



# SAARMSTE

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

## FIRST ANNOUNCEMENT AND CALL FOR PAPERS

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

**A Virtual Conference**

**TUESDAY 18 – THURSDAY 20 JANUARY 2022**

**HOSTED COLLABORATIVELY BY A CONSORTIUM OF WESTERN CAPE INSTITUTIONS:**

**Cape Peninsula University of Technology (CPUT), Stellenbosch University (SU), University of Cape Town (UCT), University of the Western Cape (UWC), African Institute for Mathematical Sciences Schools Enrichment Centre (AIMSSEC) and Primary Science Programme (PSP)**

**CONFERENCE THEME:**

***Embracing Change and Transformation in a Technologically Enhanced Environment through  
Mathematics, Science and Technology Education (MSTE) Research***

### **SAARMSTE 2022 Research Writing Clinic**

Following the Annual Conference, SAARMSTE 2022 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](http://www.saarmste.org/conferences)**

**Conference Email: [saarmste2022@gmail.com](mailto:saarmste2022@gmail.com)**

## **SAARMSTE COMMITTEES 2021-2022**

### **SAARMSTE EXECUTIVE COMMITTEE**

President	Prof Hamsa Venkat	University of the Witwatersrand
President Elect	Prof Audrey Msimanga	University of the Witwatersrand
Secretary/Treasurer:	Dr Tulsi Morar	Nelson Mandela University
Chapter Representatives:	Prof Nicky Roberts	University of Johannesburg
	Dr Million Chauraya	University of Zimbabwe
AJRMSTE Editor:	Prof Busisiwe Alant	University of KwaZulu-Natal
	Prof Sarah Bansilal	University of KwaZulu-Natal
Research Capacity Building	Prof Audrey Msimanga	University of the Witwatersrand
Committee Chair:		
Secretariat (ex-officio):	Ms Carolyn Stevenson-Milln	SAARMSTE

### **SAARMSTE LOCAL CONFERENCE ORGANISING COMMITTEE (LOC) - 2022**

<b>Conference Chair</b>	Prof Chukunoye Ochonogor	CPUT
<b>Conference Secretary</b>	Dr Sharon McAuliffe	CPUT
	Dr Zorina Dharsey	PSP
<b>Fundraising Chair</b>	Mr Byron Abrahams	CPUT
	Dr Siphokazi Vimbelo	CPUT
	Dr Zorina Dharsey	CPUT
<b>Programme Chair</b>	Dr Keith Langenhoven	CPUT
<b>Logistics Chair</b>	Mrs Wilna Du Plessis	CPUT
	Mr Gasant Gamiet	UWC
	(Information Technology)	
<b>SAARMSTE Secretariat</b>	Ms Carolyn Stevenson-Milln	

### **PROGRAMME COMMITTEE**

<b>Programme Chair</b>	Dr Keith Langenhoven	UWC
<b>Mathematics</b>	Dr Erna Lampen	SU
	Dr Rolene Liebenberg	CPUT
	Dr Barrie Barnard	AIMSSEC
	Dr Raymond Smith	UWC
	Dr Benita Nel	UWC
<b>Science and Technology</b>	Mr Frikkie George	UWC
	Dr Zena Scholtz	CPUT
	Dr Dale Taylor	UCT
	Dr Zorina Dharsey	PSP

## **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**

***Embracing Change and Transformation in a Technologically Enhanced Environment through Mathematics, Science and Technology Education (MSTE) Research***

### **Motivation**

Shakespeare quotes in Hamlet: “There are more things in heaven and earth, *Horatio*, than dreamt of in your philosophy”. Creating innovative teaching and learning spaces through a blended and re-imagined pedagogy in mathematics, science and technology education, is generative and developmental in scope. The new normal during Covid-19 pandemic, required researchers, teachers and students to acquire critical thinking strategies of best teaching and learning pedagogies in MSTe. Innovative mathematics, science and technology education research, that shatters the ‘glass ceiling’ of perceived elitist technology and transcends socio-cultural dictums, by embedding change and transformation as a public form of communication for all of society is a need. The challenge is to re-imagine MSTe research as a voice that speaks simply and is driven by the smart application of technology. *Share your voice and ideas with delegates at the SAARMSTE 2022 conference.*

## **CONFERENCE PROGRAMME**

The proposed outline of the 2022 virtual 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 slots 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 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)	4 <sup>th</sup> May
Second announcement	30 <sup>th</sup> July
Confirmation of reviewers	30 <sup>th</sup> June
Submission of papers for review	24 <sup>th</sup> – 31 <sup>st</sup> July
Long papers sent to designated reviewers	2 <sup>nd</sup> August
Long paper reviews back to LOC through Exec	31 <sup>st</sup> August
All review feedback to authors	16 <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
Presentation uploads	30 <sup>th</sup> November
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 2021, paper(s), of those concerned, will NOT be included in the conference programme

