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**ANNOUNCEMENT OF AFRICAN MATHEMATICAL SCHOOL (AMS) AND CONFERENCE
OF
INES-RUHENGERI-INSTITUTE OF APPLIED SCIENCES, MUSANZE– RWANDA**

**THE THEME OF AMS: *MATHEMATICS DECISIONS SCIENCES AND ARTIFICIAL
INTELLIGENCE IN DIGITAL ECONOMY: CONTRIBUTIONS OF WOMEN IN MATHEMATICS***
DATE: 18-27 JUNE 2023

THEME OF THE CONFERENCE: *RESEARCH & DEVELOPMENT IN MATHEMATICS*
DATE: 28-29 JUNE 2023

INTRODUCTION

The Institute of Applied Sciences Ruhengeri (*L'Institut d'Enseignement Supérieur de Ruhengeri, INES-Ruhengeri*), is a private research university located in Northern Province in Rwanda established in November 2003. From 2010, INES-Ruhengeri chose to officially profile itself as an Institute of Applied Sciences. INES-Ruhengeri has a strong partnership with the University of Rwanda (UR) and African Institute of Mathematical Sciences (AIMS) Rwanda in exchanging staff and participants specifically in the training of masters and PhD in the area of mathematics. Through this partnership, INES is organizing jointly AMS School and conference with UR and AIMS to be held at INES-RUHENGERI, Musanze, Rwanda from 18th to 30th June, 2023.

AMS and CONFERENCE PARTICIPATIONS

The AMS School and Conference audience will be mathematicians from the Eastern Africa region, the rest of Africa and the rest of the world. It is anticipated that the total number of conference participants will be over **100**.

CONFERENCE AREAS

Research Paper and Poster presentations are expected in the following areas of Mathematics not limited to

- Algebra
- Applied Probability and Mathematical Statistics
- Bioinformatics
- Biomathematics
- Computer Science
- Clifford and hypercomplex analysis
- Combinatorics
- Data Science
- Dynamical Systems
- Experimental Pure Mathematics
- Financial/Insurance Mathematics
- Fluid Dynamics
- Graph Theory
- Mathematics Education
- Number Theory
- Numerical Analysis
- ODES and PDES
- Operations Research
- Optimization
- Real and Complex Analysis
- Stochastics
- Topology and Geometry

GOAL OF THE SCHOOL

To provide high-level training to Master's students, Doctoral students, and to allow them to discuss with various expert in the “Mathematics Decision Sciences and Artificial Intelligence in Digital Economy especially with academic researchers and professionals.

GOALS OF THE CONFERENCE

- Stimulate regional and international collaboration in training, research and outreach.
- Provide a forum for interaction of African Mathematicians and others from outside Africa with a view of sharing experiences in mathematical training, research and outreach activities.
- Bring together like-minded people from around the world to exchange ideas, generate new ideas, and inspire.
- Provide special guest speakers, one-on-one engagements, group outings, chances for social interaction.
- Engage in high-level debates and refine your ideas

SUGGESTED SPEAKERS (confirmations-ongoing)

- Prof. Abdou KA DIONGUE, Université Gaston Berger de Saint Louis (Sénégal)
- Prof. Alphonse UWORWABAYEHO, University of Rwanda
- Prof. Leonard TODJIHOUNDE, Université d'Abomey Calavi (Bénin) and former Secretary General of African Mathematical Union.
- Prof. Jean-Pierre GAZEAU, Université de Paris 7 (France)
- Prof. Ciampoline PAOLO, Parma University, (Italy)
- Prof. (Mrs) Sophie DABO, Université de Lille, France
- Prof. Guy DEGLA, Université d'Abomey Calavi (Bénin)
- Prof. Raoul AYISSI, Université de Yaoundé I (Cameroun)
- Prof Jean Bosco KAYOYA, Université du Burundi
- Prof. Denis NDANGUZA, University of Rwanda –CST
- Dr. (Mrs) Michele MUKESHIMANA, Université du Burundi
- Dr. (Mrs) Pélagie HOUNGUE, Université d'Abomey Calavi (Bénin)
- Dr. Charline UWILINGIYIMANA, INES-RUHENGERI, Rwanda
- Dr. Samuel SINDAYIGAYA, INES-RUHENGERI, Rwanda
- Dr. (Mrs) Ménéodore KARIMUMURYANGO, Université du Burundi
- Dr. (Mrs) Raissa Babel GUEMDJO KAMDEM, Université de Douala (Cameroun)
- Dr. Celestin KURUJYIBWAMI, University of Rwanda –CST
- Dr. (Mrs) Lydie MPINGANZIMA, University of Rwanda –CST

- Dr. (Mrs) Marie Reine KAKPO, Université Nationale des Sciences, Technologies, Ingénierie et Mathématiques (Benin)
- Staff and PhD students from AIMS-RWANDA, Department of Mathematics
- Staff and PhD students from University of Rwanda, Department of Mathematics

