

---

# CURRICULUM VITAE

FREDRICK ONYANCHA ARASA

M.Sc Civil Engineering, (PAU & JKUAT), B.tech Civil & Structural Eng ,(MMUST), MEBK.

---

## CONTACTS

---

**Postal address:** P.O. BOX 50100- 190, KAKAMEGA, KENYA

**Email:** eng.arasa@gmail.com

**Cell phone:** +254711812265

## A. PERSONAL DETAILS

---

**Date of Birth:** 4<sup>th</sup> April, 1988

**Gender:** Male

**ID No:** 25980932

**Nationality:** Kenyan

**Marital Status:** Married

**Languages:** English, Kiswahili and Ekegusii

## B. EDUCATION AND QUALIFICATIONS

---

### **March 2016-June 2018: Master's degree**

The Pan African University (PAU) & Jomo Kenyatta University of Agriculture and Technology (JKUAT)

Master's Degree in Civil engineering (Structural option)

### **August 2008 – December 2013: Undergraduate degree**

Masinde Muliro University of Science and Technology (MMUST)

Bachelor's Degree in Civil and Structural Engineering (First Class Honors)

### **January 2003 – December 2006: Secondary School**

Shieywe Secondary School, Kakamega

Kenya Certificate of Secondary Education (KCSE)

### **January 1994 – December 2002: Primary School**

Milimani Primary School, Kitale

Kenya Certificate of Secondary Education (KCPE)

## C. EMPLOYMENT HISTORY

---

### **Tutorial Fellow**

**Masinde Muliro University of Science and Technology: [www.mmust.ac.ke](http://www.mmust.ac.ke) (Kakamega)**

**May 2020 To Date**

*Masinde Muliro University of Science and Technology (MMUST) is a public university located in Kakamega County in Western Kenya. The university offers certificate, diploma, undergraduate degree, Master's Degree and Doctor of Philosophy (Ph.D.) degrees in various discipline. As a Tutorial Fellow I am attached in the Civil and Structural Engineering Department.*

---

### **Responsibilities**

- ❖ Participate in the development of learning materials, maintaining records to monitor students' progress, attendance and achievement.
  - ❖ Teach undergraduates in areas allocated by the chair of the department i.e Design of Timber Structures, Masonry Design, Pavement Design, Highway Geometric Design, Geotechnical Engineering, Engineering Drawing and Procurement Methods and Standard Contracts
  - ❖ Participate in the examination process through setting examinations, invigilation and marking regularly.
  - ❖ Review departmental programs i.e MSC, BSC, BTB, ETC
  - ❖ Participate in administration of departments programs of study and other activities as requested
  - ❖ Participate in supervision of research projects at all levels including diploma, undergraduate and post graduate students to ensure they are done properly and all objectives are achieved
  - ❖ Contribute to departmental, faculty committee and actively follow and promote institutional policies.
  - ❖ Attend faculty and departmental board meetings for approval of examination results
  - ❖ Mentor students on challenges of life that may affect their academic life and wellbeing.
  - ❖ Publish papers in refereed journals, books and book chapters for knowledge dissemination and
  - ❖ participate in seminars, conferences, workshops in order to create knowledge.
- 

### **Tutorial Fellow**

**Dedan Kimathi University of Technology: [www.dkut.ac.ke](http://www.dkut.ac.ke) (Nyeri)**

**June 2019 to May 2020**

*Dedan Kimathi University of Technology (Dkut) is a public university located in Nyeri County in central Kenya. The university offers certificate, diploma, undergraduate degree, Master's Degree and Doctor of Philosophy (Ph.D.) degrees in various discipline. I work as a Tutorial Fellow in the Civil Engineering Department.*

---

### **Responsibilities**

- Contribute in creation and circulation of civil engineering knowledge and skills through teaching and research. Courses taught include structural design In Structural Design III, Structural Design IV, Water Resources Engineering I, Theory of structures IV, Theory of structures V.
  - Participate in supervision of research projects at all levels including diploma and undergraduate students to ensure they are done properly and all objectives are achieved
  - Enrich the intellectual development of students through academic counseling in civil engineering
  - Participate in the examination process through setting examinations, invigilation and marking regularly.
  - Attend meetings, seminars and workshops
-

