

The Association for Mathematics Education of
South Africa

invites you to the
9th National Congress
with the theme

**“Teaching and Learning Mathematics in and
for Changing Times”**

A celebration of 10 years of AMESA

Venue: U.C.T. Baxter Theatre Complex and
Rustenburg Girls' Junior School

Dates: 30 June to 4 July 2003

Including:

- ❖ Plenary addresses by local and international experts in their fields
- ❖ Panel discussions (AMESA 10 years, Assessment, F.E.T Curriculum and Research panels)
- ❖ Parallel sessions in the five streams: Foundation Phase, Intermediate Phase, Senior Phase, FET and ABET / Research / INSET / Tertiary

Website: <http://www.sun.ac.za/mathed/AMESA2003/>

PLENARY SPEAKERS

Doug Clarke (Australia)

Doug Clarke is currently Associate Professor in the Education Faculty of the Australian Catholic University, Melbourne, with research focussed around early numeracy projects. He is also Director of the Mathematics Teaching and Learning Centre and Mathematics Education Flagship of this university. He has been the recipient of a number of awards for excellence in teaching.

Plenary address: Changing Assessment for Changing Times: Integrating Teaching, Learning and Assessment.

Maarten Dolk (the Netherlands)

Maarten Dolk is a researcher and developer of mathematics education at the Freudenthal Institute in the Netherlands, where he has been involved in the development of inservice materials for teachers and of multimedia learning environments for student teachers (the MILE-project). His recent work focuses on the development of pre-and in-service materials including digital environments.

Plenary address: Thinking Mathematically: Developing a Mathematical Worldview

Georgina Ernstzen (South Africa)

Georgina Ernstzen is a grade 1 teacher at Anne Pienaar Primary School, a rural school situated on a wine farm between

Malmesbury and Paarl. She is the co-author of a book *Leaps and Bounds: Integrating Numeracy and Literacy* - a culmination of the work done in the GetinSet project in which she worked from 1998 to 2001. She has also been a consultant for the *Maths for All* foundation phase books. In 2002 Georgina was short-listed for the Teacher of the Year award.

Plenary address: Adapting to Changing Times: A
 Personal Story of Growth and
 Development.

Catherine Fosnot (United States)

Catherine Fosnot is a researcher at the City College of the City University of New York. She is Director of the Mathematics in the City project and in 1992 received the YWCA Women in Leadership Award. Her research interests include elementary mathematics education from a constructivist perspective, with a strong focus on the inservice education of mathematics teachers.

Plenary address: Teaching and Learning in the 21st
 Century

Cassius Lubisi (South Africa)

Cassius Lubisi is a mathematics education senior lecturer at the University of Natal. He is also chairperson of the Ministerial Project Committee responsible for the development of the National Curriculum Statements for grades 10 to 12. As educators work to implement these documents in the near future, his intimate knowledge of the underlying principles and philosophies behind the development of FET mathematics and mathematical literacy curriculum statements will be of immense value.

SOCIAL PROGRAMME

- Monday Evening:** Mayoral Reception
- Tuesday Evening:** An evening at the Baxter Theatre (tickets for a theatre performance can be booked at the Information table at Congress.)
- Wednesday:** Book a ticket in the registration form for the bus to the Waterfront for the afternoon and evening. Delegates can book at the Information table at Congress for a trip to Robben Island, an IMAX movie or a visit to the aquarium in the afternoon. The evening will be free to browse the Waterfront or return to res.
- Thursday Evening:** Join AMESA in celebrating 10 years at a gala dinner and dance with an African theme. This will be an evening to remember. Do not miss this chance to celebrate together in true Cape Town style.

KEY CURRICULUM PRESS ACTIVITY CENTRE

This innovation at Congress looks set to prove a wonderful addition to the programme. The venue will be open almost 24 hours a day – a place for people to go to in their spare time to do some mathematics.

A range of activities will be on offer with certain focussed events at different times during the course of the day and night.

It will be a meeting place for a quiet chat, a cup of coffee, a moment of deep thought on a particularly perplexing puzzle on offer – a creative space for all.

This truly promises to be a highlight of Congress.

