The Association for Mathematics Education of South Africa

2010 AMESA

Mathematics: The Pulse of the Nation

16th Annual National Congress

28 March to 1 April 2010

George Campbell School of Technology

Durban, KwaZulu-Natal

FIRST ANNOUNCEMENT AND CALL FOR PAPERS

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You are invited to the Sixteenth Annual National Congress of the Association for Mathematics Education of South Africa (AMESA) and to submit contributions around the theme:

Mathematics: The Pulse of the Nation

VENUE: George Campbell School of Technology, Durban, KwaZulu-Natal

DATE: 28 March – 1 April 2010

THE PROGRAMME will include:

1. **Pre-congress workshops (27 March)**
   Limited space will be available and booking is essential.

2. **Plenary addresses** by invited speakers (including overseas speakers).

3. **Panel discussions** on various issues in Mathematics Education.

4. **Parallel sessions** presented by participants, in the following areas: Foundation Phase, Intermediate Phase, Senior Phase, FET Phase, Mathematics Teacher Education.
   The following formats will be used:
   - Long papers (40 minutes plus 20 minutes discussion)
   - Short papers (20 minutes plus 10 minutes discussion)
   - "How I Teach" papers (20 minutes plus 10 minutes discussion)
   - Posters (Exhibited on a 1,2 m x 1,8 m board, for the duration of the conference. Authors should be available at certain hours, for discussion.)
   - Workshops (1 or 2 hours)

5. **Activity centre:** Hands-on practical activities to enhance teachers' and learners' concepts.

6. **Maths Market:** Promotion of their products by commercial vendors.

7. **AMESA Annual General Meeting**

OTHER FEATURES OF CONGRESS 2010:

- International speakers
- Excursions
- Photocopying
- Transport
- Daily social events
- Internet facilities
- Childcare centre
- Daily congress competitions
- Sweatshirts
- Congress bags
- Activity centre

Note: The Final Announcement and Registration Form will be distributed in January 2010 and will contain full details about the programme, accommodation, costs, transport, etc.

Durban, KwaZulu-Natal

Durban is a prime choice for conference and event planners, tourists and sports enthusiasts, because this is the city that is Africa's leading sports and events capital.

Durban is a modern vibrant cosmopolitan city and it's lifestyle, architecture and culture reflect and thrive on it's warm sub-tropical climate. As South Africa's premier travel destination, the city boasts stylish hotels, trendy restaurants, world class shopping, top nightlife and a shoreline of golden sands and blue flag beaches. In contrast Durban's western boundary is flanked by the Valley of a Thousand Hills and the rich history of the Inanda Heritage trail. Whilst the Southern boundary offers superb golf and world class diving at Aliwal shoal.

The City of Durban is one of South Africa's fastest growing urban areas with a population of 3, 7 million people. A previous winner of the United Nations Award for Best Managed City in Africa, Ethekwini Municipality maintains effective control of the City's resources while steering its progress.

George Campbell School of Technology

George Campbell School of Technology is a co-educational school which has always offered a technical education. This school is situated in Brickhill Road, Durban. It is opposite the Ice Rink and 5 minutes walk to the beachfront.

The school has a large well equipped media as well as an Information Technology Centre. The centres are aircondtioned. The IT centre is divided into 2 sections. The one section has 32 computers and the other has 34 computers. All the computers are networked, linked to high speed printers and internet. Smartboard Technology is availabable.

