

PATRICK C. NAMULISA

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EDUCATION

Ph.D. ECOLOGY, EVOLUTION, AND ENVIRONMENTAL BIOLOGY Sept 2022 – Present
Columbia University, New York City, New York, USA

Land – Atmosphere Interactions and Feedback targeting Carbon & Nutrients dynamics in tropical forest ecosystems under climate change and other global change drivers including elevated-CO₂ and warming particularly in the Congo Basin.

Advisor: Duncan Menge

Terrestrial Biogeochemistry | Atmospheric Science | Ecosystems Ecology | Global Change Science | Nature-based Climate Solutions

M.S. SOIL BIOGEOCHEMISTRY AND GLOBAL CHANGE Sept 2020 – Sept 2022
Joint MS Program - Ghent University [Belgium], BOKU Vienna [Austria] & University of Göttingen [Germany] | www.imsoglo.eu

Thesis : Greenhouse gas emissions from worm-compost-biochar combinations from production to farm to fork.

Advisor: Rebecca Hood-Nowotny (BOKU Vienna, Austria) | Co-advisor: Ana Meijide Orive (University of Göttingen, Germany)

Selected courses : Soil Biogeochemistry of Agroecosystems | Plant Nutrition in the Tropics & Nutrient Cycling | Isotopes in Ecosystem Sciences | Ecosystems Dynamics and their Effect on GHGs | Soil Management in the Tropics and Subtropics

B.S. ENVIRONMENTAL SCIENCE AND TECHNOLOGY Jul 2013 – Mar 2017
University of Burundi – Bujumbura, Burundi

Environmental Science | Sustainable Forest Management | Soil Science | Water Resources Management | Rural Development

RESEARCH AND WORK EXPERIENCE

Graduate Teaching Assistant Sept 2023 - Present
Columbia University in the City of New York, New York, USA

Fall 2023 : Science for Sustainable Development: The course provides students with the natural science basis to appreciate co-dependencies of natural and human systems, which are central to understanding sustainable development.

Skills: Teaching & Dissemination of climate Science Material • Grading & Tutoring • Climate Change • Sustainable Development

External PhD Research Fellow Jun 2023 - Present
Royal Belgian Institute for Space Aeronomy (BIRA-IASB) – Brussels, Belgium

Collaborate with the team “Infrared Observations” at the Royal Belgian Institute for Space Aeronomy (BIRA-IASB) on the scientific research project ICOS-BE (contract EF/211/ICOS-BE) coordinated by Dr. M. De Mazière

Lead the ICOS-related activities at the CongoFlux in Yangambi which include the required in-situ ICOS measurements of atmospheric concentrations of the target greenhouse gases (GHG) CO₂, CH₄ and CO near the surface, as well as complementary remote sensing observations of total column abundances of these GHG plus H₂O, HDO, HF and N₂O compliant with the TCCON requirements.

Visiting Graduate Research Fellow Jun 2021 – Sept 2022
International Atomic Energy Agency – Joint IAEA/FAO Program - Vienna, Austria
Supervisors : Rebecca Wood-Nowotny (PI), Gerd Dercon and Maria Heiling

Greenhouse gas emissions from worm-compost-biochar combinations from production to farm to fork

Key skills : GHG flux measurements : CO₂, N₂O | I5N Isotope Tracing | Greenhouse, Lab Operations & Maintenance | Trace Gas Analysis and Operations | Chambers Design & Operations | Stable Isotopes Mass Spectrometry | Microbial Biomass

Facilities: IAEA Laboratories Seibersdorf – BOKU Vienna - University and Research Center Tulln (UFT)

Co-Founder

Jun 2017 – Aug 2020

FIKRAfrika Group – Bukavu, Democratic Republic of the Congo

FIKRAfrika Group is a start-up specialised in Sustainable Construction, Design and Environmental Consulting in Bukavu, DR Congo. In addition to Consulting, my responsibilities involved Management, Portfolio and Partnership Development.

