



SAARMSTE

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

SECOND ANNOUNCEMENT AND CALL FOR PAPERS

**28th CONFERENCE OF THE *SOUTHERN AFRICAN ASSOCIATION FOR
RESEARCH IN MATHEMATICS, SCIENCE
AND
TECHNOLOGY EDUCATION***

SAARMSTE 2020

TUESDAY 14 – THURSDAY 16 JANUARY 2020

CONFERENCE THEME:

Fostering delight in mathematics, science and technology education

HOSTED COLLABORATIVELY BY:

RHODES UNIVERSITY AND NELSON MANDELA UNIVERSITY

Port Elizabeth, South Africa

SAARMSTE Website: <https://www.saarmste.org/>

Email: saarmste2020@gmail.com

SAARMSTE COMMITTEES 2019/2020

SAARMSTE EXECUTIVE

President	Prof Kenneth Ngcoza	Rhodes University
President Elect	Prof Hamsa Venkat	University of the Witwatersrand
Secretary/Treasurer:	Dr Tulsi Morar	Nelson Mandela University
Chapter Representatives:	Prof Washington Dudu	North West University
	Dr Beata Dongwi	Rhodes University, Namibia
AJRMSTE Editor:	Prof Busisiwe Alant	University of KwaZulu-Natal
Research Capacity Building Committee Chair:	Dr Audrey Msimanga	Sol Plaatje University, Kimberley
Secretariat (ex-officio):	Ms Carolyn Stevenson-Milln	

SAARMSTE LOCAL CONFERENCE ORGANISING COMMITTEES (LoC) - 2020

LoC – Rhodes University

Conference Chairperson:	Dr Lise Westaway
Conference Deputy Chair:	Prof Ingrid Schudel

Mathematics Coordinator:	Dr Pamela Vale
Science Coordinator:	Ms Zukiswa Kuhlane
Technology Coordinator:	Mr Clement Simuja

Programme Coordinator:	Prof Bruce Brown and RU LoC
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LoC – Nelson Mandela University

Conference Deputy Chair:	Dr Tulsi Morar
Registration:	Ms Rochelle Thorne Ms Sanet Deysel
Events Coordinator:	Ms Carine Steyn
Treasurer and Fundraiser:	Ms Hermione Kemp
Venues and ICT:	Dr Benedict Khoboli

SAARMSTE Secretariat:	Ms Carolyn Stevenson-Milln
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Advisors:	Prof Ken Ngcoza Prof Marc Schäfer Prof Mellony Graven Dr Lyn Webb
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OBJECTIVES OF THE SAARMSTE CONFERENCE

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

- promote the advancement of Mathematics, Science and Technology Education (MSTE) in Southern Africa
- foster a sense of community among researchers in MSTE
- 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 aims.

CONFERENCE THEME

Fostering delight in mathematics, science and technology education

Motivation:

‘Fostering delight’ is the process of ensuring that learners, teachers and researchers experience joy and excitement in mathematics, science and technology education. It is about creating confidence; recognising the beauty in mathematics, science and technology; and realising that everyone has the capacity to understand, develop and use mathematics, science and technology to understand the world in which we live. In a world dominated by test scores and performativity, we appear to have lost focus on other important aspects, such as developing a love for mathematics, science and technology education.

During this conference, we ask ‘Is our research contributing to fostering delight in mathematics, science and technology for all people?’

Keywords: *Fostering delight, joy and excitement, creating confidence, recognising the beauty of mathematics, science and technology education.*

PROGRAMME

Conference proceedings commence on Tuesday morning 14th January with workshops facilitated by invited plenary speakers. The first invited plenary speaker presentation commences on the same day. The conference ends directly after the Gala Dinner on Thursday 16th January 2020. This is a full, three-day conference that consists of various types of presentations, described below and delivered by participating registered delegates.