PROVISIONAL PROGRAMME

| | | |
|------------------|--|---|
| Sunday 29 June | 4 - 10 p.m. | Registration and residences open (Registration at the Baxter Theatre) |
| Monday 30 June | 8 - 10 a.m. 10:30 a.m. 5:30 p.m. | Registration (at the Baxter Theatre) Opening ceremony Congress day ends |
| Tuesday 1 July | 8:30 a.m. 5:00 p.m. | Congress day starts Congress day ends |
| Wednesday 2 July | 8:30 a.m. 1:15 p.m. | Congress day starts Excursions |
| Thursday 3 July | 8:30 a.m. 5:00 p.m. | Congress day starts Congress day ends |
| Friday 4 July | 8:30 a.m. 12:25 p.m. | Congress day starts Closing ceremony |

The Key Curriculum Press Activity Centre will be open daily
from 8:00 a.m. to 10:00 p.m.

CONTACT DETAILS

Telephone / fax: (021) 686 9359 Address: P.O. Box 632
Rondebosch
7700

Congress secretary Catherine Harrison ch@inds.co.za
Congress director Neil Eddy neddy@phs.wcape.school.za
Academic co-ordinator Shaheeda Jaffer sjaffer@humanities.uct.ac.za

Website: <http://www.sun.ac.za/mathed/AMESA2003/>

IMPORTANT INFORMATION

REGISTRATION

Delegates will be registered for AMESA Congress 2003 on receipt of a completed registration form and payment of all costs associated with the Congress.

Registration fees include admission to all sessions, a copy of the various volumes of proceedings of the Congress, a copy of the Congress programme, the Congress satchel, morning and afternoon teas as well as lunch from Monday to Thursday.

The reduced early registration fees will only be granted to those delegates whose forms reach the Congress secretary by 2 June 2003.

Preferential rates for AMESA members apply to current paid up members (individual or institutional) who are able to produce proof of membership.

CAMPUS ACCOMMODATION:

Congress accommodation will be in the Baxter Hall residence of the University of Cape Town. This is located adjacent to the Baxter Theatre. The cost is R95 per night for dinner, bed and breakfast accommodation. Bedding is provided, but no towels. Being winter in Cape Town, it would be advisable to pack an extra blanket.

ALTERNATE ACCOMMODATION:

The following is a list of bed and breakfast establishments in close proximity to the venue. Please make your own arrangements, but when booking, please mention that you are an AMESA Congress delegate. In some cases a portion of your cost will be returned to AMESA as a commission. Costs may have changed since we were quoted.

| Guesthouse | Rate | Contact |
|-------------------------------|-----------------------------------|--|
| Knightsbury, Rondebosch | R380 single R280 sharing | 6864347 ph knightsbury.co.za website knightsbury@iafrica.com email 6895686 fax |
| Little Scotia, Rondebosch | R335 single R215 sharing | 6868245 ph 6851887 fax scotia@new.co.za |
| Carmichael House, Rosebank | Single R370 Sharing R260 | 6898350/1 info@carmichael.co.za email 6898097 fax carmichaelhouse.co.za website |
| Ivydene, Rondebosch | R250 -R400/day/flat | 6851747 ph & fax ivydene@mweb.co.za |
| Medindi Manor, Rosebank | Single R350 Double R345/person | 6863563 Ph & fax manor@medindi.co.za email medindi.co.za website |
| Devonshire House, Rosebank | Single R355; double R495 | 6861519 ph & fax devonshire.house@webmaster.co.za |
| Sutton Place, Rondebosch | Single R380 Double R280 | 6851407 ph & fax suttonplace@iafrica.com suttonplacebb.com |
| Koornhof, Observatory | Single R280 Double R190 | 4480595 ph & fax koornhof@yahoo.com |

The closest hotels to the venue are:

| | |
|------------------------------|----------------|
| The Holiday Inn, Newlands | (021) 683 6562 |
| The Vineyard Hotel, Newlands | (021) 683 3044 |
| The City Lodge, Pinelands | (021) 685 7944 |

None of these hotels are within walking distance, so transport will be necessary.

MEALS:

Lunches from Monday to Thursday are included in the registration fee. Dinners and breakfasts are included in the accommodation costs. For those staying away from the venue, a number of restaurants and fast-food outlets are available within walking distance of the Congress venue.

CANCELLATION:

Please note that, once your registration form has been processed a cancellation fee of 20% of all costs will be charged for cancellations up to 16 June 2003. Thereafter no refunds will be made for cancellation of complete or partial costs.

CHILDCARE:

Childcare facilities are available during the day. Child-care includes the observation of children and includes morning and afternoon teas. The service will be provided at a cost of R20 per child per day. Students will be utilised to run the service.

