

CURRICULUM VITAE

Patrick NACUMUYIKI IRAKOZE

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FIELDS OF EXPERTISE

- **Medical Imaging Modalities:** Proficient in performing diagnostic imaging procedures using X-ray, CT, MRI, ultrasound, and nuclear medicine technologies
- **Radiation Safety and Protection:** Knowledgeable in radiation safety protocols, dose management, and ensuring patient and operator safety in clinical environments
- **Image Processing and Analysis:** Experienced in utilizing software tools for medical image enhancement, reconstruction, and diagnostic analysis
- **Quality Assurance (QA) and Quality Control (QC):** Skilled in performing equipment maintenance, troubleshooting, and ensuring the accuracy and consistency of medical imaging systems
- **Clinical Application and Patient Interaction:** Strong understanding of patient positioning, communication, and providing compassionate care in the imaging process, ensuring optimal image quality and patient comfort

EDUCATION

- **Bachelor of Science in Medical Imaging and Radiation Technology**
October 2021 – June 2025
Ecole des Sciences de Musanze, Musanze, Rwanda
- **Rwanda Advanced Certificate of Education**
January 2017 – November 2019
Ecole des Sciences de Musanze, Musanze, Rwanda

INFORMAL EDUCATION AND TRAINING

- **Certificate of Achievement:** “*Integrating Ethics and Governance into the Design of Artificial Intelligence Tools for Health: Case Study - Cervical Cancer Screening*” from the World Health Organization (WHO), Geneva, Switzerland, 2024
- **Certificate of Achievement:** “*Infection Prevention and Control Measures in Health Care Settings for Ebola and Marburg Disease Outbreaks*” from the World Health Organization (WHO), Geneva, Switzerland, 2024
- **Certificates of Achievement:** “*Ethics and Review of Interventional Clinical Research*” from the World Health Organization (WHO) in collaboration with Harvard University, Geneva, Switzerland, 2024.
- **Certificate of Participation:** “*Global Critical Care Webinar Series on the Topic of Volumetric Shock*” from Stanford University School of Medicine, Stanford, USA, 2024
- **Certificate of Appreciation:** “*Leadership*” from Ecole des Sciences de Musanze, Musanze, Rwanda, 2019

TEACHING AND PROFESSIONAL POSITIONS

• Intern Radiographer

Maharishi Markandeshwar Institute of Medical and Research, Ambala, India

July 2024 – Present

Duties and responsibilities:

- Perform diagnostic imaging procedures, including X-rays, under supervision
- Ensure patient safety and comfort during radiographic examinations
- Collaborate with healthcare teams to deliver high-quality imaging services and assist in diagnosing conditions
- Apply problem-solving and analytical skills to handle equipment troubleshooting and optimize imaging processes
- Contribute to health equity discussions by identifying gaps in care for diverse patient populations.

• Primary School Tutor

Group School Rwamiko, Gicumbi, Rwanda,

December 2019–March 2020.

Duties and responsibilities:

- Provide tutoring support to primary school students in elementary science and technology
- Design practical learning activities to enhance students' understanding of key theoretical concepts
- Foster a positive and engaging learning environment that encourages student participation and curiosity
- Assist students in completing assignments and offering personalized guidance based on individual learning needs
- Collaborate with teachers and staff to monitor student progress and report on their academic performance

RESEARCH AND PROJECT EXPERIENCE

• Contributor

January 2023–December 2023

Research Grant: *Prevalence of Testate Amoebae in the Urban Environment: Do Distinct Ecological Niches Exert Similar Pressure on the Microbial Community?* National Natural Science Foundation of China, Grant Number: 32250410317, Total Amount: 200,000 RMB

Contribution and tasks:

- Participate in the data collection, fieldwork, and literature review processes, ensuring thorough and accurate investigation
- Conduct statistical analysis and data interpretation, contributing to the findings
- Edited the research manuscript for publication, ensuring clarity, coherence, and academic rigor

