



**African Mathematical Union**

[www.africamathunion.org](http://www.africamathunion.org)



**PACOM 2021, Brazzaville**

[www.pacom2021.com](http://www.pacom2021.com)

**10<sup>th</sup> Pan African Congress of Mathematicians  
(PACOM 2021)**

**“Mathematics and the challenges of the African development.”**

**2<sup>nd</sup> to 7<sup>th</sup> August 2021, Brazzaville, CONGO**

**The AMU General Assembly will be held in 1<sup>st</sup> August 2021**

**FIRST ANNOUNCEMENT**

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## 1. Preamble

The African Mathematical Union (AMU) in collaboration with the Congolese Mathematical Community under the auspices of the Ministry of Higher Education and Scientific Research is pleased to announce to all the Mathematical scientists in Africa and other parts of the world the 10<sup>th</sup> Pan African Congress of Mathematicians (PACOM 2021) to be held in Brazzaville, Republic of Congo from 02 to 07 August 2021. The Congress will be based on the theme “**Mathematics and the challenges of the African development.**”

## 2. Welcome to PACOM 2021

**2.1. Welcome Address of the Hon Minister of Higher Education of Congo.** To be Available soon on the PACOM 2021 website:

[www.pacom2021.com](http://www.pacom2021.com)

**2.2. Welcome Address of the African Mathematical Union President.**

Already Available on the PACOM 2021 website: [www.pacom2021.com](http://www.pacom2021.com)

**2.3. Welcome Address of the Local Organizing Committee Chair.**

To be Available soon on the PACOM 2021 website: [www.pacom2021.com](http://www.pacom2021.com)

## 3. About AMU & PACOM

The African Mathematical Union (AMU) was founded during the first Pan African Congress of Mathematicians, held in Rabat, Morocco in July 1976.

➤ **With mission :**

To Coordinate and promote the quality of teaching, research and outreach activities in all areas of mathematical sciences throughout Africa. Advancing mathematical research and education includes efforts and contributions towards the economic, social and cultural development of the continent.

➤ **For the achievement of such mission the following actions have been undertaken:**

✚ **In 1978**, the AMU Executive Committee created the AMU Journal: **Afrika Matematika**, initially with the aim to make mathematical research originating within Africa more widely known.

- **Since 2011**, Afrika Matematika has been published by Springer. The submission rate has been growing since that date and it has truly increased in the last couple of years.
- **Since 2013**, the improved status of the journal was evidenced by the fact

that it has been listed by Scopus, and has been on the Master Journal List of the Web of Science Group,

- **Since 2018** Afrika Matematika is in the Emerging Sources Citation Index.
- **In January 2020: for the first time PACOM 2017 Proceedings have been published in a special issue of Afrika Matematika by Springer.**

✚ **In 1986, four AMU Commissions were established:**

- i. For Mathematics Education in Africa
- ii. For Pan African Mathematics Olympiads
- iii. For History of Mathematics in Africa
- iv. For African Women in Mathematics

✚ **In 2009, the AMU Commission for Research and Innovation in Mathematical Sciences** was added.

➤ **The more important AMU scientific event is: The PAN AFRICAN CONGRESS OF MATHEMATICIANS (PACOM):**

Supposed to be organized each 4 four years. Till now 9 editions have been organized. During the period 1976-1986, no Congress has been organized. The second edition of PACOM was held in Jose, Nigeria in 1986, the 3<sup>th</sup> in Nairobi, Kenya in 1991, the 4<sup>th</sup> in Ifrane, Morocco in 1995, the 5<sup>th</sup> in Cape Town, South Africa in 2000, the 6<sup>th</sup> in Tunis, Tunisia in 2004, the 7<sup>th</sup> in Yamoussoukro, Côte d'Ivoire in 2009, the 8<sup>th</sup> in Abuja , Nigeria in 2013 and the 9<sup>th</sup> in Rabat, Morocco in July 2017 at the Sciences Faculty of Rabat from 3 to 7 july 2017.

The 10<sup>th</sup> edition (PACOM 2021) will be hosted by the Republic of Congo in Brazzaville from 2-7 August 2021. It is organized by AMU in collaboration with the Ministry of Higher Education of the Republic of Congo.