- Review departmental programs i.e., Msc, Bsc and Beds
- Contribute towards the achievement of mission and vision of the university
- Participate in institution building and extra curriculum activities
- Participate in administration of departments programs of study and other activities as requested

---

### **Graduate Assistant**

**Masinde Muliro University of Science and technology (Kakamega)**

**October, 2015 to January, 2017**

---

### **Responsibilities**

- Teaching diploma courses in the Civil and Structural Engineering e.g. engineering surveying I and II, Fluid Mechanics, Engineering drawing I & II and Irrigation and drainage engineering.
- Preparing teaching/learning materials
- Setting and marking examination/assignments
- Supervision of diploma and undergraduate exams
- Supervision of student's projects
- Providing individual and/or group assistance to students
- Co-teaching undergraduate students with senior lecturers
- Attend meetings, seminars and workshops for assigned projects and programs
- Reviewed departmental programs and courses
- Assist the department in preparation of important documents
- Accept other departmental duties as assigned by senior lecturers and professors

---

### **Junior Engineer**

**Civicon limited: [www.civiconkenya.com](http://www.civiconkenya.com) (Mombasa)**

**February, 2014 to February, 2015**

*Civicon Limited is an engineering and construction company operating in east and central Africa and focus on oil and gas, power, industrial installation, transport, road and bridge and mining sector. As a junior engineer I accepted and executed tasks and responsibilities assigned by senior engineers and managers in the company.*

---

### **Responsibilities**

- Kept records and advised clients on the roads, bridge, culvert and under pass conditions in Kenya and East African countries.
- Ensured that the company's transport division fully complied with KENHA Regulatory requirement for abnormal load transport.
- Supervised offloading and installation of power transformer in KENGEN substation to client specifications.
- Carried out preliminary route survey for various routes to determine the accessibility of designated site by a particular described heavy cargo.
- Advised in the fields of road safety and environmental protection in undertaking various transportation projects.
- Accepted general supervisory duties in civil and mechanical construction including specialized transport works.
- Designed and prepared engineering plans, drawings, specification, and cost estimates.

- Performed calculations and estimate of material costs.
- Researched publications and information on the engineering field and gave relevant advice to concerned managers.
- Interpreting details and drawings and providing instructions to the concerned parties including clients and foremen.
- Preparation of important reports, engineering drawings, etc.
- Assisted in plant and equipment mobilization to various construction sites.

---

### **Assistant Civil Engineer,**

**Giefcon Limited; giefconltd.com (Mombasa),**

**Mombasa Port Development Project; December, 2013- February 2014**

*Giefcon Limited is an engineering contractor dealing with, design, construction, pipe work installation, power provision among other works. As an assistant civil engineer, I was working on site at the Port Development Project supervising the ongoing construction works.*

---

### **Responsibilities**

- Supervision of various construction works within the allocated area on site. i.e. access roads, Open Ditch and piles.
- Interpretation of details and drawings and providing instructions to crew and foreman for the access roads and piles foundations.
- Outlining the detailed activities for everyday as per the overall site program.
- Making daily reports and submitting to the senior engineers.
- Acting as the main technical adviser on a site for Engineers, section heads and project Manager.
- Setting out, leveling and surveying the site.
- Ensuring that all materials used and work performed are as per specifications.
- Overseeing quality control and health and safety matters on site.
- Resolving any unexpected technical difficulties and other problems that may arise.
- Accountable for the preparation of reports and review of foremen's reports as required by the project manager.

---

## **D. PUBLICATIONS**

### **Thesis**

- **Arasa, F. O. (2018).** Structural Performance of Drystack Hollow Sandcrete Blocks Produced Using Non-Conventional Blended Sand and Cement Blended with Sugarcane Bagasse Ash (Masters dissertation, JKUAT).

