

# CURRICULUM VITAE FOR PROFESSOR JOSEPH Y.T. MUGISHA

## PERSONAL DATA

Name Professor Joseph Y.T. Mugisha  
Current Position Professor of Biomathematics  
Nationality Ugandan  
Department of Mathematics, Makerere University,  
P.O. Box 7062, Kampala Tel: +256 772 415 999, jytmugisha@cns.mak.ac.ug  
**FELLOW of Uganda National Academy of Sciences (FUNAS)**

## QUALIFICATIONS

**2000 PhD (Biomathematics) Thesis:** The Spread of HIV/AIDS Pandemic in (Age-) Structured Populations. **Supervisor:** Professor Livingstone Serwadda Luboobi

**1992 MSc (Biomathematics) Thesis:** Mathematical Models for the spread of HIV/AIDS in a Three-age groups population. **Supervisor:** Professor Livingstone Serwadda Luboobi

## WORKING EXPERIENCE

### **Administrative Experience**

2011 - Present Principal, College of Natural Sciences, Makerere University  
2009 – 2010 Dean, Faculty of Science Makerere University  
2003 - Aug 2005 Deputy Director, Institute of Computer Science Makerere University  
2003 Aug & Dec. Ag. Director, Institute of Computer Science Makerere University  
++ I have acted as Deputy Vice Chancellor, Makerere University on several occasions

### **Employment Record**

2008 July - Present	Department of Mathematics	Makerere University	Professor
2005 - 2008	Department of Mathematics	Makerere University	Assoc. Professor
2001- 2005	Department of Mathematics	Makerere University	Senior Lecturer
1993- 2000	Department of Mathematics	Makerere University	Lecturer
1987- 1992	Department of Mathematics	Makerere University	Teaching Assistant

## PUBLICATIONS

1. Mbava, W., **Mugisha, J.Y.T.** and Gonsalves, J.W. (2017). Prey, Predator and Super-predator model with disease in the super-predator. *Applied Mathematics & Computation*, **297**: 92 – 114
2. Kitayimbwa, J.M. **Mugisha, J.Y.T.** & Saenz, R.A. (2016). Estimation of the HIV-1 backward mutation rate from transmitted drug-resistant strains. *Theoretical Population Biology*, **112**: 33 – 42
3. Nakakawa, J., **Mugisha, J.Y.T.**, Shaw, M.W., and Karamura, E. (2016) A Mathematical Model for the dynamics of Banana *Xanthomonas Wilt* with vertical transmission and Inflorescence infection. *Journal of Biological Systems* **24**(1): 147 - 165
4. Switkes, J., Nannyonga, B., **Mugisha, J.Y.T.**, and Nakakawa, J. (2016). A mathematical model for Crimean-Congo haemorrhagic fever: tick-borne dynamics with conferred host immunity. *Journal of Biological Dynamics* **10**(1):59-70.
5. Gamukama, E.A, Larson, A., Popov, O., and **Mugisha, J.Y.T.** (2015). The Decision Model for the Internet Services in the Context of Development. *Procedia Computer Science* **55**: 622 – 631.
6. Nampala H., Luboobi L.S., **Mugisha J.Y.T.**, Obua C., Sabuka M.J., and Matti Heilio (2015) Modelling Effective Antiretroviral Therapy that Inhibits HIV Production in the Liver. *Journal of Antivirals and Antiretrovirals* **7**: 43-51.
7. Nampala, H., Luboobi, L.S., **Mugisha J.Y.T.**, Obua C. (2014). Modelling Hepatotoxicity of Antiretroviral Therapy in the Liver during HIV Mono-infection. *International Journal of Computational Mathematics* 1 – 18. Paper ID 659675
8. Kajunguri, D, Hargrove, J.W, Rachid Ouifki, R., **Mugisha, J.Y.T.**, Coleman, P.G., Susan C. Welburn, S.C. (2014). Modelling the Use of Insecticide-Treated Cattle to Control Tsetse and *Trypanosoma brucei rhodesiense* in a Multi-host Population. *Bulletin of Mathematical Biology* **76**(3):673-696
9. Otieno, J., **Mugisha, J.Y.T.**, Nannyonga, B.K. (2014). Parameter Driven Dynamics of Trypanosomiasis in Cattle population. *Applied Mathematical Sciences* **8**(54): 2665 – 2685
10. Ong’ala Jacob Otieno, **Mugisha, Joseph**, Oleche, Paul (2014). A probabilistic estimation of the basic reproduction number: A case of control strategy of pneumonia. *Science Journal of Applied Mathematics and Statistics* **2**(2): 53 – 59
11. Kitayimbwa, JM, **Mugisha, J.Y.T.**, Saenz, RA (2013).The role of backward mutations on the within-host dynamics of HIV-1. *Journal of Mathematical Biology* **67**(5): 1111-1139

