

Professor Ralph Wasili Peter Masenge



Personal Profile

Name:	Ralph Wasili Peter Masenge
Born:	1940
Marital Status	Married with 4 children
Academic Qualifications	BSc, MA (Wurzburg/West Germany) 1968 DIA/MSc (Oxford/UK) 1972 PhD (Nijmegen/UDSM) 1986
Employment Record	Tutorial Fellow (1968), University of East Africa, University College Dar es Salaam Assistant Lecturer (1969), University of East Africa, University College Dar es Salaam Lecturer (1972), University of Dar es Salaam Senior Lecturer (1974), University of Dar es Salaam Associate Professor (1977), University of Dar es Salaam Professor (1991), University of Dar es Salaam
Administrative Duties	Head, Department of Mathematics, UDSM (1976-1982) Associate Dean Faculty of Science, UDSM (1974-1977) Acting Chief Administrative Officer, UDSM (1994-1995) Director of Research & Postgraduate Studies, Open University of Tanzania (OUT) (2001-2007) Acting Deputy Vice Chancellor (Admin), OUT (2007)
Research Interest:	Numerical Analysis Singularly-perturbed convection-diffusion equations Finite difference method for differential equations Finite element methods for differential equations Mathematics Education

SELECTED PUBLICATIONS

Books

- (1) Masenge, R.W.P: *Introductory Course in Numerical analysis* (1975), University of Dar Es Salaam, Department of Mathematics
- (2) Masenge, R.W.P: *Numerical Analysis* (1980), University of Dar Es Salaam, Department of Mathematics
- (3) Masenge, R.W.P: *Fundamentals of Numerical Methods* (1987), University of Dar Es Salaam, Department of Mathematics
- (4) Masenge, R.W.P: *Basic Numerical Methods* (1988), Dar Es Salaam University Press; ISBN 9976 6 0043 7
- (5) Masenge R.W.P: Chapters 2 and 9 of *Advanced Level Mathematics* Volume I (1993) by L. K. Shayo
- (6) Masenge, R.W.P: *Introduction to ordinary Differential Equations* (1997), Open University of Tanzania
- (7) Masenge, R.W.P: *Calculus* (2006), African Virtual University
- (8) Masenge, R.W.P: *Numerical Methods* (2006), African Virtual University

Papers

- (9) Masenge R.W.P: *An iterative technique for finding roots of functions* (1975), University Science Journal Vol. 1, pp 53-56
- (10) Masenge, R.W.P: *Quasi-optimal and uniform in epsilon discretization error estimates for convection diffusion problems* (1983), Numerical Analysis Report No. 8315; University of Nijmegen; The Netherlands
- (11) Masenge, R.W.P and A.O.H. AXELSSON: *Numerical treatment of boundary layers in two-point boundary-value problems* (1983), Numerical Analysis Report No. 8331, University of Nijmegen, The Netherlands
- (12) Masenge, R.W.P: *A theoretical framework for a modified streamline diffusion method for the numerical solution of convection diffusion problem* (1983), Numerical Analysis Report No. 8346, University of Nijmegen, The Netherlands
- (13) Masenge, R.W.P: *Application of numerical techniques in industrial crystal growth* (1985), Proceedings: University of Dar Es Salaam Science Symposium, pp 93-97
- (14) Masenge, R.W.P: *Numerical solution of nonlinear advection diffusion problems* (1987), Journal of the Meteorological Society of Japan, pp 297 – 302
- (15) Masenge, R.W.P: *Analysis of stability for a time-slabbing finite element method in solving linear time-dependent convection diffusion problems* (1988) Proceedings: Research and the Teaching of Mathematics; Makerere University, Kampala – Uganda, pp 123-133
- (16) Masenge, R.W.P: *Stability and discretization error estimates for the theta method in solving semi-discrete systems of ordinary differential equations* (1991), Afrika Matematika Vol. 4 No. 2, pp 1-7
- (17) Masenge, R.W.P: *Stability analysis for semi-discrete methods in solving convection-diffusion problems* (1991), Afrika Matematika Vol 4 No. 2 , pp 49-56
- (18) Masenge, R.W.P: *Eigenvalues and Eigenvectors for Toeplitz matrices* (1992) *East Africa Journal of Sciences* (Eajs); Vol. 1, pp 53-62
- (19) Masenge, R.W.P: *A Quasi Fourth Order Root-Finding Numerical Method* 2012, HURIA Journal, Open University of Tanzania Vol. X, pp 01-06
- (20) Masenge, R.W.P: *The Current Environment of Education in Tanzania: Challenges of Teaching / Learning Mathematics in Tanzania* 2012, Journal of Issues and Practice in Education (JIPE), Vol. 4 No. 2, pp 120-132