



SAARMSTE

Southern African Association for Research in
Mathematics, Science and Technology Education

FIRST ANNOUNCEMENT AND CALL FOR PAPERS

**33rd CONFERENCE OF THE *SOUTHERN AFRICAN ASSOCIATION FOR RESEARCH IN
MATHEMATICS, SCIENCE AND TECHNOLOGY EDUCATION***

MONDAY 13 – 16 THURSDAY JANUARY 2025

HOSTED BY NORTH-WEST UNIVERSITY AND SAARMSTE NORTHWEST CHAPTER:

At North-West University Potchefstroom Campus

CONFERENCE THEME:

Adapting to a Changing Landscape of STEAM Education in the Era of Artificial Intelligence

SAARMSTE 2025 Research Writing Clinic – Friday 17 to Saturday 18 January 2025

Following the Annual Conference, SAARMSTE 2025 Writing Clinic provides an opportunity to develop draft manuscripts and/or short papers to articles for journal submission. The Chief-Editor of AJRMSTE facilitates the Writing Clinic together with members of the Editorial Team.

Website: www.saarmste.org/conferences

SAARMSTE COMMITTEES 2024-2025

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Conference Secretary	Ms Ikanyeng Senna	North-West University - PC
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OBJECTIVES OF THE SAARMSTE CONFERENCE

Three objectives of SAARMSTE, according to its constitution, are:

- To promote the advancement of Mathematics, Science and Technology Education (MSTE) Research in Southern Africa
- To foster a sense of community among researchers in MSTE
- To promote research to improve and develop MSTE programmes in response to current and future needs.

The Annual SAARMSTE Conference is an important vehicle to address these objectives.

CONFERENCE THEME

Adapting to a Changing Landscape of STEAM Education in the Era of Artificial Intelligence

Motivation

The theme of adapting to a changing landscape of STEAM education in the era of artificial intelligence examines the evolving relationship between STEAM education and AI technologies. STEAM is a developing educational model of how the traditional academic research in science, technology, engineering, arts, and mathematics can be structured into a framework by which to plan integrative curricula and research approaches. It includes reviews of the epistemologies of general and discipline specific developments in conjunction with the individual discipline's standards, as related to integrative, or holistic education. Investigating these educational relationships with one another is currently being explored as a way to find the commons of education in relation to pedagogy and research (Yakman, 2008). AI exploration is crucial in education as it enables personalized learning experiences tailored to individual student needs. By exploring AI-driven adaptive learning systems, educators can provide customized instruction, remediation, and enrichment, ensuring that each student receives optimal support and achieves their full potential. AI exploration in education holds immense potential to revolutionize research, empower educators, enhance educational accessibility, and improve learning outcomes for all students. It represents a transformative force that can shape the future of education and unlock new opportunities for learners worldwide.

From other perspectives, it is essential to consider how AI is reshaping traditional teaching methods and the role of educators in conducting research in the era of AI. Ethical considerations surrounding the use of AI in STEAM education, such as data privacy, algorithmic bias, and the impact on student autonomy, also come to the forefront. Educators must navigate these complexities while ensuring that students develop the necessary skills to thrive in a world where AI technologies are ever-present, and where the intersection of STEAM education and artificial intelligence, can ensure that future generations are prepared to navigate the challenges and opportunities presented by AI in the 21st century. The theme also underscores the potential for

STEAM and AI to revolutionize research in mathematics, science, and technology education (MSTE).

CONFERENCE PROGRAMME

The proposed outline of the 2025 Conference Programme comprises:

1. Invited plenary speakers with wide and knowledgeable experience in Mathematics, Science and Technology Education (MSTE).
2. Invited Co-Chairs and experts in MSTE, are chosen to lead and facilitate 60-to-90-minute programme sessions that focus on papers with a similar theme, i.e. themed sessions, with an interactive model.
3. Delegate access to pre-loaded presentations for review prior to programme sessions.
4. Social programme – to be announced.

HOW TO CHOOSE AND SUBMIT A CONFERENCE PAPER

1. Find **Paper Options B** below to make your choice of paper, (i.e. long paper, short paper, snapshot, poster paper, symposium), and to study the criteria required in each option.
2. Ensure that your paper fits within one of the subject strands, and one of the area strands. **Refer Section C** entitled 'Paper Focus' - for further information.
3. Note: the process for paper submissions should be carried out in 2 parts:

Part 1: Complete and submit: A **Cover Sheet**, found on SAARMSTE Website

<https://www.saarmste.org/conference>

Part 2: Submit a copy of the **full paper** as an attached Word Document, (NOT pdf). Include, at the top of the full paper the following: title of the paper; presentation type (i.e. long paper), subject strand, (i.e. mathematics, science or technology) and area strand (i.e. primary, secondary etc. see options under heading: Area Strands, page 8).

4. Only when both submission parts are complete should the paper be sent for reviewing purposes.
5. Note the Activity Timelines under Section A.