12. Akinyi, OC, **Mugisha, J.Y.T**, Manyonge, A, Ouma, C (2013). Modelling the Impact of Misdiagnosis and Treatment on the Dynamics of Malaria Concurrent and Co-infection with Pneumonia. *Applied Mathematical Sciences*. 7(126):6275-6296
13. H. Ddumba, **J.Y.T. Mugisha**, J.W. Gonsalves, G.I.H. Kerley (2013). Periodicity and limit cycle perturbation analysis of a predator-prey model with interspecific species' interference, predator additional food and dispersal. *Applied Mathematics and Computation*. 219:8338-8357
14. Onga'la Jacob Otieno, **Mugisha Joseph**, Oleche Paul (2013) Mathematical Model for Pneumonia dynamics with Carriers. *International Journal of Mathematical Analysis*, 7(50):2457 - 2473
15. Ibrahim M. ELmojtaba, **J.Y.T.Mugisha** and Mohsin H.A. Hashim (2013). Vaccination model for visceral leishmaniasis with infective immigrants. *Mathematical Methods in Applied Sciences*. 36:216-226
16. Hasifa Nampala, Livingstone S. Luboobi, Joseph **Y.T. Mugisha**, Celestino Obua (2013). Mathematical modeling of liver enzyme elevation in HIV mono-infection. *Mathematical Biosciences* 242:77–85
17. Rugumisa, T.H., Charles, W.M. and **Mugisha, J.Y.T.** (2012). Modeling of a Predator prey dynamic system with harvesting using the lattice gas approach. *African Journal of Mathematical and Computer Science Research*. 5(8):135-147.
18. Betty Nannyonga, David J. T. Sumpter, **Joseph Y. T. Mugisha** and Livingstone S. Luboobi (2012). The Dynamics, Causes and Possible Prevention of Hepatitis E Outbreaks *Plos One* July 2012 | Volume 7 | Issue 7 | e41135
19. B. Nannyonga, **J.Y.T. Mugisha** and L.S. Luboobi (2011) Evaluating the effectiveness of DDT house spraying in persistent and re-emerging malaria. *Afrika Matematika*. Online version DOI: 10.1007/s13370-011-0053-7
20. Ddumba, H., **Mugisha, J.Y.T.**, Gonsalves, J.W. & Kerley, G.I.H. (2012) The role of predator fertility and prey threshold bounds on the global and local dynamics of a predator-prey model with a prey out-flux dilution effect. *Applied Mathematics and Computation* 218(15): 9169 – 9186
21. Nannyonga, B., **Mugisha, J.Y.T.** & Luboobi, L.S. (2012). Does co-infection with malaria boost persist of trypanosomiasis? *Nonlinear Analysis: Real World Applications* 13(3): 1379-1390.
22. Nabasirye, M., **Mugisha, J.Y.T.**, Tibayungwa, F. & Kyarisima, C.C. (2011). Optimization of input in animal production: A linear programming approach to the ration formulation problem. *International Research Journal of Agric & Soil Sciences*, 1(7): 221 – 226.
23. Nannyonga, B., **Mugisha, J.Y.T.** & Luboobi, L.S. (2011). Modelling the role of HIV-positive immigrants and dual protection in a co-infection of malaria and HIV/AIDS. *Applied Mathematical Sciences*, 5(59): 2919 – 2942

24. Lawi G. O., **Mugisha J. Y. T.** and Omolo - Ongati , N. (2011) Mathematical Model for Malaria and Meningitis Co-infection among Children. *Applied Mathematical Sciences*, **5**(47):2337 – 2359
25. Tibayungwa, F., **Mugisha, J.Y.T.** & Nabasirye, M. (2011). Modelling the effect of supplementing elephant grass with lablab and desmodium on weight gain of dairy heifers under stall-feeding system. *African Journal of Agric. Research*, **6**(14): 3232-3239.
26. Tibayungwa, F., **Mugisha, J.Y.T.** & Nabasirye, M. (2011). Qualitative analysis of livestock-forage system in the stall-feeding smallholder dairy cattle system. *African Journal of Agric. Research*, **6**(4): 834-843.
27. Tibayungwa, F., **Mugisha, J.Y.T.** & Nabasirye, M. (2010). Modeling nitrogen excretion, elephant grass growth and animal production in stall-feeding dairy system, *African Journal of Agric. Research*, **5**(15): 2039-2044.
28. Tibayungwa, F., **Mugisha, J.Y.T.** & Nabasirye, M. (2010). Modeling growth of dairy cattle heifers fed on elephant grass under stall-feeding system in Uganda, *African Journal of Agric. Research*, **5**(11): 1220 – 1227
29. Ibrahim M. ELmojtaba, **Mugisha, J.Y.T.** & Mohsin H.A. Hashim (2010). Mathematical Analysis of the dynamics of visceral leishmaniasis in the Sudan. *Applied Mathematics and Computation*, **217**(6): 2567-2578
30. Ibrahim M. ELmojtaba, **Mugisha, J.Y.T.** & Mohsin H.A. Hashim (2010). Modelling the role of cross-immunity between two different strains of leishmania. *Nonlinear Analysis: Real World Applications*, **11**(3): 2175 – 2189
31. Tumwiine J., **Mugisha, J.Y.T.** & Luboobi, L.S. (2010). A host-vector model for malaria with infective immigrants *J. Math. Anal. Appl.* **361**(1) 139–149
32. Tumwiine J., **Mugisha, J.Y.T.** & Luboobi, L.S. (2008) . Threshold and stability results for a malaria model in a population with protective intervention among high-risk groups. *Math. Model. Anal.* **13**(3): 443-460
33. Tumwiine, J. **Mugisha, J.Y.T.** and Luboobi, L.S. (2008). On global stability of the intra-host dynamics of malaria and the immune system. *J. Math. Anal. Appl.* **341**(2): 855-869
34. Tumwiine, J. Luckhaus, S., **Mugisha, J.Y.T.** and Luboobi, L.S. (2008). An age-structured mathematical model for within host dynamics of malaria and the immune system. *J. Math. Model. & Algorithms*, **7**: 79-97
35. Baryarama, F. and **Mugisha, J.Y.T.** (2007). Comparison of Single-Stage and Staged Progression models for HIV/AIDS Transmission. *Intern. J. Math. Math. Sci.* **2007**: 1 – 11
36. Tumwiine, J., **Mugisha, J.Y.T.** and Luboobi, L.S. (2007): A mathematical model for the dynamics of malaria in a human host and mosquito vector with temporary