TRANSPORT:

As far as possible, all delegates arriving by bus, train or plane will be transported to the venue by the organising committee. Anne Eadie will need your details by 23 June 2003. Please contact her directly with details by e-mail (eadie@mweb.co.za) or by fax (021 761 4486).

FUNDING:

A certain amount of funding is available to assist those delegates who would otherwise be unable to attend Congress. The form requesting such funding is available on the website, from regional reps and from the Congress secretary. Completed forms must please be returned by 2 June 2003.

EQUIPMENT FOR PRESENTERS:

Data projectors, overhead projectors, computer laboratories and other forms of equipment needed by presenters need to be booked with the Congress secretary. All presenters must please ensure that their requests are with the secretary by 2 June 2003.

WEATHER IN CAPE TOWN

Please remember that it will be winter in Cape Town. An umbrella will be essential. For those who feel the cold, an extra blanket and warm clothing would be advisable.

POSTERS:

A large display area will be available. Anyone who wishes to bring posters or work completed by children, personal work or work produced by students at tertiary institutions is encouraged to make use of this facility. Many ideas can be shared in this manner. Please participate!

VIDEO-CONFERENCE:

Five schools in Cape Town are involved in a video-conference with five schools in London through the MOTIVATE project of the University of Cambridge. A small group of delegates will have the opportunity of seeing this technology in use at a conference that will take place on the afternoon of Monday 30 June. If you are interested please book at the Information Desk at Congress.

DIRECTIONS:

A SELECTION OF THE TITLES OF PAPERS ON OFFER

- On "taxi-cab" geometry.
- Welcome to the wonderful world of mathematics - Giving learners the "big picture" of the subject.
- Looking for links in mathematical topics: Project work for Grade 12.
Ethnomathematics.
- Enhancing Institutional Capacity Through School Based INSET.
- Mathematical Literacy of students entering first year at a South African university.
- Using Excel to explore data handling in a mathematical literacy course.
- Using Excel to explore straight lines in a mathematical literacy course.
- Being a facilitator and mediator in mathematics classrooms: a multi-dimensional task.
- Computers, in the Mathematics Classroom.
- Practicalities of successful incidental numeracy teaching in the Foundation Phase.
- Algebra and your textbook or Does your textbook present a full picture of algebra?
- "Swap and share" group to present worksheets that have worked well (with the rubrics!)
- First year students' difficulties with high school algebra.
Developing mathematical literacy.
- Concept formation & comprehension in mathematics, using classroom and lab activities.
- Teachers' implementation of reform tasks.
- Symmetry, transformation & weaving.
- Elementary mathematics and physics of cricket.
- Using mathematics in science.
Celtic Knotwork.
Pascal's triangle.
- The value of experimentation in mathematics & mathematics education.
A Sketchpad investigation of "Arithmetic Sequence" Parabola.
Number sense development.
The language and logic of Maths.
- Ideas on the teaching of probability in the senior primary phase.
- Mathematical Literacy of Students Entering First Year at a South African university.
Assessment through clustering.
Lotto Maths.
- A SAILI model for a mathematics intervention in the Foundation Phase - some critical issues.
On making 3-D shapes with nets.
- The Development of "Visual Skills" in the teaching of Grade 11 & 12 Geometry.
Mathematical Modelling.
Shape and Space: Integrating Classroom and Lab Activities.
- The teaching and learning of Data handling in the Foundation Phase.

Mathematics teaching assistants' conceptions and practices regarding assessment: How do they develop in the context of an ongoing seminar focusing on assessment?

Work in Progress: An investigation into the senior certificate mathematics examination papers of South Africa and some teaching implications.

A Kick-Off To A Doctoral Study: Intentions And Personal Experiences.

Learning Styles of Preservice Mathematics Teachers - on-going research.

Difficulties Learners Experience Using Mathematics Involving Calculations

Dynamic Geometry or Enrichment - absolute values.

A Closer Look at Some Factors which are Said to Affect Mathematics Learning.

A non-traditional net.

Mathematics Interactive Program.

Learning school mathematics from video-taped lessons..

How Well Are Mathematics Teachers Conceptually Prepared To Teach For Learning? A Case Study Of Grade 7 Geometry.

Circle Geometry through Geometer's Sketchpad.

What we Mathematicians do: Justify and Explain.

Maths activities in a match box.

Outreaching the Teachers through an Outcomes-Based Developmental Programme.

Developing measurement and geometric concepts.

