

SUMMARY SHEET

A. J. RODRIGUES

B.Sc. (1967) Electrical Engineering

M.Sc. (1969) Automatic Control Theory and Practice

Ph.D. (1971) Mathematics of Computing/Numerical Analysis

Lecturer: Jan. 1972 - April 1979 Univ. of Nairobi - Mathematics

Senior Lecturer: April 1979 - April 1989 UoN - Mathematics

Director, Institute of Computer Science: UoN Sept 1985 to Oct 1994

Associate Professor: May 1989 – Aug. 1997 Univ of Nairobi - Computer Science

Professor: August 1997 - Aug. 2001 Univ. of Mauritius - Computer Science

Director, Centre for Information Technology & Systems, Univ. of Mauritius:
February 1998 to August 2001

Associate Professor: Sept 2001—June 2002: Univ of Nairobi - Computer Science

Professor: July 2002 -- Univ. of Nairobi - Computer Science

Date: 24th November 2008

CURRICULUM VITAE

NAME: RODRIGUES Anthony Joachim
NATIONALITY: Kenyan
COUNTRY OF RESIDENCE: Kenya
DATE OF BIRTH: 19 May 1945, Jinja, Uganda
MARITAL STATUS: Single
CURRENT ADDRESS: School of Computing and Informatics, University of Nairobi,
P.O. Box 30197, Nairobi, Kenya
TELEPHONE OFFICE: (254)(20) 4446543/4, 4444919; (254) 20 2115964
MOBILE **+254 733969869:**
FAX: (254)(20) 4449902
EMAIL: **tonyr@uonbi.ac.ke**

SCHOOLS ATTENDED:

1952 - 1958: St. Mary's High School, Bombay, India.
1959 - 1963: St. Mary's College, Kisubi, Uganda

CERTIFICATES:

1961 Cambridge School Certificate, 1st Grade (Aggregate 10 points)
1963 Cambridge Higher School Certificate, Physics A, Chemistry B,
Mathematics C.

SCHOLARSHIPS:

1964 - 1965 - Special Commonwealth Assistance to African Plan
(S.C.A.A.P) Fellowship;
1965 - 1971 - Commonwealth Scholarship

UNIVERSITY ATTENDED:

The Victoria University of Manchester 1964 - 1967
The University of Manchester Institute of Science and Technology (1967-1971).

DEGREES:

1967 - **BSc.** (Hons) Lower Second in Electrical Engineering;
1969 - **M.Sc.** Theory and Practice of Automatic Control
by Coursework (distinction) and Dissertation;
1971 - **Ph.D.** Thesis "Numerical Inversion of Laplace Transforms," in the
field of Numerical Analysis/Scientific Computation/Approximation Theory.

EMPLOYMENT:

Jan 1972 - March 1974 Lecturer in Engineering Mathematics, Faculty of
Technology, Makerere University, P.O. Box 7062, Kampala, Uganda.
July 1974 - April 1979 Lecturer in Mathematics, Faculty of Science,
University of Nairobi.
April 1979 - April 1989 Senior Lecturer in Mathematics, Faculty of Science
University of Nairobi.
Sept 1985 - Nov 1994 Director, Institute of Computer Science, University of
Nairobi.
May 1989 - August 1997 Associate Professor, Institute of Computer Science,
University of Nairobi.
August 1997 – August 2001 Professor, Department of Computer Science and
Engineering, University of Mauritius.
February 1998 – August 2001 Director, Centre for Information Technology and
Systems, University of Mauritius
Sept. 2001 -- June 2002 Associate Professor, Institute of Computer Science,
University of Nairobi
July 2002 -- Professor, School of Computing and Informatics
University of Nairobi.

RESEARCH INTEREST I:

SCIENTIFIC COMPUTATION, APPROXIMATION THEORY, MODELLING, INFORMATICS
POLICY

PUBLICATIONS & PROCEEDINGS: REFEREED / EDITED: PEER REVIEWED

1. "Properties of constants for a quadrature formula to evaluate Bromwich's integral." Rodrigues A.J. *Journal of the Institute of Mathematics and its Applications*. 1976. 18, 49-56.
2. "An error analysis and convergence of a quadrature formula to invert Laplace transforms." Rodrigues A.J. *J. Inst. Maths. Applics*. 1977. 20, 21-32.
3. "On the accuracy of quadrature Laplace Transform inversion and the solution of state-space equations." Rodrigues A.J. *J. Inst. Maths. Applics*. 1978. 22, 283- 296.
4. "Convergence of Padé Kernel approximants to the delayed Dirac function" Rodrigues A.J. *J. Inst. Maths. Applics*. 1980. 25, 17-27.
5. "Uniform derivative convergence of diagonal Padé approximants to $\exp(z)$ on unbounded sets." Rodrigues A.J. *Proceedings of 1st Eastern African Symposium in Applied Mathematics, and Mathematical Education, Nairobi*. 1981. Section B, pp. 25-36.
6. "On best I_{MN} and Dirac Kernel approximants". Rodrigues A.J. *Proceedings of the Second International Conference on Numerical Analysis and its Applications*. 1986. *Computational Mathematics II* Ola Fatunla S. (ed) pp. 202-208. Boole Press.
7. "State of the art computer science in East and Central Africa". Rodrigues A.J. & Getao K.W. *Proceedings: Workshop in Curriculum Development in Physics, Mathematics and Computer Science, Nairobi* 1986. pp. 143-147. ICTP.
8. "Some aspects of health care Management Information Systems. Case Study: Intestinal Parasitoses in a Large Agricultural Industry." Rodrigues A.J., Kamunvi F., & Minawa A. *Proceedings of the Third African Regional Conference of the International Epidemiological Association, Nairobi* 1986. Eds. Kenya P. R. et al., pp. 270-276.
9. "An appraisal of the postgraduate diploma in computer science of the University of Nairobi, Institute of Computer Science". Scott R. J. P. & Rodrigues A. J. *Proceedings of International Congress on Education and Informatics. 1989 Paris*. pp. 545-650 UNESCO.
10. "Management of technological change: Kenya case study". Rodrigues A. J., Scott R. J. P., & Okelo-Odongo W. *Information Technology for Development*. 1989 Vol. 4 No. 2, pp. 399-471.
11. "Error estimates for recursive Padé approximants to $\exp(A)$." *Discovery and Innovation*. 1990 Vol.2 No. 1 pp. 56-65.
12. "Information Technology with a development perspective." Macharia G.M & Rodrigues A.J. *Proceedings of the 7th PWWA Conference on Employment and Education: Strategies & Opportunities for Development. 1990, Nairobi*, Chapter 9 pp. 121-132. Ed., Gray, K.R., PWWA (K).
13. "Training of information analysts at the Institute of Computer Science, University of Nairobi". Moturi C.A. & Rodrigues A.J. *Information Technology Manpower: Key issues for Developing Countries*. 1992 Ed., Bhatnagar S.C., pp. 103-114. Tata-Mcgraw-Hill.
14. "Computer-based information systems in their social context: Use of Different Perspectives". Rodrigues A. J. & Waema T. M. *Social Implications of Computers in Developing Countries*. 1992. Eds., Bhatnagar & Odedra, pp. 233-243. Tata Mcgraw-Hill.
15. "Communications research for development: The experience of the Nairobi ESANET node". Macharia G. M. & Rodrigues A. J. *Proceedings of International Workshop on Science and Technology Communications Networks in Africa* 1992. Nairobi. Eds., Tindimubona A & Auerbacher W., pp. 101-108. African Academy of Sciences/American Association for the Advancement of Science.
16. "Kenyan PACSAT licensing experience." Rodrigues A. J. & Macharia G. M. *Proceedings of International Workshop on Digital Radio Technology and Applications* 1992. Nairobi. Eds., Baiya H, Balson D, Garriot G. pp 159-174; International Development Research Centre.
17. "An accurate epidemiological model." Pokhariyal G. P. & Rodrigues A. J. *Applied Mathematics & Computation*. 1993. Vol. 53 pp. 1-12.
18. "Informatics in higher education-Kenya case study." Rodrigues A. J., Scott R. J. P., Okelo-Odongo W., Moturi, C.A. *Higher Education Policy*. 1993. Vol. 6 No. 3, pp 41-49.