The AMU General Assembly will be held on 1st August 2021.

➤ **AMU Mathematical Activities:**

AMU through its various commissions, is organizing various Mathematical activities: colloquia, symposia, workshops, African Mathematical Schools in diverse mathematics areas; Training schools for graduate students, Pan African Mathematics Olympiads (PAMO), training sessions for PAMO Team leaders (PAMOSTAR), training camps for students etc....Among the activities of the AMU commissions, we can quote:

- ❖ **PAMO:** Till now 27 editions of Pan African Mathematics Olympiad took place in various African countries. The last one "PAMO 2019" was hosted by South Africa, Morocco was the winner of the PAMO 2019 Gold Medal. PAMO 2020 planned to be hosted by Tunisia in March 2020, has been postponed due to the pandemic of COVID-19.
- ❖ **PAMS:** The AMU Commission on Mathematics Education (AMU-CMEA), has organized various activities since 1992, and since 2006, the AMU-CMEA has launched the Pan African Mathematical Space (PAMS) , the two first editions have been hosted by Tunisia in 2006 and 2008, and more later, the 3<sup>rd</sup> Pan African Mathematical space "PAMES 2019" has been hosted by the Republic of Angola,

organized in collaboration with, and under the auspices of, the Ministry of Higher Education, Science, Technology and Innovation with theme: “Professional development of Mathematics Teachers in Africa.

- ❖ **Symposia on African women in Mathematics:** since 2008, AMU through its commission AMU-CAWM, is organizing regularly such symposia: in 2008 in Maputo (Mozambique), in 2012 in Ouaga (Burkina Faso), in 2013 in Cape Town (South Africa), in 2015, in Nairobi (Kenya), in 2017, in Rabat (Morocco), in 2018, in Palapaye (Botswana).
- ❖ **AMS: African Mathematical Schools,** are organized regularly, since 2010, in various African countries, par the African mathematicians, under the leadership of AMU and CIMPA (International Centre for Pure and Applied Mathematics). The AMS selected to be organized in 2020 have been postponed due to the COVID-19 pandemic.

### ➤ **AMU Collaborations:**

Over the years, and since its creation, AMU has collaborated with several International Mathematical Unions, Societies, Associations, departments, Centres, Networks, NGOs etc... As well as with international organizations.

### ➤ **The current Determination of AMU is to be:**

- ✓ **INNOVATIVE:** by developing mathematics that can impact critical sectors of the economy, in particular the Business and Industry world.
- ✓ **COLLOBORATIVE,** by organizing scientific events with other international organizations pursuing the same objectives.
- ✓ **FEDERATOR** of all the African associations, Societies , NGO etc..., with a full input and great commitment

## ***4. Program of PACOM 2021***

### **4.1.AMU-PACOM 2021 Awards & Medals.**

The AMU-PACOM 2021 awards and medals are intended to foster innovative research and mentorship in all areas of mathematical sciences across the continent, recognize and honor outstanding contribution to the development of Mathematical Sciences through Africa.

The awards and medals will be in TWO major categories:

- I. **CATEGORY A: Outstanding Research & Mentorship Awards.**  
Award in the field of Pure Mathematics. Award in the field of Applied Mathematics (this includes Computer Sciences and Engineering Sciences)
- II. **CATEGORY B: Outstanding Contribution to African Mathematical Sciences Development.**  
Special Medals for identified Mathematicians who have contributed to the

development of Mathematical Sciences across the African continent.

**Eligibility:** All African Mathematical Scientists residing and working within the continent of Africa are eligible to be nominated for the awards and medals.

The African Mathematical Union (AMU) invites the nomination of eligible candidates for the AMU-PACOM 2021 Awards and Medals that will be presented at the Opening Ceremony of the 10th Pan African Congress of Mathematician (PACOM 2021) to be held in Brazzaville, Republic of Congo, on 2<sup>nd</sup> August 2021.

