

## Curriculum Vitae

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### Research Interests

**Computational Condensed Matter & Materials Physics:** I explore unique quantum properties in topological materials, focusing on new quantum phases and fundamental insights.

**Quantum Algorithms:** I am interested in developing quantum algorithms that solve complex problems more efficiently than classical methods.

**Quantum Simulation:** I am interested in utilizing quantum computers to model and investigate complex quantum phenomena, surpassing classical computational limits.

**Quantum Machine Learning:** I am interested in exploring quantum machine learning techniques that promise to outperform traditional algorithms in analyzing and predicting complex data patterns.

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### Academic History

- Sept 2025** Ph.D. in Computational Condensed Matter and Materials Physics, Department of Physics, University of Cape Town, South Africa.
- Sept 2015** Research Master Degree in Condensed Matter Physics, Department of Physics, University of Dschang, Cameroon.
- Jun 2015** Structured Master Degree in Mathematical Sciences, African Institute for Mathematical Sciences, AIMS-Cameroon.
- Sept 2012** Bachelor Degree in Condensed Matter Physics, Department of Physics, University of Dschang, Cameroon.

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### List of Publications

- [2] A.J. Fotue, M.F.C. Fobasso, S.C. Kenfack, M. Tiotso, J.-R.D. Djomou, C. M. Ekosso, G.-P. Nguimeya, J.E. Danga, R.M. Keumo Tsiaze, L.C. Fai. Tunable potentials and decoherence effect on polaron in nanostructures. *Eur. Phys. J. Plus* (2016) 131: 205. DOI [10.1140/epjp/i2016-16205-5](https://doi.org/10.1140/epjp/i2016-16205-5).
- [1] Kenfack SC, Nguimeya G.-P, Talla PK, Fotue AJ et al. (2016) Decoherence of Driven Coupled Harmonic Oscillator. *J Nanosci Curr Res* 1: 104. doi:[10.4172/JNCR.1000104](https://doi.org/10.4172/JNCR.1000104).

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### Teaching

- Sept 2022 - Oct 2023** Teaching assistant (Head Tutor):  
African Institute for Mathematical Sciences (AIMS), South Africa.
- Feb 2022 - Jun 2022** Teaching assistant (Tutor):  
African Institute for Mathematical Sciences (AIMS), South Africa.
- Feb 2019 - Nov 2019** Teaching assistant:  
University of Cape Town (UCT), South Africa.
- Feb 2017 - Mar 2017** Teaching assistant:  
Higher Teacher Training College (HTTC) Bambili, Cameroon.
- Quantum Mechanics (Undergraduate course)
  - Advanced Quantum Mechanics (Graduate course)

- Sept 2016 - Jun 2017** Part-time High School Physics Teacher:  
Government Bilingual High School Mbouda, Cameroon.
- May 2016 - Jun 2016** Teaching assistant:  
University of Dschang, Cameroon.  
  - Quantum mechanics (Graduate course).
- Feb 2016 - Mar 2016** Teaching assistant:  
Higher Teacher Training College (HTTC) Bambili, Cameroon.  
  - Quantum mechanics (Graduate course).
- Nov 2015 - Jan 2016** Teaching assistant:  
University of Dschang, Cameroon.  
  - Electromagnetism (Undergraduate course)
  - Electrostatics (Undergraduate course)
  - General Physics (Undergraduate course)
- May 2014 - Jul 2014** Teaching assistant:  
University of Dschang, Cameroon.  
  - Introduction to Quantum Physics (Undergraduate course)

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### **Additional Training**

- Aug 2025** Badge Womanium 2025 Quantum Program issued by [The Washington Institute for STEM, Entrepreneurship and Research](#).
- Aug 2025** Quantum Algorithms to Solve Partial Differential Equations issued by [The Washington Institute for STEM, Entrepreneurship and Research](#).
- Aug 2025** Quantum Algorithms for Nonlinear Problems issued by [The Washington Institute for STEM, Entrepreneurship and Research](#).
- Aug 2025** PennyLane Trotterization Challenge at the Womanium & Wiser Quantum Program 2025 issued by [PennyLane](#).
- Aug 2025** Qiskit Global Summer School 2025 - Quantum Excellence | Summer School by [IBM Quantum](#).
- Jul 2025** PennyLane Linear Combination of Unitaries (LCU) Challenge at the Womanium & Wiser Quantum Program 2025 issued by [PennyLane](#).
- Jul 2025** Quantathon (Hackathon at AIMS Ghana) by [AIMS Ghana QTedu Global Event](#): a week-long celebration of innovation, collaboration, and quantum education for the SDGs; awarded second place to my team.
- Apr 2025** Certificate in Advanced End-to-End Quantum Computing (ADEQUATE) by [QURECA](#) and [QWorld](#).
- Mar 2025** PennyLane Codebook Learning Path - Foundations of Quantum Algorithms issued by [PennyLane](#).
- Mar 2025** PennyLane Codebook Learning Path - Foundations of Quantum Computing issued by [PennyLane](#).
- Feb 2025** Applied Data Science Lab issued by [WorldQuant University](#).
- Nov 2024** Artificial Intelligence and its applications issued by [Womanium](#).
- Nov 2024** Expertise in High-Level Algorithm Design (Q-SITE Hackathon 2024) issued by [Classiq](#).
- Nov 2024** PennyLane Challenge at Q-SITE 2024 issued by [PennyLane](#).