## B. Paper Options are:

1. LONG PAPERS		
<b>Length</b> Abstract: 100-150 words * Full paper: up to 6 000 words	<b>Submission deadline date</b> Friday 30 July 2021 Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>	<b>Final submission date for re-worked papers:</b> 30 September 2021. Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>
<p>Long papers must be as close to, <b>but not exceeding</b>, 6 000 words (including tables, figures and references).</p> <p>Long papers should use a format similar to those required by journals: i.e. abstract, (100-150 words), 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 <b>excluded</b> for double blind peer review.</p> <p><b>Note</b> the process for long paper submissions should be carried out in 2 parts:</p> <p><b>Part 1:</b> Complete and submit: A Cover Sheet and the Presentation Information Page, found on SAARMSTE Website <a href="https://www.saarmste.org/conference">https://www.saarmste.org/conference</a></p> <p><b>Part 2:</b> Submit a copy of the <b>full long paper</b> as an attached <b>Word Document</b>, (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 7).</p> <p>Only when both submission parts are complete will the paper be sent for reviewing purposes.</p> <p>Once reviewer's feedback has been forwarded to the author(s), re-worked papers must be submitted to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a> by 30 September 2021.</p>		

Accepted long papers appear in the Conference Proceedings and are eligible for DHET subsidy funding.

In accepting a long paper for presentation at a SAARMSTE conference, the Review Panel presumes that:

- a. the paper is original and has not been published elsewhere;
- b. permission has been granted by the author for the accepted long paper to be published in the accredited Conference Proceedings; and
- c. at least one of the authors will register and attend the conference to present the paper.

Long Papers are independently double-blind peer reviewed.

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 requirement and deadlines for a short paper.

Authors with accepted long papers are required to provide:

1. A Power-point voice over recorded presentation of no longer than 20-minute and,
2. The basic Power-point slides (no narrative). These must be submitted by 30<sup>th</sup> November 2021.
3. During the Conference programme author(s) are expected to present a 2-minute synopsis to introduce themselves and their paper to conference delegates and Co-Chairs of the session.

## 2. SHORT PAPERS

### Length:

Abstract: 100-150 words \*

Full paper: 1 650 words

### Submission deadline date:

Friday 30 July 2021. Email to:

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

Final submission date of Reviewer recommended Extended Short Paper: 30 September 2021

Short Papers, of **no more than 1 650 words** (including: abstract preliminary findings, tables, figures and references), must be submitted by Friday 30 July 2021.

Short papers should use a format similar to those required by journals: abstract (100-150 words), introduction, literature review/conceptual framework, theoretical framework, methodology, findings, discussion and conclusion. (Total word count not exceeding 1 650 words).

Short papers should highlight preliminary findings and the significance of the research.

Author details must be **excluded** for the double-blind peer review.

The reviewers may 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 to a journal. The author(s) will decide if they would like to accept this opportunity only once review process has been completed.

The extended short papers are published in the electronic record of Research Papers. These are **not** eligible for DHET funding subsidy.

Extended short papers must be emailed, as an attached Word document, to the Secretariat at [saarmste@gmail.com](mailto:saarmste@gmail.com) by Friday 29 October 2021.

Short papers should appear in the 2021 electronic record of Research Papers in Mathematics, Science and Technology Education. Short papers are **not** eligible for DHET subsidy.

Should a paper not be accepted for presentation as a short paper, it is possible that the author may be asked to amend and re-submit the paper as a snapshot or a poster paper. Such an amended paper should be re-submitted by 30 September 2021.

Authors whose short papers are accepted will be required to provide:

1. A Power-point voice over recorded presentation of no longer than 15-minute and,
2. The basic Power-point slides (no narrative). These must be submitted by 30<sup>th</sup> November 2021.
3. During the Conference programme author(s) are expected to present a 2-minute synopsis to introduce themselves and their paper to conference delegates and Co-Chairs of the session.

<b>3. SNAPSHOTS</b>		
<b>Length:</b> Abstract: 100-150 words * Full paper: 1 650 words	<b>Submission deadline date:</b> Friday 30 July 2021. Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>	<b>No revisions required</b>
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.		
Snapshots should use the format: introduction, literature review, methodology and the way forward.		
Snapshots, of <b>no more than 1 650 words</b> (including abstract, preliminary findings, tables, figures and references), must be submitted as a <b>Word</b> document by Friday 30 July 2021. (Total word count must not exceed 1 650 words).		
Author details must be <b>excluded</b> for a “blind peer review”.		
Snapshots are <b>not eligible</b> for DHET subsidy. Some universities will not provide funding for presenters to attend the conference.		
Feedback is provided by the reviewers. No revisions are required as snapshots are still ‘research in progress’.		
Authors whose snapshot papers are accepted will be required to provide:		
<ol style="list-style-type: none"> <li>1. A Power-point voice over recorded presentation of no longer than 10-minute and,</li> <li>2. The basic Power-point slides (no narrative). These must be submitted by 30<sup>th</sup> November 2021.</li> <li>3. During the Conference programme author(s) are expected to present a 2-minute synopsis to introduce themselves and their paper to conference delegates and Co-Chairs of the session.</li> </ol>		