19. "Simulating plant-pathogen epidemics". Rodrigues A. J. & Moturi C. A. *Information Technology Utilisation in Developing Countries 1993*. Eds. Ojo S. O., Parsons D. I., Ige J. A. pp 124-129. P&P. Co. Botswana (Pty) LTD.
20. "Error analysis of dynamical models in epidemiology." Pokhariyal G. P. & Rodrigues A. J. *Int. J. of Math. & Math. Sci.* 1994. Vol. 17 No. 1 pp 119-124.
21. "Trends in Informatics education". Rodrigues A. J. & Getao K. W. *Higher Education Policy*. 1995. Vol 8. No. 3 pp. 57 - 63.
22. "The East and Southern Africa network (ESANET): Technical and management perspectives". *Proceedings of IFIP, WG9. 4 International Conference 1995* Cairo, pp. 55-80.
23. "Cost sharing in public universities: A Kenyan case study." Rodrigues A. J. & Wandiga S. O. *Higher Education Policy*. 1997. Vol 10, No. 1, pp 55-80.
24. "The emerging global electronic messaging and networking technologies: An analysis of their potential developmental impact in Africa". Dzidonu C.K., Rodrigues A. J. & Okot-Uma R. *African Development Review: Special Issue; Information, Knowledge and Africa's Development*. 1998 Vol. 10, No. 1, Ed. Olubenga Adesida , pp 189-210. African Development Bank.
25. "Review of dynamical models in plant pathogen epidemiology" Rodrigues A. J., *University of Mauritius Research Journal: Science and Technology* 1998 Vol. 1. pp 49-71.
26. "Electronic Distance Education and Enabling Technologies in a Small Island State". Govinda S & Rodrigues A. J. *Proceedings of Colloquium on Distance Education and Technology*, November 1999, Santiago pp. 43-54. Catholic University of Chile.
27. "Towards an Integrated Management Information System: A Case of the University of Mauritius". Rodrigues A.J. & Govinda S. *Information Technology for Development* 2003 Vol 10 pp41-56 IOCPress
28. "Health Informatics: Implications of Evaluation Models for Developing Countries." Rodrigues A. J., *Importance of Mathematical Modelling of Biological & Biomedical Processes*. Eds. Livingston L.S., Mugisha J.Y.T. & Kasozi J. African Society for Biomathematics. Series 1 pp. 79-94. Kampala :Makerere University Press 2004
29. "An Integrated Regional ICT Policy for the East Africa Community (EAC): Impact on a Possible Information Revolution." Wafula J.M. , Rodrigues A.J., Waiganjo W.P., and Wanjohi N. *Proceedings of the Third Conference on Information Technology and Economic Development*. 2004 Ghana .INTERCED
30. "Global Knowledge and the Information Society : Illusion or Reality for developing countries.? Rodrigues A.J and Wafula J.M. *Proceedings of the International Conference on the Application of ICT in Enhancing Higher Learning Education* April 2004.pp8-19University of Dar-es-salaam. Tanzania
31. "A Novel Framework for E-Commerce Diffusion and Adoption and supporting Digital Documentation Options" Wafula M. , Rodrigues A.J., and Wanjohi N. *Proceedings of the WAITRO Biennial Congress* September 2004. JKUAT Kenya
32. "Income generation at public universities: A case of the University of Nairobi Enterprises and Services Limited". Rodrigues A. J., Wainaina G. and Mwangi E. W. in *Measuring Computing Research Excellence and Vitality* Eds.Williams D & Baryamureeba V. 2006 Vol 1 pp 247-265 ISBN 13:978-9970-02-592-3; ISBN 10:9970-02-592-9.
33. "Sub-regional ICT policy: Case of the East African Community". , Rodrigues A.J. and Wafula J.M. in *Measuring Computing Research Excellence and Vitality* Eds.Williams D & Baryamureeba V. 2006 Vol1 pp 89-111 ISBN 13:978-9970-02-592-3; ISBN 10:9970-02-592-9.
34. "Towards an Education Evaluation Framework: Synchronous and Asynchronous e-Learning Cases". Omwenga E.I. and Rodrigues A.J. in *Measuring Computing Research Excellence and Vitality* Eds.Williams D & Baryamureeba V. 2006 Vol1pp 272-285 ISBN 13:978-9970-02-592-3; ISBN 10:9970-02-592-9.
35. "Towards an Education Evaluation Framework: Synchronous and Asynchronous e-Learning Cases". Omwenga E.I. and Rodrigues A.J. *Journal of the Research Centre for Educational Technology* Spring 2006. <http://www.rcet.org>
36. "ICTs In Developing Countries: Contexts, Challenges And Interventions" Rodrigues A.J. (Eds.)Joseph Kizza, Janet Aisbett, Andrew Vince, and Tom Wanyama , *Special Topics in Computing and ICT Research: Advances in Systems Modelling and ICT Applications*, 2006Vol. 2, pp. 261-276, ISBN 13:978-9970-02-604-3; ISBN 10:9970-02-604-6.
37. "Informing Regional ICT Policy: Case Study Of Trends In ICT Indicators of OECD, EU, COMESA and EAC". Wafula J.M. , Rodrigues A.J., and Wanjohi N. (Eds.)Joseph Kizza, Janet Aisbett, Andrew Vince, and Tom Wanyama , *Special Topics in Computing and ICT Research: Advances in*

