



# SAARMSTE

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

## FIRST ANNOUNCEMENT AND CALL FOR PAPERS

**32<sup>nd</sup> CONFERENCE OF THE *SOUTHERN AFRICAN ASSOCIATION FOR RESEARCH IN  
MATHEMATICS, SCIENCE AND TECHNOLOGY EDUCATION***

**A Face-to-Face Conference**

**TUESDAY 16 – THURSDAY 18 JANUARY 2024**

**Hosted by  
The International University of Management  
in Collaboration with:  
University of Namibia;  
Namibia University of Science and Technology;  
Ministry of Higher Education, Technology and Innovation;  
Ministry of Education, Arts and Culture**

**CONFERENCE THEME:**

***Rethinking Relevant Research in Mathematics, Science and Technology  
Education for the 4<sup>th</sup> Industrial Revolution (4IR)***

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

## **SAARMSTE COMMITTEES 2023-2024**

### **SAARMSTE EXECUTIVE COMMITTEE**

President	Dr Tulsi Morar	Nelson Mandela University
President Elect:	Dr Million Chauraya	Midlands State University, Zimbabwe
Secretary/Treasurer:	Prof Nicky Roberts	University of Johannesburg
Chapter Representatives:	Dr Fraser Gobede	University of Malawi
	Dr Qetelo Moloji	University of Johannesburg
AJRMSTE Editor:	Prof Sarah Bansilal	University of KwaZulu-Natal
Research Capacity Building Committee Chair:	Prof Elizabeth Mavhunga	University of the Witwatersrand
Secretariat (ex-officio):	Ms Carolyn Stevenson-Milln	SAARMSTE

### **SAARMSTE LOCAL CONFERENCE ORGANISING COMMITTEE (LOC) - 2024**

<b>Conference Chair</b>	Mrs Martha Nyamakuti	International University of Management
<b>Conference Secretary</b>	Ms Victoria Shiimi	Ministry of Mines and Energy
	Dr Charity Ausiku	University of Namibia
	Dr Marius Hedimbi	International University of Management
<b>Fundraising Chair/Team</b>	Dr Linus Kambeyo	University of Namibia
	Dr Aletta Hautemo	Namibia University of Science & Technology
	Dr Angelius Liveve	International University of Management
	Mr Gerry Munyama	International University of Management
<b>Programme co-Chairs</b>	Dr Elizabeth Ngololo	University of Namibia
	Mrs Eva Asheela	Ministry of Education, Arts & Culture
<b>Logistics Chair</b>	Mr Tasara Manamike	Ministry of Education, Arts & Culture
	Dr Sirrka Tshinigayamwe	University of Namibia
	Mr Johannes Neporo	Ministry of Education, Arts & Culture
<b>SAARMSTE Secretariat</b>	Ms Carolyn Stevenson-Milln	SAARMSTE
<b>PROGRAMME COMMITTEE</b>		
<b>Programme co-Chairs</b>	Dr Elizabeth Ngololo	University of Namibia
	Mrs Eva Asheela	Ministry of Education, Arts & Culture
<b>Mathematics</b>	Dr Beata Dongwi	Ministry of Education, Arts & Culture
	Prof Hileni Kapenda	International University of Management
<b>Science</b>	Mrs Ester Shinana	Ministry of Education, Arts & Culture
	Dr Faustina Neshila	University of Namibia
<b>Technology</b>	Mrs Johanna Munyanyo	Ministry of Education, Arts & Culture
	Mr Gerhard Ndafenongo	Ministry of Education, Arts & Cultur
<b>LOC CONSULTANTS</b>	Professors Kenneth Ngcoza; Mellony Graven; Marc Schäfer; Drs Clement Simuja and Zintle Songqwaru	

## **OBJECTIVES OF THE SAARMSTE CONFERENCE**

Four objectives of SAARMSTE, in terms of its constitution, are:

- To promote the advancement of Mathematics, Science and Technology Education (MSTE) Research in Southern Africa
- To provide avenues for local publication of the findings of research in MSTE
- To make research in MSTE available and accessible to policy makers and practitioners
- 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.