Submission Format and three-part Procedure will be found on the website:

<https://www.saarmste.org/conference>

A. ACTIVITY TIMELINES

<i>Paper Activities</i>	<i>Date</i>
First announcement (call for papers)	22 nd April
Second announcement	24 th June
Confirmation of reviewers	30 th June
Deadline for submission of papers for review	22 nd July
Long papers sent to designated reviewers	29 th July
Long paper reviews back to LOC through Executive	30 th August
All review feedback to authors	13 th September
On-line registration opens	2 nd September

Submission of re-worked papers	30 th September
Provisional programme released to presenters	15 th November
Application for post-Conference Writing Clinic by:	31 st October
Presentation uploads by:	30 th November
Payment of registration fees by all presenters (*See note below)	29 th November
Final programme released to presenters and the public	9 th December

Note* If final arrangements for payment of registration fees are not processed by 29th November 2024, paper(s), of those concerned, will NOT be included in the conference programme.

B. PAPER OPTIONS are:

1. LONG PAPERS		
<p>LENGTH</p> <p>Full paper: 4500- 6000 words (<i>excluding</i> Abstract but <i>including</i> Reference list). Abstract: 100 – 150 words.</p>	<p>Submission deadline date</p> <p>Monday 22 July 2024 Email to: saarmste@gmail.com</p>	<p>Final submission date for re-worked papers: Monday 30 September 2024. Email to: saarmste@gmail.com</p>
<p>Long papers should follow a format similar to articles/papers required by journals: i.e. abstract, introduction, literature review/conceptual framework, theoretical framework, methodology, findings, discussion and conclusion. (Total word count: not exceeding 6 150 words).</p> <p>Author details must be excluded for double blind peer review.</p>		
<p>Long papers are reviewed by at least 2 qualified reviewers. Once reviewer’s feedback has been forwarded to the author(s), re-worked papers must be submitted to: saarmste@gmail.com by 30 September 2024.</p>		
<p>Accepted long papers appear in the Conference Proceedings and are eligible for DHET subsidy funding.</p> <p>In accepting a long paper for presentation at a SAARMSTE conference, the Review Panel presumes that:</p> <ol style="list-style-type: none"> the paper is original and has not been published elsewhere. permission has been granted by the author for the accepted long paper to be published in the accredited Conference Proceedings; and at least one of the authors will register and attend the conference to present the paper. 		
<p>Should a paper not be accepted for presentation as a long paper, it is possible that the author may be asked to reduce the length of the paper to meet the requirements and deadlines for a short paper.</p>		
<p>Authors with accepted long papers are required to provide:</p> <ol style="list-style-type: none"> A Power-Point presentation of summary slides (no narrative, maximum 10 slides). These must be submitted by 30th November 2024. During the Conference programme long paper author(s) may present their paper for 20 minutes, (only), with 10-minute questions from the attending delegates/co-chairs. 		

2. SHORT PAPERS		
<p>LENGTH: Full paper: 1 650 words <i>(excluding Abstract but including Reference list).</i> Abstract: 100 – 150 words.</p>	<p>Submission deadline date: Friday 22nd July 2024. Email to: saarmste@gmail.com</p>	<p>Final submission date of Reviewer recommended Extended Short Paper: 30 September 2024</p>
<p>Short papers should use a format similar to those required by journals: abstract, introduction, literature review/conceptual framework, theoretical framework, methodology, findings, discussion and conclusion. (Total word count: not exceeding 1 800 words).</p> <p>Short papers should highlight preliminary findings and the significance of the research. Author details must be excluded for the double-blind peer review.</p>		
<p>Short papers will be reviewed by 2 qualified reviewers. On completion the main author is advised of the outcome.</p> <p>The reviewer may advise: i. Accept with no reservation, or ii. Accept as a Snapshot Paper, or iii. Reject the paper as being unsuitable.</p> <p>The reviewers may suggest, if the paper is accepted, that the author(s) develop the short paper into an extended short paper of 3 600 words. This may be useful for authors who wish to register for the writing clinic and/or submit a paper to a journal. The author(s) will decide if they would like to accept this opportunity only when the review process has been completed.</p> <p>Extended short papers must be emailed, as an attached Word document, to the Secretariat at saarmste@gmail.com by Friday 30 September 2024.</p>		
<p>Short papers should appear in the 2025 electronic record of Research Papers in Mathematics, Science and Technology Education. Short papers are not eligible for DHET subsidy.</p>		
<p>Authors whose short papers are accepted will be required to provide:</p> <ol style="list-style-type: none"> 1. A Power-point presentation of summary slides, (no narrative, maximum 10 slides). These must be submitted by 30th November 2024 2. During the Conference programme short paper author(s) may present their paper for 15 minutes, (only), with 5-minute questions from the attending delegates/co-chairs. 		

