

REPORT ON THE 2ND AFRICAN WOMEN MATHEMATICS WORKSHOP HELD AT AIMS (SOUTH AFRICA), CAPE TOWN, 17TH TO 19TH JULY 2013

Background Information

This workshop was a follow up workshop to the one held at the University of Ouagadougou, 26th -27th October 2012, under the auspices of AMUCWMA which is the African Mathematical Union (AMU) Commission for Women and Mathematics in Africa.

The main objective of this workshop was to bring together women from various countries within the continent to a Mathematics Workshop where there was a platform for presenting their work, discussing the situation and status of women in mathematics in each of their countries and forming part of the 'Round Table' discussions on the creation of the Association of African Women Mathematicians as well as update the data on African Women in the Mathematical Sciences. In addition the workshop formed part of the Mathematics of Planet Earth (<http://mpe2013.org>) initiative and included lectures that were within this theme, network activities and talks by participants on their respective research.

Conference Proceedings

A number of guest lectures were identified and invited by the organizing committee. The organizing committee comprised the following members:

Marie-Francoise Ouedraogo (Chairperson of AMUCMWA, Burkina Faso, West Africa)

Sibusiso Moyo (Secretary of AMUCMWA, Southern Africa)

Barry Green (AIMS South Africa director, South Africa)

Marie-Francoise Roy (CIMPA scientific officer, France)

Rabbecca Walo (RD Congo, Central Africa)

Micheline Gbeha (Benin, West Africa)

Yirgalem Tsegaye (Ethiopia, East Africa)

Senelani Dorothy Hove-Musekwa (Zimbabwe, Southern Africa)

Rajae Aboulaich (Morocco, North Africa)

Rene January (AIMS, South Africa)

Ingrid Rewitzky (Stellenbosch, South Africa).

The workshop attracted 42 participants from at least 17 African Countries within the continent: AIMS [13], Algeria [1], Benin[1], Burkina Faso [3], Cameroon [1], Cote D'Ivoire [1], DRC Congo [1], Ethiopia [2], France [1], Ghana [1], Kenya [2], Malawi [1], Morocco [1], Mozambique [1], Nigeria [1], Senegal [2], Soudan [1], South Africa [5], Tanzania [1], Uganda [1], Zimbabwe [1].

The programme was as follows:

Day 1: Wednesday 17th July 2013

The programme started with a special welcome from the Chairperson of AMUCWMA Dr Marie Françoise Ouedraogo. She gave background information and welcomed all the participants from the representative countries.

This was then followed by the official opening session of talks by the invited speakers, Prof Barry Green (AIMS Director, South Africa) who gave an overview of AIMS, its activities, programme as well as performance indicators from its inception. What was of particular interest is the well represented component of women participating in the AIMS programme and graduating over the last few years. In addition AIMS has successfully expanded strategically into certain parts of the continent to cater for the need of training in the Mathematical Sciences.

This presentation was followed by Dr Phetiwe Matutu from the (Department of Science and Technology in South Africa. In this talk various statistics of the status of mathematics and participation rates in the secondary to University level were given. There was also a discussion of what the Department was doing to contribute to the skills training.

Professor Marie-Françoise Roy from France (CIMPA scientific officer and Convenor of EWM) gave information on CIMPA programs in Africa and a perspective of European Women in Mathematics, the structure of the organization and set of activities. This gave an introduction to the participants on discussing the establishment of a similar association for women in Africa with similar objectives.

This talk was then followed by contribution and presentations from the participants who were Ratera Safiel Mayar, Cynthia Mazinu, Winnie Mutuku and Sibusiso Moyo.

Finally there was a presentation of the AMU (African Mathematical Union) and what it does to increase women participation delivered by Prof Daniel Makinde who is the Secretary General of the AMU. This gave some background on the AMU and the establishment of the various commissions including AMUCWMA. This presentation generated much discussion and clarification questions in terms of the AMU and AMUCWMA visibility within the continent and how interested participants can become members. Following this was the Round Table discussion on the situation of African Women in Mathematics which listed in general the lower participation rates at all levels and fewer women in Mathematics at Professorial levels within the academic sector.