COMMITTEE

a. Scientific Committee

- Prof. Alexandre LYAMBABAJE, University of Rwanda and former secretary of Inter University Council of East Africa.
- Prof. Abdou KA DIONGUE, Université Gaston Berger de Saint Louis (Sénégal)
- Prof. Alphonse UWORWABAYEHO, University of Rwanda
- Prof. Leonard TODJIHOUNDE, Université d'Abomey Calavi (Bénin) and former Secretary General of African Mathematical Union.
- Prof. Blaise TCHAPNDA, AIMS-Rwanda
- Prof. Jean-Pierre GAZEAU, Université de Paris 7 (France)
- Prof. Ciampoline PAOLO, Parma University, (Italy)
- Prof. Denis Ndanguza, University of Rwanda
- Dr. (Mrs) Ménéodore KARIMUMURYANGO, Université du Burundi
- Dr. (Mrs) Raissa Babel GUEMDJO KAMDEM, Université de Douala (Cameroun)
- Dr. Celestin KURUJYIBWAMI, University of Rwanda -CST
- Dr. (Mrs) Lydie MPINGANZIMA, University of Rwanda -CST

b. International Organizing Committee

- Prof. Guy DEGLA, Université d'Abomey Calavi (Bénin)
- Prof. Raoul AYISSI, Université de Yaoundé I (Cameroun)
- Prof Jean Bosco KAYOYA, Université du Burundi
- Prof. (Mrs) Sophie DABO, Université de Lille, France
- Dr. (Mrs) Michele MUKESHIMANA, Université du Burundi
- Dr. (Mrs) Pélégie HOUNGUE, Université d'Abomey Calavi (Bénin)

c. Local committee

- Dr. (Mrs) Charline UWILINGIYIMANA (Coordinator), INES-RUHENGERI
- Dr. Samuel SINDAYIGAYA (President) , INES-RUHENGERI
- Dr. Celestin KURUJYIBWAMI, University of Rwanda
- Dr. Isambi Sailon Mbarawata, AIMS-Rwanda
- Prof. Denis Ndanguza, University of Rwanda
- Prof. Banzi Wellars, University of Rwanda
- Dr. Minani Froduald, University of Rwanda
- Prof. Blaise TCHAPNDA, AIMS-Rwanda

COURSES TITLES AND SPEAKERS

Course 0 : Softwares (R, Python) Learning Tutorial (**S. DABO**, Université de Lille, (France))

Course 1: Applied Optimization: Calculus of variations, Optimal control theory and Applications in Mathematics decision sciences (**G. Degla**, Université d'Abomey Calavi (Bénin))

Course 2: Introduction to Artificial Intelligence: Machine learning and Neural Networks with their applications in digital economics (**C. PAOLO**, Parma University, Italy)

Course 3: Machine learning for the detection and prediction of crop diseases (**L. Mpinganzima** , UR-CST, Rwanda)

Course 4: Progress in mathematical economics. (**J. P. GAZEAU**, Université de Paris7 (France)& **D. NDANGUZA**, UR-CST, Rwanda)

Course 5 : Le rôle des mathématiques comme facteur de développement (**M. KARIMUMURYANGO**, Université du Burundi)

Course 6: Stochastic Processes and Bayesian statistics (**A. K. Diongue**, Université Gaston Belger de Saint Louis Senegal)

Course 7: Deep Learning for recognition tasks (**P. HOUNGUE**, Université d'Abomey Calavi (Bénin))

LANGUAGE

English or French will be the official languages for both AMS and conference.

REGISTRATION FOR THE AFRICAN MATHEMATICAL SCHOOL OF INES-RUHENGERI

There will be no registration fee for AMS. The deadline for registration is **12/04/2023**. Registration to be done online using the link <https://www.ines.ac.rw/ams/>.

VISA

Visa may be required for International visitors to Kigali - Rwanda. Please check with the respective local Embassy for details and other requirements. Letters of invitation will be issued to participants upon request for the processing of travel documents.

VENUE

The AMS and conference will be held at INES-RUHENGERI, Rwanda

CONFERENCE REGISTRATION AND SUBMISSION OF ABSTRACTS

The registration fee for conference is **US\$ 200 for senior researchers and US\$ 100 for master's and PhD students**. The conference registration and submission of abstracts will be done online using the link <https://www.ines.ac.rw/ams/> with a deadline of **12/04/2023**. The conference will embrace both **physical** and **online** attendance.

ACCOMMODATION

Hotel charges for accommodation in Musanze ranges from US\$ 50 to US\$ 200 per night. The Local Organizing Committee is available for assistance. Food ranges from US\$ 5.00 to US\$ 25.00 a meal.

FOR FURTHER INFORMATION, PLEASE CONTACT THE CHAIR LOC;

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AND COPY YOUR EMAIL TO,

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