Contact details

Please send all communication about *administrative matters* to:

The Congress Secretariat
P.O. Box 1028
Desainagar
Durban
4405

Tel: 032 941 5935
Fax: 032 941 5935
E-mail: congress@amesa.org.za

Please send all communication about the *academic programme* to:

The Academic Coordinator
Michael de Villiers
Mathematics Education (Edgewood Campus)
University of KwaZulu-Natal
Private Bag X03
3605 ASHWOOD

Tel: 031 260 7252
Fax: 031 260 3697
E-mail: michael@amesa.org.za

Congress Director
Vishnu Naidoo
Tel: 083 262 7119
Fax: 032 941 5935
E-mail: Vishnu@amesa.org.za

Congress website
Please see the congress website for updated relevant information:
http://www.amesa.org.za/AMESA2010/

Local Organising Committee

Members of the AMESA 2010 LOC come from a variety of backgrounds and include teachers, subject advisors and university lecturers:

Vishnu Naidoo	Harry Govender	Kitty Phillips	Sushie Naidoo
Kamla Ramdin	Shanba Govender	Tyger Yegambaram	Thulani Dela
Jane Cruickshank	David Maistry	Merle Pillay	Logie Baskali
Michael deVilliers	Dory Reddy	Busi Goba	Phillip Digkomo
Roshini Ramnarayan	Priscilla Brijlal	Ronel Mitchel	Magash Naidoo

Maths Market

Publishers, entrepreneurs and NGOs are invited to present and promote their commercial products in a special session called *Maths Market*. Research about such products may be presented as an academic paper, but commercial products should not be directly promoted in academic sessions. Please contact the Secretariat for more details.

Call for papers

You are invited to propose one or more contributions to the academic programme.

Please note that to ensure a high standard of presentations and broad based participation:

- We will accept no more than two inputs per presenter.
- We will not accept any presentation for the programme unless a full manuscript or workshop outline has been submitted for reviewing.
- We will adhere to the due dates for submission as this ensures time for useful and relevant reviews of submissions.

To help you in planning and writing your proposal, we include overleaf-technical guidelines for preparing a paper. An electronic styles template is available on the congress website.

The Presentation Proposal Form (page 9) must be submitted *with your proposal* by 31 October 2010.

Call for Reviewers

In order to have a sufficient number of reviewers for submitted papers we invite AMESA members to volunteer to help with reviewing papers. This review process should take place in November-December 2009.

You can serve as reviewer if you are a current AMESA member and have presented a reviewed paper (a long or short paper) at previous AMESA congresses, or have published in Pythagoras.

If you qualify and are willing, please fill in the Reviewer Form (page 11) and send it to the Academic Coordinator by 20 October 2009.

Deadlines

Reviewer Information	20 October 2009
Submission of papers for reviewing:	31 October 2009
Feedback on reviewed papers:	17 December 2009
Application for financial support:	1 February 2010
Early registration:	By 5 February 2010
Normal registration:	6 February to 5 March 2010
Late registration:	After 5 March 2010

Start planning for Congress 2010

We look forward to seeing you in Durban!

Guidelines for submission of long papers

Length: 8 – 12 pages
Each long paper will be scheduled a total time of 60 minutes: 40 minutes for oral presentation and 20 minutes for discussion. The following types of papers are suitable for presentation as a long paper:

1. **Research report** This should include the following:
   - A statement about the focus of the paper or the research questions, and a motivation for the significance of the research;
   - An indication of the theoretical framework of the study reported;
   - Discussion of the related literature;
   - An indication of and justification for the methodology used;
   - Some sample data and findings and a statement of how these help to answer the research questions;
   - What your findings mean for mathematics teaching and learning or further research;
   - List of references.

2. **The exposition of a piece of mathematics** These papers could have as an objective the presentation of mathematics, relevant to the school curriculum, such as:
   - An innovative way of dealing with a section of mathematics;
   - Alternative proofs for theorems;
   - Interesting mathematics that teachers are conversant with; Mathematics that is new in the proposed curriculum;
   - List of references.

3. **Theoretical or philosophical essays** These should include the following:
   - A statement about the focus of the paper and a motivation for its significance;
   - An indication of the theoretical or philosophical framework within which the focus or theme of the paper is developed;
   - Reference to related literature;
   - A clearly articulated statement of the author's position on the focus or theme;
   - What your findings mean for mathematics teaching, learning or research;
   - List of references.