- Nov 2024** QSilver | Quantum Computing and Programming issued by [QCzech](#). More details on the [QSilver26 webpage](#).
- Oct 2024** Advanced Proficiency in Quantum Algorithm Design | [Classiq](#) Advanced Workshop in the [Womanium Global Quantum + AI Program 2024](#).
- Oct 2024** Introduction to Quantum Computing with Qiskit (with IBM Quantum) by [openHPI](#) and IBM Quantum.
- Oct 2024** Quantum Computing Hardware | Quantum Computing Hardware Module: “From Qubits to Quantum Computers” in the [Womanium Global Quantum + AI Program 2024](#).
- Oct 2024** Quantum Machine Learning with Qiskit issued by [openHPI](#).
- Oct 2024** Womanium Global Quantum + AI Project Certificate by [Womanium](#).
- Oct 2024** Womanium Global Quantum + AI Badge 2024 issued by [The Washington Institute for STEM, Entrepreneurship and Research](#).
- Aug 2024** Quantum Machine Learning (QML) for Conspicuity Detection in Production | Womanium Global Quantum + AI Project as part of the [Womanium Global Quantum + AI Program 2024](#).
- Aug 2024** Design and Development of Quantum Algorithms | [Classiq](#) Fundamentals Workshop in the [Womanium Global Quantum + AI Program 2024](#).
- Aug 2024** Quantum Machine Learning (QML) | PennyLane QML Challenge in the [Womanium Global Quantum + AI Program 2024](#).
- Aug 2024** Qiskit Global Summer School 2024 - Quantum Excellence issued by [IBM](#).
- Jun 2024** IBM Quantum Challenge 2024 Achievement issued by [IBM](#).
- Jun 2024** Introduction to PennyLane Certificate | Quantum Challenge by [PennyLane](#).
- Jun 2024** Quantum Machine Learning (QML) | PennyLane QML Challenge in the [QClass23/24](#) program by [QWorld](#).
- May 2024** QCourse504-1 | Elementary Quantum Algorithms. Spring semester of the [QClass23/24](#) program by [QWorld](#) and the University of Latvia.
- May 2024** QCobalt | Quantum Annealing issued by [QWorld](#). Self-study module in the [QClass23/24](#) program by [QWorld](#).
- May 2024** QTitanium | Topological Quantum Computing issued by [QWorld](#). Self-study module in the [QClass23/24](#) program by [QWorld](#).
- May 2024** QZinc | Quantum Error Correction issued by [QWorld](#). Self-study module in the [QClass23/24](#) program by [QWorld](#).
- Feb 2024** CHPC - NITheCS Coding Summer School by the Centre for High Performance Computing ([CHPC](#)), South Africa. More details on the [CSS4 webpage](#).
- Jun 2024** QHack 2023 Flashback Event Badge issued by [PennyLane](#).
- Jan 2024** QCourse551-1 | “Quantum Software Development with Classiq” by [QWorld](#) and [Classiq](#). I was part of Project 32: Smart Post-Processing for Algorithms with Quantum Phase Estimation, in which I worked on the quantum phase estimation of the ground state energy of a particle in a double-well potential. More details on the [QCourse551-1 webpage](#).

- Jan 2024** QCourse501-1 | Elements of Quantum Computing and Programming. Autumn semester of the [QClass23/24](#) program by [QWorld](#) and the University of Latvia. More details on the [QClass23/24 webpage](#).
- Oct 2023** QNickel | Quantum Computing and Programming issued by [QPoland](#). More details on the [QNickel6 webpage](#).
- Sept 2023** QBronze | Quantum Computing and Programming issued by [QNepal](#). More details on the [QBronze115 webpage](#).
- Sept 2023** Quantum Computing for Natural Sciences (with IBM Quantum) issued by [openHPI](#) and IBM Quantum.
- Sept 2022** Practical HPC | [2022 Winter School Online Course](#) by the Centre for High Performance Computing ([CHPC](#)), South Africa.

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### Leadership Roles

- Oct 2013 - Sept 2015** Class Representative:  
Class representative for the MSc in Condensed Matter Physics at the University of Dschang, Cameroon.

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### Softwares & Programming

- DFT & TB model** Quantum Espresso, Wannier90, WannierTools, Quantum Lattice.
- Crystallography** Xcrysden, FermiSurfer, Vesta, Avogadro.
- Q. Computing** Qiskit, PennyLane, Classiq, Cirq.
- Programming** Git, GitHub, Bash Script, Python, Google Apps Script, LaTeX (including Beamer).
- Operating System** Linux, Windows.

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### Languages

- French** Mother tongue
- English** Fluent

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### References

- Reference(s)** Contact detail(s) available upon request