

Curriculum Vitae

MERVIS KIKONKO

The University of Zambia, School of Natural Sciences

Department of Mathematics and Statistics

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Date of Birth:	6th June, 1973
Citizenship:	Zambian
Gender:	Female
Marital status:	Married to Edgar Shamalambo

Current position: Lecturer and researcher, University of Zambia, School of Natural Sciences, Department of Mathematics and Statistics. [2011 to date]

Duties: Lecturing and examining Bachelor students in Mathematics and Statistics courses; Engaging in orientation of first year students in the School of Natural Sciences; Mentoring first year female students in the school of Natural Sciences; Engaging in research activities with local and international partners; Focal person for research in the Department of Mathematics and Statistics.

Specializations: Ordinary differential equations; Partial differential equations; Sturm-Liouville theory

Teaching and research interests: Ordinary differential equations; Partial differential equations; Complex variables; Analytic geometry; Multivariable calculus; Engineering Mathematics; Foundation Mathematics; Advanced calculus.

ACADEMIC QUALIFICATIONS

Degree of Doctor of Philosophy (PhD): Mathematics

Department of Engineering Sciences and Mathematics, Lulea University of Technology, Lulea, Sweden [2012 – 2016]

Thesis: *Some new results concerning general weighted regular Sturm-Liouville problems*

Master of Science (MSc.) Applied Mathematics

School of Mathematics and Statistics, Faculty of Science, Carleton University, Ottawa, Canada [2008 – 2011]

Thesis: *Non definite Sturm-Liouville problems with weight function having two turning points*

Bachelor of Arts with Education (B.A.Ed.)

The University of Zambia, Lusaka, Zambia [2004 – 2008]

Dip.Ed. (Mathematics and Geography)

Nkrumah Teachers College, Kabwe, Zambia [1993 – 1994]

PREVIOUS PROFESSIONAL EXPERIENCE

Staff Development Fellow, University of Zambia [2008 – 2011]

Teacher (Mathematics and Geography), Chainda Basic School, Lusaka, Zambia [2001 – 2008]

Teacher (Mathematics and Geography), Muyooma Basic School, Lusaka, Zambia [1995 – 2001]

AWARDS

Zambia Research and Development Centre – Received best reviewer award at the 2017 International Multi-Disciplinary Conference held from 23rd to 25th August, 2017.

International Science Programme (ISP) – International Programme in the Mathematical Sciences (IPMS) fellow [2012 - 2016]

Carleton University – Anglin Scholarship for Zambian students [2008-2010]

The University of Zambia - Commendation letters for exhibiting academic excellence in second, third and fourth year, School of Education, University of Zambia [2005 – 2007]

Nkrumah Teachers College - Best graduating student in overall academic performance and in Geography at the 1995 graduation ceremony.

OTHER ACTIVITIES

- Organizer and reviewer at International Multi-Disciplinary Conference 23 to 25 August 2017.
- Participated in module writing seminar organized by the Institute of Distance Education, University of Zambia, 2013.
- Judging post graduate students presentations during the post graduate seminar week at University of Zambia, 2017.
- Involved in assessment of colleges affiliated to the University of Zambia
- Appointed as a member of the Committee of Experts for the Higher Education Authority (HEA) in Zambia. This involves evaluating Higher Education Institutes (HEI) for registration, auditing the HEI for quality assurance and evaluating learning programmes of both Public and Private HEI for accreditation.
- Observation and evaluation of school of Education students during School teaching practice experience in High Schools in Zambia.

ABILITIES

- Comprehensive knowledge of Sturm-Liouville theory, Ordinary differential equations, Partial differential equations.
- Computer Literate: Knowledge of Microsoft office; Knowledge of LateX; Knowledge of Matlab and Maple packages.

CONFERENCES AND WORKSHOPS

- Southern Africa Mathematical Sciences Association (SAMSA) conference, Livingstone, Zambia, November 2011.
- East African University Mathematical Programme (EAUMP) conference, Arusha, Tanzania, August 2012.
- Southern Africa Mathematical Sciences Association (SAMSA) conference, Lilongwe, Malawi, November 2012.
- Workshop in Algebra, Livingstone, Zambia, April 2017.
- Curriculum review workshop, Livingstone, Zambia, April 2014.

PUBLICATIONS

1. **Kikonko, M.** and Mingarelli, A.B., On Non-definite Sturm-Liouville problems with two turning points. *J.Appl. Math.Comp.* 219 (2013), 9508-9515.
2. **Kikonko, M.**, On a non-definite Sturm-Liouville problem in the two turning point case – analysis and numerical results. *J.Appl.Math.Phy.* 4 (2016), 1787 – 1810.
3. **Kikonko, M.** and Mingarelli, A. B., Bounds on real and imaginary parts of non-real eigenvalues of non-definite Sturm-Liouville problems. *J.Differential Equations*, 261 (2016), no. 11, 6221 – 6232.
4. **Kikonko, M.** and Mingarelli, A. B., Estimates on the lower bound of the eigenvalue of the smallest modulus associated with a general weighted Sturm-Liouville problem. *Int. J. Differ. Equ.* (2016). DOI:10.1155/2016/7396951

5. **Kikonko, M. and Mingarelli, A. B.**, Complex oscillations of non-definite Sturm-Liouville problems. Electron.J.Differential Equations, 2016 (2016), No. 314, pp. 1-7.
6. **Kikonko, M.** Non-definite sturm-Liouville problem with two turning points, Proceedings of the East African Universities Mathematics Programme (EAUMP) conference, Arusha, 22 to 25 August 2012, 52-60.

REFEREES

Prof L.-E. Persson,

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Lulea University of Technology,
971 87 Lulea
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