## **2024 CONFERENCE THEME:**

***Rethinking Relevant Research in Mathematics, Science and Technology Education for the 4<sup>th</sup> Industrial Revolution (4IR)***

## **CONFERENCE THEME MOTIVATION**

The 4<sup>th</sup> Industrial Revolution (4IR) is transforming the world at an unprecedented and rapid pace. As we face an increasingly digital and automated society, it is crucial to rethink how we conduct research in mathematics, science, and technology education and ensure that it is ethical, relevant, and meaningful for this new era. We need to consider how we can integrate emerging technologies into our research and use our research to address the complex challenges facing our society. By rethinking relevant research, we can better prepare ourselves and future generations for the changing demands of the 4IR and ensure that we are able to harness the full potential of these transformative technologies for the benefit of all. Moreover, we should ensure that the 4IR is transformative and environmentally responsible. Ethical research in this context is, inter alia, research that is not in opposition to principles of sustainability and responsible environmental stewardship. Research should thus focus on developing solutions that address the complex challenges of climate change and use emerging technologies to create a sustainable future for ourselves and future generations.

## **CONFERENCE PROGRAMME**

The 2024 Conference Programme comprises:

1. Invited plenary speakers with wide and knowledgeable experience in Mathematics, Science and Technology Education (MSTE).
2. Invited Discussant / Co-Chairs with expertise in MSTE, who are chosen to lead and facilitate programme sessions that focus on papers with a similar theme, i.e. themed sessions, based on an interactive model.
3. Delegate access to pre-loaded presentations for review prior to programme sessions.
4. Social programme comprises:
  - a. A welcome social event at the end of the first day of the Conference Programme
  - b. A Gala Dinner, including Awards, SAARMSTE Choir and Dancing completes the final day of proceedings.

## **A. CHOOSING AND SUBMITTING A CONFERENCE PAPER**

1. See **Paper Options B** below for the five possible paper options, (i.e. long paper, short paper, snapshot, poster paper, symposium), and to study the criteria required in each option.

2. See **Paper Focus C** (page 9), **Subject Strands**, to ensure that your paper choice fits within one of the *subject strands*, and one of the *area strands*, as listed according to discipline, (mathematics, science or technology).
3. **Paper Submission Process**
  - a. Complete and submit the **Cover Sheet and the Presentation Information Page**, found on SAARMSTE Website <https://www.saarmste.org/conference/>
  - b. Submit a copy of your **conference paper** as an attached **Word Document, (NOT pdf)**.
  - c. Further important information will be made available on the Website <https://www.saarmste.org/conference/> including: *Required Paper Format and APA Referencing style*.
4. Note **Activity Timelines**. Kindly adhere to deadline dates. Early submissions are greatly appreciated.

#### ACTIVITY TIMELINES

<i>Paper Activities</i>	<i>Date – no later than</i>
First announcement and Call for Papers	28 <sup>th</sup> April
Second announcement	31 <sup>st</sup> July
Confirmation of reviewers	30 <sup>th</sup> June
Submission of papers for review	1 <sup>st</sup> – 31 <sup>st</sup> July
Long papers sent to designated reviewers	31 <sup>st</sup> July
Long paper reviews back to LOC through Executive Committee	31 <sup>st</sup> August
All review feedback to authors	15 <sup>th</sup> September
On-line registration opens	15 <sup>th</sup> September
Submission of re-worked papers	30 <sup>th</sup> September
Application for post-Conference Writing Clinic	31 <sup>st</sup> October
Payment of registration fees by all presenters (*See note below)	30 <sup>th</sup> November
Provisional programme released to presenters	4 <sup>th</sup> December
Final programme released to presenters and the public	11 <sup>th</sup> December

**Note\*** If final arrangements for payment of registration fees are not processed by 30<sup>th</sup> November 2023, paper(s) of those concerned, will **NOT** be included in the conference programme

#### B. PAPER OPTIONS are:

1. LONG PAPERS		
<b>Word count:</b> Abstract: 100-150 words Full long paper: up to 6 000 words (excluding Abstract, but including Reference list)	<b>Submission deadline by</b> 31 July 2023 Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>	<b>Final submission date for re-worked papers:</b> 30 September 2023. Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>
<b>Format:</b> Similar to articles / papers required by journals: i.e. abstract, introduction, literature review/conceptual framework, theoretical framework, methodology, findings, discussion and conclusion.		