RESEARCH INTERESTS

Medical imaging and radiology; Deep learning in healthcare; Radiation safety and quality control; Health equity and access to medical technologies

PUBLICATIONS

1. Ndayishimiye, J.C., Nyirajana, J., Nyirabuhoro, P., **Nacumuyiki, P.I.**, Coker, A.O., Akintayo, F.O., Mazei, Y., Saldaev, D., Nkinahamira, F., Habumugisha, T., Murwanashyaka, T., 2024. Determinants of environmental changes in human-modified ecosystems: Effects of plastics on moisture gradients, nutrients, and clay properties. *Heliyon*, 10, e38738. <https://doi.org/10.1016/j.heliyon.2024.e38738>
2. Mukiza, F., Yadav, K., Tuyizere, E., **Nacumuyiki, I.P.**, Nyirangirimana, P., Priyankal., 2023. Efficiency of combined retrograde urethrography and anterograde cystourethrography procedures in the diagnosis of voiding difficulties. *Journal for ReAttach Therapy and Developmental Diversities*, 6, 2146–2159. <https://doi.org/10.53555/jrtdd.v6i9s.3390>

AWARDS, GRANTS, AND FELLOWSHIPS

Fully Funded Scholarship: *Study in India Governmental Scholarship*, 2021–2025

PROFESSIONAL ACTIVITIES AND AFFILIATIONS

- **East Africa Radiography Students Association**, Member, 2023–Present
- **Young African Leaders Initiative**, Member, 2022–Present
- **Red Cross of Rwanda**, Volunteer and Member, 2016–Present

PRACTICAL AND TECHNICAL SKILLS

- **Practical scientific procedure and techniques:** Strong interpersonal skills, with the ability to conduct field and laboratory work independently or in a team
- **Radiology interferences:** Picture Archiving and Communication System (PACS) and Matlab
- **Other:** Skilled in WPS Office, SPSS, and software tools for data presentation.

LANGUAGES

- **English:** native proficiency
- **French:** native proficiency
- **Kinyarwanda:** native
- **Deutsch:** Basic level
- **Hindi:** Basic level

VOLUNTEERING AND EXTRACURRICULAR ACTIVITIES

- **Mass Sports Management in Ambala, India**
January 2021 – Present
Responsibilities and tasks:
 - Organize and coordinate large-scale sports events and activities for the community or institution
 - Manage logistics, including scheduling, participant registration, and equipment allocation
 - Collaborate with local organizations and volunteers to ensure smooth operations and participation
 - Promote sportsmanship and physical fitness through various outreach initiatives and community engagement efforts
 - Develop teamwork and leadership skills while overseeing large groups of participants

- **Red Cross Blood Donation Campaigns in Rwanda and India**

January 2017 – Present

Responsibilities and tasks:

- Assist in organizing and promoting blood donation drives
- Educate community members on the importance of blood donations
- Work in collaboration with healthcare professionals to ensure smooth operations during campaigns

- **Umuganda Community Program in Rwanda**

January 2018 – 2020

Responsibilities and tasks:

- Actively engage in community-driven projects aimed at improving public health in Rwanda and India
- Develop leadership and teamwork skills by coordinating with community members on various projects

REFERENCES

- **Sohan Singh, Professor and Head**, Department of Radiology, Institute of Medical and Research, Maharishi Markandeshwar Deemed to be University, Mullana, Ambala, India, Phone: (+91) 9815070302, E-mail: profsohan@rediffmail.com
- **Jean Claude Ndayishimiye, Ph.D.**, Senior Lecturer, Shenzhen MSU-BIT University, 1 International University Park Road, Shenzhen, China, Phone: (+86) 15960235991, E-mail: 6420210004@smbu.edu.cn
- **Kripanand Yadav, Ph.D.**, Assistant Professor, Institute of Medical and Research, Maharishi Markandeshwar Deemed to be University, Radiology Department, Ambala, Mullana, India, Phone: (+91) 9996695789, E-mail: kripanand.yadav@mmumullana.org