Reviewing
Two reviewers, with experience in the area, will review your paper. Specifically reviewers will be asked to comment on the following: mathematical content, theoretical framework and related literature, methodology (if appropriate), statement and discussion of results, clarity and relevance to the AMESA audience. If your paper is not accepted for this category it will automatically be considered as a short paper presentation.

Guidelines for submission of short papers

Length: 5 – 8 pages
Each short paper presentation will be given a total time of 30 minutes: 20 minutes for oral presentation and 10 minutes for discussion. This kind of presentation is most suitable for work in progress.

1. **Reflection on teaching or practice** This is mainly for mathematics educators who would like to share their reflections on their teaching or on their participation in a developmental project or research project. For reflection on teaching you need to specify the following:
   - The grade and class size;
   - The mathematics topic taught;
   - The mathematical goals and purposes;
   - A description of the lesson;
   - What factors contributed to the success of the lesson;
   - What factors tended to hamper success and how you dealt with them.

2. **For reflection on participation in a mathematics development project** you should specify the following:
   - The duration of the project;
   - Mathematical aspects covered by the project;
   - Practical examples of how participation in the project impacted on your teaching.

3. **The exposition of a piece of mathematics** These papers could have as an objective the presentation of mathematics relevant to the school curriculum. For details on this type of presentation, see (2) of the long papers.

4. **Proposals – research or development** This can be a presentation of a proposal for a research or mathematics education developmental project and should include the following:
   - A description of the focus of the research project or developmental project;
   - Motivation for the study or project;
   - Some indication of the theoretical framework of the study or project;
   - Some discussion of the related literature;
   - How the study or project will be undertaken, including some justification of methodology;
   - Participants and time lines;
   - List of references.

5. **Initial sharing of data** This is mainly for people who have done research and are still working on their analysis. The paper should include the following:
   - A statement about the focus of the paper or the research questions, and a motivation for the significance of the research;
   - Some aspects of the theoretical framework of the study reported;
   - Some discussion of the related literature;
   - An indication of and justification for the methodology used;
   - Some sample data and initial analysis or description of data;
   - List of references.

Reviewing
Two reviewers, with experience in the area, will review your paper. Specifically, reviewers will be asked to comment on the following: mathematical content, conceptual coherence, clarity and relevance to the AMESA audience.

Guidelines for “How I teach” papers

Length: Minimum 1 page and a maximum of 4 pages

Critical information to be included:

- **Title**: A heading for your paper e.g. How to use paper folding in geometry.
- **Name**: Your Name and Surname
- **Organisation**: Where you are from e.g. the name of your school.
- **Phase:** The phase your talk is aimed at i.e. foundation, intermediate, senior or FET.
- **Introduction:** Include here a paragraph on what your talk is about. Why you chose to talk about it. What you are going to do in the talk.
- **Content:** You might want to write one or two sentences on your experiences of using such activities in your class and some of the advantages or disadvantages of using the activities. Also provide here a brief conclusion on the talk.
- **References:** Add here any references that you might have used. In other words, if you took the activities from a textbook or from the internet, please acknowledge that.

Reviewing
The Programme Committee will review the proposals for “How I teach” presentations.
The Programme Committee reserves the right to make minor editing changes. If substantial changes to your work are necessary the paper will be returned to you in order to make the changes.

Guidelines for poster presentations

Poster presentations are available for those whose work is more suitably communicated in a pictorial or graphical format, rather than through an oral presentation. There is no formal oral presentation associated with posters, but a time will be allotted, after sufficient display time, during which presenters will be available at their posters for informal discussion with participants.

A poster can present research projects, software developments, curricular innovations, educational programmes, etc., related to Mathematics Education.

When preparing your *proposal* for a poster:

- Your proposal should describe both the contents of the poster and its particular visual (pictorial or graphical) characteristics.
- Restrict your proposal to one page, including references and figures. If accepted, this text will be included in the conference proceedings.
- Type and centre the title (in capitals), author(s) name(s), and affiliations(s) of the author(s) in this order.