**The call for Nomination, and the application form are available in both:**  
[www.africamathunion.org](http://www.africamathunion.org) & [www.pacom2021.com](http://www.pacom2021.com)

**N. B. Nominations should be forwarded not later than Friday 26<sup>th</sup> February 2021 to: Prof. Nouzha EL YACOUBI (AMU President, Chairperson of the AMU-PACOM 2021 Award Selection Committee)**

E-mail: [nelyacoubi4@gmail.com](mailto:nelyacoubi4@gmail.com) / [amu2017president@gmail.com](mailto:amu2017president@gmail.com)

#### **4.2. Official Language and Subject areas of PACOM 2021:**

**The official languages of PACOM 2021 are English and French.**

**The topics to be covered at the congress are:**

- Algebra and Number Theory
- Real, Complex, Harmonic and Functional Analysis
- ODE, PDE, Dynamical systems and Control Theory
- Topology / geometry-Algebraic and Differential
- Representation Theory of groups and algebras
- Probability and Statistics
- Numerical analysis and Applied Mathematics
- Mathematical modeling, Biomathematics, Econometrics, Engineering etc...
- Mathematical Physics.
- Mathematics Education
- History of Mathematics

#### **4.3. Contents of the Scientific Program:**

The whole Scientific program will consist of Plenary lectures (45mn duration), Invited talks (30 mn), short communications (15 mn), posters, specialized workshops, social events, excursions etc....

In addition, a Plenary panel « Mathematics as an asset for the industrial development » is planned in the scientific program of PACOM 2021, as well as three special sessions: on Mathematics Education, on African Women in Mathematics, on History of Mathematics in Africa.

Also, for fruitful collaboration between AMU and international Mathematical Unions, Societies, Associations, NGOS etc... Pursuing the same goals, a round table is scheduled in the program.

Otherwise, Space for expositions will be available at the Congress venue for mathematical societies, publishers, and other companies. Detailed information could be provided for interested applicant.

**4.4. Timetable for PACOM 2022 :** To be posted at: [www.pacom2021.com](http://www.pacom2021.com)

## **5. Committees**

### **5.1. International Organizing Committee (IOC)**

**CHAIR:** Prof. Nouzha EL YACOUBI, AMU President.

The IOC Consists of the AMU Executive Committee

### **5.2. Local Organizing Committee (LOC)**

**CHAIR:** Prof. Basile BOSSOTO, AMU Vice-President for Central Africa

### **5.3. Scientific Committee:**

**Prof. Jacek Banasiak**, Editor in Chief of Afrika Matematika, Department of Mathematics, University of Pretoria, South Africa. (CHAIR).

E-mail: [jacek.banasiak@up.ac.za](mailto:jacek.banasiak@up.ac.za)

**Prof. Nouzha El Yacoubi**, University Mohammed V, Rabat, Morocco (Liaison member with the PACOM 2021 IOC).

E-mail: [nelyacoubi4@gmail.com](mailto:nelyacoubi4@gmail.com)

**Prof. Basile Bossoto**, Marien Ngouabi University, Congo (Liaison member with the PACOM 2021 LOC).

E-mail: [basile.bossoto@pacom2021.com](mailto:basile.bossoto@pacom2021.com)

**Prof. Andrei Okounkov**, Columbia University, New York, USA.

**Prof. Ingrid Daubechies**, Duke University, Germany.

**Prof. Claire Voisin**, Collège de France, France.

**Prof. Jeffrey Hoffstein**, Mathematics Department, Brown University, USA.

**Prof. Guillermo Cortiñas**, Department of Mathematics, University of Buenos Aires, Argentina.

**Prof. Mishra Siddhartha**, Department of Mathematics ETH, Zurich, Switzerland.

**Prof. Hoàng Hiệp Phạm**, Institute of Mathematics, Academy of Science and Technology, Hanoi, Vietnam.

**Prof. Xiao-Jun Yang**, School of Mathematics, University of Mining and Technology, Jiangsu, China.

**Prof Sophie Dabo**, University of Lille, laboratoire PAINLEVE, INRIA-MODAL, Lille, France.

**Prof Aissa Wade**, Mathematics Department, Penn State University, USA.

**Prof. Jean M-S Lubuma**, Department of Mathematics and Applied Mathematics. Faculty of Natural and Agricultural Sciences. University of Pretoria. South Africa.