3. SNAPSHOT PAPERS		
<p>LENGTH: Full paper: 1 650 words <i>(excluding Abstract but including Reference list).</i> Abstract: 100 – 150 words</p>	<p>Submission deadline date: Monday 22nd July 2024. Email to: saarmste@gmail.com</p>	<p>No revisions required</p>
<p>Snapshots focus on emerging research, which need not necessarily include results. The purpose is to receive input from an interested audience of like-minded delegates.</p>		

<p>Snapshot papers use the format: abstract, introduction, literature review, methodology, references and the way forward. (Total word count: not exceeding 1 800 words). Author details must be excluded for a “blind peer review”.</p>
<p>Snapshot papers will be reviewed by 2 qualified reviewers. On completion the main author is advised of the outcome.</p> <p>The reviewer may advise i. Accept with no reservation, or ii. Accept as a Poster Paper, or iii. Reject the paper as being unsuitable.</p> <p>No revisions are required as snapshots are still ‘research in progress’.</p>
<p>Authors whose snapshot papers are accepted will be required to provide:</p> <ol style="list-style-type: none"> 1. A Power-Point presentation of summary slides (no narrative, maximum 10 slides). These must be submitted by 30th November 2024. 2. During the Conference programme snapshot paper author(s) may present their paper for 10 minutes, (only), with 5-minute questions from the attending delegates/co-chairs.

4. GUIDED POSTER PAPERS		
<p>LENGTH:</p> <p>Full paper: 1 650 words (<i>excluding</i> Abstract but <i>including</i> Reference list).</p> <p>Abstract: 100 – 150 words</p>	<p>Submission deadline date: Monday 22nd July 2024. Email to: saarmste@gmail.com</p>	<p>No revisions required.</p>
<p>A Word document should provide a brief outline of the main features of the author’s research with abstract, introduction, literature review and references. The actual poster is not submitted for review, a Word document is.</p> <p>A Word document, of a total word count of 1 800 words must be submitted by 22nd July 2024.</p> <p>Author details must be excluded for a “blind review”.</p>		
<p>Reviewers look for interesting topics for further research with content that illustrates the main features of the intended research. Feedback is provided by the reviewers.</p>		
<p>Authors whose poster papers are accepted will be required to provide:</p> <ol style="list-style-type: none"> 1. A Power-point presentation of a summary slide for entry into a competition. Details and template to follow. These must be submitted by 30th November 2024 or, 2. A one-hour session is allocated to the presentation of all guided posters. During this time researchers will circulate in the hall/foyer to read the posters. <p>Fellow researchers will ask questions, encourage discussion, and make suggestions (hence the term, ‘guided poster’).</p> <p>Authors are expected to remain with their poster for the full hour. Posters must be brought to the conference. Posters should be no smaller than A1.</p>		

5. SYMPOSIA / PANEL DISCUSSION		
LENGTH: Full paper: 1 650 words <i>(excluding Abstract but including Reference list).</i> Abstract: 100 – 150 words	Submission deadline date: Monday 22 nd July 2024. Email to: saarmste@gmail.com	No revisions required
<p>These are discussions around a central theme or issue where different points of view, approaches, debates, or analysis of the same problem are presented. The paper should provide a short outline of the whole symposium. Details of each speaker’s contribution should be outlined, including how these come together to create a forum for discussion and debate.</p> <p>Note: The symposium is not a platform for a collection of short papers presented under the auspice of one supervisor or researcher. 90-minutes is allocated for each symposia/panel discussion to enable audience engagement.</p>		
Reviewers will provide feedback, but no revisions are required. Symposia are not eligible for DHET subsidy.		

C. PAPER FOCUS should fall within on **one** of the following **Subject Strands**:

Mathematics	Science	Technology
Mathematical Literacy	Natural Sciences	Design and Technology
Mathematics	Biology	Engineering Education (Civil, Electrical, Mechanical, Process, Material, Robotics, Mechatronics, Textile Technology etc.)
	Chemistry	Indigenous & Appropriate Technology
	Physics	Information & Communication Technology (ICT)

AND within **one** of the following **AREA STRANDS**:

Primary education	Initial teacher education
Secondary education	Continuous teacher education
Tertiary education	Out-of-school education

Submission Deadline for all options above: Monday 22nd July 2024

Note: * Abstracts of accepted papers will be included in the Conference Programme with day-to-day schedule of themed presentation sessions.

IMPORTANT NOTE: Spaces in the Research Writing Clinic are limited.

Applications and a DRAFT PAPER must be submitted directly to the SAARMSTE Secretariat by 31st October 2024 at saarmster@gmail.com (Online application details will be provided in the 2nd Announcement).

DELEGATE CONFERENCE REGISTRATION

Researchers interested in attending the 2025 SAARMSTE Conference, together with accepted paper authors and/or presenters, should register online through:

<https://www.saarmste.org/conference>

REGISTRATION FEES

Will be provided in the 2nd Announcement.

SAARMSTE CORRESPONDENCE DETAILS

General SAARMSTE Conference queries should be addressed to:
Dr Tshele Moloi, Dr Judicial Sebatana, Ms. Ikanyeng Senna and Ms Euphodia Swartz

To the 2025 Conference

Email: tshalej@gmail.com ; Judicial.Sebatana@nwu.ac.za; Ikanyeng.Senna@nwu.ac.za ;
21745986@nwu.ac.za

Paper queries should be addressed to:

Ms Carolyn Stevenson-Milln

Cell: +27 (0)82 977 9858

SAARMSTE Secretariat

Email: saarmste@gmail.com