Undergraduate Research Intern

Dec 2016 – Mar 2017

Samaki Tamu SPRL & FABI University of Burundi – Bujumbura, Burundi

Supervisors : Prosper Kiyuku (FABI UB) and Alain Murekambaze (Samaki Tamu)

Research on Climate and Aquaculture – Tilapia (*Oreochromis niloticus*) feeding and stockage density optimization | Water quality and Soils | Aquatic Ecology and Biodiversity | Precision Sampling | Field Work Organisation

LEADERSHIP, MENTORING AND SERVICE

University Life Ambassador

Oct 2022 – Present

Columbia University – University Life Office, New York City, NY

Leadership Development | Trainings and Facilitation | Volunteering and Curation of Students and Researchers' Experience on Campus and out.

Students Representative

Oct 2020 – Oct 2021

IMSOGLO Steering Committee – Ghent (Belgium), Vienna (Austria), and Göttingen (Germany)

Student Delegation and Leadership | Program and International Mobility Quality Evaluations of the Joint Program with Ghent University (Belgium), Aarhus University (Denmark), University of Göttingen (Germany), and BOKU Vienna (Austria).

Founder and Facilitator

Sept 2019 – Present

Urithi Leadership Lab - Africa Sustainability School – Bukavu, Democratic Republic of the Congo

Urithi stands for Legacy in Swahili - The Urithi Leadership Lab is an effort of Environmental and Climate Justice to underrepresented and vulnerable communities through Environmental and Sustainability Education to Students of non-environment-related programs in local universities campuses in French Speaking countries in Africa (starting from Congo DRC). Climate Education Outreach Programs | Leadership Development | Mentoring | Scholarship Application Guidance & Coaching

SELECTED HONOURS AND AWARDS

CARN ASPIRE 2023 Research Grant – Conservation Action Research Network (CARN) – Value: 5000 USD	Nov 2023
FLUXNET Secondment Program 2024 Award – FLUXNET Community Council-UC Berkeley – Value: 6000USD	Nov 2023
External PhD Fellowship – ICOS-BE Project – Royal Belgian Institute for Space Aeronomy (BIRA-IASB)	Aug 2023
E3B Explorative Travel Grant – Dept of Ecology, Evo & Environmental Biology – CU - Value: 4000 USD	July 2023
Columbia GSAS – PhD Fellowship – Graduate School of Arts and Science - Columbia University	Sept 2022 - May 2027
Erasmus Mundus Joint Master Degree Full Scholarship – European Union - Value : 58000 USD	Sept 2020 – Aug 2022
Nudge Global Challenge 2021 Wild Card Awardee – Nudge Academy Netherland - Value : 5350 USD	Aug 2021
Civil Society Leadership Award – Language Proficiency Fund – Open Society Foundation - Value : 3000 USD	Oct 2019

CONFERENCE PRESENTATIONS AND PUBLICATIONS

International Symposium on Managing Land & Water for Climate Smart Agriculture 2022- IAEA Presentation Jul 2022

Namulisa P. C., et al., 2022, Greenhouse gas emissions from worm-compost-biochar combinations; a potential peat alternative?

EGU 2022 Presentation :

May 2022

Namulisa P.C. et al., 2022, Greenhouse gas emissions from worm-compost-biochar combinations from farm to production to fork

DOI: <https://doi.org/10.5194/egusphere-egu22-7741>

SELECTED EXTRA CURRICULUM EDUCATION EXPERIENCES

Nudge Global Impact Challenge 2021 - Leadership, Sustainability and Impact Creation Training

Aug 2021 – April 2022

Nudge Academy Netherlands – Amsterdam, Netherlands | www.nudgeglobalimpactchallenge.com

Theme 2021: Rebalancing the Planet | Online with a two-day Grand Finale closure event in May 2022 in the Netherlands

Eddy Covariance Flux Measurements Intensive Course 2021

Nov 2021

Thünen Institute of Climate-Smart Agriculture, Germany

School of Climate Change Michaelmas SoCC 2021

Oct – Dec 2021

Oxford Climate Society, Oxford University – Oxford, UK

IMSOGLO Summer School 2021 - Description, Sampling, and Classifications of Danish soils based on field studies. Aug 2021

Aarhus University – Aarhus, Denmark

SELECTED SKILLS

Digital and Software : ArcGIS, QGIS, R & RStudio, Hyprop Fit, HYDRUS-1D, EddyPro, Websites & Digital Communication.

Soft Skills : Research and analytical skills, Written and Verbal Communication, Organizational and planning skills, Presenting,...

Language Skills : English, French [Native], and Swahili [Native]