The 2020 invited plenary speakers are:

1. **Emeritus Professor Terezinha Nunes** hails from Oxford University, United Kingdom. Her research is extensive and focuses on numeracy and literacy development covering both cognitive and cultural issues.
2. **Professor Umesh Ramnarain** is currently Head of Department in Science and Technology Education at the University of Johannesburg, South Africa. His main research interest is on inquiry-based science education in South African classrooms with a particular focus on complex and diverse learning contexts.
3. **To be confirmed shortly**

Further information can be found on the above speakers on the SAARMSTE website <https://www.saarmste.org/>

IMPORTANT FINAL DATES to diarise

Online submission of papers for review: see 1st Announcement	Wednesday 31 July 2019
Review process completed – advise authors of outcomes	Monday 30 September 2019
Final submission of re-worked long papers	Thursday 31 October 2019
Online conference registration opens	Monday 30 September 2019
Application for conference Writing Clinic closes	Thursday 31 October 2019
Payment of registration fees by all presenters¹	Friday 29 November 2019
Provisional programme released to presenters	Wednesday 4 December 2019

BOOK OF LONG PAPERS/PROCEEDINGS & MEMORY STICK

- A Book, (printed hard copy), entitled Long Papers/Proceedings includes ISBN number, publication date and review procedures. This will be compiled from all accepted long papers. Such long papers are FULLY peer reviewed and may attract DHET subsidy
- A Memory Stick of all presented papers will be compiled from accepted long and short papers, snapshots, guided posters and symposia. (Kindly note that short papers are NOT fully peer reviewed and thus do not attract subsidy).
- A Conference Programme, (printed hard copy), includes abstracts of all accepted papers i.e. long and short papers, snapshots, guided posters and symposia abstracts.

Delegates may *pre-order* a hard copy of the book of long papers/proceedings when registering for the conference online, <https://www.saarmste.org/conferences> Delegates will be required to pay for the hard copy of the proceedings.

Delegates will be provided with a copy of the conference programme and a memory stick at the SAARMSTE Conference Registration desk in January 2020

PROGRAMME PRESENTATIONS - Refer 1st Announcement for:

- A. Invited Presentations
 1. Plenary Sessions
 2. Plenary Speaker Workshops
 3. A Panel Presentation
- B. Submitted Peer Reviewed Paper Presentations
 1. Long paper
 2. Short paper
 3. Snapshots
 4. Guided Posts
 5. Symposia / panel discussion

Criteria for submitting the above presentation options and format are found in Section B of the 1st Announcement and Section C which includes the relevant conference strands

Note Section C on Paper Presentations and Strands:

Mathematics	Science	Technology
Mathematical Literacy	Natural Sciences	Information & Communication Technology (ICT)
Mathematics	Biology	Engineering
	Chemistry	
	Physics	

¹ *If final arrangements for payment are not processed by Saturday 30/11/2019 paper(s) will NOT be included in the conference programme

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

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

NB. In addition to the above details it should be noted that:

1. In accepting a **long paper** for presentation at the SAARMSTE conference, the Review Panel presumes that:
 - a. the paper is original and has **not** been published elsewhere
 - b. permission will be granted by the author for the accepted long paper to be published in the accredited book of proceedings
 - c. at least one of the authors will register and attend the conference to present the paper; and that
 - d. first authors present one long paper at the conference

Long papers are fully peer reviewed and thus attract DHET subsidy

2. Once a **short paper** (1 500 words) has been accepted, authors may elect to develop their research further into a 3 600 word paper which will not be reviewed but, after consultation with the editors, could be published in the book of short papers. These papers do not attract DHET subsidy. See 1st Announcement for further details.

POST-CONFERENCE WRITING CLINIC

The Writing Clinic is scheduled for the day after the conference (Friday 17th January). The purpose is to develop draft manuscripts and/or short papers into articles for journal submission. The Chief-Editor of AJRMSTE (**Professor Busisiwe Alant**), together with members of the Editorial Team, will facilitate the Post-Conference Writing Clinic.

For short paper authors, the feedback and guidance received during the Writing Clinic may assist in the publication of a journal article within AJRMSTE or other recommended and accredited journals within the field of MSTE.

Who should attend?

1. Those who submit long papers but are advised that a short paper is more appropriate for the conference.
2. Those who submit, and have accepted, a short paper for participation in the conference.

Spaces in the Writing Clinic are limited.

Applications, accompanied by a draft paper, should be submitted directly to Prof Busisiwe Alant by 31 October 2019 at Alantb@ukzn.ac.za

Should you be accepted to take part in the Post-Conference Writing Clinic, you will need to make your own accommodation arrangements for the additional night(s).

