

EUNICE MUREITHI



Personal Profile

Full Name: Eunice Wambui Mureithi
Title: Associate Professor
Current Position: Head of Department
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Marital Status: Married with three children

Academic Qualifications

BEd(Double Maths)- Kenyatta University, Kenya
MSc. (Applied Mathematics) Kenyatta University, Kenya
PhD (Fluid Dynamics): University of New South Wales- Australia

Administrative Duties

2015-Present: Head, Department of Mathematics
2014-2016: Coordinator: Eastern Africa Universities Mathematics Programme (EAUMP)
2013- Present: Eastern Africa regional coordinator of the African Mathematics Millennium Science Initiative (AMMSI).

Employment Record:

2011- Present- University of Dar es Salaam

2005-2010- University of Pretoria, South Africa

2001-2004- The University of Witwatersrand, South Africa

1990-2000 –Kenyatta University, Kenya

Research Interests:

Boundary layer flows and their stability

Flows through porous media

Nanofluid flows

Mathematical Modelling of infectious disease

Selected Publications

1. Joshua A. Mwasunda, **Eunice W Mureithi**, Nyimvua Shaban, The use of non-standard finite difference schemes to solve the DAMP and the SIT models. *Journal of Mathematical Sciences and Applications*, 2015, Vol. 3, issue 2, 25-32, DOI: 10.12691/jmsa-3-2-2.
2. Makungu James, **E.W. Mureithi**, Dmitry Kuznetsov, Effects of variable viscosity of nanofluid flow over a permeable wedge embedded in saturated porous medium with chemical reaction and thermal radiation, *Int. Journal of Advances in Applied Mathematics and Mechanics*, 2(3), 101-118, 2015.
3. Makungu James, **E.W. Mureithi** and Dmitry Kuznetsov, Natural convection flow past an impermeable vertical plate embedded in nanofluid saturated porous medium with temperature dependent viscosity. *Asian Journal of Mathematics and Applications*, Volume 2014, Article ID ama0165, 17 pages: ISSN 2307-7743.
4. **Eunice Mureithi**, A mixed convection boundary layer flow over a vertical wall in a porous medium with exponentially varying fluid viscosity. *Journal of Applied Mathematics and Physics*, 2, 795-802, 2014.
5. Anguelov R, Dumont Y, Lubuma JM-S, **Mureithi EW** Stability analysis and dynamics preserving NSFD schemes for a malaria model. *Mathematical population studies: An International Journal of Mathematical Demography*, 20, 101-122, 2013.
6. **Mureithi, EW**, JJ Mwaonaji and Makinde, OD On the boundary layer flow past a continuously moving flat surface with temperature dependent viscosity. *Open Journal of Fluid Dynamics*, 3, 135-140, 2013.
7. Lubuma, JM-S, **Mureithi, EW**, Terefe Y. Analysis and dynamically consistent numerical schemes for the SIS model and related reaction diffusion equation in *CI Christoc and MD Todorov (eds), Proceedings of the 3rd International Conference on Applied Mathematics in Technical and Natural Sciences (AMiTaNS'11)*, (Albena, Bulgaria), *Institute of Physics-AIP Conf. Proc.*, 1404, (2011), pp 168-175, ISBN 978-0-7354-0976-7

8. **Eunice W Mureithi** and James P Denier, Absolute-convective instability of a mixed forced-free convection boundary layer. **Fluid Dynamics Research**.42, 1-10, 2010.
9. **Mureithi, EW** and DP Mason, Local Non-similarity solutions for a forced-free boundary layer flow with viscous dissipation. *Mathematical and Computational Applications journal* 15, no. 4, 558-573, 2010.
10. **Mureithi, E.W.** Effects of buoyancy on the lower branch modes on a Blasius boundary layer. *J. Discrete and Continuous Dynamical Systems Series B.*, 8, 613-622, 2007.