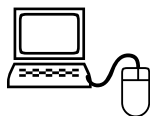




University of Dschang



CMC-2019

Colloquium of Mathematics and Computer Science Colloque de Mathématiques et Informatique (CMC/CMI-2019)

Theme : *Big Data Analysis : Challenges and applications for the development*

April 8-12, 2019

Call for papers (4th call)

The Faculty of Science of the University of Dschang (UDs) in Cameroon, in collaboration with the African Institute for Mathematical Sciences (AIMS), the Center for Study, Research and Valorization of Natural Resources and Technologies (CERVARENT in French), the Research Unit in Fundamental Computer Science, Engineering and Applications (URIFIA), the Research Unit in Mathematics and its Applications (URMA), organizes the 1st edition of the Colloquium of Mathematics and Computer Science (CMC-2019) on the theme « *Internet of Things, Big Data Analysis and Development* », from 8 to 13 April 2019 at the main university campus in Dschang. This international scientific event will feature guest speakers and selected research topics based on their relevance, their impact on the development, their scientific quality and the topic addressed.

• Presentation

The CMC-2019 is a meeting of exchanges and debates, where participants, experienced researchers and young researchers can discuss their work in the light of advances in the field of Mathematics and Computer Science.

Internet is no longer limited to computers or smartphones. Now, with the implementation of the IPv6 protocol, virtually all objects can be connected to the internet (watches, glasses, bracelets, refrigerators, electric meters, cars, light bulbs, clothing, televisions, agricultural machinery, or industrial machinery...). These objects and devices connected to the Internet generate data, which can be analyzed to reveal trends and information for various purposes. As the number of connected objects increases, the volume of data generated by the Internet of Things explodes. Thus, to be able to support and analyze them in real time, it is necessary to rely on Big Data analytical tools. Crossing massive data from multiple origins using innovative techniques is the challenge of Big Data. In many fields (health, agriculture, environment, industry, urban development ...), the use of these data raises scientific and technical questions, but also socio-economic issues.

Epidemiological, sociological and other types of analysis usually require the use of mathematical tools aimed in particular at analyzing Topological model of data (Topological Data Analysis -TDA). Beyond the topology, there is a revival of advanced mathematical work in order to exploit the data and to extract as much as possible the signals they contain. We can cite among other tools complementary to the topology, the theory of the graphs, at the heart of the models of classification of the information, with immense perspectives. The importance of mathematics in data processing is no longer to be demonstrated.

This edition of the CMC will be dedicated to raising awareness about the theoretical and practical developments (concepts, complexity, approaches ...) on Computational Sciences in general and the feedback of experiences proposed in the Internet of Things, Data Sciences, the Machine Learning and Mathematical Big Data Analysis in particular. Beyond the reflection on the complexity and on the constraints inherent to the theoretical and methodological positioning of these research themes, the organizers of this conference hope that the research and experiments results already carried out in the field will help to arouse more enthusiasm on the part of economic operators and decision-makers. To enrich the debates, this conference will give the floor to experts in these fields. At the same time, business professionals will exhibit products, services and innovations.

• Submission

Participants are invited to submit their proposals (Abstract of no more than 300 words / full article of no more than 3000 words) via the website cmi2019.univ-dschang.org before **February 20, 2019**. Articles will be written in English or in French, **but English is preferable**.

⇒ **Original contributions are welcome, covering (but not limited to) the topics below:**

Data analysis; Big Data; biostatistics; Data mining; Econometrics of innovation; Epidemiology; Simulation and case studies; Randomized experiments; Artificial intelligence; Statistical methods; Data Analysis Models; Optimization; Forecasting models; Stochastic programming; Operational research; Time series; Image processing; Automatic control.

⇒ Doctoriales

Sessions of the Colloquium will be dedicated to PhD students' work, in the form of communication or posters, to present the state of progress, the approaches used and the possible results of their research on original questions related to Mathematics and Computer Science. Plenary talks focusing on methodology and research issues, data and computational sciences and their analysis are also planned.

• Editorial and Managing Board

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• Deadlines

- Submission of abstracts (communications and posters) : February 20, 2019
- Communications (full version) : Mars 10, 2019
- Posters (full version) : March 15, 2019
- Decision of the Board : March 20, 2019
- Registration : March 25, 2019

• Registration (mandatory for all participants)

Students: 10 000 F.CFA (15 Euros), Academics: 20 000 F.CFA (30 Euros), Professionals: 30 000 F.CFA (45 Euros)

Included are: Conference Proceedings, handouts, badges and conference program booklet, coffee breaks etc.

NB : After March 25, 2019, the amounts will be increased by 10 000 FCFA (15 Euros).

• Publications and Awards

The articles selected will be published in the Proceedings of the Colloquium and the best ones could be submitted to international journals. To promote excellence and development, the Faculty of Science will award the three best papers of the Colloquium.

• For more information, please visit the website <http://cmi2019.univ-dschang.org> or send an email to cmi2019@univ-dschang.org

