



## 3<sup>rd</sup> PAMES 2019

### REPORT

On the 2<sup>nd</sup> -5<sup>th</sup> December 2019, the 3<sup>rd</sup> Pan-African Mathematics Education Space in Africa was held in Luanda, capital of the Republic of Angola, under the coordination of Professor Maria de Natividade, Secretary of Mathematical Education in Africa and Professor Nouzha EL YACOUBI, the President of the African Mathematical Union, with the support of the Ministry of Higher Education, Science, Technology and Innovation of the Republic of Angola.

The main goal of PAMES 2019 was to bring together researchers, scientists, academic leaders in mathematical education in Africa and around the world, and those responsible for education in Africa and beyond, in order to exchange and share their latest experiences and results, trends and concerns, as well as the challenges and practical solutions encountered in improving the quality of teaching and mathematics's professionals in Africa and elsewhere, and its consequences on the scientific and technological development of the respective countries.

PAMES 2019 counted on researchers in Mathematics and Mathematics education from around the world, highlighting the following individuals who presented plenary conferences:

1. Professor Nouzha EL YACOUBI, AMU President
2. Professor Adolphe Cossi Adihou, President of African Didacticians of Mathematics, from Canada
3. Andrés Fraguera Collar, Researcher Professor at Faculty of Physics and Mathematics of Autonomous University of Puebla in Mexico;
4. Bernardo Rodrigues, Researcher Professor of University of Kwazulu Natal, South Africa
5. Professor Lew-Chai, president of Korea National University of Education
6. Jill Adler, SARChI Mathematics Education Chair at the University Witwatersrand, and President of International Commission on Mathematical Instruction (ICMI)
7. Professor Mahman Banzanfaré, Rector of the University of Zinder
8. Professor Maria Teresa Bixarão Neto, Researcher Professor in the Department and Education and Psychology at the University of Aveiro, Portugal

It also had 12 presentations by invited speakers from various countries in the world and one from Angola, with emphasis on the Deputy Director of CEMASTEIA (Center for Mathematics, Science and Technology Education in Africa), Ms. Lídia Muriithi.



The opening ceremony of the 3<sup>rd</sup> Pan-African Space of Mathematical Education in Africa began at 10 am, in the Palmares Hotel's Conference Room, with the presences of the following persons:

- Doctor Maria do Rosário Sambo; Minister of Higher Education, Science, Technology & Innovation
- Doctor Jesus Joaquim Baptista; one the of National Secretaries of Education Ministry
- Mr. Andre de Jesus Moda; National Secretary of Agriculture & Forests

Doctor Maria de Natividade, LOC's President started with a description of the historic course of Pan-African Spaces of Mathematical Education. The first one of these took place in Tunisia, on November of 2006, and it was made about the theme "Research in Mathematical Education". Two years later, on November of 2008, the 2<sup>nd</sup> Pan-African Spaces of Mathematical Education took place in Tunisia again.

Angola has the privilege of being the host of the 3<sup>rd</sup> Pan-African Spaces of Mathematical Education with the theme "Professional Development of the Mathematic Teachers in Africa", made up from 2<sup>nd</sup> to 5<sup>th</sup> of December, in Palmares Hotel (Luanda).

Doctor Maria de Natividade concluded her introduction announcing the main goals of the Pan-African Spaces of Mathematical Education:

- ✓ Gathering researchers in Mathematical Education, academic leaders in Mathematical Education and African government's persons in charge, in order to exchange experiences and Mathematical Education research results on every level and talk about professional development of Mathematic teacher in Africa;
- ✓ Showing and discussing recent results, tendencies, challenges and practical solutions that contribute for the improvement of mathematical teaching and for the technological development of African and continental countries.

This was followed with the intervention of Doctor Nouzha El Yacoubi, the President of African Mathematical Union, who began thanking the availability showed by the Ministry of Higher Education, Science, Technology & Innovation, about holding this event. Then, she pointed the following aspects:

- ✓ The key mantle of education and concomitantly the Mathematic as a base for Science and Technology
- ✓ The collaboration of the African Mathematic African with the Governments suits Africa's development;

The opening speech was performed by Professor Maria do Rosário Sambo; Minister of Higher Education, Science, Technology & Innovation, and she talked about the following points:

- ✓ The importance of the execution of the 3<sup>rd</sup> Pan-African Spaces of Mathematical Education
- ✓ The wish of producing results, as programmed;
- ✓ The mantle of the School in society, the dynamism of Mathematic and the contribution of Mathematical Education;
- ✓ The mantle of the Mathematic Teacher and the enhancement of the Teaching Methods;



As an ending , she wished best regards to every participant in the event.

At 10:50 AM, was signed of the memorandum of understanding between the Agostinho Neto University (UAN), Angola, African Mathematical Union and the South Korea University, in the people of Doctor Magalhães, UAN's Dean, Nouzha El Yacoubi, AMU's chairman and Professor Hee-Chan-Lew, South Korea University's chairman.

Professor Isaac Paxe, Chairman of the National Institute of Education Table Formation, uttered a Masterful Conference, in representation of Angola's Education Minister, Ana Paula Tuavanje Elias, where she pointed the mantle of the National Institute of Education Research and Development and the National Institute of Education Table Training, in the training of teachers and Mathematics. In this Masterful Conference there was some emphasis on the mantle of Pedagogic Superior School of Bengo; on the work of the so called Local Curriculum, like some training programs of the teachers, like PREPA, that capacitates teachers in different methods and the PAT, learning for everyone, who are working in association with the World Bank.

Then Professor Nouzha El Yacoubi, president of the AMU, uttered a plenary talk.

The works resumed in the afternoon period with two panels that served for discussing the collaboration between Africa and the other Continents about the professional development of Mathematics teachers, with prominent teachers from Africa, Asia, Europe and America.

In the last two days, the 3<sup>rd</sup> and 4<sup>th</sup> of December, the works went as plenaries; there were six of them and parallel sessions, with a total of sixteen presentations.

The plenaries and the presentations in parallel sessions forged an exchange of experiences because lots of different subjects had been discussed, all of them focused on the best mathematic teaching methods and the formation of mathematics' teachers, pointing the following subjects:

- A better approach in the formation of mathematic teachers; both at an initial level and at continuous;
- Need of an better approach, about the education in class and the practices in the daily routine.
- Exploit the technologies in order to improve the teaching and learning Mathematics process;
- Make the student the core of the teaching-learning process of Mathematics;

Recommendations:

- 1) Indicate a joint commission in order to make a memorandum, between the participants of African countries, with concrete offers focused on helping the implementations of politics of regional and continental integration, focused on the training of mathematic teachers, the integration and the teachers' mobility. Once drafted and approved, the memorandum, referred to above, should be addressed to the governments of African countries.
- 2) Encourage the Angolan researchers to participate in the Conferences of the Region and Continental Science Organizations, such as SAMSA;
- 3) Work with the Angolan Ministry of Higher Education towards Angola to host one of the next SAMSA Congresses, as a bridge for the integration of Angolan researchers in SADC scientific projects in the area of Mathematics.



We can conclude that the conference was a success judging by the level of organization and quality of the presentations and that its objectives were achieved.





