

PERSONAL DETAILS

Name: Patricia Wanjiku Mwangi

Title/Qualification: PhD

Department: Urban & Regional Planning

Designation/Position: Lecturer

Email: mwangi.patricia@ku.ac.ke

Contact Address:

Area of Specialization:

- Geospatial Engineering
- Natural Resource Management
- Environmental Planning & Management

Research Interests:

- Surveying
- Photogrammetry, Remote Sensing & GIS
- Climate Change
- Data Science

Google Scholar:

https://scholar.google.com/citations?user=e8_bvtoAAAAJ&hl=en

ORCID ID: 0000-0003-1863-782X



EDUCATION

PhD	Kenyatta University, Environmental Planning & Management Modelling the Spatial Relationship between Built-up Volumes and Surface Urban Heat Islands in Upper Hill, Nairobi City County, Kenya	Feb 2020
MSc	University of Florence, Faculty of Agriculture Land Evaluation in the Gulf of Orosei, Central Eastern Sardinia, Italy	June 2013
BSc	University of Nairobi, Geospatial Engineering Graduated Second Class Honors	June 2009

TEACHING EXPERIENCE

Kenyatta University, Nairobi Tutorial Fellow , Dept. Urban and Regional Planning	May 2015 to Present
<ul style="list-style-type: none">• Lecture and assess remote sensing, GIS, surveying, planning studios• Revised the syllabus to meet accreditation standards• Carry out research and advancement of knowledge	
Technical University of Kenya, Nairobi Part-time lecturer	Sept to Dec 2013
<ul style="list-style-type: none">• Teach remote sensing, introduction to natural resources in the faculty of engineering and the built environment• Developed quizzes, exams, and assignments	

- Coordinated grading and labs with a team of 1 teaching assistant

OTHER WORK EXPERIENCE

Tutor, Goethe University, Germany Sept.-Oct. 2020

- Geospatial Technologies Lecture Series

Trainer, Goethe University, Germany Sept. 2019

- Training international students on image analysis using R studio

Land Surveyor, P.K Surveyors, Kenya 2014- 2015

- Plan, subdivide and compile cadastral surveys and mutations;
- Beacon searches and re-establishment;
- Topographical Surveys & Profiling

Team Leader, Oakar Services Ltd, Kenya July-Oct. 2012

- Provided technical support, prepared training materials and trained three clients in GIS, Remote Sensing and Photogrammetry;
- Developed proposals, organized workshops, industry and product seminars on GIS, Remote Sensing and use of GPS devices;
- Supervised five interns and developed their organizational goals and their reports;
- Lead four members of the sales department in achieving quarterly sales goals.

GIS Analyst, Oakar Services Ltd, Kenya Jan. 2011-June 2012

- Provided training and technical support to three clients in GIS, Remote Sensing and use of GPS devices;
- Prepared clients data requirements, handled enquiries and printed maps;
- Organized and participated in industry & product seminars, workshops as well as making demos;
- Provided software and training solutions to clients in ERDAS, ArcGIS, use of Satellite imagery and GPS;
- Provided of technical support and product solutions to clients through proposals;

GIS Assistant, International Committee of the Red Cross, Kenya May-Aug. 2010

- Managed water points and settlement databases for Somalia, by linking water points to the nearest settlement;

Surveyor, Kenya Aug.2009-Feb 2010

- Land use/ Land cover classification of Loiyankalani and Laisamis for a road survey that was undertaken.
- Land use/Land cover classification of the Nairobi river basin and determined its use and eventual management.

- Developed a prototype Land Information Management System (LIMS) for the Peri-urban areas of Nairobi covering some parts of Kitengela, through land surveys and development of a geodatabase;
- Topo-survey for South Eastern University College (SEUCO) and production of a topographical map

PROFESSIONAL AFFILIATIONS

Institution of Surveyors of Kenya (ISK), 2010-Present

PUBLICATIONS

Articles and Journal Publications

Ongoma V., Mwangi, P.M., “*The loss of vegetation is creating a dangerous heat island over Nairobi*”, The Conversation, (2020, December 8), <https://theconversation.com/the-loss-of-vegetation-is-creating-a-dangerous-heat-island-over-nairobi-150622>

Mwangi, P.M., Karanja, F.N., Kamau, P.K., and Letema, S.C., “*Impact of Urban Forms on 3D Built-Up Intensity Expansion Rate from Aerial Stereo-Imagery*”, ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, vol. 4, no. 1, 2020, pp. 203-208.

Mwangi, P.M., Karanja, F.N., and Kamau, P.K., “*Analysis of the Relationship between Land Surface Temperature and Vegetation and Built-Up Indices in Upper-Hill, Nairobi*”, Journal of Geoscience and Environment Protection, vol. 6, no. 1, 2018, pg. 1-16.

Wayumba, R., Mwangi, P., and Chege, P., “*Application of Unmanned Aerial Vehicles in Improving Land Registration in Kenya*,” International Journal of Research in Engineering and Science (IJRES), vol. 5, no. 5, 2017, pp. 05-11.

Conference Papers

(Abstract-Reviewed)

Mwangi, P.W., “*Analyzing the Spatial Relationship between Building Volumes and Land Surface Temperature in Upper-Hill, Nairobi, Kenya*,” Proceedings of 38th Annual Scientific and Technical Conference of the DGPF and PFGK18 Conference in Munich, Germany, Mar. 6-9, 2018, vol. 27, pp. 691-700.

PAPER PRESENTATIONS

“*Impact of Urban Forms on 3D Built-Up Intensity Expansion Rate from Aerial Stereo-Imagery*,” XXIV ISPRS Congress 2020, Date.31st Aug.-2nd Sept. 2020

CONFERENCES/ WORKSHOPS/ PROFESSIONAL DEVELOPMENT TRAINING

- July 2019- IFRA Conference on “Sustainable Urban Development “ in Nairobi
- March 2019- DAAD Alumni Conference on “Young Scholars in Africa – Challenges and Opportunities” in Nairobi
- Nov 2018- MAWAZO & DAAD retreat on ” Women in Academia and Research Leadership Training” in Nairobi
- March 2018- German Society for Photogrammetry and Remote Sensing Conference in Munich, Germany
- July 2017- NACOSTI & RESTEC workshop on “Utilization of Space Technology” in Nairobi
- Nov 2016- International training workshop on “Addressing Climate Change using Satellite Application Technology” in Beijing, China

ADMINISTRATIVE POSITIONS HELD

- Sept 2020 to Present- School Exams Coordinator
 - Sept 2016 to Aug 2017- Departmental Exams Coordinator
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