



# THE TECHNICAL UNIVERSITY OF KENYA

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Faculty:	ENGINEERING AND THE BUILT ENVIRONMENT
School:	MECHANICAL AND MANUFACTURING ENGINEERING
Department:	Mechanical and Mechatronic Engineering
Current Designation:	Tutorial Fellow, THERMODYNAMICS AND FLUID MECHANICS (DTFM)
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Consultation Hours:	8AM-5PM MON - FRI



## EDUCATION

LEVEL	QUALIFICATION NAME	INSTITUTION	YEAR
Bachelor of Science in Engineering(B.Sc. Eng)	MECHANICAL ENGINEERING	JOMO KENYATTA UNIVERSITY(Kenya)	2014

## WORK EXPERIENCE

PERIOD	INSTITUTION	POSITION
OCT 2015 - TO - DATE	The Technical University of Kenya	Tutorial Fellow
4 Feb 2015 - 31 SEP 2015	Associated Services Consultants	Assistant Engineer
29 Feb 2016 - 15 Dec 2016	Sumitomo Chemical Company Limited, Japan	Research Fellow

## GENERAL STATEMENT ON RESEARCH AREAS

Insight-driven people leader and researcher fusing commercial instinct and pragmatism, tech-savvy and consumers' insight to navigate ambiguity, champion customer needs, drive agility and inspire sustainable transformation. Builder of outperforming smart operations models. Track record spanning periods of growth to turnarounds

## CURRENT RESEARCH PROJECTS

CFD Analysis of an Airbag Module Using The Existing Gasflow-USM and the New Gasflow-AMR Solver	Computational Fluid Dynamics.
CFD Modeling of the Mixing Process in a Fuel Tank.	CFD, Automotive Engineering
High Precision Machining of Hard-to-cut Materials	Precision engineering, high-performance materials, modeling and simulation, manufacturing
Smart Manufacturing	Manufacturing Engineering, additive manufacturing

**SELECTED PUBLICATIONS**

TITLE	LINK TO PULICATION
M-Tour: A Smart Design Tourism Application Development for a Destination Competitiveness	<a href="https://www.evise.com/co-author?dgcid=invite_email_coauthoroutreach2212571X#/JDM/submit/JDM_2019_218">https://www.evise.com/co-author?dgcid=invite_email_coauthoroutreach2212571X#/JDM/submit/JDM_2019_218</a>
Experimental and numerical study of kerf characteristics in abrasive waterjet machining	<a href="https://www.journals.elsevier.com/journal-of-materials-processing-technology">https://www.journals.elsevier.com/journal-of-materials-processing-technology</a>
M-Tour: A new socio-technological design application for destination competitiveness in Egypt	<a href="https://doi.org/10.1108/IMDS-01-2020-0020">https://doi.org/10.1108/IMDS-01-2020-0020</a>
Fluid-structure interaction modeling of the abrasive waterjet drilling of carbon fiber reinforced polymers	<a href="https://www.researchgate.net/publication/343690220_Fluid-structure_interaction_modeling_of_the_abrasive_waterjet_drilling_of_carbon_fiber_reinforced_polymers/stats">https://www.researchgate.net/publication/343690220_Fluid-structure_interaction_modeling_of_the_abrasive_waterjet_drilling_of_carbon_fiber_reinforced_polymers/stats</a>
Numerical and Experimental Characterization of Kerf Formation in Abrasive Waterjet Machining	<a href="https://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=2721585">https://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=2721585</a>

**COURSES TAUGHT**

NAME	DESCRIPTION	PERIOD
Engineering Product Innovation and Rapid Prototyping	Reverse Engineering Principles, 3D Printing (Additive manufacturing)	2014 - TO-DATE
Electrical and Autotronics	It is a core unit for Automotive engineers where design and functioning of various electrical components in vehicle are analysed.	October 2015 - TO-DATE
Technology and Engineering Management	Students who concentrate in Technology and Engineering Management are prepared for careers including product and project management, management consulting, and entrepreneurship. They acquire skills to manage technical organizations, foster innovation, and deal with rapidly evolving technologies and dynamic markets. Specialized coursework is flexible, allowing students to explore and gain depth and understanding of technical organizations to develop a culture of successful innovation and entrepre	September 2019 - TO-DATE
Programming for Engineers	Matlab, C, C#	2017 - TO-DATE
Advanced Manufacturing Systems	Introduction to CNC Manufacturing. Modern Machine Tool Control Tooling for Hole and Milling Operations Features of CNC Machining Centers Mathematics for CNC Programming Techniques and Fixed Cycles for CNC Lathe Programming Introduction to CNC Wire EDM Modern Computer-Aided Part Programming	2017 - TO-DATE
Maintenance Engineering	Basic Principles of maintenance planning. Planned maintenance: Objectives and principles, benefits of sound maintenance systems. Reliability and machine availability; MTBF, MTTR and MWT, factors of availability. Maintenance organization, maintenance economics. Preventive maintenance, maintenance schedules, repair cycles. Principles and methods of lubrication. Total productive maintenance (TPM). Machine condition diagnostics: Condition monitoring; cost comparison with and without condition monito	September 2019 - TO-DATE

PROFESSIONAL AFFILIATIONS AND SOCIETIES

<b>TITLE</b>	<b>INSTITUTION</b>
Graduate Engineer	Engineer Registration Board of Kenya, The Institution of Engineers of Kenya
Associate	American Society of Mechanical Engineers (ASME)