<p><b>Long Paper Submission Process - Refer: A. Choosing and Submitting a Conference Paper</b> (see above).</p> <p><b>Note:</b> Author details must be <b>excluded</b> for double blind peer review</p> <p>Only when the Cover Sheet, and Conference paper are complete, should the paper be sent for reviewing purposes.</p>
<p><b>Reviewing process:</b></p> <ol style="list-style-type: none"> <li>1. Long papers are reviewed by at least 2 qualified reviewers. On completion the main author is advised of the outcome.</li> <li>2. If the paper is <b>accepted with modifications</b>, the re-worked paper(s) must be submitted as noted above to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a> by 30 September 2023.</li> <li>3. Should a long paper be <b>accepted as a short paper</b>, the author(s) will be asked to reduce the length of the paper to re-submit as a short paper by 30 September 2023.</li> </ol>
<p><b>Further information:</b></p> <ol style="list-style-type: none"> <li>1. Accepted long papers are published in the accredited Conference Proceedings and are eligible for DHET subsidy funding.</li> <li>2. The Review Panel presumes that: <ol style="list-style-type: none"> <li>a. the paper is original and has not been published elsewhere;</li> <li>b. permission has been granted by the author for the accepted long paper to be published in the Conference Proceedings; and</li> <li>c. at least one of the authors is registered and attends the conference to present his/her accepted paper.</li> </ol> </li> </ol>
<p><b>Programme requirements:</b> by 30<sup>th</sup> November, author(s) with accepted long papers are required to prepare and submit:</p> <ol style="list-style-type: none"> <li>1. Paper Power-Point Summary slide for entry into a <b>competition</b>. Details and template to follow,</li> </ol> <p><b>OR</b></p> <ol style="list-style-type: none"> <li>2. Paper Power-Point Presentation Slides, (maximum 10).</li> </ol> <p><i>During the Conference thematic programme sessions, author(s) are expected to present a short summary of themselves and their paper to attending delegates and co-chairs. Followed by interaction through Question and Answers from the floor.</i></p>

<b>2. SHORT PAPERS</b>		
<p><b>Word count:</b></p> <p>Abstract: 100-150 words  Full short paper: 1 650 words  (excluding Abstract, but including Reference list)</p>	<p><b>Submission deadline by:</b>  31 July 2023. Email to:  <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a></p>	<p><b>Final submission date</b> for recommended Extended Short Paper: 30 September 2023. Email to:  <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a></p>
<p><b>Short Paper content:</b></p> <ol style="list-style-type: none"> <li>1. These should include: abstract, introduction, literature review/conceptual framework, theoretical framework, methodology, findings, discussion and conclusion.</li> <li>2. Short papers should highlight preliminary findings and the significance of the research.</li> </ol>		
<p><b>Short Paper Submission Process - Refer: A. Choosing and Submitting a Conference Paper</b> (see above).</p> <p><b>Note: Author details</b> must be <b>excluded</b> for double blind peer review</p> <p>Only when the Cover Sheet, and Conference paper are complete, should the paper be sent for reviewing purposes.</p>		

**Reviewing process:**

Short papers will be reviewed by 2 qualified reviewers. On completion the main author is advised of the outcome.

The reviewer may advise:

- i. Accept with no reservations, or
- ii. Accept as a Snapshot, or
- iii. Reject the paper as being unsuitable.
- iv. In some cases the reviewer may accept the paper and suggest 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/article to a recognized journal.

Extended short papers must be emailed, as an attached Word document, to the Secretariat at [saarmste@gmail.com](mailto:saarmste@gmail.com) by 30 September 2023.

Note: \*In the event that the short paper is accepted as a snapshot, an amended paper should be re-submitted to the Secretariat at [saarmste@gmail.com](mailto:saarmste@gmail.com) by 30 September 2023.

**Further information:**

Short and Snapshot papers are recorded in the 2023 electronic record of Research Papers in Mathematics, Science and Technology Education. Short papers are **not** eligible for DHET subsidy.

**Programme requirements:** by 30<sup>th</sup> November, author(s) with accepted short papers are required to prepare and submit:

1. Paper Power-Point Summary slide for entry into a **competition**. Details and template to follow,

**OR,**

2. Paper Power-Point Presentation Slides, (maximum 10).

*During the Conference thematic programme sessions* author(s) are expected to present a short summary of themselves and their paper to attending delegates and co-chairs. Followed by interaction through Question and Answers from the floor.

### 3. SNAPSHOTS

<b>Length:</b> Abstract: 100-150 words * Full snapshot paper: 1 650 words (excluding Abstract. But including Reference list)	<b>Submission deadline by:</b> 31 July 2023. Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>	<b>No revisions will be required.</b>
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Snapshots focus on emerging research, and need not necessarily include results.