**Prof. M. N. Hounkonnou**, (ICMPA-UNESCO Chair), University of Abomey-Calavi, Benin.

**Prof. Mamadou Sanghare**, University Cheikh Anta Diop, Dakar, Senegal.

**Prof. Khalil Ezzinbi**, Cadi Ayad University, Marrakech, Morocco.  
**Prof. Daouda Sangare**, Nangui Abrogoua University of Abidjan, Côte d'Ivoire.

## ***6. Plenary Lecturers***

A list of plenary lecturers and biographies are gradually updated on the PACOM 2021 website: [www.pacom2021.com](http://www.pacom2021.com)

## ***7. Registration***

### **7.1. Registration:**

Registration could be done by filling the registration form available on the PACOM 2021 website: [www.pacom2021.com](http://www.pacom2021.com)

\_\_\_\_ Registered mathematicians will receive updated information. Wishes and comments may help the organizers to prepare the PACOM 2021 according to the expectations of its participants.

**Immediate payment is not required.** However, your registration will not be considered complete and you will not be accepted to join activities of the Congress until your payment is successfully received by the organizer.

When your registration is complete, a ***Confirmation of Registration*** will be sent to your default e- mail account used to register.

If you fill in all required information and submit your contribution, but you prefer to pay later, even at your arrival at Brazzaville, you will, instead, receive a ***Knowledge of Registration***.

### **7.2. Conference Fees and details for payment:**

will be announced soon at: [www.pacom2021.com](http://www.pacom2021.com)

## ***8. Grants and Financial support***

One of the aims of the PACOMs is to gather mathematicians from all over the world among the presenters as well as among the general participants, and particularly many from Africa. In order to achieve this goal, AMU has instigated a general policy of established a solidarity fund by setting a part of the registration fees, and applying for financial support from some international institutions and sponsors, in order to be able to offer, for some participants across the African continent, who may not be able to secure support elsewhere.

A “PACOM 2021 Grants selection Committee”, appointed by AMU will distribute the grants from the Solidarity Fund amongst the successful applicants. Priority will be given to young mathematicians and African women mathematicians who contribute to the scientific programs.

Grants will be given mainly as partial support to registration fee,

accommodation, and travel costs. All potential applicants are advised to apply for funding from other sources as well.

Participants who consider themselves eligible for grants are encouraged to send a grant application. Application form will be available before 1<sup>st</sup> October 2020 at the PACOM 2021. Interested participants are asked to apply between 1<sup>st</sup> October and 1<sup>st</sup> December 2020.

It is necessary to include the following details in the application for grant: Basic personal information (full name, postal and e-mail addresses); Current institution; academic position; country/region; contribution in the scientific program; Paper or poster submitted; Academic CV; List of publications; Current financial situation; a recommendation letter by PhD-supervisor for the PHD students.

## ***9. Important dates.***

**July 20, 2020:** Opening of Registrations

**September 01, 2020:** Submission of extended abstracts (2-3 pages).

**October 01, 2020:** Application for grant.

**October 30, 2020:** Application for mini-symposia or workshop organization

**November 30, 2020:** submission of Posters

**December 20, 2020:** Deadline for Application for mini-symposia or workshop organization.

**January 30, 2021:** Deadline for Abstracts submission.

**April 30, 2021:** Decision for grants.

**May 30, 2021:** Deadline for submission of posters.

**June 30, 2021 :** Announcement of the final scientific program.

**July 31, 2021:** Arrival of the African mathematician's colleagues registered and invited to attend the AMU General Assembly on 01 August 2021.

**August 01, 2021:** Arrival day for congress participants.

**August 02, 2021:** Opening ceremony of the PACOM 2021, and beginning of the scientific program until August 07, 2021.

**August 07, 2021:** End of the scientific program, and closing Ceremony of PACOM 2021.

## ***10. Miscellaneous***

***Other Details from the Local Organizing Committee (will be posted soon in: [www.pacom2021.com](http://www.pacom2021.com)), concerning the following matters:***

- a. Congress venue.
- b. Housing possibilities.
- c. Excursions.
- d. About Brazzaville and Congo.

For more information visit the PACOM 2021 website: [www.pacom2021.com](http://www.pacom2021.com)

**Contact:** PACOM 2021 Organizing Committee.

**E-mail:** [info@pacom2021.com](mailto:info@pacom2021.com)