- Systems Modelling and ICT Applications*, 2006 Vol. 2, pp. 227-246, ISBN 13:978-9970-02-604-3; ISBN 10:9970-02-604-6.
38. "Modelling and Simulation of Natural Growth" Rodrigues A.J. (Eds.) Getao K.W. & Wagacha *Proceedings of 1st International Conference in Computer Science & ICT COSCIT 2007* pp.1-9 School of Computing & Informatics, University of Nairobi. ISBN: 9966-7284-0-6
 39. "Proposal for Metadata Models and Standards for Kenya National Spatial Data Infrastructure." Odongo R.O. and Rodrigues, A.J. (Eds.) Getao K.W. & Wagacha *Proceedings of 1st International Conference in Computer Science & ICT COSCIT 2007* pp67-76 School of computing & Informatics, University of Nairobi. ISBN: 9966-7284-0-6
 40. "ICT Regulation Review & Analysis." Wafula J.M. and Rodrigues A.J., (Eds.) Getao K.W. & Wagacha *Proceedings of 1st International Conference in Computer Science & Informatics COSCIT 2007* pp104-109 School of computing & Informatics, University of Nairobi. ISBN: 9966-7284-0-6.
 41. "The Use of Diffusion Models to Leverage the Strategic Management of Information Systems in Developing Countries". Mutanu, L. and Rodrigues A.J., (Eds.) Getao K.W. & Wagacha *Proceedings of 1st International Conference in Computer Science & Informatics COSCIT 2007* pp 117-123 School of computing & Informatics, University of Nairobi. ISBN: 9966-7284-0-6.
 42. "Utilization of ICTs for Poverty Reduction: Towards a Poverty Reduction Framework". Ruhiu, S.N. and Rodrigues A.J., (Eds.) Getao K.W. & Wagacha *Proceedings of 1st International Conference in Computer Science & Informatics COSCIT 2007* pp. 124-123 School of computing & Informatics, University of Nairobi. ISBN: 9966-7284-0-6.
 43. Does Interactive Learning Enhance Education : For Whom, In What Ways and In what Contexts? Rodrigues A.J. (Eds.) Kizza J., Muhirwe J., Aisbett J., Getao K. W., Mbarika V. W., Patel D., & Rodrigues A.J., *Strengthening the Role of ICT in Development 2007* Vol III pp278-289 ISBN 978-9970-02-730-9.
 44. Conceptual ICT tool for Sustainable Development: The Community Development Index (CDI) Wafula J.M., Rodrigues A.J. & Wanjohi N. (Eds.) Kizza J., Muhirwe J., Aisbett J., Getao K. W., Mbarika V. W., Patel D., & Rodrigues A.J., *Strengthening the Role of ICT in Development 2007* Vol III pp498-508 ISBN 978-9970-02-730-9.
 45. Browsing impact of large herbivores on *Acacia xanthophloea* Benth in Lake Nakuru National Park, Kenya. Dharani, N. Kinyamario, J.I. Wagacha, P.W. & Rodrigues, A.J. *Afr. J. Ecol.* 2008 *to appear*
 46. "Novel Decision Support Tool based on ICT and Social Networks for Sustainable Development" Wafula J.M., Rodrigues A.J. & Wanjohi N. 4th International Conference on Technology, Knowledge and Society. 2008 North Eastern University Boston
 47. The role of ICT in creation and sustenance of trust in SME clusters and inter-organizational systems. Mindila A., McCormick D., Rodrigues A.J. & Mwangi R.W. (Eds.) Aisbett J., Gibbon G., Rodrigues A.J. Kizza J.M., Nath R., & Renardel G.R. . *Strengthening the Role of ICT in Development 2008* Vol IV pp194-202 ISBN 978-9970-02-871-2.
 48. Data Security Lapses in Developed Societies: Public and Private Sector Cases. Rodrigues A.J (Eds.) Aisbett J., Gibbon G., Rodrigues A.J. Kizza J.M., Nath R., & Renardel G.R. . *Strengthening the Role of ICT in Development 2008* Vol IV pp203-214 ISBN 978-9970-02-871-2.
 49. Tertiary ICT Education in the East African Community (EAC): Human Capital and Curriculum Development. Rodrigues A.J. & Wafula J. M. *Int J.Comp & ICT*. Oct 2008 Special Issue pp76-84 ISBN 1996-1065 on-line.
 50. ICTs for Poverty Reduction Initiatives: What Should be their Theoretical Underpinnings? Ruhiu S.M., Rodrigues A.J. & Van Audenhove L. 2008 (*submitted to IJCIR*)

RESEARCH INTEREST II:

MODELING & SIMULATION, INFRASTRUCTURAL CONTEXTS FROM A DEVELOPMENT PERSPECTIVE

AGRICULTURE

1. "Dynamical models in plant-pathogen epidemiology" I U C. Mathematics Subject meeting, Kampala 12-15 December 1988
2. "Accurate holistic dynamical models in epidemiology". Rodrigues A. J. & Ramos A. *Technical Report No. AJR AR/1/83* (National Agricultural Laboratories).
3. "Determination of the optimum tea growing altitude in Kenya with respect to yield" (Tea Research Foundation of Kenya). A preliminary analysis 1985.

