



**AFRICAN
ACADEMY OF SCIENCES**



**AFRICAN MATHEMATICAL
UNION**



AAS/AMU Symposium on “Current Research Trends in Mathematical Sciences and applications”

Date: May 16 – 20, 2016

Host: UNESCO Chair of Mathematics, National Mathematical Centre (NMC), Abuja, Nigeria

**COMMUNIQUE ON AAS/AMU INTERNATIONAL SYMPOSIUM AND PRE-SYMPOSIUM
SCHOOL**

The International Symposium and Pre-Symposium School on “Current Research Trends in Mathematical Sciences and Applications” organized by AAS and AMU were hosted by ECOWAS and NMC-UNESCO Chair on Mathematics in Abuja from 3rd to 20th May, 2016.

The Symposium closed with various resolutions and recommendations as follows:

1. The participants at the symposium observed with appreciation that there was a two-week pre-symposium School for younger mathematicians – Post Doctoral, Postgraduate students, and young lecturers. It is hoped that such capacity building efforts would continue all over the continent.
2. All participants and lecturers commended the organizers of the Symposium for the apt topics, quality of Speakers and good facilities;
3. The participants commended AAS, IMU, AMMSI and ECOWAS for their support and urged the organizations to continue to support this capacity building exercise within the Sub-regions of the continent.
4. There is a need to build up a critical mass of research mathematicians and other mathematical scientists for the overall scientific, technological and economic development of the continent;
5. More emphasis should be placed on encouraging girls/women for careers in the mathematical sciences so as to reduce the gender gap;
6. There is a need to encourage sound training at Ph.D. level including visits abroad and international contacts;

7. Emphasis should be on research quality rather than quantity; Also, substandard journals should be avoided;
8. Established mathematical scientists should use their network to open doors of opportunities for upcoming young ones;
9. There should be inducements by way of good scholarship for those who want to study mathematical sciences as well as enhanced entry opportunities into various careers for mathematical sciences graduates;
10. The dichotomy between Pure and Applied mathematics should be de-emphasized. Students should be encouraged to understand mathematics as one and single area of Knowledge;
11. Conscious effort should be made to encourage more upcoming research mathematicians to study pure mathematics at doctoral level due to the current dearth of pure mathematicians in African universities;
12. Regular meetings of HODs and Professors of mathematical sciences in Nigeria should continue to be organized by NMC, Abuja;
13. There is urgent need for a restructuring of the mathematics teacher education programme in favour of more mathematics subject matter dose for the pre-service teachers and would-be mathematics educators;
14. At the secondary level non-mathematics education graduates should not be allowed to teach mathematics;
15. Mandatory continuous professional development programme should be organized for mathematics subject teachers (and indeed all subject teachers) annually. Such trainings should provide them with modern methods and techniques of teaching Mathematics, including the integration of latest IT tools into their teaching of the subject;
16. African governments should, as a matter of urgency, declare a state of emergency on the teaching and learning of Mathematics. In Nigeria, the government should then go ahead to provide more funding for the National

Mathematical Centre (NMC) to prosecute its mandate effectively and efficiently;
Appropriate IT tools should be used to make teaching and research more effective and enhance students learning;

17. Remarkable improvement of teaching and research facilities, infrastructure and equipment in our schools and tertiary institutions should be vigorously pursued;

18 In Africa, all Mathematical Sciences Centres and universities should be adequately funded to beef up their capacity building activities. In particular, the National Mathematical Centre in Nigeria should be well funded;

19 All Mathematical Sciences Centres in African countries should be encouraged to anchor research connections with Industries and other Research Institutions, and

20 Popularization of mathematical sciences should be intensified in its various ramifications.

Membership of the Symposium Communiqué Committee

- | | | |
|---------------------------|---|----------|
| 1. Prof. Peter Onumanyi | - | Chairman |
| 2. Prof. Abayomi Arigbabu | - | Member |
| 3. Prof. Vincent Ele Asor | - | Member |
| 4. Prof. Uba Ahmad Ali | - | Member |

Professor Aderemi Kuku

President, African Academy of Sciences (AAS)

Professor Adewale R. T. Solarin

President, African Mathematical Union