Their purpose is to receive feedback from an interested audience of like-minded delegates.

**Snapshot paper content:**

1. These should include: abstract, introduction, literature review, methodology, references and the way forward.
2. Note reviewers look for *interesting topics on emerging research*.
3. Feedback is provided to the authors.
4. No revisions are required as snapshots are still 'research in progress'.

<p><b>Snapshot Paper Submission Process - Refer: A. Choosing and Submitting a Conference Paper</b> (see above).</p> <p><b>Note:</b> Author details must be <b>excluded</b> for double blind peer review Only when the Cover Sheet, and Conference paper are complete, should the paper be sent for reviewing purposes.</p>
<p><b>Reviewing process:</b></p> <p>Snapshot papers must be reviewed by 2 qualified reviewers. On completion the author(s) is advised of the outcome.</p> <p>The reviewer may advise:</p> <ol style="list-style-type: none"> <li>Accept with no reservations, or</li> <li>Accept as a Poster Paper, or</li> <li>Reject the paper as being unsuitable.</li> </ol> <p>Note: In the event that the snapshot paper is accepted as a poster, an amended paper should be re-submitted to the Secretariat at <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a> by 30 September 2023.</p>
<p><b>Further information:</b></p> <ol style="list-style-type: none"> <li>Snapshots are <b>not eligible</b> for DHET subsidy.</li> <li>Some universities provide funding for snapshot presenters to attend the conference, some do not.</li> </ol>
<p><b>Programme requirements:</b> by 30<sup>th</sup> November, author(s) with accepted snapshot papers are required to prepare and submit:</p> <ol style="list-style-type: none"> <li>Paper Power-Point Summary slide for entry into a <b>competition</b>. Details and template to follow,</li> </ol> <p><b>OR,</b></p> <ol style="list-style-type: none"> <li>Paper Power-Point Presentation Slides, (maximum 10).</li> </ol> <p><i>During the Conference thematic programme sessions</i> author(s) are expected to present a short summary of themselves and their paper to attending delegates and co-chairs. Followed by interaction through Question and Answers from the floor.</p>

<b>4. GUIDED POSTER PAPERS</b>		
<p><b>Length:</b> Abstract: 100-150 words Full poster paper: 1 650 words</p>	<p><b>Submission deadline by:</b> 31 July 2023. Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a></p>	<p><b>No revisions will be required.</b></p>
<p><b>Poster paper content:</b></p> <ol style="list-style-type: none"> <li>A Word document providing an outline of the content of the poster. The actual poster is not submitted for review, a Word document.</li> <li>The poster paper should contain a brief outline of the main features of the author’s research, similar to a short paper with abstract, introduction, literature review and references.</li> </ol> <p>Note: Author details must be <b>excluded</b> for a “blind peer review”.</p>		
<p><b>Reviewing process:</b></p> <ol style="list-style-type: none"> <li>Reviewers look for interesting topics for further research with content that illustrates the main features of the intended research.</li> <li>Feedback is provided by the reviewers.</li> </ol>		

**Further information:**

1. Posters are **not eligible** for DHET subsidy.
2. Some universities provide funding for poster presenters to attend the conference, some do not.

**Programme requirements:** by 30<sup>th</sup> November, author(s) with accepted poster papers are required to prepare and submit:

1. Paper Power-Point Summary slide for entry into a **competition**. Details and template to follow

2. A one-hour session is allocated to the presentation of all the posters. During this time fellow researchers will circulate in the hall/foyer to read the posters.

Fellow researchers will ask questions, encourage discussion and make suggestions (hence the term, 'guided posters').

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.

## 5. SYMPOSIA / PANEL DISCUSSION

**Length:**

Abstract: 100-150 words \*

Full symposium paper: 1 650 words  
(excluding Abstract, but including  
Reference list)

**Submission deadline by:**

31 July 2023. Email to:  
[saarmste@gmail.com](mailto:saarmste@gmail.com)

**No revisions required****Symposia content:**

1. Symposia comprise discussions around a central theme or issue where different points of view, approaches, debates or analysis of the same issue are presented.

2. The paper should provide a short outline of the whole symposium.

3. Details of each speaker's contribution should be outlined, including how these come together to create a forum for discussion and debate.