4. "Implication of accurate dynamical models in epidemiology" Pokhariyal G.P. & Rodrigues A. J. *Proc. Int. Congress of Mathematicians. Aug. 1990 Kyoto. Abstracts pp 258. Technical Report ICS/90/1.*

TRANSPORT (Kenya Railways)

5. "Appraisal of the availability of Motive Power with special attention to design and maintenance factors". *AJR-ALU/1/84.*

PUBLIC-HEALTH

6. "Study of Intestinal parasitoses in Large Agricultural Industries in Kenya. The Awendo Sugar Industry". *Technical Report No. K. M. R./1/86* Kamunvi F. Minawa A., Rodrigues, A. J.
7. "The geometry of the spread of the human African Trypanosomiasis Infection in Kenya." Mwanje J. I. & Rodrigues A. J. *Technical Report ICS/96/1.*
8. "Theoretical ecology of biotopes interactions as a determinant of the geographic spread of the Rhodesian sleeping sickness in Lambwe Valley, Kenya." Mwanje J. I., Rodrigues A. J. & Odingo R. S. *Technical Report ICS/96/2.*
9. "Effective transmission and infection capacity of Trypanosoma brucei rhodesiense parasite in Lambwe Valley, Kenya." Mwanje J. I. & Rodrigues A. J. *Technical Report ICS/96/3.*
10. "Geopolitical consideration for public health policy: The case of African Trypanosomiasis control in Eastern Africa." Mwanje J. I., Odingo R. S. & Rodrigues A. J. *Technical Report ICS/96/4.*

INFORMATICS

11. "Informatics training and education in Kenya" 1986. Rodrigues A. J. and Opiyo J. C. *Read at Curriculum Development Workshop, Nairobi, ISAPAM.*
12. "The Role of Informatics Technology in development". *Proceedings of the Seminar on the Introduction of Informatics Technology in Developing Countries, Moi University 1987.* Ed. Tonfoni, G. Bologna.
13. "Towards An Information and Informatics Policy". Read at *Seminar : Formulation of National Information And Communication Policy For Kenya.* 1991, Kericho, Kenya National Commission for UNESCO.
14. ICT for development : Tensions between Information Perspectives. Rodrigues A. J. 2003 East African Community Head Quarters, under the auspices of ECA VarsityNet "Software Research in e-government project: : A pilot project for East Africa" Lead researcher.
15. "Global Knowledge and the Information Society: Illusion or Reality for Developing Countries? Rodrigues A.J. & Wafula J.M. *Proceedings International ICT Workshop on the Application of ICT in Enhancing Higher Learning Education.* May2004 pp 8-19 Dar-es-salaam

DEMOGRAPHY

16. An integrated model approach to the generation of Life Tables. A position paper (1985).

HIGHER EDUCATION

17. "Recovering Public Higher Education Costs through Loan Schemes". Wandiga, S.O., Rodrigues A. J. and Chana R. P. S. 1991. Prepared for the Loan Recovery Unit.
18. "Science and Technology: Vision for a Learning Society: Rodrigues A. J. *Proceedings of the National Seminar on Tertiary Education.* TEC, Mauritius 1998.
19. Science and Technology Policy: Some generic issues and frameworks. July 2003. For Kenya National Academy of Science
20. Information and Communication Technology Status in Higher Education Institutions in Kenya. Report for Public Universities Inspection Board: January 2006
21. ICT Education : Trends, Risks and Opportunities Editor(joint) : Report of the meeting of the specialised committee on ICT education in East Africa, sponsored by Inter University Council for East Africa. IUCEA November 2006

TELEMATICS

22. "Microcomputer-based data communications networking in the East and Southern African Region (ESANET)". *Start up Workshop Proceedings, Nairobi November 1990; Design Workshop Proceedings, Harare May 1991; Evaluation Workshop Proceedings, Kampala September 1993.*
23. "Computer networks and telecommunications infrastructure in Africa". *Workshop on the Use of Microcomputers for Scientific and Technological Information Handling* Nairobi, Nov. 1991.
24. "Science and Technology information networks. Institutional perspectives on East and Southern African Network (ESANET)" Rodrigues A. J. *Seminar on National Networking of Science and Technology Information Systems.* 1994. Nairobi. National Council for Science and Technology.

INFORMATION SYSTEMS

25. "Information Systems and their Social Context: A Case of a University Admission System." Waema T. M. & Rodrigues A. J. *Technical Report ICS/92/1*. 1992
26. "Ensuring Quality Information: Integrity, Security and Privacy." *Seminar on Computer Security*. 1999. National Computer Board, Mauritius.
27. "IT development in a University Environment: A Case of the Institute of Computer Science, University of Nairobi ". *Workshop to establish a Regional Centre in Computer Science*. 2003 , Makerere University, Kampala
28. "Software research in e-government: A pilot project for East Africa " *A conceptual framework for sustainable e-government* Lead researcher: IUCEA co-ordinated project funded by UNECA: VarsityNet 2003-2004
29. ICTs in development: Contexts, Challenges and Interventions. Report for Public Universities Inspection Board: January 2006

BIOINFORMATICS

30. Mensurational Data Diagnostic System Design: Relative growth and Quasi-Allometric Patterns of *Acacia xanthophloea Benth* in Lake Nakuru National Park, Kenya .A.J. Rodrigues, P.W.Wagacha , N. Dharani , G.P. Pokhariyal Technical Report No SCI/2008/AJR/ 1. 27 pages

EXPOSITORY PAPERS

1. "Derivative properties and applications of the Padé approximant to $\exp(z)$ ". *Technical Report AJR/80/1*, 30 pp.

