

ALFRED NAVOKHI APAJI

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RESEARCH INTERESTS

Water and wastewater treatment, microplastics, emissions from wastewater treatment, flood and river management, hydraulic modeling

EDUCATION

Newcastle University

MSc Environmental Engineering - **Semester 1 Grade: 79.10 %** [🔗](#)

Supervisor: **Dr Elizabeth Heidrich**

Sept. 2023 - Present

Newcastle, United Kingdom.

Modibbo Adama University of Technology

Bachelor of Technology in Industrial Chemistry - **Grade: First Class Honours**

Supervisor: **Dr Jibrin Ndahi**

Jan. 2013 - May. 2019

Yola, Nigeria.

RESEARCH EXPERIENCE & PROJECTS

Water and Wastewater Treatment

March 2024

MSc Module: *Environmental Engineering Design and Project Management*

Newcastle, United Kingdom.

- Participated in a 5-member team project to design a conceptual wastewater treatment plant for three locations in urban and rural settings.
- Engaged in policy development to identify potential water treatment technologies that suit the technology's location, climate, and effectiveness.
- Designed a wastewater treatment technology system that uses bio-based flocculants.

Gravity-fed Water Supply System

December 2023

MSc Module: *Introduction to Practical Hydraulics*

Newcastle, United Kingdom.

- Designed a conceptual water supply system leveraging EPANET for a rural area in Nepal.
- Analysed various water sources within the community, including groundwater, spring, and surface water to choose the most suitable source.
- Utilised hydraulic principles from Darcy-Weisbach and Hazen-Williams to determine flow rate, flow velocity, pipe sizes and pipe materials for the conceptual design.

Physico-chemical and bacteriological analyses of selected heavy metals in water

April. 2019

Undergraduate Project: *Modibbo Adama University of Technology*

Yola, Nigeria.

- Conducted heavy metals analysis of water samples using atomic absorption spectroscopy.
- Used the traditional pour plate count method to analyse total coliforms in water samples.

TEACHING EXPERIENCE

Ibrahim Badamasi Babangida University

Jun. 2019 - Jun.. 2020

Graduate Assistant (Supervisor: **Dr Ibrahim Isa Lakan**)

Lapai, Nigeria.

- Organised and led 3 hours per week practical sessions for over 300 first-year Chemistry students demonstrating skills in content delivery, and audience engagement.
- Graded and provided detailed feedback on exercises to over 300 students, enhancing preparation for examination.
- Attended seminars and project defense meetings rendering technical and administrative support to faculty members.

ACADEMIC WRITING SAMPLE

- [1] Gravity-fed Water Supply System for a Rural Community in Nepal: A Coursework submitted to the Environmental Engineering Group, Newcastle University, UK. [🔗](#)
- [2] Remediation Technologies: Remediation of fuel-contaminated groundwater, soil and LNAPL at the Naval Weapons Station (NWS) Seal Beach, California, USA submitted to the Environmental Engineering Group, Newcastle University, UK. [🔗](#)

AWARDS & ACCOLADES

2023 Best Presenter: Awarded prize as the best presenter for the Core Skills in Environmental Engineering Module at Newcastle University.

2023 Commonwealth Shared Scholarship: Total costs for a master's degree at Newcastle University, covering visa application fees, tuition, living expenses, and travel allowances. [!\[\]\(3dfb8d66e81160ad61421a3452093d1b_img.jpg\)](#)

2023 Think Big Scholarship: 16000GBP funding for a Master of Science in Environmental and Water Management at the University of Bristol. (***Award declined in favor of Commonwealth Shared Scholarship.***)

2022 Nigeria Jubilee Fellowship: Total costs for a placement internship in Nigeria, totaling 1000GBP.

2019 Most Outstanding Student Award, Department of Chemistry, Modibbo Adama University of Technology, Yola.

PROFESSIONAL WORK EXPERIENCE

Scientific Officer

Oct. 2022 - Sept. 2023

Taraba State Ministry of Water Resources.

Taraba, Nigeria

- Investigated water samples to ensure they meet the drinking water quality as developed by National Standards for Drinking Water Quality.

Project Manager

Oct. 2020 - Oct. 2022

African Resilient Initiative for Community and Sustainable Development.

Taraba, Nigeria

- Led a teacher training session for over 20 teachers within Jalingo on global citizenship education particularly to enable teachers to teach environmental problems and their solutions to their students.
- Coordinated volunteers for projects around environment or education within the rural areas of Jalingo.
- Catalogued important documents and guided new volunteers through the registration process.

Quality Control Intern

March 2017 - Aug. 2017

Taraba State Water and Sewerage Company.

Jalingo, Nigeria

- Carried out physicochemical analysis in water samples using a DR-6000 spectrophotometer.
- Wrote detailed experimental reports.
- Achieved a high satisfaction rate through diligent laboratory procedures.

PROFESSIONAL MEMBERSHIPS

- Black Engineering Network, **Member**
- Institute of Water in the UK, **Student Member**

SKILLS AND HOBBIES

Analytical Tools: Spectrophotometer, qPCR sequencing

Statistical Tools: EPANET, Python (Beginner)

Hobbies: Watching and playing football, traveling, talks about environmental sustainability and listening to afrobeat music.