DELEGATE REGISTRATION TO ATTEND THE CONFERENCE

Those wishing to attend the 2020 SAARMSTE Conference should register online through <https://www.saarmste.org/>

REGISTRATION FEES

There are four different levels of registration fees:

1. valid 2019 paid up member of SAARMSTE;
2. non- or lapsed member of SAARMSTE;
3. valid 2019 member over 65 years of age; and
4. daily participants

Note: If you did not attend the SAARMSTE 2019 Conference, or have not paid membership fees since then, you are not a paid-up member

MEMBERSHIP STATUS	EARLY BIRD (payment received before/on 31 October 2019)	LATE PAYMENT (payment received after 31 October 2019)
Valid 2019 paid up members Discounted conference fee includes 2019 membership fee	R3 800.00 (includes 2020 membership)	R4 100.00 (includes 2020 membership)
Non-members and lapsed members.	R4 350.00 (includes 2020 membership)	R4 650.00 (includes 2020 membership)
Valid 2019 members and over 65 years of age	R1 900.00 (includes 2020 membership)	R1 900.00 (includes 2020 membership)
Daily rate – excludes membership	R1 740.00	R1 860.00

When processing payment, kindly include delegate name or conference invoice number.

Registration fees paid from outside South Africa and cash payments must include a bank charge of R200.

Details of methods of payment are provided on receipt of submitted registration. This includes: South African bank account details for bank transfers and/or EFT deposits. Kindly note: that credit card and/or PayPal facilities are **not** available.

CANCELLATION OF REGISTRATION

If cancellation is received in writing:

- | | |
|--|-------------|
| before 31 October 2019: | full refund |
| between 31 October and 15 December 2019: | 40% refund |
| after 15 December 2019: | no refund |

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

SAARMSTE CORRESPONDENCE DETAILS

Please address your SAARMSTE CONFERENCE correspondence to

Ms Carolyn Stevenson-Milln
SAARMSTE Secretariat

Cell: +27 (0)82 977 9858

Conference 2020 Email: saarmste2020@gmail.com

General SAARMSTE queries should be addressed to the SAARMSTE Secretariat

Ms Carolyn Stevenson-Milln
SAARMSTE Secretariat

Cell: +27 (0)82 977 9858

Secretariat Email: saarmste@gmail.com

CONFERENCE BURSARY (Financial Support)

Three bursaries are available to assist delegates whose institutions do not provide financial support, and who under these circumstances would not otherwise be able to attend the conference. Such a bursary covers conference registration fees and accommodation in student residences for three nights only. Any additional costs, such as travel costs, must be covered by the delegate. The following criterion applies:

- The applicant must be attending the SAARMSTE conference for the first time
- The applicant must present a paper (either a short paper or a long paper)
- The applicant must be the first author of the paper, and must be the presenting author
- The applicant must be unable to obtain funding from their institution
- The applicant's supervisor should support the application.

For those who are interested in applying for a bursary kindly complete the application form at the end of this announcement or refer to the conference website:

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

SAARMSTE AWARDS

Two awards may be awarded at the Gala Conference Dinner of the Annual Conference. These are:

1. EARLY CAREER PUBLICATION AWARD

For an emerging published researcher in the early part of his/her career for a remarkable and excellent report in the African Journal of Research in Mathematics, Science and Technology Education (AJRMSTE).

Eligibility

Only candidates who satisfy the following criteria will be considered. They must:

1. be a current SAARMSTE member;
2. have attained a PhD degree five or less years prior to the forthcoming conference;
3. have published an outstanding research paper in AJRMSTE during the year preceding the relevant SAARMSTE Conference; and
4. either be the sole or main author of the paper concerned.

Judging

The award is made on the basis of:

- evidence that the paper makes a significant, relevant and original contribution to the field of Mathematics, Science or Technology Education;
- the evidence is assessed through interrogating the quality of the qualifying papers identified and the supporting documentation (CV and letter describing the process of the paper development);
- the AJRMSTE Editorial Team **proposes** candidates for the SAARMSTE Early Career Publication Award, for ratification by SAARMSTE's Executive Committee.

Awards are not necessarily given on an annual basis. They are awarded only where candidates are considered deserving of the award. The decision of the SAARMSTE Executive Committee is final.

Acknowledgement: The above award is adapted from the MERGA Early Career research award.