Reviewing
The Programme Committee will review the proposals for Poster Presentations.
If your proposal is accepted, the Programme Committee will provide further guidance on the preparation and display of the actual poster itself.

Guidelines for workshop presentations

Note that workshop write-ups and the worksheets will be not be published in the paper Congress Proceedings. It will be included in the CD_ROM Proceedings, and copies of the activities will be duplicated only for the workshop participants.

Your proposal should include:

1. **Motivation for running workshop**
   This is for reviewing and should include:
   - **Title of the workshop**
   - **Name of presenter(s)**
   - **Institution where you are employed**
   - **Target audience:** The phase your workshop is aimed at e.g. intermediate.
   - **Duration:** There will be 1-hour or 2-hour workshop slots. Please ensure that you choose an appropriate length slot.
   - **Maximum no. of participants:** You may limit the number of participants in your workshop. Workshop presenters should attempt to cater for at least 30 participants.
   - **Motivation for the workshop:** Why is this workshop important and how will it help participants?
   - **Description of content of workshop**
     What will be done in the workshop? How will the time slot be broken up?
   - **The activities and worksheets to be used in the workshop** (maximum 8 pages)
2. **An abstract describing the level, nature and content of the workshop** (200 words)
   Note: Only this abstract will be published in the Congress Proceedings or Programme.

Note:
- Workshops need to be **hands-on sessions** where participants are **actively involved** in doing the activities that you provide. Usually these activities will be done in groups, consisting of 3 – 5 participants. There should also be ample time for discussions (approximately 25% of your time is suggested).
- If you have used ideas from other sources, it is essential that you acknowledge these sources. We will *not* accept any submissions where more than 2 pages have been copied directly from another source.

Reviewing
The Programme Committee will review the proposals for Workshop Presentations.

Technical guidelines for preparing manuscripts

We are endeavouring to work towards a uniform appearance for all papers in the congress proceedings. An electronic template and guidelines will be available from the congress website. Please use the template as the basis for your paper.

Please adhere to these guidelines:
- Restrict your paper to the maximum number of pages as specified for the type of presentation, including references, figures, and appendices.
- Write the paper in English.
- Type and centre the title (in capitals), author(s) name(s), and affiliation(s) of the author(s), in this order.
- Underline the name of the presenting author(s).
- Begin the paper with an abstract of up to ten lines, single-spaced, preferably in italics.
- Use a 14-point type (Times recommended), a 16-point line space, and 6 points between paragraphs, occupying a frame of 170 by 247 mm. Please use exact dimensions, and fill the entire frame. Remember that the original text will be reduced in the Proceedings.
- Give references in the APA style.
- **Do not number the pages**
- E-mail the paper as an attachment to the Academic Coordinator by 31 October 2009. **Fax copies will not be accepted.**

TABLE OF PRESENTATION CATEGORIES

This page is for your reference when completing the Reviewer Form or the Presentation Proposal Form.

Reviewers will receive proposals for review according to their preferred categories that they mark in their Reviewer Form.

The proposals will be sent to reviewers according to the presentation categories that authors have marked in their Presentation Proposal Form.

PRESENTATION CONTENT DOMAINS

1. Affective factors	12. Geometrical and spatial thinking
2. Algebra and algebraic thinking	13. Language and mathematics
3. Assessment and evaluation	14. Measurement
4. Beliefs	15. Metacognition
5. Computers, calculators and other technological tools	16. Numeracy (numbers and operations)
6. Conjecturing (proofs and explanations)	17. Probability and combinatorics
7. Data handling (statistics)	18. Problem solving and mathematical modeling
8. Financial mathematics	19. Socio-cultural studies
9. Fractions, rational numbers and proportion	20. Teacher education and professional development
10. Functions and graphs	21. Theories of learning
11. Gender issues	22. Other (indicate)

EDUCATIONAL LEVEL:

23. Foundation Phase	26. Further Education and Training (FET)
24. Intermediate Phase	27. Teacher Education (pre- & in-service training)
25.Senior Phase	

