Pascal SUNGU NGOY

Education

PhD in Applied Mathematics to Life Sciences

Feb. 2023 - Present

University of Douala, Douala, Cameroon

MSc in Mathematics (Computational Option)

May 2019 - April 2021

The Pan African University Institute for Basic Sciences, Technology and Innovation (PAUSTI) and

Jomo Kenyatta University of Agriculture and Technology (JKUAT), Nairobi, Kenya

MSc in Mathematical Sciences

Aug. 2017 - June 2018

African Institute for Mathematical Sciences, Limbe, Cameroon

Postgraduate diploma in Mathematics and Computer Science (Bac+5)

Oct. 2009 - July 2015

University of Lubumbashi, Lubumbashi, DRC

Published Articles

- Jonathan Lenge, Kaninda Musumbu, Geisla Wanuku, and Pascal Sungu. 2022. Blockchain Technology as A Guarantee of Transparency in The Supply Chain of Commercial Enterprises. In 2022 3rd Asia Service Sciences and Software Engineering Conference (ASSE' 22). Association for Computing Machinery, New York, NY, USA, 1–7.
- Ngoy, P. S., Musumbu, K., & Gathungu, D. K. (2021). A Mathematical Modeling Approach in Cybersecurity Using Deep Neural Learning. International Journal of Advanced Research in Science, Engineering and Technology, Vol. 8, Issue 6, June 2021.
- Ngoy, P. S., Musumbu, K., & Gathungu, D. K. (2021, May). Combining Epidemic Model and Deep Learning to Study Cyber Attacks. In 2021 International Conference on Computer Communication and Artificial Intelligence (CCAI) (pp. 150-154). IEEE.
- Ngoy, P. S., Musumbu, K., & Wandji, N. (2021). **An Approach of Concept Lattice Theory in Data Mining and Its Applications.** Theory and Practice of Mathematics and Computer Science Vol. 7, 57-75.
- SUNGU, P., MUSUMBU, K. & WANDJI, N. (2019). Concept Lattice Theory in Data Mining and its Applications. IJRDO Journal of Computer Science Engineering (ISSN: 2456-1843), 5(7), 01-10.

Scholarship and awards

Global Development Hub Fellowship

May. 2024 - July 2024

Imperial College London, London, United Kingdom

African Consortium in Modeling for Effective Vector Control (ACoMVeC) Scholarship

Feb. 2023 - Present

Centre for Research in Infectious Diseases (CRID), Yaounde, Cameroon

Pan African University Scholarship

May 2019 - April 2021

The Pan African University Institute for Basic Sciences, Technology and Innovation (PAUSTI) and

Jomo Kenyatta University of Agriculture and Technology (JKUAT), Nairobi, Kenya

African Institute for Mathematical Sciences Scholarship

Aug. 2017 - June 2018

African Institute for Mathematical Sciences, Limbe, Cameroon

Training & Conferences

Modern Statistics and Machine Learning for Population Health in Africa

24th- 28th March 2025

Meeting Activities

Attended a hands-on training on probabilistic programming and advanced statistical modelling for population health, hosted at AIMS Cape Town and led by Imperial College London and partners. Topics included Bayesian workflows in Stan, hierarchical models, Gaussian processes, and infectious disease modelling with real-world applications in malaria and HIV.

Technical Vector Control Advisory Group (TVCAG) for Cameroon

March 28, 2024

Meeting Activities

Participated in a consultative TVCAG meeting organized by CRID, contributing to the development of five operational research projects focused on enhancing malaria control strategies in Cameroon through mathematical modelling.

Malaria Modeling Symposium : AMMnet Cameroon Chapter

February 08, 2024

Meeting Activities

I presented at the Malaria Modelling Symposium, a scientific event fostering networking and knowledge exchange among PhD students, early career researchers, and decision makers in malaria modelling. My talk focused on 'Modeling the impact of Indoor Residual Spraying on Malaria Disease,' contributing to discussions on vector control dynamics and interventions

Training of medical entomologists in mathematical modelling

October 5-6, 2023

Meeting Activities

Participation in the Regional AMMnet event titled "Training of medical entomologists in mathematical modelling" held from October 5-6, 2023, in Yaoundé, Cameroon.

PAMCA Annual conference and Exhibition

September 17-21, 2023

Meeting Activities

Participated at the 9th PAMCA Annual Conference and Exhibition held from September 17-21, 2023, at the Skylight Hotel, Addis Ababa, Ethiopia, under the theme "Reorienting surveillance and management in the context of emerging threats of disease vectors."

Experience

Part-time Lecturer Oct. 2022 - Present

University of Lubumbashi (UNILU) and Don Bosco University of Lubumbashi (UDBL), Lubumbashi, DRC

Responsibilities

- Teaching and providing tutorials in the Mathematics and Computer Science department for the following unit: *Algorithms* and Data Structures (BAC 2-UNILU).
- Teaching and providing tutorials in the Software Engineering department for the following unit: *Introduction to Artificial Intelligence (Bachelor 4 UDBL)*.

Netsuite Technologies and Integration Consultant - ERP, IPaaS, CRM

June 2022 - July 2023

Big Bang ERP, remote, Canada

Responsibilities

- Functional and technical advisor for cloud solutions (NetSuite, Celigo, Boomi, Jira).
- · Supporting clients' digital transition.

Teaching Assistant Nov. 2018 - Nov. 2021

Nouveaux Horizons University (UNH), Lubumbashi, DR Congo

Responsibilities

- Teaching and providing tutorials to the Computer Science faculty and the School of Engineers in the following units: Algorithms and Data Structures, Python Programming, General Computer Science;
- Managing exam papers and grades for the Computer Science faculty, the School of Engineers, and the School of Architecture (First semester 2019);
- · Co-supervising bachelor's level projects in the Computer Science faculty;
- Co-organizing the international conference on Artificial Intelligence (Deep Learning IndabaX DRC) 2019.

Volunteering

Peer-reviewed Manuscript Evaluator

Apr. 2021 - Present

• Reviewing peer-reviewed manuscripts in the fields of mathematics and computer science.

Support in IT Skills (Limbe, Cameroon)

Nov. 2017 – Apr. 2018

- Assisting nurses and administrators at Limbe Hospital and at the University of Buea in mastering IT tools: Excel, Word, PowerPoint.
- Assisting the IT manager in installing UBUNTU operating systems on AIMS machines and some basic software such as: Python, Sage Math, SciLab, LaTeX.

References

Professor Thomas Churcher

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Professor Samuel Bowong

University of Douala, Douala, Cameroon

bowong@univ-douala.com