THE TECHNICAL UNIVERSITY OF KENYA

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Current Designation:	Tutorial Fellow, PURE AND APPLIED MATHEMATICS (DPAM)
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Consultation Hours:	8AM-5PM MON - FRI

EDUCATION

LEVEL	QUALIFICATION NAME	INSTITUTION	YEAR
Doctor of Philosophy (PhD)	PURE MATHEMATICS	JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY(Kenya)	2024
Masters of Science (M.Sc.)	MATHEMATICAL SCIENCE	UNIVERSITY OF STELLENBOSCH(South Africa)	2020
Bachelor of Science (BSc)	MATHEMATICS	UNIVERSITY OF NAIROBI(Kenya)	2018
O level/Equivalent	KENYA CERTIFICATE OF SECONDARY EDUCATION	MARANDA HIGH SCHOOL(Kenya)	2013

WORK EXPERIENCE

PERIOD	INSTITUTION	POSITION
1.12.2021 - present	The Technical University of Kenya	Tutorial Fellow Pure Mathematics

GENERAL STATEMENT ON RESEARCH AREAS

My research primarily focuses on analysis and its interactions with other areas of mathematics, such as mathematical modeling, mathematical finance, and partial differential equations. I also have an interest in quantum computing and data science.

CURRENT RESEARCH PROJECTS

On Density and Dentability in Norm-Attainable Classes	Analysis, Geometry and Optimization

SELECTED PUBLICATIONS

TITLE	LINK TO PUBLICATION	YEAR
College Algebra - An Analyst's Perspective: Analysis Meets Algebra	View online	
Lie Group Analysis of a Nonlinear Coupled System of Korteweg-de Vries Equations	View online	
Exact symmetry reduction solutions of a nonlinear coupled system of Korteweg-De Vries Equations	View online	
Conserved Quantities of a Nonlinear Coupled System of Korteweg-De Vries Equations	View online	
Lie Group Analysis of Nonlinear Partial Differential Equations	View online	
Group Invariant Solutions and Conserved Vectors of a Simple KdV Type Equation	View online	
A Group Approach to Exact solutions and Conservation laws of Classical Burger's Equa- tion .	View online	
An Application of Lie Point Symmetries in the Study of Potential Burger's Equation	View online	
A Concise Introduction to Calculus.	View online	
A Treatise on Discrete Mathematics	View online	
Algebra in the Practical Context.	View online	
Linear Algebra and its Applications.	View online	
Group Analysis on One-Dimensional Heat Equation	View online	

POSTGRADUATE STUDENTS SUPERVISION

NAME	PROJECT TITLE	PERIOD
Amos Njoroge	A mathematical model for HIV control	June-August 2022
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COURSES TAUGHT

NAME	DESCRIPTION	PERIOD
Funtional Analysis	This course is offered to fourth years and they get acquainted with fundamental notions in classical analysis. From Banach spaces, functionals and operators to Hilbert spaces, and continuity and boundedness of operators between the aforementioned spaces. Students also get to interact with Hahn Banach theorems.	July -October 2022 - TO-DATE
Linear Algebra	This course was taught to Engineering students. They are introduced to a vector space and some results proved to them. We then solve systems of linear equations using matrices, cramer's rule and elementary row operations. We also touched on inner products spaces, normed spaces and orthogonality of the same.	January 2022 - April 2022
Calculus	The course for industrial chemistry students exposes them to basic differential and integral calculus. Some applications are looked into in the course.	January 2022 - March 2022
Real Analysis I	This is a course taught to third year bachelor of technology and bachelor of science students. They are introduced to sequences and series; and their convergence, tests for convergence, Cauchy Sequences, different modes of convergence and analytical theory of some classes of functions.	January 2022 - March 2022
Introduction to analysis	This is an introduction course to mathematical analysis. The students get exposed to ordered and algebraic fields, completeness of the real line, limit and interior points, countability, continuity in different modes ; and differential and integral concepts for real valued functions.	March - June
Discrete Mathematics	An introductory course to management science students. They were exposed set theory, mathematical logic, functions and relations, series and sequences, binomial expansion, permutations and combinations and rudimentary graph theory.	March - June
Real Analysis II	The course generalizes an analysis of the real line as a metric space to abstract metric spaces. Notions such as Completeness, compactness, convergence, continuity modes, Sequences and series of functions are looked into. Also taught are Riemann Integrals, Riemann Stieltjes Integrals, bounded and total variations in functions.	May 2022 - August 2022

EXTRA INFORMATION

DESCRIPTION

I am an avid researcher in the realms of pure and applied mathematics.