

1. Bio data

Family name: Mogire

First Names: Philip Osiemo

Nationality: Kenyan

Civil Status: Married

Contacts: P. O. Box 18070 - 00100, Nairobi. Cell: +254-725-018138 Email: philosiemo@yahoo.com

2. Education:

| Institution [Date from - Date to] | Degree(s) or Diploma(s) obtained: |
|--|--|
| University of Nairobi 2016 - 2021 | PhD in Civil Engineering (Structural Engineering), PhD Thesis Title: Simulation model for the prediction of the service life of water conveyancing reinforced concrete structures. |
| Jomo Kenyatta University of Agriculture and Technology 2012 – 2015 | Master of Science in Civil Engineering (Structural Engineering), MSc Thesis Title: Analysis of Curved Plate Elements using Open Source Software. |
| Jomo Kenyatta University of Agriculture and Technology 2009 – 2012 | Bachelor of Science in Civil Engineering |
| The Kenya Polytechnic 1998-2000 | Higher Diploma in Construction(Structures) |
| Kenya Technical Teachers College 1994-1997 | Diploma in Building Construction |

Other Trainings

2012: Certificate of Environmental Impact Assessment and Environmental Audit course, Africa Nazarene University, Nairobi, Kenya-2012

2017: Certificate of Training on Hydropower projects design-VS Consulting (PVT) Ltd, Colombo, Sri Lanka.

2019: Certificate of Training of Trainers' course on Eurocode 2 Design of Concrete Structures, Kenya Bureau of Standards, Machakos, Kenya.

2023: Certificate of Trained Trainer Course on Research to Commercialization, KENIA & Victoria Ventures.

2024: Innovation Managers Executive Learning Program, Hindsight Ventures

3. Language skills: (1 - excellent; 5 - basic)

| Language | Reading | Speaking | Writing |
|-----------|---------|----------|---------|
| English | 1 | 1 | 1 |
| Kiswahili | 1 | 1 | 1 |
| Kisii | 1 | 1 | 1 |
| French | 5 | 5 | 5 |

4. Professional Affiliations

- i. Professional Engineer- Engineers Board of Kenya (EBK)-A4428
- ii. Corporate member- Institution of Engineers of Kenya (MIEK)-M.3703
- iii. Lead Expert- National Environmental Management Authority (NEMA)-No.11671
- iv. Member-Environment Institute of Kenya(MEIK)-No.EIK/1/3134
- v. Member- Reviewer Team American Journal of Civil Engineering(AJCE).
- vi. Member - Technical Committee for Eurocode 2 – Kenya Bureau of Standards (KEBS) – Jan 2017 to date
- vii. Task Force Member-Telecommunication and Digital Superhighway (BETA)

5. Key Qualifications.

Registered Professional Engineer (PEng,) with extensive experience in Civil/Structural Engineering projects spanning 15 years. Areas of expertise include structural analyses, design, detailing and supervision of a wide array of projects including residential, office and industrial buildings both in structural steel and reinforced concrete; bridges, culverts, water infrastructure projects, electricity pylons, sports stands and swimming pools.

Track record of a productive experience with different engineering firms and institutions including, VS Hydo (K) Ltd, East Africa (Design, supervision, Tendering, coordination, contract design and management), Shelter structures Ltd, Kenya (Projects Planning and Management), South Eastern Kenya University, Kenya (Research and Teaching), The Technical University of Kenya, Kenya(Research and Teaching),Steel Structures Ltd, Kenya (Site Supervision),Murang’a University, Kenya(Research and Teaching),Pan African University-PAU(Research).

Key competencies include:

- Ability to analyze and design complex structural engineering projects
- Good knowledge and experience in structural design, detailing and site supervision
- Excellent knowledge of AutoCAD, Revit, Robot, Masterseries, Prokon and ETABS, and advanced structural engineering modelling skills.
- Able to work under pressure and on multiple tasks with minimum supervision
- Good conduct and high moral integrity
- Possess an analytical mind with excellent reporting skills
- Excellent interpersonal communication and strong networking skills

6. Employment/Work experience

- i) Jan 2024-Present:** Lecturer and Ag.Chair of Department- Building and Civil Engineering
Murang’a University of Technology(MUT)
PO Box 75-10200
Murang’a Kenya.