REVIEWING:

1980 - Reviewer for: Mathematical Review, fifty (50) such reviews have been published by the *American Mathematical Society*. *Kenya Journal of Science and Technology* (10 papers); *Discovery and Innovation* (6 papers).

EXTERNAL ASSESSMENT

National University of Lesotho	Associate Professor 1991
Makerere University -	Professor 1997, 2006 Associate Professor 2005, 2008(2) Senior lecturer 2006
Sudan University of Science and Technology –	Professor 2000
University of Lagos –	Associate Professor (3) 2002
University of Swaziland	Professor 2005

SUPERVISION:

M.Sc Thesis:	"Pade Approximation to $\exp(z)$ " 1983. "Cliques, Coverings and Colourings with Application to Scheduling". 1984.
M.B.A. Dissertation	"Information Technology: A Strategic Tool in Education & Training in Mauritius". 1998. "A strategy for Civil Computerisation in Mauritius. 2000. "Market Survey of IT Products and Services in the Civil Service in Mauritius". 2000.
PhD Thesis:	"Investigation of Systems Ecologic Models of Human African Trypanosomiasis Epidemics: A Case of Kenya." 1991. "Harnessing Information Technology (IT) for national competitive advantage". 1998. "New Information and Communication Technology-based information systems as tools for Agricultural Communication and Development in Mauritius". 1999. "Information technology Policy: Enabling Governance and Sustainable Development in Kenya. " 2007 "ICT Policy formation for Developing Countries: Towards a Knowledge Society Foresight Framework" 2004-ongoing.

“Towards a Framework for the Development of a Regional Spatial Data Infrastructure: Case of National Resource Management in East Africa.” Jan 2006 -ongoing
“Information and Communication Technology for Economic Development in the SME metal Industry.2005-ongoing

Projects: *Postgraduate Diploma* Forty Computer Systems projects in a System Analysis of University of Nairobi, Finance, Administration and Academic Departments. These were towards the establishment of a Management Information System for Central Administration. (1985-94)

MSc (Information systems)

- “Technology Diffusion models for Strategic Management : A case of Integrated Systems in Kenya” September 2004.
- “ Road map to e-Government : A Kenya Case Study” October 2004
- “ Assessment of ICT Diffusion Models : The Case of a Multinational Corporation in a Developing Country” 2004.
- Utilizing ICT to Realise Commuter needs in the Nairobi Transport Sector. 2005
- Roads Information Database & Maintenance System for Kiambu District, Kenya 2005
- GIS Aided Roads and Traffic Management System in Nairobi Central Business District 2006

EXTERNAL EXAMINER:

APPLIED MATHEMATICS: 1986, 1995, 1996, 1997	<i>Makerere University.</i>
PURE AND APPLIED MATHEMATICS: 1986/87, 1987/88	<i>Makerere University.</i>
POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE: 1986/87, 1987/88	<i>Makerere University;</i>
COMPUTER SCIENCE: 1988	<i>University of Khartoum</i>
1990, 1991, 1992, 1995, 1996,2004,2005,2006,2007,2008	<i>Kenyatta University</i>
1993, 1994, 1995,2006	<i>University of Lesotho</i>
1995, 1996, 1997.	<i>Makerere University</i>
1995, 1996, 1997, 1998,2002,2003,2004,2005,2006	<i>National University of Science and Technology(Zimbabwe).</i>
2002,2003,2004,2005,2006,2007,2008	<i>Egerton University</i>
2006,2007,2008	<i>Kabarak University</i>
2007,2008	<i>Univ. of Dar es salam</i>

MSc. DISSERTATIONS:

Makerere University.

- “Computerized Accounting Application in an Ugandan Environment”. 1992.
- “Mathematical Models for the study of HIV/AIDS transmission between sexually active groups and the role of Mobility to the spread of the epidemic”. 1993.
- “A comparison of some of the most common numerical methods for solving boundary value problems in ordinary differential equations”. 1995.
- “Mathematical models for the study of the effect of malaria, sleeping sickness and HIV/AIDS on a community.” 1996.
- “Deterministic Models for the Control/Eradication of Poliomyelitis.”1998

University of Dar es Salaam

- Challenges of Adaptive Computing: A Case of Higher learning Institutions in Tanzania, 2007
- Development of a prototype of web based marketing information system (mis) for small-scale entrepreneurs (a case study of Lushoto district, Tanga) 2007
- Development of an e-granary digital library for secondary school: a case of Duluti secondary school 2007
- Development of a free and open Kiswahili spell checker 2007
- Development of research information management system for higher education institutions in Tanzania: case study 2007

Rodrigues: CV

- Development of a Web Based Information Management System for Institutional Meetings: A Case Study of University Of Dar-Es-Salaam 2007
- Development of dynamic web based information system for students' service administration: The Case of Institute of Accountancy Arusha 2008

Jomo Kenyatta University of Agriculture and Technology

- "Using fault tree analysis in a work breakdown structure to develop a low risk online electronic voting system: A case of the Electoral Commission of Kenya" 2008

Ph D THESESES: *Mbarara University of Science and Technology*

- Modeling multistage dynamics of immune response to malaria parasites within a human host and mosquito vector 2007

Makerere University

- An Application of System Dynamics Modeling to Immunisation Policy Analysis 2008

EDITORIAL WORK

Consulting Editor : *At the Crossroads: ICT Policy Making in East Africa* Eds Etta F.E. & Elder L. 2005 IDRC ISBN 9966-25-439-0 , ISBN 1-55250-219-8 (IDRC e-book)

Managing Editor : *International Journal of Computing & ICT Research* since 2006 ICT for Sustainable Development Track.

Joint Editor : *Strengthening the Role of ICT in Development* 2007 Vol III Eds: Kizza J., Muhirwe J., Aisbett J., Getao K.W., Mbarika V.W., Patel D., & Rodrigues A.J., ISBN 978-9970-02-730-9.

Joint Editor : *Strengthening the Role of ICT in Development* 2008 Vol IV Eds: Aisbett J., Gibbon G., Rodrigues A.J. Kizza J.M., Nath R., & Renardel G.R. ISBN 978-9970-02-871-2.

