



## **DR. -ENG. PATRICK MWANGI MURIGI**

Dr.-Ing. Civil Eng. (KIT, Germany), MSc., BSc., Civil Engineering (U.O.N), P.E., MIEK,  
Bene Merenti Medalist (Community Service)

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### **PERSONAL INFORMATION**

Date of Birth: 31<sup>st</sup> July 1977  
I.D. Number: 14627576  
Language: Kikuyu, English, Swahili, German  
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### **EDUCATION BACKGROUND**

#### **KARLSRUHE INSTITUTE OF TECHNOLOGY, GERMANY**

**2011 – 2015** PhD in Civil Engineering

(Thesis: “**Collaborative Decision Support Tools for Water Resources Management. A Scientific Case Study of Nairobi River Catchment**”).

(Award: **Cum Laude**)

#### **UNIVERSITY OF NAIROBI**

**2004 –2008** Master of Science in Civil Engineering

(Thesis: “**Evaluation of Raw Water Coagulation Process for the Masinga-Kitui Water Treatment Plant**”)

**1998 – 2003** Bachelor of Science Civil Engineering

(Award: **Upper Second-Class Honours Degree**)

#### **NJIIRIS HIGH SCHOOL**

**1993 – 1996** Kenya Certificate of Secondary Education (Grade obtained: **A- (Minus)**)

## PUBLICATIONS

Rukwaro R., Kivaa T., Mugwima N, Muthumbi W. and Murigi, P. M., 2018. *Investigation of Building Failures in Kenya for Enhancement of Regulatory Control in the Local Construction Sector (in progress)*.

Murigi, P. M., 2015. *Collaborative Decision Support Tools for Water Resources Management - A Scientific Case Study of Nairobi River Catchment*. Karlsruhe: KIT-Bibliothek.

Murigi, P. M., Nestmann, F. & Klingel, P., 2015. A Methodology to Adaptive Collaborative Decision Support Tools for IWRM in developing countries. *5th International Multidisciplinary Conference on Hydrology and Ecology*. Wien, Österreich: HydroEco2015 (accepted).

Murigi, P. M., Nestmann, F. & Klingel, P., 2012. A review of the status, limitations and needs in water resources management in Kenya. *Interactions of water with energy and materials in urban areas and agriculture in: IWRM Karlsruhe 2012*, pp. 474 - 480.

Murigi, P. M., 2008. *Evaluation of raw water coagulation process for the Masinga-Kitui water treatment plant*. Nairobi: University of Nairobi JKM Library.

## CORE SUBJECTS

- \* Applied Hydrology & Flood Control Engineering;
- \* Water Resources Management and Administration;
- \* Analysis and Planning of Water Distribution Networks;
- \* Social Economic Aspects of Development Planning;
- \* Engineering Hydraulics; Irrigation and Drainage Engineering;
- \* Water Resources Modelling: Decision Support Tools for Resources Management; and
- \* Water Resources Systems Engineering.

## HONOURS & SCHOLARSHIPS AWARDS

- **2018** Honoured with **BENE MERENTI MEDAL** during KAAD 60<sup>th</sup> Jubilee Academy in Bonn, Germany; for Community Service as the founder of Society of KASEA (SoK) Scholarship Programme in Kenya.
- **2011 – 2015** **Katholischer Akademischer Ausländer-Dienst (KAAD)** Scholarship to pursue doctorate in Civil Engineering at Karlsruhe Institute of Technology (KIT) in Karlsruhe, Germany.
- **2004 – 2007** **Katholischer Akademischer Ausländer-Dienst (KAAD)** Scholarship to pursue MSc. Civil Engineering at the University of Nairobi.
- **1992 – 2003** **Save the Children Fund** (via Starehe Boys Centre) Scholarship to pursue High School Education at Njiiris High School.

## PROFESSIONAL AFFILIATIONS AND RESPONSIBILITIES

- **EBK** **Professional Engineer (PE)** - registered member with the Engineers Board of Kenya (EBK).