### **Paper in Journal (s)**

- **Arasa, F. O., Onchiri, R., & Gariy, Z. C. (2017, December).** Effect of Sugarcane Bagasse Ash on the Engineering Properties of Blended Sandcrete Blocks. *International Journal of Engineering Research & Technology (IJERT)*, 6(12), 327-337.

## **E. CONFERENCES, SEMINARS WORKSHOPS AND TRAINING ATTENDED**

---

- SEBE Research **Workshop**, 17<sup>th</sup> February to Friday 26<sup>th</sup> February, 2021. MMUST, held in Bishop Stamp, Kakamega Kenya. (Participant)
- School **Training** on Academic Module OF ERP, Wednesday December, 2020, MMUST, Kakamega Kenya. (Participant)
- Graduate Engineers **Conference**., 10<sup>th</sup> September 2020. Online webinar, Nairobi, Kenya. (Participant)
- MIDAS nGen Expert Webinar's series on vertical Structures, **Online Training**, 2<sup>nd</sup> September to 30<sup>th</sup> September, 2020, MIDAS IT, Mumbai India. (Participant)
- TVET Stakeholders **Workshop**, 17<sup>th</sup> February to Friday 19<sup>th</sup> February, 2016. MMUST, held in Bishop Stamp, Kakamega Kenya. (Participant)
- Totally Construction East Africa **Conference and exhibition** , 4<sup>th</sup> October - 5<sup>th</sup> October, 2016 . Laico Regency Hotel, Nairobi, Kenya (Participant)

## **F. UNDERGRADUATE RESEARCH PROJECT SUPERVISED**

---

- Assessment of the effect of the quality of sand in Kiambu county on strength and durability performance of concrete, 2020
- Investigating the effectiveness of grouting in bearing capacity improvement of liquefiable soils in Nakuru county, 2019.
- Effects of rice husks ash on the durability of concrete, 2019
- Effects of Coconut Fibers and Coconut Shells in the Structural Performance of Lightweight Concrete, 2019.

## **G. PROFESSIONAL MEMBERSHIP**

---

- Engineers Board of Kenya (MEBK)

## **H. KEY FUNCTIONAL SKILLS, BEHAVIORAL COMPETENCIES/ATTRIBUTES**

---

- Expertise knowledge and experience in design standards for highways, building (timber, steel, concrete & masonry), soils, bridges and water retaining structures
- Expertise skills in CAD, analysis and design softwares i.e., AutoCAD and ArchCAD, Prokon, SAP, ETABs MIDAS nGen and Excel design sheets.
- Advanced skills in Microsoft office tools i.e., Microsoft Word, Microsoft Excel, Microsoft Outlook and Microsoft PowerPoint
- Knowledge in project management software i.e., MS project
- Knowledge in projects inspection and Supervisions.
- Knowledge on organization and administration skills
- In-depth understanding of civil and structural engineering disciplines
- Advanced knowledge on conducting research and publishing findings
- Soft skills i.e Leadership skills, Communication skills, Interpersonal skills, Organizational skills, Ability to work under pressure, Team building, Problem solving, Conflict management and Supervisory
- Knowledge in Pedagogical kills
- Knowledge and experience in presentations during lectures and seminars

## I. REFEREES

---

**1. Eng. Dr. Bernadette Sabuni**

Dean School of Engineering and Build Environment (SEBE)  
Masinde Muliro University of Science and Technology (MMUST)  
Email: bernadettesabuni@yahoo.com  
Phone NO: +254722272292

**2. Dr. Njenga Mburu**

Dean School of Engineering  
Dedan Kimathi University of Technology (DKUT)  
Email: njmburu2002@yahoo.com  
Phone No: +254728777573

**3. Eng. Prof. Richard Onchiri**

Dean Faculty of Engineering and Technology  
Technical University of Mombasa (TUM)  
Email: roocharo@yahoo.com  
Phone No: +254724372704

**4. Eng. Dr. Timothy Nyomboi**

Deputy Director, Structures  
Kenya Urban Roads Authority (KURA)  
Email: tnyomboi@hotmail.com  
Phone NO: +254722756864