ADMINISTRATION & MANAGEMENT:

DIRECTOR, Institute of Computer Science, University of Nairobi, 1985 to 1994.

Academic Section: Teaching and Research

Technical Section: University-wide Network & Computing Services;
Information Systems for University Management.

DIRECTOR, Centre for Information Technology and Systems, University of Mauritius, Feb 1998 – Sep2001

Information Technology Services
Management Information Systems

CURRICULUM DEVELOPMENT:

Bachelor of Science (Computer Science) - November 1991, Implemented 1992/1993.

Master of Science (Information Systems) - Conversion Course, 1991, 1996, 2001

Postgraduate Diploma in Computer System - Revised, 1991, 1994.

Master of Science (Computer Science) - Specialist Course 1996.

Master of Science IT with Management – Conversion Course 2000-Univ of Mauritius

Master of Science E-Business – Conversion Course 2000- Univ of Mauritius

Bachelor of Science (Computer Science & Information Systems) 2003-Univ. of Venda

Master of Science (Computer Science) - Specialist Course 2005

STAFF DEVELOPMENT:

University of Nairobi; Resource Mobilisation for overseas training, 1985 to 1994

Academic: 7 Ph.D. - ODA/TCT

1 Ph.D. - IDA

2 M.Sc. - ODA/TCT

Technical: 1 M.Sc. - ODA/TCT

1 H.N.D - IDA

Exchange Visits: 2 Academic, to U. K. for 6 technical staff for 3 months

In-house & On-the-job-training - Technical staff.

ADJUDICATION:

"ThinkQuest Africa Youth Camp and Award Ceremony" held in Cairo 25th- 28th September 2004.

SchoolNet Africa “Mtandao Afrika Youth Camp and Award Ceremony” held in Cairo 2-8 March, 2007
“African ICT Achievers Awards” East African Region & Africa 2008 6 – 10 October (Gauteng, SA)

CONSULTANCY

1. UNEP Data Processing Training for Managers. 1986.
2. COMMONWEALTH SECRETARIAT Kenya Case Study: Office Automation (AMREF) (1987).
3. MINISTRY OF TOURISM: Computerisation Plan (1987/88).
4. UNIVERSITY OF NAIROBI: Integrated Management Information Systems: 1988.
5. KENYA BUREAU OF STANDARDS: Microcomputer Training 1988.
6. IDRC: Deans of Graduate Studies, Application of Microcomputers for Administration. Oct 1989.
7. UNESCO - Informatics Studies in Higher Education 1990, 1993.
8. MINISTRY OF EDUCATION/POLICY PLANNING TASK GROUP: Specifications, Operational Requirements, Tender Evaluation for Supply of Computer and Related equipment. 1989 to 1994.
9. KENYA POSTS & TELECOMMUNICATIONS CORPORATION. Procurement guidelines 1993.
10. INTERNATIONAL DEVELOPMENT RESEARCH CENTRE: International Pre-Mission to advise the Democratic Alliance (ANC, COSATU, SANCO etc.) on an Information Policy for the Republic of South Africa. 1994.
11. KENYA GRAIN GROWERS CO-OPERATIVE UNION LTD: Tender Evaluation for Information Systems at KGGCU 1994.
12. GOVERNMENT OF KENYA/WORLD BANK: Cost and Financing of Education Studies. Access, Equity and Quality of Tertiary Education and Training. Study No. 3 1995. Tender No. 2/94-95.
13. HIGHER EDUCATION LOANS BOARD (HELB): Means Testing System-Implementation and Review. 1995.
14. GOVERNMENT OF KENYA/WORLD BANK: Bidding Documents & Technical Specifications for the Supply, Delivery, Installation and Support of a Computer-based Management Information System and Related Services for Kenyatta National Hospital. 1997.
15. MAURITIUS STANDARDS BUREAU: Bidding Documents and Technical Specifications for Electrical Installation for Computerization Project. 1999.
16. MAURITIUS STANDARDS BUREAU: Technical Evaluation for Electrical Installation for Computerisation Project 1999.
17. MAURITIUS STANDARDS BUREAU: Setting up an MIS Department. 1999.
18. DEVELOPMENT BANK OF MAURITIUS LTD: Bidding Documents and Technical Specifications for Structured Cabling Project. 1999.
19. UNIVERSITY OF MAURITIUS: Computer-based audit to determine unauthorised access to email accounts on the University mail Server 1999-2000
20. TERTIARY EDUCATION COMMISSION/University of Mauritius : Enterprise Resource Planning: Project Appraisal 2001
21. GOVERNMENT OF MAURITIUS: Task force on e-education and training , co-opted member March –August 2001
22. GOVERNMENT OF MAURITIUS: Task force on e-government , co-opted member March – August 2001
23. INSURANCE COMPANY OF EAST AFRICA : Information Technology Strategic Planning 2001
24. KENYA REVENUE AUTHORITY: Pre-qualification Tender Evaluation.; Supply and Implementation of an Integrated Customs Systems and Associated Consultancy Services. Tender no. KRA/HQs/62/2003-2004
25. UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA: COMESA e-Strategy Study. July 2004.
26. UNIVERSITY OF NAIROBI ENTERPRISES & SERVICES : Development of Strategic Plan 2005-2010

27. PUBLIC UNIVERSITIES INSPECTION BOARD: ICTs in development: Contexts, Challenges and Interventions. December-January 2006
28. PUBLIC UNIVERSITIES INSPECTION BOARD: Information and Communication Technology Status in Higher Education Institutions in Kenya. December -January 2006

FUNDING FOR PROJECTS:

1. UNITED NATIONS EDUCATIONAL CULTURAL ORGANISATION (UNESCO)
Annual Support for Postgraduate Diploma in Computer Science. (Training & Equipment) US \$ 2,000 annually. 1985 - 1989.
2. GOVERNMENT OF KENYA/OVERSEAS DEVELOPMENT ADMINISTRATION (ODA).
Microcomputers in Teaching and Research (Equipment, Academic & Technical staff Scholarships and Study Visits) 3 years Joint Project for Depts. of Physics, Electrical & Electronic Engineering and Institute of Computer Science. 1988-1991. Capital Cost UK Pounds 256,000. Technical Co-operation UK Pounds 572,000. TCT awards 9 PhD academic staff, TCT awards 3 for technical staff. UK Pounds 300,000.
3. GOVERNMENT OF KENYA/WORLD BANK
Supply of a Replacement Computer for University of Nairobi. GOVERNMENT OF KENYA/IDA 5th Education Project Amendment EDUC/IDA/5/29/88-89. US \$ 1,900,000.
4. GOVERNMENT OF KENYA/WORLD BANK
Infrastructure Development - Site Preparation: Extension to Institute of Computer Science Building. GOVERNMENT OF KENYA/IDA 5th Education Project Amendment EDUCA/IDA/5/29/88-89 Kshs. 4,700,000/-.
5. NATIONAL CASH REGISTER/UNIVERSITY OF NAIROBI
Donation of NCR Tower Model 32/400 5 workstations, Unix, suite of Software Kshs 1,600,000.
6. INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (IDRC)
East and Southern Africa Network (ESANET). Regional Telematics Project, 1990-1993. Data Communications for Development. Canadian Dollars 148,070 (Project Leader).
7. GOVERNMENT OF KENYA/WORLD BANK
University Investment Project, sub-project: Provision for Computer Diagnostics Laboratory, Enhancement of University Network and a Library Automation System. US \$ 1,015,000.
8. UNESCO/ROSTA
Directory of Specialised Informatics Institutions and Informatics Personnel in Africa. 1992 US \$ 6000. Update 1994 US \$ 2000.
9. COMMONWEALTH SECRETARIAT
Regional Programme for Trainers of Information Analysts in Africa (REPTIAA). 20 participants yearly for 1 month, UK Pound 50,000 Yearly 1994, 1995, 1996.
10. GOVERNMENT OF MAURITIUS: Skills and Information Technology Development Fund,
University of Mauritius Strategic IT Plan Project. 2000. MUR 1,500,000.
11. UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA: ‘Software research in e-government: A pilot project for East Africa ’ IUCEA co-ordinated project : VarsityNet 2003-2004 US\$30,000

EXTENSION TRAINING WORKSHOPS:

“Computing Awareness/Applications for Development/Management Information Systems”.

UNEP - 1986

School of Journalism - 1986

UNESCO/ANSTI: Engineering Education- Industry - 1986

IDRC - Workshop 1986

KEMRI - Workshop 1987

Kenya Computer Institute, 1988

Forum for Innovation and Incentives 1989

African Regional Organisation for Standardisation (ARSO) 1989

Kenya Bureau of Standards 1990

ATTEC 1990

Commonwealth Secretariat - REPTIAA, 1994, 1995, 1996

Kenyatta National Hospital 1996.

University of Mauritius 1998.

ADMINISTRATIVE REPORTS:

1. Communication Requirements for the UNIVERSITY OF NAIROBI. Senate Report 1986 (MAY) Committee Chairman.
2. RE-ORGANISATION OF Personnel Structure at Institute of Computer Science:1985 (November).
3. PROPOSAL for New Computing Facility for the University of Nairobi, November 1986: Chairman - Computer Advisory Committee.
4. U-K visit: Study Tour *REPORT* (June 1987).
5. University-Library Automation Committee *REPORT* Chairman 1988.
6. Central Universities Bursary Board, *GUIDELINES* for Universities Bursary Secretariats. January 1992.
7. *ORGANISATIONAL RESTRUCTURING & Rationalisation of Positions*, Institute of Computer Science, University of Nairobi; March 1993.
8. *STRATEGIC ACTION PLAN*: Headed for the next Millennium (1998-2003), Centre for Information Technology and Systems, University of Mauritius.
9. *INDUSTRIAL ATTACHMENT GUIDELINES*: Dept of Computer Science and Engineering, University of Mauritius, 1998.
10. Electrical Supply Committee *REPORT*: Strategies to enhance the Quality of Power Supply at the University of Mauritius, 1998.
11. *STRATEGIC PLAN (1999-2004)*: University of Mauritius, June 1999.
12. *DISCIPLINARY COMMITTEE: Investigation, Draft Charges and Supportive evidence*. A case of unauthorised access to email accounts. University of Mauritius, Jan 1999-September 2000.
13. *PROPOSED STRUCTURE: Objectives, Resources & Cost Estimates*. Virtual Centre for Innovative Learning Technologies, University of Mauritius, 2001-2004.
14. *STRATEGIC PLAN : School of Computing and Informatics: 2005-2010*

PROFESSIONAL REPORTS:

1. Management Information *STUDY*: University of Nairobi 1988.
2. Supply of a Replacement Computer for University of Nairobi. TENDER NO. EDUC/IDA/5/29/88-89. GOK/IDA.
- 2 (a) *OPERATIONAL REQUIREMENTS* - DEC 1988
- 2 (b) *BIDDING DOCUMENTS*: International Competitive Bidding - June 1989
- 2 (c) *TECHNICAL EVALUATION REPORT* 28/8/89
- 2 (d) *TENDER EVALUATION REPORT* 26/9/89
3. University of Nairobi-Computer *POLICY* September 1990.
- 4 *COMMISSIONING REPORT*: Supply of a Replacement Computer for University of Nairobi. TENDER NO. EDUC/IDA/5/29/88-89. GOK/IDA March 1991.
5. PROVISION for: Computer Diagnostics Laboratory, Enhancement of University Network and Library Automation System - *OPERATIONAL REQUIREMENTS* GOK/IDA University Investment Project. June 1991
6. *TERMS OF REFERENCE* Management Information Systems & Consultancy for The COMMISSION FOR HIGHER EDUCATION. NOVEMBER 1991.
7. *TERMS OF REFERENCE* Information Systems Consultancy for The LOAN RECOVERY SCHEME. NOVEMBER 1991.
8. UNIVERSITY INVESTMENT PROJECT: GOK/IDA *TECHNICAL EVALUATION REPORT*.
 - i) MIS Consultancy for Student Loan Recovery Scheme. (EDUC/UIP/09/91-92).
 - ii) Microcomputers for Student Loan Recovery Scheme. (EDUC/UIP/10/91-92)

