

STE*M EDUCATION PRE-CONFERENCE WORKSHOPS AND INTERNATIONAL CONFERENCE 2024

(Draft Programme #3.0)

WORKSHOP PROGRAMME FACULTY OF EDUCATION, STELLENBOSCH UNIVERSITY

Workshop 1 (9:00 – 12:30)

Topic: 'Empowering STE*M teachers with AI: a hands-on AI experience for STE*M teacher support'
Venue: Room 5003, GG Cillie building (Faculty of Education, SU)
Facilitators: Hanne Deprez & Robin Schaeverbeke (KU Leuven)

Workshop 2 (9:00 – 12:00)

Topic: 'Build a Solar-Powered Mobile Charger!'
Venue: Room 2039/2042 (LAB), GG Cillie building (Faculty of Education, SU)
Facilitator: Miranda Myburgh

CONFERENCE PROGRAMME STIAS, STELLENBOSCH UNIVERSITY, SOUTH AFRICA

THURSDAY 12 SEPTEMBER 2024

Venue: Auditorium

07:30 – 08:30	On-site registration and admin
08:30 – 08:45	Official welcoming and opening - Prof Mbulungeni Madiba (Stellenbosch University, Dean: Faculty of Education), Prof Oliver Holz (KU Leuven, Belgium) and Dr Marie-Louise Botha (Stellenbosch University, South Africa)
08:45 – 09:45	Keynote 1: Dr Ir. Hanne Deprez & Dr Arch. Robin Schaeverbeke Topic: 'An appeal for a STEAM for all!' Chairperson: Prof Oliver Holz
Session 1 Teaching, learning and assessment in diverse STE*M classrooms	
10:00 – 11:00	Dr Zorina Dharsey (Western Cape Primary Science Programme): Science teaching in primary schools – supporting teacher professional development ** Dr Eva González Melón (KU Leuven): Didactic challenges in Spanish as a Heritage Language in mixed classes from teacher's and student's perspective Ms Vanessa Majiza (Walter Sisulu University): Towards an integrated, discipline-specific academic writing support for Master's students - a doctoral students' perspective
11:00 – 11:30	Morning Break
11:30 – 12:15	Prof Zingiswa Jojo (Rhodes University): Teachers' experiences with Mathematics online teaching in rural situated primary schools in South Africa Discussion - related to all four papers
12:15 – 13:15	Keynote 2: Prof Eugene Cloete, Stellenbosch University Topic: 'Achieving the extraordinary with ordinary people'. Chairperson: Marie-Louise Botha
13:15 – 14:00	Lunch Break
Session 2 Interdisciplinarity in STE*M Education	
14:00 – 15:20	Dr. Ir. Hanne Deprez (Faculty of Engineering Science, KU Leuven): Visualizing interdisciplinary connections in STEM - curricula via collaborative concept mapping Dr Philip Mirkin (University of Pretoria): Student STEM-stimulated experiences of personal meaning while studying physical science Dr Elmarie Randewijk (Parklands College): The transfer issue: From theory to investigation in Mathematics and Science Education Discussion
15:20 – 15:40	Afternoon Break
Session 3 Interdisciplinarity in STE*M Education	
15:40 – 17:00	Dr. Ir. Hanne Deprez (Faculty of Engineering Science, KU Leuven): Assessing mathematics integration in STEM-projects developed by pre-service teachers Dr Retha van Niekerk (Stadio) & Dr Erna Lampen (Stellenbosch University): Affordances of coding and robotics media: Potential conflicts within Mathematics Sien Wissels (Faculty of Architecture, KU Leuven): How an educational design study of a STE*M-based learning environment can enhance social debate around youth, city and architecture
17:00 – 17:15	Discussion
17:15	Plenary session – Reflection on and discussion of Day 1 of Conference Session Chair: Prof Oliver Holz
	Adjourn
19:00 – 21:30	Conference Social Function - STIAS

KU LEUVEN



FRIDAY 13 SEPTEMBER 2024

07:30 – 08:30	On-site registration and admin
08:30 – 09:30	<p>Keynote 3: Prof Gerrit Stols, University of Pretoria</p> <p>Topic: 'Harnessing the power of Generative AI in STEAM Education'.</p> <p>Chairperson: Marie-Louise Botha</p>

Session 4 National and international perspectives on STE*M Education for all

09:30 – 10:50	<p>Mr Gabriel Tuhafeni Nhinda (Namibia University of Science and Technology): Collaborative Innovation across the Atlantic</p> <p>Dr Carine Steyn (Nelson Mandela University): The role of professional development in the diffusion of the STEAM educational approach in South African schools</p> <p>Ireen Carette (KU Leuven): The role of the teacher in STE*M education</p> <p>Discussion</p>
10:50 – 11:10	Morning break

Session 5 Diversity and Inclusion in STE*M Education

11:00 – 12:55	<p>Dr. Zamambo Mkhize (University Of Cape Town): The violence of inclusion in higher education: Post-doctorate and early career African women's experiences in STEM disciplines in South African universities</p> <p>Ms Nomfundo Radebe (University of Witwatersrand): Investigating gender inequalities experienced by female learners in STEM subjects: A case of grade 9 learners in a rural South African province</p> <p>Thijs Eeckhout (Odisee, Belgium): How to adapt STEM activities to multilingual preschoolers with a low SES?</p> <p>Dr Tamirirofa Chirikure (University of Botswana): In the Zone of STEM exclusion: Access, survival, output and outcome in Sub-Saharan Africa)</p> <p>Discussion</p>
12:55 – 14:00	Lunch Break

Session 6 Variety of papers/contributions

14:00 – 15:20	<p>Sylvia Hannan (Human Sciences Research Council): National Science Week: A platform for promoting diversity and inclusion in STE*M education in South Africa</p> <p>Jaques Louw, Senior Education Specialist: Information Technology, Directorate: Curriculum FET, Western Cape Government: Education): Topic to be finalised</p> <p>Dr Nazeem Edwards & Dr Marie-Louise Botha (Faculty of Education, Stellenbosch University): Socioeconomic disparities in STEM-related subjects in Grade 12: analysing achievement gaps across quintiles in Western Cape schools</p> <p>Discussion</p>
15:20 – 15:40	Afternoon break
15:40 – 16:40	<p>Panel discussion on the overall trends, issues and impressions that emerged from the conference.</p> <p>Panel members: Ireen Carette, Leuven University, Belgium; Nazeem Edwards, Stellenbosch University, South-Africa; Jan Springob, University of Cologne, Germany; Emma Versteegh, Utrecht University, Netherlands</p> <p>Moderators: Zelda Barends, Stellenbosch University, South-Africa and Hanne Deprez, Leuven University, Belgium</p>
16:40 – 17:00	Closing remarks and words of thanks – Dr Marie-Louise Botha and Prof Oliver Holz
17:00	Adjourn

- ** Please note:** (1) Only presenting or first authors are indicated in the programme. For co-authors, please consult the Conference Abstract Book.
- (2) The first presenter in each session will act as timekeeper and chair for that session. Please adhere strictly to allocated times.

