

## CURRICULUM VITAE

### PERSONAL DATA:

First Name and Last Name: FREDERIC NZANYWAYINGOMA, PhD

Physical Street Address for courier delivery: *Rwanda – Kigali –Kicukiro – Gikondo-KG614-14*

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Marital Status: *Married*

Date of Birth: 27/09/1981

Gender: Male

Nationality: Rwanda

Languages and Fluency Level: French (Advanced), English (Advanced), and Chinese (Medium)

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### EDUCATION:

**PhD in Communication and Information Systems, University of Science and Technology Beijing, China, 2013/09 to 2018/01**

**MSc in Information and Telecommunication Engineering, University of Science and Technology Beijing, China, 2010/09 to 2013/06**

**Bsc in Electronics and Communication Systems, National University of Rwanda, 2004/01 to 2009/10:**

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### WORK HISTORY:

**02/2021-Now: Quality Assurance Consultant, MasterCard Foundation RFP. This is ongoing project to develop Digital Platform for Teacher Recruitment.**

*2018 – Now: Lecturer and Postgraduate Programmes Coordinator, Department of the Information Systems, School of ICT, University of Rwanda (College of Sciences and Technologies – Nyarugenge Campus)*

**Duties and responsibilities:** - Coordinate Postgraduate Programmes in the School of ICT. - Supervise undergraduate, master students- Assist in the development of new curricular- Conduct research- knowledge transfer to business and the community - To undertake scholarly activities including the development of teaching and learning materials and publication of textbooks - Undertake teaching and related duties as may be allocated by the head of discipline. I teach 2 courses at **Master Level:** Wireless network Designs, Legal and Regulatory Requirements. I teach other courses at **Undergraduate Level:** Wireless Communication Systems, Operating System Concepts, Computer and Network Security, Computer Architecture and Maintenance, Network and System Administration, Enterprise Systems.

*2016/7- 2017/8: IT Infrastructure Services Engineer, Huawei Technologies (Uganda)*

**Duties and responsibilities:** - Served as Technical Engineer, independently complete technical work in service scenarios such as project delivery (storage data migration, virtual resource provisioning, software configuration, hardware installation –FusionCube & Oceanstor equipment, data center migration), network maintenance, and service product development involving a single product, and achieve business objectives in aspects like baselines, efficiency, costs, quality or competitiveness.

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### OTHER INFORMATION AS APPROPRIATE:

#### **\*Recognitions and awards**

- 1. Cyber Security Certificate for Service Work*
- 2. PrePosition Competence Certification for Maintenance Service*
- 3. Outstanding International Student award year 2017*

4. Chinese Government Scholarship for International Students 2010-2013

5. Rwanda Education Board Master & PhD Scholarships 2010-2018

**\*Reviewer of the below Journals:**

- IEEE Communications Surveys & Tutorials
- IEEE Access
- International Journal of Knowledge Management Studies
- Journal of Sensors
- International Journal of Production Research
- International Journal of Network Management
- Concurrency and Computation: Practice and Experience

**\* Supervisory Activities**

I am supervising 6 Bachelor Students and 7 Master Students

I am also co-supervising 2 PhD students

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**RESEARCH AREA**

**Research area:** Edge/Fog/Cloud Computing, IoT, Wireless Communication.

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**RESEARCH GRANT WON**

**Project Title:** "Real-time Assessment of the Indoor Air Pollution in Sub-Saharan households (Case study: Rwanda rural and urban areas)"

**RSIF Research Grant REF: RSIF/RA/004**

**Project Title:** Crop conditions monitoring and yield prediction using IoT systems and Machine Learning Techniques for Precision Agriculture (case study of maize in Rwanda)

**ACTS/AI4D\_2021/109651/020**

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**COMPUTER AND TECHNOLOGY KNOWLEDGE:**

Word Processing Software, Java, Linux & Windows Servers OS, HTML Editing Software, SQL, Python, Oracle, InfluxDB, MySQL, Microsoft SQL, Wireless Networks Configuration, Virtualization Technologies configurations (VMWare, HyperV, Citrix,...), Enterprise Systems Apps, Desktop Applications, experience of networking and system administration within an Active Directory environment, Supports, analyzes, and troubleshoots distributed, cloud-based technology solution, and multi-tiered application systems with a focus on finding root causes.

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**PUBLICATION LIST**

1. Frederic, N. and Huang Qiming, *Improving energy efficiency in M2M healthcare systems using CP-ABE schemes*, IEEE 12th Intl Conf on Ubiquitous Intelligence and Computing and 2015 IEEE 12th Intl Conf on Autonomic and Trusted Computing and 2015 IEEE 15th Intl Conf on Scalable Computing and Communications and Its Associated Workshops (UIC-ATCScalCom), vol. 00, no. , pp. 1243-1248, **2015**, <https://doi.org/10.1109/UIC-ATCScalCom-CBDCom-IoP.2015.225> (EI)
2. Frederic, N. and Huang Qiming, *Securable personal health records using ciphertext policy attribute based encryption*, IEEE 14th International Conference on e-Health Networking, Applications and Services, October **2012**,

<https://doi.org/10.1109/HealthCom.2012.6379472> (EI)

3. Frederic, N. and Yang Yang, *Task Scheduling and Virtual Resource Optimizing in Hadoop YARN-based Cloud Computing Environment*, International Journal of Cloud Computing, <https://doi.org/10.1504/IJCC.2018.093741>

4. Frederic, N. and Yang Yang, *Effective Task Scheduling and Dynamic Resource Optimization based on Heuristic Algorithms in Cloud Computing Environment*, KSII Transactions on Internet and Information Systems, December 2017, <https://doi.org/10.3837/tjis.2017.12.006> (SCI)

5. Frederic, N. and Yang Yang, *Efficient Resource Management techniques in Cloud Computing Environment: Review and discussion*, International Journal of Computers and Applications, <https://doi.org/10.1080/1206212X.2017.1416558> (EI)

6. Frederic, N. and Yang Yang, *A Literature Survey on Resource Management Techniques, Issues and Challenges in Cloud Computing*. TELKOMNIKA (Telecommunication, Computing, Electronics and Control) <https://doi.org/10.12928/TELKOMNIKA.v15i4.6574>

7. Frederic N., Yang Yang, *Analysis of Particle Swarm Optimization and Genetic Algorithm based on Task Scheduling in Cloud Computing Environment*, International Journal of Advanced Computer Science and Applications (IJACSA), Volume 8 Issue 1, 2017. [10.14569/IJACSA.2017.080104](https://doi.org/10.14569/IJACSA.2017.080104)

8. Tuyishime, Clement Regis, Frederic Nzanywayingoma, and Omar Gatera. "IoT-based Intelligent Energy Efficiency Management System for Smart Industries (IoT-IEEMS)." 2021 IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communications Technology (IAICT). IEEE, 2021. <https://ieeexplore.ieee.org/abstract/document/9532542/>

## REFERENCES

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### 1. Munyakayanza John

**Rank and Post:** Lecturer and HoD of the Department of Information Systems

**Organization:** University of Rwanda (UR) - College of Science and Technology (CST)

**Tel:** +250788631995

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### 2. Dr. Musabe Richard

**Rank and Post:** Senior Lecturer and Dean of School of ICT

**Organization:** University of Rwanda (UR) - College of Science and Technology (CST)

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**Email:** [rmusab10@gmail.com](mailto:rmusab10@gmail.com)

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Yours faithfully,

**Frederic Nzanywayingoma**

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