



**Proceedings of the  
13<sup>th</sup> Annual National Congress  
of the  
Association for Mathematics Education of  
South Africa**

**FRONT MATTER**

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Setati, M., Chitera, N. & Essien, A. (Eds) (2007). **Proceedings of the 13th Annual National Congress of the Association for Mathematics Education of South Africa**. Retrieved on [date] from <http://www.amesa.org.za/AMESA2007/Proceedings.htm>.

## FOREWORD

The theme for this year's congress is "*The Beauty, Utility and Applicability of Mathematics*". This is an appropriate theme particularly now when so many of our learners enter mathematics classrooms with very negative attitudes towards mathematics. Many of them study mathematics only because they have to. It is a well-known fact that Mathematics has a widespread public image as being difficult, cold, abstract, theoretical, ultra-rational but important. It also has an image of being remote and inaccessible to all but a few super-intelligent human beings.

We, as mathematicians and mathematics educators know that mathematics is for all and it is important for human development and a crucial part of human culture. It is a powerful language for sharing and systematizing knowledge and also an important part of human existence. The value of mathematics is evident in its utility in the construction of bridges and tall buildings, the harnessing of the power of water, coal, electricity and the effective employment of light, sound and radio in illumination, communication, navigation and even entertainment. Mathematics has not only been applicable to the very practical institutions such as banking, insurance, pension systems, etc. but it has also supplied substance, quality and methodology to other sciences like economics, politics and sociology. Number, quantitative studies and accuracy have replaced vague and subjective speculations.

Mathematics is not only useful and applicable to human culture and development, it is also beautiful. As Bertrand Russell, the mathematician, said "*Mathematics, rightly viewed, possesses not only truth, but supreme beauty - a beauty cold and austere, like that of sculpture, without appeal to any part of our weaker nature, without the gorgeous trappings of painting or music, yet sublimely pure, and capable of a stern perfection such as only the greatest art can show.*" While we as mathematicians and mathematics educators appreciate and enjoy the beauty, utility and applicability of mathematics, the challenge that remains is to ensure that learners appreciate mathematics for what it is, what it does and what it can enable them to do and be. The many papers that we received for presentation at this Congress reflect an attempt by the AMESA community at making the beauty, utility and applicability of mathematics accessible to our learners.

There are in total 65 papers to be presented at this congress: 20 long papers, seven short papers, 13 'how I teach it' papers and 25 workshops. This large number of presentations on offer at this congress is indicative of our growth as a mathematics education community. This growth is also evident in the different areas of mathematics and mathematics education addressed in the presentations. These include research and practitioner presentations on mathematical literacy; the use of technology and games in mathematics education; teaching and learning mathematics in multilingual classrooms and the teaching of new topics in the FET curriculum (e.g. financial mathematics). It is also very encouraging to see the many presentations by teachers, in particular those who are involved in the maths4stats project funded by Statistics South Africa. Without exaggeration, I can safely say we have not had this many presentations at an AMESA Congress in many years. The review team had a difficult task of ensuring that all the papers received.

All the long and short papers received were sent to three reviewers. As a rule, papers with at least two recommendations for acceptance were accepted. Many authors were requested to make modifications to their papers before they could be accepted for publication in these proceedings. Only two out of all the long and short papers received were rejected, however, the authors were given an opportunity to present the papers even though they would not be published in the proceedings. All the 'how I teach it' papers and workshops received were reviewed by at least one person and where necessary, authors were requested to make improvements for acceptance. All workshops received were accepted (some after rework) and only two 'how I teach it' papers were rejected. Thank you to all the reviewers and authors for co-operating with us during the long review process. Reading the wide variety of papers submitted for the congress was stimulating and intellectually rewarding.

Many thanks to Nancy Chitera and Tony Essien, who are PhD fellows at the Marang Centre at Wits University, for sharing in the responsibilities involved not only in the preparation of these proceedings but also in the administrative task of the review process.

Mamokgethi Setati, PhD  
Academic Programme co-ordinator  
Congress 2007

## ACKNOWLEDGEMENT

All papers submitted to the congress were sent to three independent reviewers for blind reviewing. We hope that the contributors found the comments and suggestions useful and we trust that this process helped to improve the quality of the papers.

Many thanks to our review team who reviewed the papers in a constructive and helpful spirit:

Aarnout Brombacher	Hamsa Venkat	Mellony Graven
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13<sup>th</sup> Annual AMESA National Congress, 2 to 6 July 2007, White River, Mpumalanga.

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First published: July 2007, Johannesburg

Published by AMESA

**ISBN: 978-0-620-38906-8**