Duties and Responsibilities

Duties included administering lectures and examining students in structural analysis, design and dynamics, materials and Health, Safety and Environmental Engineering, research supervision. Supervise delivery of the departmental programs through the Quality management system and Information Security Management Systems.

Freelance Consultant, Structural Engineering, Environmental Impact Assessment and Audit

iii) July 2022-Dec 2023: Lecturer of Civil Engineering and Chairman department of CCEE

South Eastern Kenya University(SEKU)

PO Box 170-90200

Kitui Kenya.

Duties and Responsibilities

Duties included administering lectures and examining undergraduate students in structural analysis, design and dynamics, materials and Health, Safety and Environmental Engineering.

Freelance Consultant, Civil & Structural Engineering, Environmental Impact Assessment and Audit

ii) Dec.2014-June 2022: Projects Engineer and design Coordinator

VS Hydro (Kenya) Limited

P.O Box 67845-00200

Nairobi.

Duties and Responsibilities

- a) Coordinate and review Design and Construction of infrastructure projects –East and West African Region.
- b) Coordinate and review production of project managing documents to IFC and World Bank standards including environment and social management plans.
- c) Scheduling, monitoring and maintaining work programs and progress
- d) Prepare environmental and social plans during construction period and project completion reports and their regular review for conformity.

iii) September 2013-June 2021: Sessional Assistant Lecturer in Civil Engineering

At the department of Structural and Construction Engineering.

The Technical University of Kenya

P.O Box 52428-00200

Nairobi, Kenya

Duties and Responsibilities

Teach and Examine Units assigned in Analysis and Design

Subjects Taught/Examined Undergraduate Level

-Design of Structures in Masonry, Steel, Timber and Reinforced concrete.

v) June 2013-Dec. 2014: Design Engineer,

VS Hydro (Kenya) Limited
P.O Box 67845-00200
Nairobi.

Duties and Responsibilities

- a) Design of Structural and civil works.
- b) Managing project (Gura SHPP) quality assurance-design and construction
- c) Preparation of engineering estimates
- d) Prepare environmental and social plans during construction period and project completion reports

vi) 2008-2012: Supervisor Civil/Structural

Shelter Structures Ltd
P.O Box 5062-00506, Nairobi.

Duties and Responsibilities

- a) Design and development of Structural and civil engineering works.
- b) Supervision of developments of civil and building works

vii) 2007-2008: Site Engineer

Daje Enterprises Ltd
PO Box 69926, Nairobi.

Duties and Responsibilities

-Supervision of erection of civil and building structures

viii) Feb 2008-April 2008: Erection Supervisor

Steel Structures Ltd
P.O Box 49862-00100, Nairobi.

Duties and Responsibilities

-Supervision of erection of steel structures

ix) Nov. 2004-July 2005: Site Engineer

Daje Enterprises Ltd.
P.O Box 69926, Nairobi.

Duties and Responsibilities

- a) Site supervision
- b) Design and detailing structural elements
- c) Project Scheduling

x) 2003 – 2004: Studio Technician

Ashraf & Associates

P.O. Box 5211, Village Market

Duties and Responsibilities

- a) Detailing architectural and structural works Preparation of working schedules
- b) Preparation of contract documents and Site supervision
- c) Preparation of presentation drawings Animations

7. Publications

Peer Reviewed Publications

2014

1. **Mogire, P.O, Mang'uriu, G.N,Oyawa,W.**(2014).Analysis of Curved Plate Elements using Open Source Software. International Journal of Scientific and Research Publications, 4(7), 3194.<http://www.ijsrp.org>.