4. POSTER PAPERS		
<b>Length:</b> Abstract: 100-150 words * Full poster paper: 1 650 words	<b>Submission deadline date:</b> Friday 30 July 2021. Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>	<b>No revisions required.</b>
<p>A <b>Word</b> document, of <b>no more than 1 650 words</b> (including abstract, preliminary findings, tables, figures and references), must be submitted by 30 July 2021. (Total word count must not exceed 1 650 words)</p> <p>The Word document should provide an outline of the content of the poster. The actual poster is not submitted for review, a Word document is.</p> <p>Author details must be <b>excluded</b> for a “blind review”.</p>		
The poster should contain a brief outline of the main features of the author’s research, similar to a short paper, which includes a 100-150 word abstract.		
Feedback is provided by the reviewers.		
Posters are <b>not eligible</b> for DHET subsidy. Some universities do not provide funding for poster presenters to attend the conference.		
<p>Authors whose poster papers are accepted will be required to provide:</p> <ol style="list-style-type: none"> <li>1. A Power-point voice over recorded presentation of no longer than 5-minute and,</li> <li>2. The basic Power-point slides (no narrative). These must be submitted by 30<sup>th</sup> November 2021.</li> <li>3. During the Conference programme author(s) are expected to present a 2-minute synopsis to introduce themselves and their paper to conference delegates and Co-Chairs of the session.</li> </ol>		

5. SYMPOSIA / PANEL DISCUSSION		
<b>Length:</b> Abstract: 100-150 words * Full paper: 1 650 words	<b>Submission deadline date:</b> Friday 30 July 2021. Email to: <a href="mailto:saarmste@gmail.com">saarmste@gmail.com</a>	<b>No revisions required</b>
<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.</p> <p>90-minutes is allocated for each symposia/panel discussion to enable audience engagement.</p>		
A submission of 1 650 words, (including abstract of 100-150 words and references), must 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.		
Reviewers will provide feedback, but no revisions are required. Symposia are <b>not eligible</b> for DHET subsidy.		

**C. Paper focus should fall within on *one* of the following *Subject Strands*:**

<b>Mathematics</b>	<b>Science</b>	<b>Technology</b>
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

**Procedure for submitting the presentation options will be found on the website:**

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

**Submission Deadline for all options above: Friday 30 July 2021**

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

***VIRTUAL CONFERENCE RESEARCH WRITING CLINIC***

The Annual Conference Research Writing Clinic 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 NOTE: Spaces in the Research Writing Clinic are limited.

Applications and a DRAFT PAPER must be submitted directly to the SAARMSTE Secretariat by 30 September 2021 at [saarmster@gmail.com](mailto:saarmster@gmail.com) (Application form is provided in the 2<sup>nd</sup> Announcement).



### **DELEGATE CONFERENCE REGISTRATION**

Researchers interested in attending the 2022 SAARMSTE Conference, together with accepted paper authors and/or presenters, should register online through:

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

### **REGISTRATION FEES**

There are two different levels of registration fees:

1. Paid up and current 2021 member of SAARMSTE
2. Non or lapsed member of SAARMSTE

**Note:** If you did not attend the SAARMSTE 2021 Conference, or have not paid membership fees for 2021, you are not a current member.

<b>MEMBERSHIP STATUS</b>	<b>EARLY BIRD (payment received before/on 30 October 2021)</b>	<b>LATE PAYMENT (payment received after 30 October 2021)</b>
<b>Valid 2021 current members</b> Discounted conference fee	R1 750.00 (includes 2022 membership)	R2 250.00 (includes 2022 membership)
<b>Non-members and lapsed members.</b>	R2 300.00 (includes 2022 membership)	R2 800.00 (includes 2022 membership)

**NB: When processing payment,** kindly include **delegate name** and **invoice number**.

Registration fees paid from outside South Africa must include bank transfer charges.

Details of methods of payment should be found in the 2<sup>nd</sup> Announcement e.g. South African bank EFT or Bank Transfer. Payment by credit card is **not** accepted.

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

Before 30 October 2021: full refund

Between 31 October and 15 December 2021: 40% refund

After 15 December 2021: no refund

Refunds should be paid into the account from which the registration fee emanates.

### **SAARMSTE CORRESPONDENCE DETAILS**

General SAARMSTE Conference queries should be addressed to:

Dr Sharon McAuliffe and/or Dr Zorina Dharsey

To the 2022 Conference Email: [saarmste2022@gmail.com](mailto:saarmste2022@gmail.com)

Paper queries should be addressed to:

Ms Carolyn Stevenson-Milln

Cell: +27 (0)82 977 9858

SAARMSTE Secretariat

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