There were also Poster sessions by AIMS students which show cased the work of the students to the participants. This was very interesting especially the school outreach programmes as well.

Day 2: Thursday 18th July 2013

The second day of the workshop had a very interesting focus on Mathematical Culture and African Women by Prof Sylla Fagueye Ndiaye from the University of Cheikh Anta Diop. This talk insisted on active pedagogy to encourage all students including women. This was followed by the Lecture by Professor Paulus Gerdes on 'Mathematical Ideas, Creativity, and Invention in African Female Cultural Practices'. A number of case studies from the Makwe, Tonga mat and basket weavers in Mozambique was looked at. According to the presentation, mathematics is present in traditional African culture. This set the tone of the day. Furthermore there were presentations from the participants as well, namely, Dorothy Senelani Musekwa, Natasha Van Rooyen, Bernadette Faye, Joyce Kagendo.

Prof Amanda Weltman presented her talk on Mathematics, Cosmology and Research. She is based at the University of CapeTown in South Africa. Her talk was very inspirational as it also encouraged other participants on what achievements one can make in this area and the many opportunities for Research and Collaboration. The day ended with the 'Round table discussion on the creation of the Association of African Women Mathematicians as well as Forum discussions.

Day 3: Friday 19th July 2013

Professor Josephine Guidy-wandja, University of Abidjan gave a talk on Women and Mathematics: History and Actuality. The historical and actuality account was very informative for the participants and gave a context of the current situation in many African states.

The lecture by Professor Diane Wilcox from the University of Witwatersrand was on 'No Guts for Maths of Finance and Economics'. This talk was also very interesting and informative. Following this was a panel discussion and talks by the participants, namely, Yirgalem Tsegaye, Juliet Nakakawa, Latifat Erinle-Ibrahim, Scheherazad Selmani and Fatima Boudich. Followed by this was the lecture on 'Mathematics of the Planet Earth and epidemiological models' by Professor Edward Lungu, University of Botswana.

During the Round Table discussion the African Women in Mathematics Association (AWMA) constitution was adopted to form the AWMA 2013 with the following category of members elected as officers of AWMA:

President: Marie-Francoise Ouedraogo (Burkina Faso)

Vice President - West Africa: Joséphine Guigy-Wandja (Côte D'Ivoire)

Vice President - Central Africa: Rebecca Walo Omana (D.R. Congo)

Vice President - North Africa: Scheherazad Selmane (Algeria)

Vice President - East Africa : Yirgalem Tsegaye (Ethiopia)

Vice President - Southern Africa - (To be co-opted)

Secretary: Senelani Dorothy Hove-Musekwa (Zimbabwe)

Vice Secretary: Winniefred Mutuku (South Africa/Kenya)

Treasurer: Fagueye Ndiaye (Senegal)

Publicist Secretary: Milaine Sergine Seuneu Tchmaga (South Africa – Southern Africa

*(See the attached Appendix which forms the AWMA constitution) with the focus on development of Women Mathematicians within the continent. The AWMA was formed to contribute to the development of mathematics and women in mathematics.

The meeting ended with the farewell cocktail reception and dinner.

FUNDERS/SPONSORS

Many thanks to all the sponsors for their financial support:

- African Institut for Mathematical Science (AIMS)
- International Center for Pure and Applied Mathematics (ICPAM/CIMPA)
- International Mathematical Union (IMU)
- London Mathematical Society (LMS) and African Mathematics Millennium Science Initiative (AMMSI). LMS – AMMSI
- Committee for Developping Countries of European Mathematical Society (CDC for EMS)
- Union Economique et Monétaire Ouest Africaine (UEMOA)

Several individuals had their plane tickets paid by various institutions, in particular

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