

CURRICULUM VITAE

Personal Details

Name and Contact Information	Faith Njoki Karanja P.O. Box 43851 – 00100 Nairobi, Kenya. Tel. +254 720240987 (cell phone) +254 020 318262 ext. 28339 (office) Email: faithkaranja@uonbi.ac.ke or faithkaranja@hotmail.com
Gender	Female
Nationality	Kenyan
Marital Status	Married
Religion	Christian
Educational Qualifications	Ph.D (Geoinformatics)
Membership of Professional Institutions	Full Member : Institution of Surveyors of Kenya (ISK) Full Member African Women in Science and Engineering (AWSE) Corresponding Member (CM) International Academy of Astronautics (IAA)

Key Highlights:

- Senior Lecturer specialising in training and research in the areas of Geographic Information Systems, Remote Sensing, Land Surveying and Computer Graphics.
- Chair, School of Engineering Postgraduate Programmes Committee
- Chair, Sub Committee on GIS, Remote Sensing, Photogrammetry and Space Technology ISK, Land Geospatial Surveyors Chapter
- Member of the National Committee on the Establishment of the Kenyan Space Agency, National Council for Science and Technology
- Co-ordinator of the MOU between University of Nairobi and University of Helsinki
- External Examiner – Department of Geomatic Engineering and Geoinformation Sciences, Kimathi University College of Technology
- Mentor, My Community Our Earth (MyCOE)- American Association of Geographers
- Member, Development of Research Uptake in Sub-Saharan Africa (DRUSSA) Network

Employment Record / Career Progression

Dates	Institution	Positions Held
2008-Present	University of Nairobi	Senior Lecturer (GIS, Remote Sensing, Computer Graphics and General Land Surveying)
2003-2008	University of Nairobi	Lecturer (GIS, Remote Sensing, Computer Graphics and General Land Surveying)
2004-2007	Jomo Kenyatta University	Part-Time Lecturer(GIS, Remote Sensing and General Land Surveying)
1997-2002	University of Nairobi	Assistant Lecturer(GIS, Remote Sensing and General Land Surveying)
1991-1997	University of Nairobi	Graduate Assistant(GIS, Remote Sensing and General Land Surveying)

Educational Background

University	Country	Dates	Degree
Kenyatta University	Kenya	2008-2010	MBA(Project Management)
University of Hannover	Germany	1999-2002	Ph.D.(Geoinformatics)
University of Nairobi	Kenya	1994-1996	Masters(Surveying-GIS and Remote Sensing)
University of Nairobi	Kenya	1992-1993	Postgraduate Diploma in Computer Science
University of Nairobi	Kenya	1988-1991	BSc. (Surveying and Photogrammetry)

Professional Experience /Consultancies

January 2013	Analysis of Women Land Ownership Programs-ongoing
December 2012- Todate	Use of Participatory GIS in the viability assessment of available climate change adaptation strategies in Taita Hills.
November 2011- February 2012	Research to determine Minimum and Maximum Landholdings for Kisii, Transzoia and Kajiado Counties-ISK
September 2011- June 2012	Pilot Project to establish a pro-poor Land Information Management System (LIMS) for part of Thika Municipality-Land Development and Governance Institute (LDGI)
February 2011- Todate	Project on Climate Change Impacts on Ecosystem Services and Food Security in Eastern Africa (CHIESA)-Work Package on Land Use and biogeophysical Information.
April – May 2010	Road Survey Profiling for the Lake Turkana Wind Power Project-195Km
April – May 2007	Using GIS to generate Borehole Profiles for Nairobi Province for National Water and Pipeline Co-orporation, Kenya.
May - June 2006	Using GPS and GIS to Map Water Facilities in Machakos, Mwingi and Kitui for National Water and Pipeline Co-orporation, Kenya.
November, 2004	Using GPS to search and identify potential sites for Celtel, Kenya Telecommunication masts, in central province
Sept. – Oct., 2000	UN ECA-PROJECTS as an Intern, Addis Ababa, Ethiopia. <ul style="list-style-type: none">▪ Assisted in the preparation of an African Land Information System-Workshop co-sponsored by GTZ and ECA.▪ Conceptualization and Formulation of two Pilot projects namely:<ul style="list-style-type: none">▪ Success GIS stories in Africa.▪ Visualization aspects of Land Information Systems

Publications

Thesis Publication

Karanja, F.N., 2002: Use of Knowledge Based Systems for the Detection and Monitoring of Unplanned Developments. DEUTSCHE GEODÄTISCHE KOMMISSION bei der Bayerischen Akademie der Wissenschaften Reihe C, Dissertationen, Heft Nr. 558, 2002, 110pages, ISBN 3 7696 9597 6