2018

2. **Mogire, P. O.,** Abuodha, S. O., Mwero, J. N., Manguriu, G. N (2018). **The Effect of Using Ordinary Cement Brands, in Kenya on Corrosion Rate of Reinforced Concrete Water Conveyance Structures.** International Journal of Scientific and Research Publications,8(4),7664. <http://dx.doi.org/10.29322/IJSRP.8.4.2018.p7664>.
3. **Mogire P,** Abuodha, S. O, Mwero J. N, Manguriu G. N (2018). **The Effect of Selected Cement Brands in Kenya on the Critical Penetration depth of Rust in Reinforced Concrete Water Conveyancing Structures.** International Journal of Scientific Research Publication,8(11),8333. <http://dx.doi.org/10.29322/IJSRP.8.11.2018.p8333>.

2020

4. **Mogire P,** Mwero J. N, Abuodha S. O, Mang'uriu, G. N (2020). **A Corrosion Model for Prediction of Service Life of Reinforced Concrete Water Structures.** International Journal of Scientific and Research Publications, 10 (2), 98104. <http://dx.doi.org/10.29322/IJSRP.10.02.2020.p98104>.
5. **Philip Mogire,** Silvester Abuodha, John Mwero and Geoffrey Mang'uriu,(2020). **Effect of Selected Commercially Available Corrosion Inhibitors in Kenya on Bond Strength of Reinforced Concrete.** British Journal of Civil and Architecture Engineering (BJCAE),2(1),13-152.
6. **Philip Mogire,** Silvester Abuodha, John Mwero and Geoffrey Mang'uriu (2020). **A Corrosion Model for Prediction of the Service Life of Reinforced Concrete Water Conveyancing Structures.** British Journal of Civil and Architecture Engineering (BJCAE), 2 (06),153-181.

2021

7. **Mogire O. P,** Mwero J. N, Abuodha S. O, Manguriu G. N (2021) **Correlation of Tensile Strength and Corrosion Initiation Period of Reinforced Concrete.** Cogent Engineering, 8. DOI: 10.1080/23311916.2021.1999039.

8. Mogire O. P, Mwero J. N, Abuodha S. O, Manguriu G. N (2021) **The Relationship Between Bond Strength and Critical Penetration Depth of Rust in Reinforced Concrete Structures**. Journal of Materials Science Research. 10(2),71-83. <https://doi.org/10.5539/jmsr.v10n2p71>
2023
9. Mogire, P, (2023). **Correlation of Accelerated Corrosion and Real Reinforced Concrete Water Structures**. Journal of Materials Science Research,12(2). <https://doi.org/10.5539/jmsr.v12n2p88>.
2024
10. Neufville K.E.,Kanali C.,**Mogire P. (2024)**. **Assessing the Mechanical and Micro-Structural Properties of Concrete with Silica Fume and Coconut Shell as Partial Replacements of Cement and Fine Aggregates**. SSRG International Journal of Civil Engineering,11(4),39-53. <https://doi.org/10.14445/23488352/IJCE-V11I4P105>

Conference Presentations

2022

1. **Philip Mogire (2022)**. Correlation of accelerated corrosion test results and real reinforced concrete water structures. *Proceedings of the First SEKU Research and Innovation week Nov.2022*.

Public Lectures

1. **Research and Innovation to Commercial reality**". The lecture was held virtually on Thursday, 8th June, 2023 from 2.00pm.
<https://seku.zoom.us/j/89070509776?pwd=ZTlvWE5pTXltb041aDZFUml1ZW5Ldz09>.
2. **Research to Commercialization for SEKU- an Overview**". The lecture was held virtually on Thursday, 6th April, 2023 from 2.00pm to 3:00p.m.
<https://seku.zoom.us/j/82734426876?pwd=b0dlWU1CRHphdUZHajRpdkFiMDRSZz09>

Curriculum Development

- 1.BSc. in Civil Engineering (SEKU)-**Revision and updating for CUE and EBK Accreditation.**

