Nosiba Elfadil

Profile

Experienced graduate equipped with analytical and numerical problem solving skills. Skilled in programming (Matlab and Python), Numerical Analysis and Modelling. Interested in application areas of Mathematics (System modelling and Process optimization).

Education

2019–2020 **Master of science** , *Lappeenranta-Lahti University of Technology LUT*, Lappeenranta/Finland, *(Very Good)*.
Specialized in Computational Engineering and Technical Physics/Technomathematics

2018–2019 **Master of Science** , *African Institute for Mathematical Sciences (AIMS)*, Kigali/Rwanda, *(Distinction)*.
Specialized in Mathematical Sciences/Climate Change.

2016–2017 **Master of Science** , *University of Khartoum*, Khartoum/Sudan, *(First Class)*.
Specialized in Industrial and Computational Mathematics

2010–2015 **Bachelor of Science**, *University of Khartoum*, Khartoum/Sudan, *(Second Class Honours- Division 1)*.
Specialized in Mathematics and Computer Science

Experience

2022–Now **Lecturer**, Red sea University -Applied sciences college , Port Sudan/Sudan (April –Now).
Tasks:
○ Taught mathematical courses for applied sciences students.

2021–2022 **Part-time Teaching**, Red sea University -Applied sciences college , Port Sudan/Sudan (March –March).
Tasks:
○ Taught calculus and general algebra courses for the first year students

2021–2021 **Partial collaborator**, National Council for Child Welfare , Port Sudan/Sudan (May –July).
Tasks:
○ Data entry and analysis for a study on children's education.

2021–2021 **Part-time Teaching**, Ahlia Port sudan college-Information Systems department , Port Sudan/Sudan (January –May).
Tasks:
○ Taught Discrete mathematics course for the second year students

2020–2021 **Intern**, Alliance of Bioversity International and International Centre for Tropical Agriculture, CIAT, Remote location (November –April).
Research topic:
○ Deep learning for land cover map applications.

2018–2018 **Part-time Teaching**, Ahlia Port sudan college-Information Systems department , Port Sudan/Sudan (February –June).
Tasks:
○ Taught Introduction to Probability and Statistics course for first year students.
○ Taught System Analysis and Design course for the second year students.

2016–2017 **Teaching assistant**, University of Khartoum (UofK)-Faculty of Mathematics Sciences, Khartoum/ Sudan (April-September).
Tasks:
○ Held tutorial in calculus course for first year students.
○ Held tutorial in real analysis, ordinary differential equations, and numerical computation courses for the second year students.

2016–2017 **Teaching assistant**, University of Khartoum (UofK)-Faculty of Administrative Sciences, Khartoum/ Sudan (March-September).
Tasks:
○ Held tutorial in Mathematics course for first year students.

Masters Thesis

Title *Numerical Approximation of Non-Linear Shallow Water Equations 2019-2020*

Supervisors Professor Heikki Haario & Associate Professor Ashvinkumar Chaudhari

Description This thesis was a continuous study from my previous thesis at AIMS. I added new numerical methods such as Forward Euler, Crank-Nicolson, and the Method of Line to solve the shallow water model. The results for all the numerical methods were compared with the results of the analytical solution. I also compared the CPU time for all the numerical methods.

Title *Numerical Approximation of Non-Linear Shallow Water Equations 2018-2019*

Supervisors Associate Professor Mohamed Mbehou

Description In this thesis, the system of shallow water equations, which are non-linear partial differential equations, was derived under specific assumptions. A numerical approximation was used to solve the system of equations with method of finite differences, specifically backward central schemes.

Title *The Diet Problem 2016-2017*

Supervisors Associate Professor Mohsin Hassan Abdullah

Description In this thesis, the main objective was to develop an optimization model to minimize the cost of food consumed during one day, subject to the constraint that the diet meets the nutritional requirements of a person. A specific group of people were used and a simplex algorithm was used to solve the dietary model.

Awards

2018	African Institution for Mathematical Sciences (AIMS), Kigali/Rwanda Scholarship
2019	Lappeenranta-Lahti University of Technology (LUT), Lappeenranta/Finland Scholarship

Computer skills

Basic	Open Foam.
Intermediate	PYTHON, SPSS, Microsoft packages.
Advanced	MATLAB, LaTeX.

Communication Skills

2020	Oral Presentation at Lappeenranta-Lahti University of Technology (LUT) in case study seminar and presentation
2019	Oral Presentation at African Institution for Mathematical Sciences (AIMS) in Operation Research
2016	Oral Presentation at university of Khartoum in Mathematics Problem Solving Skills

Languages

English	**Intermediate**	*Conversationally fluent*
Arabic	**Mothertongue**	

References

Eihab Bashier
Associate Professor, Department of Applied Mathematics.
University of Khartoum.
+00966536909593
eihabbash@aims.ac.za

Mohamed Mbehou
Associate Professor, Department of Mathematics.
Cameron University of Yaounde I.
+23775518266
mbehoumoh@gmail.com