Book Contributions

Karanja, F.N. and Lohmann P., 2001: Monitoring the trend of unplanned developments in an urban area, Remote Sensing and Data Fusion over Urban Areas, 192-197. ISBN 0-7803-7059-7

Karanja, F.N. and Lohmann P., 2001: Use of temporal knowledge in detecting unplanned developments in urban areas, Remote Sensing of Urban Areas, 43-52. ISBN 3-88246-222-1

Journal Publication

Karanja, F.N. and Wanyoro, A. K., 2011: Understanding the Spatial Prevalence of Cervical Cancer using GIS in Nairobi, Kenya, (oral reviewed) AGSE conference, August 15-19, in Nairobi, Kenya.

Karanja, F.N., 2011: Effective Planning and Management of Water Resources through Borehole Profile using GIS, A Case Study of Nairobi, Kenya, (oral reviewed) ICWES conference, July 2011 in Adelaide Australia

Karanja, F.N., 2011: A Spatially Gender-Dissaggregated Database for Bursary Allocation to attract Women pursuing Science, Engineering and Technology (SET) in Kenya, (oral reviewed) ICWES conference, July 2011 in Adelaide Australia.

Karanja, F.N., 2011: Mending the Bridge between Higher Institutions of Learning and Industry, a Case Study of School of Engineering, University of Nairobi. Journal of Management, June 2011, Volume II, 190-199, ISSN 2074-4730

Karanja, F.N., 2010: The Role of Geomarketing in understanding the Massification and Expansion of Higher Education in Public Universities in Kenya: Case Study :University of Nairobi. Journal of Management, June 2009, Volume 1, 385-397, ISSN 2074-4730.

Karanja, F.N., Ndirangu M., Kiema, J.B.K.; 2007: The Spatial Approach in the Identification of Tax Evasion on Rental Income: Case Study of Umoja and Kileleshwa Estates in Nairobi, Kenya. Journal of Property Tax Assessment and Administration, Volume 4, Issue 1, 2007, 47-60. ISSN 1357-1419.

Kiema, J.B.K., Dang'ana M.A., **Karanja, F.N.;** 2007: GIS-Based Railway Route Selection for the Proposed Kenya-Sudan Railway: Case Study of Kitale-Kapenguria Section. Journal of Civil Engineering Research and Practice, Volume 4, Number 1, April 2007, 79-90. ISSN 1729-5769.

Musyoka, S.M., Mutyauvyu, S.M., Kiema, J.B.K., **Karanja, F.N.,** Siriba, D.N.; 2007: Market segmentation using Geographic Information Systems (GIS): A case study of the soft drink industry in Kenya. Marketing Intelligence and Planning, Volume 25, Number 6, 2007, 632-643. ISSN 0263-4503.

Kiema, J.B.K., Kipkemei, A., **Karanja, F.N.,** Musyoka, S. M.; 2007: Using Geoinformatics to identify Suitable Middle to Long Distance Athletics Training Sites in Kenya, International Journal of Sports and Science Coaching, Volume 2, Number 4, 2007, 473-484.

International Conference Proceedings Papers

2012-2014

Karanja, F.N. 2012: Aligning Space Science and Technology Curriculum in Universities with the National Agenda in Kenya, United Nations/Japan Nano-Satellite in Symposium in Nagoya, Japan from 9th to 14th October , 2012.

Karanja, F.N. 2013: From Green Cities to Concrete Cities, A remote sensing perspective, to be presented at the ISPRS conference in May 2013 Hannover, Germany.

2009-2011

Karanja, F.N., 2011: Technical and Managerial capacities in implementing Small Satellite Programmes in Kenya, United Nations/Austria/European Space Agency Symposium on “Small Satellite Programmes for Sustainable development: Implementing Small Satellite Programmes: Technical, Managerial, Regulatory and Legal Issues” Graz, Austria, from the 13th to 16th September, 2011.

Karanja, F.N., 2011: The Role of Space Technology in Landuse and Landcover Mapping in Africa, 4th African Leadership Conference on Space Technology, Mombasa Kenya, September 26-28, 2011.