Status: **Approved and accredited by CUE and EBK.**

- 2.MSc. in Construction and Infrastructure Management (2022)-**Development.**

Status: **Externally Reviewed**

- 3.MSc.in Civil Engineering (Structural Engineering)-2024.**Development.**

Status: Awaiting Senate Approval

8. Graduate Supervision

PhD Supervision – Ongoing

1. Ngangu N. S. (PAUSTI, 2019 – to date) **Development of Artificial Intelligence-enhanced Finite Element Method Model for Predicting Concrete creep and Relaxation Deformation**

MSc Supervision

1. Neufville E.K. (PAUSTI, 2023 – 2024) -Completed
Thermal, Durability, and Micro-Structural Properties of Concrete with Silica Fume and Coconut Shells as Partial Replacements of Cement and Fine Aggregates
2. MANDELLOT-MATETELOT Saint Jacques Le-Majeur. (PAUSTI, 2024 –) -Ongoing
Performance of Ronier Fibers (borassus aethiopum) on Mechanical and Durability Properties of Concrete.

MSc Thesis Examination (Not Supervised)

2024

OUEDRAOGO Abdoul Karim Ameyric Habib (PAUISTI, 2024)

Effect of Gum Arabic and Pretreated Corn cob ash on the Mechanical and Durability Characteristics of High Strength Concrete

9. Mentorship of graduate Engineers to Professional Engineering Registration

- 1.Samuel Ngumbi-
- 2.Anthony Kipng'eno
- 3.Ian Kiprotich-B16577

10. Environmental Impact Assessment and Audit Projects Successfully Participated/Undertaken.

- (i) EIA for Proposed Residential Development on Thika Municipal Block 5/282-Thika Subcounty, Kiambu County.
- (ii) EIA for Kiomo/Kyethani-Mwingi Intergated Water Project, Kitui County.
- (iii) EIA for St.Mary's Miambani Catholic Church In the Diocese of Kitui.
- (iv) EIA for Proposed Residential Development on Plot No. Kajiado/Kaputiei North/23522 in Kajiado County.
- (v) EIA for Proposed Residential Development on Plot No. Kiambaa/Kihara/4474 in Kiambu County.
- (vi) EIA study report for the proposed Kimakia/Karangi /Mbugiti Community irrigation Project, Gatanga sub-county, Muranga County.

11. Research interests

General

Material and design of concrete structures

Specific

- (i) Service Life Modelling of Reinforced Concrete structures
- (ii) Application of Sustainable construction with smart eco-construction materials of the 21st century
- (iii) Application of Nanotechnology in increasing the service life of Reinforced Concrete structures.

Teaching Interests

- (i) Structural Analysis and design

- (ii) Structural dynamics
- (iii) Computer Applications

12. COMMUNITY SERVICE

I was a board member of the Bishop Kaia School Advisory Board for 2018-2019. I gave a voluntary consultancy service for design and maintenance of Children homes built and supported by World Orphans within the East African Region.

13. REFEREES

Please feel free to contact the under mentioned in regard to my competence, work ethics, performance and / or any other aspect with respect to me:

1. Prof.(Eng.) J. N. Mwero

Associate Professor, Department of Structural and Construction Engineering,
The Technical University of Kenya.
P.O Box 30197 - 00100, Nairobi, Kenya
Email: johnmwero@gmail.com
Tel.: +254 721 602 773

2. Eng. Paul C.K. Kioko, CE

Lecturer Department of Civil, Construction and Environmental Engineering (SEKU)
Po Box 415-902000, Kitui, Kenya.
Email: pkioko@seku.ac.ke
Tel: +254 722 771 706.

3. Prof. Eng. Christopher Maina

Dean School of Engineering and Technology (MUT)
Po Box 75-102000, Murang'a, Kenya.
Email: cmaina@mut.ac.ke
Tel: +254 721 791 736.

Certification:

I, Mogire Philip Osiemo, the undersigned, certify that the aforementioned data, correctly describe me, my qualifications, and my experience.



Date: 08/08/2024