conference Dinner – The Cornstore Restaurant	

Thursday 27th August

Time	Activity			Location
9.00 – 10.30	Paper Session 3			
	Session 1(Papers) - Clinical interviews as translanguaging spaces: Rehearsing equitable mathematics pedagogies. <i>Hanna Haydar</i> - Beyond trauma-informed mathematics education: Toward a healing-centered framework for multilingual and neuro-affirming participation. <i>Ellen Carter</i>	Session 2 (Papers) - Embodied learning and everyday activities for developing the angle concept with linguistically disadvantaged students. <i>Kirstin Erath, Arindam Bose and Frode Rønning</i> - Poetic structures in classroom discourse on graphs: An analysis using systemic functional linguistics. <i>Elizabeth Kimber</i>	Session 3 (Papers) - Western-centric symbolism of artificial intelligence and the exclusion of local meanings. <i>Cennet Ebru Candan</i> - Mathematics classrooms as dispositif: A theoretical expansion of interactional approaches. <i>Christoph Aumann and Kirstin Erath</i>	Session 1: W3 Session 2: W5 Session 3: W9
	Chair: Camilla Justnes	Chair: Ulrika Ryan	Chair: Martina Teschner/Esther Henschen	
10.30 – 11.00	Tea/Coffee			West Wing, Main Quad
11.00 – 12.30	ST Session 2			
	ST1: Interaction and discourse in mathematics	ST2: Multilingualism and language varieties in mathematics learning	ST3: Methodological and theoretical approaches in mathematics education research	ST 1: W5 ST 2: W9 ST 3: W3
	Chairs: Ingó Gíslason & Anna-Marietha Vogler	Chairs: Frode Rønning & Alexander Schüler-Meyer	Chairs: Kirstin Erath & Melina Fabian	

12.30 – 13.30	Lunch	Main Restaurant
13.30 – 15.00	Poster Session (Link to Posters) - Breaking the code: Supporting multilingual students in mathematical word problems. <i>Thomas Utvær and Camilla Justnes</i> - Linguistic complexity in linear algebra task sections according to their context and function. <i>Louisa Ebel and Stefan Halverscheid</i> - Heuristics for conceptual development through multilingual mathematics activities: The case of homework. <i>Petra Källberg and Ulrika Ryan</i> - Engaging Learners Through Productive Struggle: Meaning Making and Language Development in University Calculus Classrooms. <i>Kara Teehan</i> - MAPPING at the museum: Children's experiences with map drawing and visuospatial reasoning. <i>Maria Eloisa Nuguid</i> - Verbing Mathematics: Lessons from L'nui'ta'simk. <i>Lisa Lunney Borden, Simon Sylliboy, Ellen Carter, Kyla Bernard</i>	West Wing, Main Quad
15.00 – 15.30	Tea/Coffee	West Wing, Main Quad
15.30 – 17.00	Close of Conference This session will bring together key discussion points from the ST groups, outline the next steps for the ETC22 conference proceedings, and look ahead to CERME15.	W6