

Emmanuel Nyandu Kagarabi

Curriculum Vitae

Personal Information

First Name Emmanuel
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Education

January - November 2024 **Master in Mathematical Sciences with specification in Artificial Intelligence for Science**, *African Institute for Mathematical Sciences (AIMS)*, Cape Town, South Africa.
The program sits at the exciting intersection of AI and the Sciences : Machine Learning, Computer Vision, Deep Learning for Ecology, Natural Language Processing, Reinforcement Learning. Please, find all courses [here](#).
Some of my presentations related to this Master's are available [here](#).
2016 - 2021 **Bachelor of Mathematics**, *Institut Supérieur Pédagogique de Bukavu (ISP-BUKAVU)*, Bukavu, DRC.
This 5-year program offered solid training in pure and applied mathematics, including Algebra, Analysis, Geometry, Operational Research, General Topology, Mathematical Logic, Physics, etc.
Thesis: [Treatment of numerical tensors](#).
2011 - 2016 **High School Education**, *Institut Nyamokola*, Birava, South-Kivu province, DRC.
Developed an interest in Mathematical and Physical Sciences and their teaching.

Awards

April 24, 2021 **Bourse d'Excellence Cimpunda (BEC)**.
This scholarship rewards the best students in Bukavu City, DRC. [Certificate](#).
January-December 2024 **Google DeepMind Scholarship**.
This fully funded scholarship by [Google DeepMind](#) was awarded to the top forty African students to study the Artificial Intelligence Masters at AIMS South Africa.

Work Experience

September 2022-December 2023 **Part-time Assistant**, *Université Officielle de Bukavu (UOB-BUKAVU)*, Bukavu.
Taught Practical work in [Algebra](#), [Analytical Geometry](#) to first-year students at the Ecole des Mines Faculty, and [General Mathematics](#) (Algebra and Analysis) to first-year students of the Sciences Appliquees Faculty (Geology, Biology, Environment, and Agronomy).
October 2022-December 2023 **Visiting Lecturer**, *Institut Supérieur d'Etudes Commerciales et Financières de Bukavu*, Bukavu.
Taught [General Mathematics](#) course to first-year students of all faculties : Financial Management, Business Management, Management and Administration, and Computer Sciences.
April - June 2022 **Visiting Lecturer**, *Institut Supérieur Pédagogique de Bukavu (ISP-BUKAVU)*, Bukavu.
Taught [Mathematics for Chemists II](#) to third-year students of the Chemistry-Physics department.
October 2021 - December 2023 **Teacher**, *Institut du Groupe Scolaire MAENDELEO*, Bukavu.
Taught Mathematics and Physics in the Commercial Management, Social Sciences, and General Pedagogy sections.

- December 2020 - **Trainee**, *Societe Nationale d'Electricite (SNEL)*, Bukavu.
January 2021 Gained knowledge of the operation of a hydroelectric power plant, specifically the RUZIZI 1 plant. [Certificate](#).
- December 2020 - **Trainee**, *Unité de Recherche et Enseignement de Mathématiques Appliquées(UREMA)*, ISP-BUKAVU.
January 2021 Acquired knowledge relating to the operation of a scientific research unit, focusing on teaching and research in pure and applied mathematics.

Volunteer Experience

- 17-22 March 2024 **Volunteer**, *African Institute of Mathematical Sciences (AIMS)*, Cape Town, South Africa.
Volunteered during the SIYAKHULA (Growing Mathematics in Africa) festival, celebrating the 20th anniversary of the AIMS network. [Certificate](#).

Workshops attended

- 17-19 April 2024 **Africa Scientifique Programme**.
A capacity-building program for African researchers, academics, and science communicators held at Aims South Africa. [Certificate](#).
- 10-29 June 2024 **Meaningful Modeling of Epidemiological Data (MMED) 2024**.
An intense introduction to data-driven infectious disease modeling, with participants coming from across Africa and around the world held at Aims South Africa.

Skills

- \LaTeX Proficient in writing complex text, equations, and drawing certain figures.
- Programming languages Proficient in Python and R.
- Artificial Intelligence Knowledgeable in building/training Artificial Neural Networks in various AI sub-fields, with or without any fancy library, depending on the problem.
- Teaching Comfortable teaching applied and pure mathematics.

Languages

- French **Fluent**
- English **Proficient (CEFR B2)**
- Kiswahili **Native Speaker**

References

- **Dr. Ulrich Paquet**, *Executive Director of AIMS South Africa* .
Mail: ulrich@aims.ac.za
- **Dr. Claire David**, *Academic Director of the AI for Science Masters program at AIMS South Africa*.
Mail: claired@aims.ac.za
- **Dr. Justin Buhendwa Nyenyezi**, *Head of the Sciences Exactes Section and Lecturer in the Mathematics-Physics department at ISP-BUKAVU*.
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- **Dr. Simon Muya Kasanda**, *Director of the faculty École des Mines and lecturer at UOB-BUKAVU*.
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- **Dr. Lucien Zihindula Biguru**, *Lecturer at UOB-BUKAVU and at the Université Catholique de Bukavu (UCB BUKAVU)*.
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Cape Town, June 20, 2024
Emmanuel NYANDU KAGARABI