

KU Teaching Staff Summary profile form

Name: Simon Thuku Mwangi

Position: Tutorial Fellow

Department: Agricultural and Biosystems Engineering

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Membership in Professional Societies

Organization	Position	Reference No.
Engineers Board of Kenya (EBK)	Graduate Engineer	B.15783
Institution of Engineers of Kenya (IEK)	Graduate Engineer	G.8222
National Environment Management Authority (NEMA)	Associate Expert	7772
Environment Institute of Kenya (EIK)	Associate Expert	EIK/2/3746

Education

Period	Institution	Qualification
2015-2018	University of Nairobi	MSc. Environmental and Biosystems Engineering
2009-2014	University of Nairobi	BSc. Biosystems Engineering (First Class Honours)

Research focus

1. Mechanization Development,
2. Energy, Power and Machinery Engineering,
3. Structures Engineering,
4. Process and Food Engineering
5. Wastewater and Solid waste management

Recent Projects and consultancies

1. Feasibility Study, Design, Tender Document Preparation and Supervision of Ndiriti Aguthi Irrigation Scheme Value Addition Infrastructure in Kiieni East Division, Nyeri County. Contract No.: MOALF/SIVAP/T002/2017-2018
2. Environmental and Social Impact assessment (ESIA) for proposed community borehole, agricultural produce marketing shed, and livestock sale yard, Bomet County – Ministry of Agriculture, Livestock and Fisheries. May 2020
3. Environmental and Social Impact assessment (ESIA) for proposed community boreholes, Machakos County – Ministry of Agriculture, Livestock and Fisheries. March 2020
4. Environmental and Social Impact assessment (ESIA) for proposed community boreholes, Makueni County – Ministry of Agriculture, Livestock and Fisheries. February 2020
5. Pilot project of the Vehicle Labeling and Fee-bate in Kenya. UNEP- Energy Regulatory Commission (ERC) 2014/2015; 2016/2017.
6. Pilot project of the Global Fuel Economy Initiative (GFEI) and Modeling in Kenya. UNEP- Energy Regulatory Commission (ERC) 2013/2014.
7. Environmental and Social Impact Assessment (ESIA) for Rwabura Irrigation Development Project, Kiambu County -National Irrigation Board 2015-2016
8. Preliminary design of Irrigation systems for Mwea Irrigation Development Project including rehabilitation of dilapidated irrigation and Water infrastructure. 2014-2015
9. Design and Project supervision of Kiserian Slaughterhouse Waste Water Treatment Systems University of Nairobi - National Water Conservation & Pipeline Corporation(NWCPC) Grant 2014

Conference Presentations

1. Mechanization Status in Africa: An Overview. In: *Pan African Society for Agricultural Engineering Conference* in Southern Sun Mayfair Hotel, Nairobi Kenya, 25-28 March 2018.
2. Optimization of Specific Draft Requirement and Hitch Length for an Animal Drawn Sub-Soiler: A Case of Sandy Clay Loam Soils. Innovation Exposition of Agricultural, Environmental and Biosystems Engineering on 23rd October 2018, *-DAAD School of Engineering Conference University of Nairobi*
3. Fungal contaminants and aflatoxins in the maize from lower eastern region in Kenya, *The Sixth African Higher Education Week and RUFORUM Biennial Conference, 22-26 October, 2018 KICC.*

Recent publications

1. Gitau, A.N. and **Mwangi, S.T.** (2019). Mechanization Status in Africa: An Overview. In: Journal of Engineering in Agricultural and the Environment (JEA) ISSN 1562-6946, Volume 5 No.2. 2019
2. Mwonga, N.K., Gitau, A.N., Mutua, J.M. and **Mwangi, S.T.** (2019). Optimization of Specific Draft Requirement and Hitch Length for an Animal Drawn Sub-Soiler: A Case of Sandy Clay Loam Soils. Open Journal of Optimization, 8, 83-99. <https://doi.org/10.4236/ojop.2019.83008>
3. **Mwangi, S.T.**, Gitau, A.N. and Muchiri, G. (2018). Effect of Chisel Ploughing on Physical and Mechanical Soil Properties on a Maize Cropped Field. **International Journal of Emerging Technology and Advanced Engineering Website: www.ijetae.com (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 8, Issue 11, November 2018)**

4. Gitau, A.N., Wilba, S.N., Mbuge, D.O. and **Mwangi, S.T.** (2018). Modelling variable cost of Tractors. A case study of ten tractor models in Juba Southern Sudan. AMA Spring 2018 Vol. 49 No. 2. ISSN 0084-5841. Pp 104-111.