Karanja, F.N., 2011: Assessment of critical Engineering Skills relevant for Industrialization, Kenya Institute of Management 3rd ANNUAL INTERNATIONAL CONFERENCE ON INDUSTRY AND HIGHER EDUCATION Nairobi, Kenya 28th – 30th September 2011

Karanja, F.N. and Wanyoro, A. K., 2011: The spatial prevalence of Maternal Mortality, A Case of Central Province in Kenya, 6th ESRI Eastern Africa User Conference (EAUC) Zanzibar, Tanzania, October 5- 7, 2011

2006-2008

Karanja, F.N., 2006: The Use of GIS and Remote Sensing in defining the Spatial Pattern of Sexual Assault, A Case Study of Nairobi Area, AARSE Conference, Cairo, Egypt Oct.-Nov., 2006.

Karanja, F.N., 2008: The role of Geoinformation in poverty reduction in developing countries, International Conference for Women in Engineering and Science, Lille, France July 2008.

Nyadawa, M.O., **Karanja, F.N.** and Njoroge, T.M., **2008:** Application of GIS-based spatially distributed hydrologic model in Integrated Watershed Management: A case study of Nzoia basin, Kenya, Proceedings of the 2nd International

Civil Engineering Conference on Civil Engineering and Sustainable Development, Mombasa Kenya September, 2008.

2003-2005

Karanja, F.N., 2004: GIS/GPS for Facility Mapping and Management, presented at a Training Workshop for School Mapping Project at Kenya Institute of Education, May 2004.

Kiema, J.B.K., Mulaku, G.C., Karanja, F.N., 2004: From Surveying to Geospatial Engineering: Proposal for new academic programs at the University of Nairobi. Paper presented at the AARSE Conference, UN-Headquarters, Nairobi, Kenya October, 2004.

Karanja, F.N., 2004: Towards an Environmental Information System for monitoring and managing vacant land within a dynamic urban environment. Paper presented at the AARSE Conference, UN-Headquarters, Nairobi, Kenya October, 2004.

Karanja, F.N., 2005: Use of GPS/GIS to monitor school enrollment by Gender, Paper presented at the International Conference for Women in Engineering and Science, Seoul, South Korea in August 2005.

2000-2002

Karanja, F.N. and Lohmann P., 2000: The contribution of GIS and Remote Sensing in Urban Land Use Negotiation in Developing Countries, Proceedings, IAPRS, Vol. XXXIII, Amsterdam, 2000.

Karanja, F.N. and Lohmann P., 2001: Use of temporal knowledge in detecting unplanned developments in urban areas, 2nd Symposium, Remote Sensing of Urban Areas, 22-23 June, 2001, University of Regensburg, Germany

Karanja, F.N. and Lohmann P., 2001: Monitoring the trend of unplanned developments in an urban area, IEEE/ISPRS Joint Workshop on Remote Sensing and Data Fusion over Urban areas, Rome, Italy, November, 8-9th, 2001

Karanja, F.N. and Lohmann P., 2002: Using Developable Land Units as an Indicator of Rate of Growth of an Urban Area, 3rd Symposium, Remote Sensing of Urban Areas, 11-13 June, 2002, Istanbul, Turkey.

Postgraduate Supervision

Ph.D (Doctoral)

Ng'anga, T.M: Modeling Forest Cover Change, A case study of Mt. Kenya Forest from 1980-2030, University of Nairobi-On going.

Nthuni Samuel Mwenje: Identification of Tree Species using Airborne Hyperspectral Data (Taita Hills)-On going.

Odeny Dickson: Modelling Forest Biodiversity and Carbon Storage in East African Mountains (Taita Hills and Mount Kilimanjaro Areas)-On going

MSc (Masters)

Kariuki J.W., (F56/63271/2010): Use of GIS in solving Power Failure Incidences, Case Study of Roysambu Area, Kasarani Constituency, Nairobi County.

Mugo, B.M., (F56/78262/2009) 2011: Optimal Location of suitable sites for Wind Farms using a GIS approach. Case Study of Garissa and Ijara.

Kavuwa, S.M., (F56/72092/2008) 2010: Application of Web-GIS as a Tool in Healthcare Management Information System. Case Study: Buruburu Estate.

Muchigi, H., (F56/71024/07) 2010: Development of a Prototype GIS based application for production of a Route Sketch Map.

Kirui, H., (F56/71218/2007) 2009: A GIS-based approach in the determination and selection of the most suitable mobile banking outlet: A case study of Safaricom's Mpesa dealership.

Ngamau, J. K., (F56/P/7758/2006) 2008 : Using GIS to Develop a River Basin Management Plan for Ena River Basin in Embu and Mbeere Districts.

Njoroje, G.G., (F56/P/7747/2006) 2008: Developing a GIS based Nuclear Material Information System (NUMIS): A case study of Nairobi Province-Kenya.

Obura, J., (F56/8075/2003) 2008: Animations for Urban Dynamics.

