

Joseph Njuguna Muguthu

PhD. (Harbin Institute of Technology, China), MPhil Tech Ed, Bed Tech. Hons.
(Moi University, Kenya),

1.1 PERSONAL PROFILE

1.1.1 Personal Details

Name	Dr. Joseph N. Muguthu
Cell phone	0204406240
Email Address	muguthu.joseph@ku.ac.ke / muguthu@gmail.com
Citizenship	Kenyan
Gender	Male
Designation	Lecturer

1.1.2 Academic & Professional Qualifications

Postgraduate

- 2010-2013: PhD. in Mechanical Manufacture and Automation, Harbin Institute of Technology, Harbin, China, July 2013
- 2003-2007: Master of Philosophy in Technology Education (Mechanical Technology), Moi University, Kenya

Undergraduate

- 1992-1996: Bachelor of Education (Technology Education), Second Class Honors Upper Division, Moi University, Kenya

1.1.3 Employment History/Work Experience

June. 2015 to date: Lecturer, Energy Technology Department, Kenyatta University

Feb 2014. - June 2015: Lecturer, Mechanical Engineering Department, Kenyatta University

Jan. 2005 – Feb. 2014: Assistant Lecturer Mechanical Engineering Department, Teachers Service Commission, Thika Technical Training Institute

1.2 RESEARCH AND PUBLICATIONS

1.2.1 Articles in refereed journals

1. E.Y. Kombe, **J Muguthu.**, “Wind Energy Potential Assessment of Great Cumbrae Island Using Weibull Distribution Function”., Journal of Energy Research and Reviews, 1-8, DOI: 10.9734/JENRR/2019/v2i229734., 2019
2. E. Y. Kombe, **J. Muguthu.**, “Geothermal Energy Development in East Africa: Barriers and Strategies”., Journal of Energy Research and Reviews 2 (1), 1-6, DOI: 10.9734/JENRR/2019/v2i129722, 2018
3. J. C. Ngugi, P. Muchiri, **J. Muguthu**, C. Nkundineza. “Quality Failure Analysis and Quality Improvement Methods in Small and Medium Manufacturing Companies (A Case Study of Shamco Industries Limited)”. International Journal of Scientific & Technology Research Volume 7, Issue 4, ISSN 2277-8616, Apr 2018,
4. B. Osodo, D. Nyaanga, J. Kiplagat, **J. Muguthu.**, “Optimum Air Velocity, Air Temperature and Maize Layer Thickness for Highest Moisture Removal Rate and Drying Efficiency in a Forced Convection Grain Dryer”, American Journal of Food Science and Technology, DOI:10.12691/ajfst-6-6-6, 2018, Vol. 6, No. 6, 263-273
5. J.M. Wathigo, J.N. Keraita, J.B. Byiringiro, **J. N. Muguthu**, “Investigation on Optimal Cutting Parameters in Turning AISI 8660 Steel Using Silicon (Sic) Whisker Reinforced Ceramic Tool”, IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), 2017

1.2.2 Other Publications

Reviewed Conference Papers

1. **J. N. Muguthu.**, (Host Speaker) “Leveraging Fourth Industrial Revolution in Africa: Role of Modeling and Simulation in Education”, 5th International Annual October Conference on Education and Lifelong Learning., Kenyatta University, October 2018.
2. **J. N. Muguthu**, N. Langat., “Financing Sustainable Energy Projects in Agriculture”., 1st Pan-African Society of Agricultural Engineers Conference., Mayfair Hotel, Nairobi (March 2018)
3. Booker O., D. Nyaanga, J. Kiplagat, **J. N. Muguthu.**, “Optimisation of an Experimental Forced Convection Grain Dryer Using Taguchi Approach”., 1st Pan-African Society of Agricultural Engineers Conference., Mayfair Hotel, Nairobi (March 2018)
4. **J. N. Muguthu**, D Gao., Tool Wear, Wear Mechanism and Dimensional Accuracy in Machining Al₂124SiCp MMC using CBN and PCD Tools, Proceedings of Sustainable Research and Innovation Conference, 345-349, 2015
5. **Muguthu, J. N.** and Ikua, B. W., “Roadmap to Industrialization- Preparedness of Human Resource in Metal Manufacturing Industries in Kenya”, Scientific and Industrialization Conference, JKUAT, (Dec. 2007).

1.3 QUALITY TEACHING AND LEARNING

Postgraduate Supervision

(i) PhD Supervision: Ongoing

- J98/33431/14 Macben Makenzi

Research Title: “Optimization of Solar Photo-Voltaic Water Pumping System Planning through techno-economic modelling and decision frameworks”
Kenyatta University

- J98/24446/2013: Lucy K. Wangai

Research Title; Optimization and Comparison of Production Process for fuel Bioethanol from wet and Dry Coffee pulp for cooking in Rural Kenya

(ii) Masters Supervision: Ongoing

- 156/7106/01: Ngigi John Njau

Research Title: “Design and Performance of a Combined Derrieus-Savonius Wind Electric Pumping System”. Kenyatta University

(iii) Postgraduate Supervision

(a) Masters Supervision: Completed

i. Philip Onyango Aluoch

Thesis Title: Productivity Performance Analysis and Improvement in Kenya Sugar Industry. (Case Study at South Nyanza Sugar Company Ltd., Awendo)
University: Dedan Kimathi. University of Technology
Year of Graduation: Passed Thesis defense, waiting graduation

ii. James Mwangi Wathigo

Thesis Title: Investigation on Turning AISI 8660 using Silicon Carbide Whisker Reinforced Ceramic Cutting Tool,
University: Dedan Kimathi University of Technology
Graduation date: April 2019

iii. E221-003-0009/2012 James Njoroge Ndungu

Thesis Title: Productivity Improvement of the Manufacturing Processes Through Modelling and Simulation Analysis: A Case Study of a Vehicle Assembly Plant.
University: Dedan Kimathi University of Technology
Graduation date: April 2017

iv. E221-003-002/2012 Reuben Kirkumet

Thesis Title: Analysis and Reduction of Energy Consumption in a

Manufacturing Setup: A Case of Farmers Choice Limited
University: Dedan Kimathi. University of Technology
Graduation date: April 2016

- v. **JE221-003-0023/2013 Stephen Kikuvi Vala**
Thesis Title: Development of Asset Management Strategies for Critical Care Equipment at Kenyatta National Hospital.
University: Dedan Kimathi. University of Technology
Graduation date: April 2016

1.4 ADMINISTRATIVE RESPONSIBILITIES IN KENYATTA UNIVERSITY

1.4.1 Administrative Positions

- **May 2018 to May 2020:** Examinations Coordinator, Energy Technology Department
- **Oct 21st 2014 to April 2017:** Digital School Coordinator (School of Engineering and Technology) in KU

1.5 REFEREES

1. Dr F. N. Njoka

Chairman

Energy Technology Department

School of Engineering and Technology

Kenyatta University

P. O. Box 43844-00100

Tel: 0726 811416

Email: njoka.francis@ku.ac.ke

2. Prof. Eng. B. W. Ikua

DVC (Administration)

JKUAT

P.O Box 62000-00200 Nairobi

Tel. +254-67-52711, +254-0722-286264

Email: ikua_bw@eng.jkuat.ac.ke