4. *What the symposium is not:*

It is not a platform for a collection of short papers presented under the auspices of one supervisor or researcher.

Note: Author details must be **excluded** for a "blind peer review".

**Reviewing process:**

1. Reviewers look for: *interesting topics on one central theme which promotes interaction between presenter(s) and attending delegates*

2. Feedback is provided, but no revisions are expected.

3. Symposia are **not eligible** for DHET subsidy.



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

No.	Subject: Mathematics	Subject: Science	Subject: Technology
1.	Mathematical Literacy	Natural Science	Design and Technology Education
2.	Mathematics	Biology	Computer Education
3.		Chemistry	Indigenous and Appropriate Technology Education
4.		Physics	Information and Communication Technology (ICT) Education
5.			Robotics and Coding Education

Within **one** of the following **Area Strands**:

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

The above guidelines on procedures for submitting the presentation options can also be found on the website: <https://www.saarmste.org/conference/>

or see above: **A. CHOOSING AND SUBMITTING A CONFERENCE PAPER**

**As indicated, the SUBMISSION DEADLINE for all options outlined above is 31 July 2023**

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

#### **SAARMSTE 2024 WRITING CLINIC**

The Annual Conference Writing Clinic follows on from the Annual Conference. It is aimed at developing draft manuscripts and/or short papers into articles for journal submission. The Chief-Editor of AJRMSTE facilitates the Research Clinic together with members of the Editorial Team.

Participation in the Virtual Writing Clinic includes: some pre-conference preparation (submission, admission and feedback) for groups of 10 participants. The programme takes place over two days and comprises approximately 5 activities and group task work.

For accepted conference short papers, the writing clinic provides the potential for feedback and possible development of a journal article for the *African Journal of Research in Mathematics, Science and Technology Education*, (AJRMSTE), or other recommended and accredited journals within Mathematics, Science and Technology Education.

#### **IMPORTANT: Spaces in the Writing Clinic are limited.**

Applications and a DRAFT PAPER must be submitted directly to the SAARMSTE Secretariat ([saarmste@gmail.com](mailto:saarmste@gmail.com)) no later than 31 October 2023 (Application form is provided in the 2<sup>nd</sup> Announcement).

### **DELEGATE CONFERENCE REGISTRATION**

Researchers interested in attending the 2024 SAARMSTE Conference, together with accepted paper authors and/or presenters, should register online through:

<https://www.saarmste.org/conference> Registration opens September 2023.

### **REGISTRATION FEES – See 2<sup>nd</sup> Announcement for actual 2024 fees**

There are three different levels of registration fees:

1. Current paid up Member of SAARMSTE,
2. Not a member of SAARMSTE, and
3. Over 65 years of age.

**Note: If you did not attend the SAARMSTE 2023 Conference, or have not paid membership fees since then, you are not a paid-up member**

<b>MEMBERSHIP STATUS</b>	<b>EARLY BIRD (payment received before/on 31 October 2023)</b>	<b>LATE PAYMENT (payment received after 31 October 2023)</b>
<b>Valid 2023 paid up members</b>	R0.00 (Includes 2024 membership)	R0.00 (Includes 2024 membership)
<b>Non-members or lapsed members.</b>	R0.00 (Includes 2024 membership)	R0.00 (Includes 2024 membership)
<b>Valid 2023 members and over 65 years of age</b>	R0.00 (Includes 2024 membership)	R0.00 (Includes 2024 membership)
<b>Daily rate – excludes membership</b>	R0.00	R0.00

**NB: When processing payment, kindly include delegate name and/or invoice number. Registration fees paid from outside South Africa must include bank transfer charges.**

Details of methods of payment will be provided in the 2<sup>nd</sup> Announcement e.g. South African bank EFT or Bank Transfer. Regrettably payment by credit card is **not** available.

**CANCELLATION OF REGISTRATION** - The following cancellation penalties apply:

Before 30 October 2023: full refund  
Between 31 October and 15 December 2023: 40% refund  
After 15 December 2023: no refund

Refunds will be paid into the account from which the original registration fee emanated.

### **SAARMSTE CORRESPONDENCE DETAILS**

Queries should be addressed to:

Ms Carolyn Stevenson-Milln, SAARMSTE Secretariat

Cell: +27 (0)82 977 9858

Email: [saarmste@gmail.com](mailto:saarmste@gmail.com)