Mwangi J., (F56/P/8766/2005) 2007: Development of a GIS based Road Pavement Information and Management System in Kenya

Nyadawa, M.O., (F56/P/8890/2005) 2007: Application of GIS-based Spatially Distributed Hydrologic Modelling: A case study of Nzoia Basin, Kenya.

Njeru, B., (F56/P/8787/2005) 2007: Use of GIS in Real Estate Business Analysis.

Postgraduate Theses Examination

Masters Theses

Karimi G., 2005: 3D VISUALIZATION FOR CULTURAL HERITAGE DOCUMENTATION: A Case Study of the Old PC's Office Building in Nairobi, University of Nairobi.

Musembi, S.N., 2006: VISUALIZING THE SPATIAL-TEMPORAL PATTERNS OF CRIME IN NAIROBI, University of Nairobi.

Kiplimo, J.C., 2008: Decision Support System for Water Demand Management: A case study of Buruburu Estate, Nairobi, Kenya.

Doctoral Thesis

Gidudu, A., 2006: LAND COVER MAPPING THROUGH OPTIMIZING REMOTE SENSING DATA FOR SVM CLASSIFICATION, University of Cape Town, South Africa, 2006.

Professional Training

Use of Geographic Technologies for Climate Change, food security and agriculture and of professional development of fellows and mentors, 9th -19th December, 2012., My Community Our Earth Servir East Africa Fellowship Programme.

Enhancing Productivity and Efficiency in Manufacturing for a Global Competitive Industry, 23rd – 23rd November, 2012, Linking Industry with Academia (LIWA)

The role of Professionals in The Devolved Governance Structurer, August 2012, Association of Professional Societies in East Africa (APSEA)

Inaugural Survey Expo, 12th – 13th July, 2012, by Oakar Services

Proposal Writing and Grants Management, March 2012: University of Nairobi-Office of Deputy Vice Chancellor Research, Planning and Extension.

Quality Management Systems, 2011: Implementers Training for ISO 9001:2008 Standard for Middle Level Management by Apex Management Systems-Consultants

Leadership Training, 2010: African Women in Agriculture Research and Development (AWARD), November, 2010, Accra Ghana.

Formal Mentoring, 2009: African Women in Agriculture Research and Development (AWARD), October, 2009 Mombasa.

Rapid Results Initiative, 2007

Pedagogy Training, 2007

E-Learning Content Development for Teaching **Science and Engineering Subjects, Kigali Institute of Science and Technology, Kigali Rwanda. Outcome; A CD on the Introduction to GIS, October, 2004.**

Leadership Training Workshop for **African Women in Science and Engineering, Nairobi Safari Club, Kenya, August, 2004.**

E-Learning Content Development for Teaching **Science and Engineering Subjects, University of Nairobi, Self-Study Centre, Nairobi Kenya, October, 2003.**

Responsibilities

2002 -Todate	Member of the Departmental Sub-Group Committee on the Curriculum Review of the Geographic Information Systems Postgraduate Diploma and Masters Degree Curriculum.
Feb., - Oct., 2004	Member of the Local Organizing Committee and Convenor of the Technical/Scientific Sub-group committee for the African Association of Remote Sensing of the Environment Conference held from 18th to 21st October, 2004
2003 - 2006	Member of the deans committee on Exam Regulations, School of Engineering.
2005 - Todate	Member and Secretary of the Departmental Sub-Group Committee on the Curriculum Review on Masters Science in Geospatial Engineering.
2005 - Todate	Member of the Departmental Committee on Equipment and Facilities Prioritization and acquisition.
2007 - Todate	Third Year Class Mentor
2007 - Todate	Member of the Departmental Sub-Group Committee on the Curriculum Review of the Masters Degree Program in Geospatial Engineering.
Dec.,2007 - Feb.,2008	Member of the Deans Committee on Sexual Harassment
Feb., 08 - 2011	Member of the Faculty Postgraduate Student Committee
March 2010-September, 2011	Member of the Local Organizing Committee on the African Leadership Conference on Space science and Technology for Sustainable Development to be held from 26-28 September, 2011 in Kenya.
December 2010-Todate	Member of the National Committee on the Establishment of the Kenyan Space Agency
March 2011-August, 2011	Member of the Local Organizing Committee of the International Conference on the Applied Geoinformatics for Society and Environment (AGSE) to be held between 15 th – 19 th August, 2011, in Kenya.
November 2011-Todate	Chair, School of Engineering, - Postgraduate Student Committee
April 2012- Todate	Chair, Sub-Committee on GIS, Remote Sensing, Photogrammetry and Space Technology, Institution of Surveyors of Kenya.