2. EXCEPTIONAL SERVICE TO SAARMSTE

This award is in acknowledgement to a SAARMSTE member who is found to have made a substantive contribution to a range of SAARMSTE activities and to the SAARMSTE as an organisation.

Nominations for either award should be accompanied by a letter of motivation and sent to the Association Secretariat at: saarmste@gmail.com The deadline for nominations: 31 October 2019 for the 2020 awards.

CONFERENCE ACCOMODATION and OTHER INFORMATION

As noted, the 28th SAARMSTE Conference 2020, is scheduled to be hosted collaboratively by Rhodes University and Nelson Mandela University. The venue for the conference is scheduled to take place at Nelson Mandela University, South Campus, Summerstrand, Port Elizabeth, Eastern Cape, South Africa. A list of accommodation options, (hotels, guest houses, bed and breakfast establishments, and university residences) close to Nelson Mandela University South Campus appear below. Accommodation is not included in the conference fee. The payment thereof is for the delegate's own account. Kindly note Port Elizabeth is a tourist destination and there are numerous accommodation establishments. For more options Google 'Summerstrand Port Elizabeth Accommodation'.

Accommodation – Port Elizabeth. Kindly direct bookings and/or queries to the supplier of your choice

Summerstrand, Port Elizabeth accommodation	Rating (star rating)	Contact details: Telephone, Email, Website	Further information
HOTELS:			
Summerstrand Hotel, Marine Drive, Summerstrand, PE	3 *	+27 (0)41 583 3131 reservations@hotsummer.co.za www.summerstrandhotel.co.za	Swimming pool, parking, NMU: 2.5 km
City Lodge Hotel Cnr Beach & Lodge Road Summerstrand, PE	5 *	+27 (0)41 584 0322 Clpe.resv@clhg.com www.clg.com	147 rooms, swimming pool, fitness room. 2.6 km
Courtyard Hotel Cnr Lodge & Beach Road Summerstrand, PE	4 *	+27 (0)41 583 4655 Cype.resv@clhg.com www.clhg.com	91 suites, opposite Humewood Beach, airport shuttle, NMU: 2.6 km
Beach Hotel Marine Drive Summerstrand, PE	4 *	+27 (0)41 502 3050 reservatios@pehg.co.za www.thebeachhotel.co.za	58 en-suite rooms, beach views, airport shuttle, NMU: 3 kms
Radisson Blu Hotel Cnr Marine & 9 th Ave Summerstrand, PE	4 *	+27 (0)41 409 5000 Infoport-elizabeth@dadissonblu.com www.radissonblu.com/en/hotel-portelizabeth	173 rooms, sea views, fitness room, airport shuttle, NMU: 2.3 kms
Town Lodge Cnr Beach & Lodge Rd	2 *	+27 (0)41 509 2000 Tlpe.resv@clhg.com www.clhg.com	Opposite Humewood Beach with sea views, airport shuttle, NMU: 2.6 km

Summerstrand, PE			
Road Lodge Marine Drive, PE	1 *	+27 (0)41 583 4404 Rlpe.dm@clhg.com www.clhg.com	92 rooms, opposite Hobbie Beach, NMU: 2.6 km
GUEST HOUSES:			
First Avenue GH 3 First Ave. Summerstrand, PE	4 *	+27 (0)41 583 5173 info@firstavenueguesthouse.co.za www.firstavenueguesthouse.co.za	Near to Hobbie Beach, swimming pool, parking, airport shuttle, NMU: 2.8 kms
Fifth Avenue Beach House 3 Fifth Avenue Summerstrand, PE	4 *	+27 (0) 41 583 2441 fifthave@intekom.co.za www.fifthave.co.za	Swimming pool, parking, NMU: 2.6 kms
Brighton Lodge GH 21 Brighton Drive Summerstrand, PE	4 *	+27 (0) 41 585 4756 info@brightonlodge.co.za www.brightonlodge.co.za	Swimming pool, parking, airport shuttle, NMU: 2.4 kms
B&B (Bed and Breakfast) Accommodation			
Africa Beach B&B 10 Skegness Road, Summerstrand, PE	4 *	+27 (0)41 583 5833 stay@africabeach.co.za www.africabeach.co.za	En-suite rooms, close to Hobbie Beach, parking, swimming pool, airport shuttle, NMU: 2.5 kms
At Home Ekhaya B&B 258 Skegness Road, Summerstrand, PE	4 *	+27 (0)41 583 6433 athomebb@telkomsa.net www.athomebnb.co.za	En-suite rooms, close to NMU and beach, swimming pool, parking
Beachwalk B&B 1 Second Avenue Summerstrand, PE	4 *	+27 (0) 41 583 3594 info@beachwalk.co.za www.beachwalk.co.za	Swimming pool, parking, airport shuttle, NMU: 2.8 kms
Pine Lodge Resort Marine Drive Cape Recife, PE	3 *	+27 (0) 41 583 3839 enquiries@pinelodge.co.za www.pinelodge.co.za	Swimming pool, parking, airport shuttle, NMU: 2 kms
Blue Bay B&B 53 Marine Drive Summerstrand, PE	3 *	+27 (0) 41 503 7700 info@bluebaybnb.co.za www.bluebaybnb.co.za	Swimming pool, parking, NMU: 2.1 kms
NELSON MANDELA UNIVERSITY STUDENT RESIDENCE			
NB. Nelson Mandela University Residence Accommodation availability to be confirmed. See website: https://www.saarmste.org/ for details late August 2019.			