Rethinking trigonometry for South African schools.

Fractions using the computer.

The Impact Of Language Proficiency On Geometrical Thinking.

Using Teacher Action Research to Promote Constructivist Classroom.

Environments in Mathematics in Limpopo Province.

Hour-glass Model: Overcoming the problems of over-crowded mathematics classes using cooperative learning.

Meaningful context & Dead Mock reality: experiences in black & white mathematics classrooms.

Pentominoes.

How to change basic Algebra Teaching using derive 5.

Using conic sections as an integrating factor in the proposed FET curriculum.

How I teach number concept and addition in a Grade 4 remedial class.

The Contribution of Mathematics Textbooks to the Development of Metacognitive Skills in the Intermediate Phase.

Establishing a classroom culture for problem-centred teaching.

Dotty numbers are Crazy.

Virtual Mathematics - Finding, using and sharing mathematics resources online.

Grade learner Assessment Study.

Conceptual Development As Starting Point For The Teaching Of Euclidean Geometry In The Senior Phase.

Teaching Mathematics to Setswana learners in English - a complex issue.

Euler tiling.

Mathematical Surprises.

The Impact Of Mathematical Competitions And Olympiads In Promoting Mathematics.



REGISTRATION FORM AMESA CONGRESS 2003

SECTION A: PERSONAL DETAILS:

| | | |
|-----------------------------|--|----------------|
| Surname: | First name: | Title: |
| Postal address: | | Code: |
| Institution: | AMESA Membership number (if a member): | |
| Telephone (home): () | Telephone (work): () | Fax: () |
| e-Mail: | | |

SECTION B: REGISTRATION:

Please note that to qualify for early registration your form needs to be received at the Congress office by no later than 2 June 2003. For non-members, one year of AMESA membership is included in the registration fee – please complete Section F.

| | Tick | Amount |
|--|-------------------|--------|
| Full early registration – AMESA member @ R450 | | |
| Full normal registration – AMESA member @ R500 | | |
| Full early registration – non-AMESA member @ R535 | | |
| Full normal registration – non-AMESA member @ R585 | | |
| Day visitor (please tick appropriate days) @ R120 per day | M T W T F | |
| Sub-total for registration: | | |

SECTION C: ACCOMMODATION AND MEALS:

Please note that lunch from Monday to Thursday is included for all delegates as part of your registration fee.

| | Tick | Amount |
|---|------|--------|
| Dinner, bed and breakfast for Sunday 29 June 2003 @ R95 | | |
| Dinner, bed and breakfast for Monday 30 June 2003 @ R95 | | |
| Dinner, bed and breakfast for Tuesday 1 July 2003 @ R95 | | |
| Dinner, bed and breakfast for Wednesday 2 July 2003 @ R95 | | |
| Dinner, bed and breakfast for Thursday 3 July 2003 @ R95 | | |
| Dinner, bed and breakfast for Friday 4 July 2003 @ R95 | | |
| Sub-total for accommodation and meals: | | |

Dietary requirements:
(please tick or specify)

| | | | |
|--------|--------|------------|-------|
| Halaal | Kosher | Vegetarian | Other |
|--------|--------|------------|-------|

SECTION D: EXCURSIONS AND FUNCTIONS:

| | Tick | Amount |
|--|------|--------|
| Bus to Waterfront for Wednesday afternoon and evening @ R10 (tickets for Robben Island, etc. can be bought at the Information table at Congress) | | |
| Thursday night: AMESA 10 year dinner and dance @ R95 | | |
| Sub-total for excursions and functions | | |

SECTION E: CHILDCARE:

| Childcare at R20 per child per day (includes light lunch) | M | T | W | T | F | Amount |
|---|---|---|---|---|---|--------|
| Sub-total for childcare | | | | | | |

SECTION F: AMESA MEMBERSHIP:

Only to be completed by non-members:

Field of interest:

| | | |
|---------|-----------|---------------------|
| Primary | Secondary | Tertiary / Research |
|---------|-----------|---------------------|

SECTION G: SPECIAL NEEDS:

| |
|---|
| Special needs requirements (wheelchair entrance, etc.): |
|---|

SECTION H: TOTAL PAYMENT:

| | Amount |
|--|---------------|
| Sub-total for registration (Section B) | |
| Sub-total for accommodation and meals (Section C) | |
| Sub-total for excursions and functions (Section D) | |
| Sub-total for childcare (Section E) | |
| Grand total | |

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