IN THE CASE OF RESEARCH, THE TYPE OF RESEARCH:

28. Empirical / Experimental	31. Ethnographic / Interpretative
29. Statistical	32. Theoretical / Philosophical
30. Case study	

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3605 ASHWOOD

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E-mail: michael@amesa.org.za

PRESENTATION PROPOSAL FORM

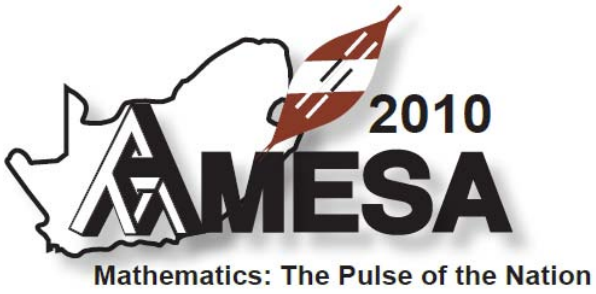
This form must be completed and submitted with every presentation proposal.

Note: You may prefer to complete the electronic form on the congress website.

DEADLINE: 31 October 2009

PLEASE TYPE OR HAND-WRITE BY USING ONLY CAPITAL LETTERS

Type of Presentation (mark one): Long paper ☐ Short paper ☐ How I teach ☐ Poster ☐ Workshop ☐
Title of Presentation:
Author(s):
Presenting Author(s):
Contact Details: The following information should be completed only for a Presenting Author: Postal Address: City: Postal Code: Telephone no: Cell no: Fax no: E-mail:
Complete to assist the Programme Committee in finding you an appropriate reviewer Presentation categories (choose relevant numbers from the Table on page 8): Content Domains (mark at most three numbers from 1 to 22): ____ ____ ____ Educational Level (from 23-27): ____ Type of Research if applicable (from 28-32): ____



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E-mail: michael@amesa.org.za

REVIEWER FORM

Please complete this form if you are prepared to help review submitted papers for the congress.

To qualify as a reviewer, you must be a current AMESA member and have presented a reviewed paper (a long or short paper) at previous AMESA congresses, or have published in Pythagoras or another reviewed journal.

DEADLINE: 20 October 2009

Note: You may prefer to complete the electronic form on the congress website.

PLEASE TYPE OR HAND-WRITE BY USING ONLY CAPITAL LETTERS

Contact Details:

Name:

Institution:

Postal Address:

City: Postal Code:

Telephone no:

Cell no:

Fax no:

E-mail

Complete to assist the Programme Committee to match you to appropriate submissions

Presentation categories (choose relevant numbers from the Table on page 8):

Please choose at most four **Content Domains** (numbers 1 to 22):

Please choose your preferred **Educational Levels** (numbers 23 to 27):

Please choose your preferred **Types of Research** (numbers 28 to 32):

The Congress Secretariat
P.O. Box 1028
Desainagar
Durban
4405

Fax: 032 941 5935
E-mail: congress@amesa.org.za

Application for financial support: AMESA Congress 2010

Note: *Closing date is* ***1 February 2010***

I, ... , would like to apply for financial support to attend AMESA Congress 2010.

Surname: .....

First names: .....

Postal address: .....

.....

Postal code: .....

Institution: .....

Area of interest: (Primary / Secondary / Tertiary) .....

Tel: (Home) ..... (Work) ..... Fax: .....

E-mail: .....

Complete 1 and 2 below and take note of 3:

1. I am an AMESA member: YES / NO ..... Membership number: .....
2. I am able to contribute R…….. of the projected R……. costs for my attendance.
3. I undertake to write an article/report on AMESA Congress 2010 which may be published in *AMESA News*.

Signature: ..... **Date:** .....

Note:

- *A typed ½ to 1 page motivation, as well as a detailed budget must accompany this application. The application will not be considered without a detailed budget.*
- *Preference for funding will be given to paid-up AMESA members who will be participating in the congress programme.*