

LAIKIPIA UNIVERSITY STAFF PROFILE
DEPARTMENT OF MATHEMATICS



Name of Faculty/Staff: Dr. Rose Gachogu

Designation/Rank: Lecturer

Department: Mathematics

School: Science and Applied Technology

Email: rgachogu@laikipia.ac.ke

A Educational Background

1. PhD in Pure Mathematics, Egerton University, Kenya (2019)
2. Master of Science in Pure Mathematics, Kenyatta University, Kenya (2007)
3. Bachelor of Education in Education Science (2nd Class, Upper Division) Kenyatta University, Kenya (1987)

B Brief Auto-biography

Dr. Rose Gachogu is currently a lecturer in the Mathematics Department at Laikipia University. She teaches various Mathematics courses as she researches in her area of Group theory, to develop algebraic structures for applications in other fields. She is also a member of OWSD (Organization of Women in Science for the Developing World), where she has gained a lot on gender issues. Further still, she strongly supports community activities as evidenced by her commitment as a Board of Management member in Weru and Karandi Sec schools where she has contributed to initiatives of mentorship to improve academic performance.

C Research Interest

Group theory and Combinatorics; Development of algebraic structures for application in various fields.

D Selected Publications

1. **Rose W, Gachogu**, Action of the dihedral group D_n on sets of non-diagonal vertices of a regular n – gon, (on-going publication).

2. **Rose W. Gachogu**, Generalized Suborbital Graphs of the Dihedral Group Acting on Unordered Subsets. *International Journal of Scientific Research and Innovative Technology*, May 2020.
3. **Rose W. Gachogu**, Moses N. Gichuki, Ireri N. Kamuti, Suborbital Graphs of the Cyclic Group C_n Acting on Unordered Subset. *International Journal of Scientific Research and Innovative Technology*, Vol 6, no. 7, Aug 2019.
4. **R. W. Gachogu**, I. N. Kamuti, M. N. Gichuki, Transitivity, Rank and Suborbits of the Cyclic Group Acting on Unordered Subsets. *International Journal of Advanced Scientific and Technical Research*, issue 8, Vol. 1, 2018.
5. **R. W. Gachogu**, I. N. Kamuti, M. N. Gichuki, Properties of Suborbits of the Dihedral Group D_n Acting on Ordered Subsets. *Advances in Pure Mathematics*, Vol. 7, No. 8, 2017, 375-382.
6. **R. W. Gachogu**, I. N. Kamuti, Properties of Suborbital Graphs of the Dihedral Group Acting on Unordered r -Element Subsets. *International Journal of Algebra*, Vol. 8, 2014, no. 12, 557-561.
7. **R. W. Gachogu**, I. N. Kamuti, Ranks and Subdegrees of the Dihedral Groups D_n Acting on Unordered r -Element subsets. *International Journal of Algebra*, Vol. 8, 2014, no. 11, 537-545.

E Courses/Training/Conferences attended

1. Research Methods, AAU (Association of African Universities), Sept - Dec 2020.
2. Thesis writing and Supervision, (AAU), Sept – Dec 2020.
3. Introduction to Competency-based Curriculum (CBC), T3 Alliance, August 2023.
4. 3rd University of Kabianga Multidisciplinary Conference, Sept 2023.