- iii) MIS Consultancy for Commission For Higher Education. (EDUC/UIP/II/92-93).
 - iv) Supply of Computers & Related Equipment for:
University of Nairobi
Moi University
Kenyatta University
Egerton University
Maseno University College
EDUC/IDA/UIP/05/92-93
9. UNIVERSITY INVESTMENT PROJECT: GOK/IDA
BIDDING DOCUMENTS:
 - * Management Information System Consultancy for Commission For Higher Education. (EDUC/IDA/UIP/11/91-92).
 - * Private University Studies, EDUC/IDA/UIP/16/92-93.
 - * Socio-Economic Study of Access to University Education, Performance, Equity and Gender Issues. EDUC/IDA/UIP/17/92-93.
 - * Graduate Labour Market Study, EDUC/IDA/UIP/18/92-93.
 - * Supply of Computers & Related Equipment.
 10. UNIVERSITY INVESTMENT PROJECT: GOK/IDA *TERMS OF REFERENCE & OPERATIONAL REQUIREMENTS:*
 - * Computing Facilities for Policy & Planning Task Group (PPTG).
 - * Enhancement of the University of Nairobi Computer Network System.
 11. KENYA GRAIN GROWERS CO-OPERATIVE UNION LTD.
TECHNICAL EVALUATION REPORT: Information Systems for KGGCU LTD. 1994.
 12. GOVERNMENT OF KENYA/WORLD BANK.
Cost and Financing of Education Studies: Access, Equity and Quality of Tertiary Education and Training. Study No. 3. 1995. Tender 2/94-95.
 13. HIGHER EDUCATION LOANS BOARD *MEANS TESTING SYSTEM REPORTS:* Financial, Control, Payment & Press. *STRATEGIC RECOMMENDATIONS:* Loan Application Processing. 1996.
 14. HEALTH REHABILITATION PROJECT: GOK/WORLD BANK. *BIDDING DOCUMENTS & TECHNICAL SPECIFICATIONS:* Supply, Delivery, Installation and Support of a Computer-based Management Information System and Related Services for Kenyatta National Hospital. 1997.
 15. MAURITIUS STANDARDS BUREAU: *BIDDING DOCUMENTS AND TECHNICAL SPECIFICATIONS:* Electrical Installation for Computerization Project. 1999.
 16. MAURITIUS STANDARDS BUREAU: *TECHNICAL EVALUATION REPORT* for Electrical Installation for Computerisation Project 1999.
 17. MAURITIUS STANDARDS BUREAU: *PROPOSAL* for setting up an MIS Department 1999.
 18. DEVELOPMENT BANK OF MAURITIUS LTD: *BIDDING DOCUMENTS AND TECHNICAL SPECIFICATIONS* Structured Cabling Project. 1999.
 19. TERTIARY EDUCATION COMMISSION/UNIVERSITY OF MAURITIUS: Computerization of Financial Management of TEC and TEIs. Enterprise Resource Planning :Project Appraisal. 2001.
 20. KENYA REVENUE AUTHORITY: *Pre-qualification Tender Evaluation Report;* Supply and Implementation of an Integrated Customs Systems and Associated Consultancy Services. Tender no. KRA/HQs/62/2003-2004
 21. UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA: "Software research in e-government: A pilot project for East Africa " IUCEA co-ordinated project : VarsityNet 2003-2004
 22. UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA: " COMESA e-Strategy Study –Instruments " August 2004
 23. UNIVERSITY OF NAIROBI ENTERPRISES & SERVICES : Strategic Plan 2005-2010
 24. PUBLIC UNIVERSITIES INSPECTION BOARD: ICTs in development: Contexts,Challenges and Interventions. January 2006
 25. PUBLIC UNIVERSITIES INSPECTION BOARD: Information and Communication Technology Status in Higher Education Institutions in Kenya. January 2006

- 26 INTER UNIVERSITY COUNCIL FOR EAST AFRICA; ICT Education : Trends, Risks and Opportunities Editor(joint) : Report of the meeting of the specialised committee on ICT education in East Africa, November 2006.
- 27 UNIVERSITY OF NAIROBI: Upgrading of the University of Nairobi Primary Data Centre. Tender No UON/T/49/2006-2007. *TECHNICAL EVALUATION REPORT* June 2007.

PROJECT MANAGEMENT OF APPLICATION SOFTWARE DEVELOPMENT:

1. University of Nairobi - *Payroll System* Security, Monthly Reports, Cumulative Tax Reports. 1987.
2. *Computer Aided Personnel Information System* (CAPIS). 1989.
3. *Joint Admission Board System* (JAB): Principles and Procedures, Systems Analysis & Design. 1990.
4. *Computerised Undergraduate Registration and Examination System* (CURES). 1991.
5. *Management Information Systems*: University of Nairobi. 1987.
6. *Means Testing System* - Public Universities: Systems Analysis and Design. 1991.
7. *Planning, Programming & Budgeting System for PPTG*: System Analysis & Design. 1993.
8. *Loan Scheme Recovery Models*; Formulation and Simulation 1991, PPTG.
9. *Loan Scheme Funding & Subsidy Models*; Formulation & simulation 1994, PPTG.
10. *Means Testing System* - Higher Education Loans Board: Implementation Phase. 1995.
11. *Analysis and Design*: Computer-Based Management Information Systems, Kenyatta National Hospital 1997.
12. *Integrated MIS-Intranet*: University of Mauritius, 1998 -2001(Modules) Human Resource; Assets and Inventory; Admission and Nominal Roll; Student Information.

CITATIONS:

- 1997 Marquis Who's Who in the World.
1997 Dictionary of International Biography, International Biographical Centre, Cambridge.
1998-99 Marquis Who's Who in Science and Engineering

REFEREES:

1. Prof. Edward L. Roberston
Computer Science Department, 101 Lindley Hall
Indiana University
Bloomington, Indiana 47405-4101, USA
2. Prof. Barry Arthur Levine
Computer Science Department
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132, USA
3. Prof G. Michael Schneider
Dept. of Computer Science
1600 Grand Ave.
St Paul, MN 55105, USA.