

ISAAC NDUMBE JACKAI II, PhD Candidate
Personal information

Education

University of Rome La Sapienza, Rome, Italy (2024 – Present)
Research: Automation of traffic conflict analysis in road safety

Ecole Nationale Supérieure des Travaux Publics (ENSTP) Yaounde, Cameroon (2014 – 2019)
Master of Engineering in Civil Engineering (Option: Design of Structures). GPA_C (cumulative): 3.62/4

Research interest

My research interest lies in Transport Engineering, a field that leverages scientific principles to ensure the safe, efficient, and sustainable movement of people and goods. I am particularly focused on analysing traffic conflicts to reduce road crashes, thereby enhancing safety levels in road transport systems. Through my PhD in Infrastructure and Transport at the University of Rome Sapienza, I aim to deepen my expertise in this domain and contribute to innovative solutions that address both local and global transportation challenges. By integrating advanced methodologies and data-driven approaches, I seek to develop strategies that minimize accident risks and promote safer, more resilient transport infrastructure, ultimately improving the quality and reliability of road networks worldwide.

Research and Professional experiences

Research experience

- Provided research assistance on the analysis of data from pedestrian behaviours and students modal choices at ENSTP Yaounde. **2024**
- In my Masters dissertation: Worked on the structural analysis and design of connections in timber multi-storey buildings using locally available timber species. **2019**
- In my third-year project report: Calibrated a water distribution system to show how the roughness coefficient of water pipes can affect the delivery of water (in terms of pressure) in households. **2017**

Professional experience

- **Instructor** for the implementation of a Master's level training in Transport Planning led by a consortium of universities made up of the ENSTP, Yaounde, Université Libre de Bruxelles, Belgium, the University of Padua, Italy and the University of Rome Sapienza, Italy, I am tasked with the identification of capacity building needs with regard to the Programme's Learning Outcomes (PLO's), the Educational Objectives of the Course (EOPs) and the Pedagogical Objectives of the teaching units in view of perpetuating the training while performing research on topics related to transport planning among which the socio-economic and techno-economic analysis of transport system.

March – June 2024

United Nations Online Volunteer

- Coordinated (as team leader) the architectural design of a recreational centre on a 1.5 ha land in Mbouda, in the West Region of Cameroon. Team was made up of architects, town planners and surveyors from Kenya, Ukraine and India respectively **January – April 2024**

Certifications

- Institution : *Ecole Polytechnique Fédérale de Lausanne* (Switzerland)
Villes Africaines – Mobilité et transports urbain **2024**
- Institution: California Institute of the Arts (United States of America)
Fundamentals of graphic design **2024**
- Institution: International Business Machine (IBM) Corporation (United States of America)
Introduction to artificial intelligence **2024**
- Institution: University of Macquarie (Australia)
Excel Fundamentals for Data Analysis **2023**

- Institution: RICE University (United States of America)
Project management – Scope, schedule and cost **2020**
- Institution: Red Cross (Cameroon)
First aid

Skills, Language & Interest

- Research and creative writing (Advanced)
- Project management skills (Advanced)
- Data analysis and computing (Advanced)
- Technical skills: MS products, AutoCAD, Revit, Robot SA, Photoshop (Advanced)
- Language: English (C1), French (C1), Italian (A2)
- Interest: Volunteering; Travelling; Protection of the environment.

Relevant publications

- StephenKome Fondzenyuy; **Isaac Ndumbe Jackai II**; Steffel Ludivin Tezong Feudjio; Davide Shingo Usami; Brayan Gonzalez-Hernández; Jean Francois Wounba; NkengGeorge Elambo; Luca Persia. Assessment of Sustainable Mobility Patterns of University Students: Case of Cameroon. Available at <https://doi.org/10.3390/su16114591>
 - Steffel Ludivin Tezong Feudjio; Dimitri Tchaheu Tchaheu; Stephen Kome Fondzenyuy; **Isaac Ndumbe Jackai II**; Davide Shingo Usami; Luca Persia. Investigating and Improving Pedestrian Safety in an Urban Environment of a Low- or Middle-Income Country: A Case Study of Yaoundé, Cameroon. Available at <https://doi.org/10.3390/futuretransp4020026>
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June 2025