- **IEK** **Corporate Member** of the Institution of Engineers of Kenya (IEK).
- **SOCIETY OF KASEA (SOK)** **Founder and Coordinator (Program Director)** of the Society of KAAD Association of Scholars from East Africa (Society of KASEA) Scholarship program
- **NATIONAL CONSTRUCTION AUTHORITY, KENYA (NCA)** **Editorial Committee Member** of the National Construction Authority
- **KIT-ALUMNI** **Member** Karlsruhe Institute of Technology Alumni Association

## PROFESSIONAL AND TRAINING EXPERIENCE

### **Sept. 2017 to Date Kenyatta University: School of Engineering and Technology – Department of Agricultural and Biosystems Engineering**

**Title: Lecturer**

As a member of the very dynamic institution of research and higher learning, my roles have been:

- Course facilitation mainly in the Departments of Agricultural and Biosystems and Civil Engineering;
- Chairing the committee on curriculum development and review of undergraduate and postgraduate courses;
- Member of the committee on accreditation of the new departmental program by the Engineers Board of Kenya (EBK);
- Researcher with multidisciplinary teams; and
- Acting chairman in event of absence of the substantive departmental chair

### **Apr. 2016 to Date National Construction Authority (NCA)**

**Title: Editorial Committee Member**

Among the key functions of NCA is to undertake or commission research into any matter connected to the construction industry. My role as a lead researcher have been:

- Peer review of abstracts and papers for presentation in the International Construction Research Conference and Exhibition (ICORCE);
- Develop research proposals and supervise their implementation under the team;
- Research and advice on national building research/scientific policies and strategies;
- Formulate and roll out a peer reviewed National Construction Journal

### **Apr. 2015 to Sept 2017 Ministry of Transport, Infrastructure, Housing & Urban Development - State Department of Public Works**

**Title: Principal Researcher**

Seconded to Kenya Building Research Centre mandated with facilitation and coordination of research, development and standardization of local building and construction materials at the State departments of Housing and Urban Development. My role as a lead researcher was to:

- develop and evaluate research goals, objectives, variables, methods and instruments in preparation of authentic research proposals;
- develop, formulate, monitor and coordinate implementation of research projects;
- approving research proposals and supervising research projects under the team;
- formulate and advice on national building research/scientific policies and strategies;
- mobilize research resources

**Nov. 2011, to Apr 2014 Karlsruhe Institute of Technology (KIT) Germany – Institute for Water and River Basin Management (Section: Water Supply Networks)**

**Title: Wissenschaftliche Mitarbeiter (Research Assistant)**

Reporting to the Head of Section, my main duties were:

- Participation in preparation of the sectional research targets; discussions on research presentations by colleague researchers and general housekeeping to ensure conducive environment for research and training of bachelors and masters students at the department;
- Preparation for conferences and presentation of papers and/or posters on department's platform at the local and international congresses;
- Regular progress reporting on ongoing research and regular publications of the results;
- Pursuing further scientific studies on relevant courses to advance competence and contribution in individual/collective discourse and scientific output;
- Developing research proposal and running research project to completion.

**Feb. 2005, to 2015 Ministry of Public Works (KENYA)**

**April 2011 to April 2015 Title: Engineer I (Academic Leave)**

Pursued German language at Zentrum für Internationale Bildung und Kulturaustausch - Heimvolkshochschule Kreuzberg Bonn and doctoral studies at Karlsruhe Institute of Technology (KIT) in Germany.

**2008 to April 2011 Title: Engineer I (Structural/Civil)**

Reporting to the Superintendent Civil Engineer, my main duties were:

- Site reconnaissance and feasibility studies towards public projects conceptualization
- Design and documentation of Civil Works: The hallmark project designed, documented and supervised to completion includes the New Malindi Law Courts etc.
- Preparation of drawings and Bills of Quantities for the works; Measurement of Civil works done and generation of payments vouchers for contractors, maintenance of records and preparation of completion certificates.
- Active participation and coordination of a project team to ensure smooth flow of various related and/or conflicting project tasks; for effective individual & collective performance of projects to their completion; while specifically supervising Civil works.

**March 2005 to March 2008 Title: Engineer II (Structural/Civil)**

Served as an assistant engineer on practical training; reporting to the Superintendent Civil Engineer.