Nelson Mandela University, South Campus,
University Way, Summerstrand, Port Elizabeth
<https://www.mandela.ac.za/>

INTERNATIONAL AIRPORT

The closest commercial airport is Port Elizabeth International Airport (PLZ), It is located 8.5 kms from South Campus, Nelson Mandela University.

TAXIS, SHUTTLES AND CAR HIRE

Many hotels and guest houses provide a shuttle service to and from PE Airport. Some do charge a fee over and above the cost of accommodation. Alternatively, the following taxi and/or shuttle services are available at Port Elizabeth International Airport:

UBER Port Elizabeth +27 (0) 41-507-7319

Blunden's Shuttle service (Office inside the Airport) +27 (0) 86 100 0731

EZ Shuttles +27 (0) 861 397 488

Car Hire Desks (Outside Departure Terminal)

AVIS Car Hire +27 (0) 41-501-7200

THRIFTY Car Rental +27 (0) 41-581 4774

BUDGET Car Hire +27 (0) 41- 501 7200

EUROPCAR +27 (0) 41-508 9500

BIDVEST Car Rental +27 (0) 41-581 4242



APPLICATION FOR FINANCIAL SUPPORT

I would like to apply for financial support to attend SAARMSTE 2020 hosted collaboratively by Rhodes University and Nelson Mandela University

Eligibility Criteria*

Are you a SAARMSTE member as at 2019?	Yes/No
Will this be your first attendance at a SAARMSTE Conference?	Yes/No
Have you submitted a Long or Short paper for the Conference? Please attach submission	Yes/No
Are you the first author who is presenting the paper at the Conference?	Yes/No
Are you unable to obtain funding from your institution to attend the Conference?	Yes/No

* You must have answered "Yes" to all criteria to be eligible to apply.

Are you a full time/part time registered student at a University? If so please provide details: <ul style="list-style-type: none"> • Name of University • Degree for which registered • Year of study • Name and contact details of supervisor 	Yes/No
Are you a full time/part time academic member of staff of a university? If so, please provide details: <ul style="list-style-type: none"> • Name of University • Department • Number of years at university • Name and contact details of Head of Department 	Yes/No

Applicant Details

Surname		Name(s)	
Institution/ Organisation			
Postal Address			
Telephone			
Cell			
Email			
Supervisor's name (if applicable)			

I, name surname, understand that this bursary only covers the conference registration fees and basic accommodation for three nights, and that all other expenses will be for my own account. I also undertake to write a 10-15-line article/report on the Conference by the end of January 2020, which may be published on the SAARMSTE website.

MOTIVATION - Maximum ¾ page please.

- Please attach a signed letter from your supervisor or Head of Department which includes a statement of adequate progress in your studies/ employment and a declaration that there are no other avenues for financial support from your university.
- Please attach a copy of your paper submission for SAARMSTE 2020

I hereby declare that all of the information supplied in this application is true and correct.

Signature

Date

Deadline for Conference Application in regard to Financial Support submissions:
31 October 2019

Please send completed application form to: the SAARMSTE Secretariat, as an email attachment to saarmste@gmail.com