- immunity. *Applied Mathematics and Computation*, **189**(2): 1953-1965
37. Tumwiine, J., **Mugisha, J.Y.T.** and Luboobi, L.S. (2007): On Oscillatory pattern of malaria dynamics in a population with temporary immunity. *Computational and Mathematical Methods in Medicine*, **8**(3): 191 – 203
  38. **Mugisha, J.Y.T.** and Ddumba, H. (2007): The Dynamics of a Fisheries Model with Feeding Patterns and Harvesting: *Lates niloticus* & *Oreochromis niloticus* in Lake Victoria. *Applied Mathematics and Computation*, **186**(1): 142 – 158 .
  39. Baryarama, F., **Mugisha, J.Y.T.** and Luboobi, L.S. (2006): A Mathematical Model for the Dynamics of HIV/AIDS with Gradual Behaviour Change. *Computational and Mathematical Methods in Medicine* **7**(1): 15-26
  40. Baryarama, F., Mugisha, J.Y.T. and Luboobi, L.S. (2006): Mathematical Model for HIV/AIDS with Complacency in a population with declining prevalence. *Computational and Mathematical Methods in Medicine* **7**(1): 27-35
  41. **Mugisha, J.Y.T.** (2005): Balancing Treatment and Prevention: The Case of HIV/AIDS. *Amer. J. Appl. Sci.* **2**(10):1380-1388
  42. Ssematimba, A., Mugisha, J.Y.T. and L.S. Luboobi (2005). Mathematical Models for the Dynamics of Tuberculosis in Density-Dependent Populations: The Case of Internally Displaced Peoples' Camps (IDPCs) in Uganda. *J. Math. & Stat.* **1**(3): 217-224
  43. Simwa, R.O. and Mugisha, J.Y.T. (2005): A Model for the CD4 cells counts in an HIV/AIDS patient and its application in treatment interventions. *Amer. J. Infect. Dis.*, **1**(1):61-64
  44. Baryarama, F., Mugisha, J.Y.T. and Luboobi, L.S. (2005): An HIV/AIDS Model with variable force of infection and its application to the epidemic in Uganda. *Amer. J. Appl. Sci.* **2**(9): 1274-1278
  45. Kakooza, R., Luboobi, L.S. and Mugisha, J.Y.T. (2005): Modelling Traffic flow and Management at Un-signalized, signalized and Roundabout road intersections. *J. Math & Stat.* **1**(3):194-202.
  46. Luboobi, L.S., Namusoke, S.S. and Mugisha, J.Y.T. (2005). Modeling Pulse-type System Response to Human Immunodeficiency Virus (HIV). *Intern. J. Mgt. & Syst.*, **21**(3): 213-224
  47. Tumwiine, J., Luboobi, L.S. & Mugisha, J.Y.T. (2005). Modeling the Determinants of anti malarial drug resistance. *Intern. J. Mgt. & Syst.*, **21**(2): 125-146
  48. **Mugisha, J.Y.T.** (2005): On the dynamics of S-I-S Epidemic in a two-age groups population. *Intern. J. Mgt. & Syst.*, **21**(2): 166-182
  49. **Mugisha, J.Y.T.** and L. S. Luboobi (2003): Modelling the Effect of Vertical Transmission in the Dynamics of HIV/AIDS in an Age-structured Population. *South Pac. J. Nat. Sci.* **Vol. 21**: 82 - 90.

50. **Mugisha, J.Y.T.** and Luboobi, L.S. (2002): The Effect of Treatment of HIV/AIDS patient in a Two-Age Groups Population. *SAMSA Journal* **Vol. 2**: 106 – 130.
51. **Mugisha, J.Y.T.** and Luboobi, L.S. (2000): The Endemicity of HIV/AIDS in a Three-Age Structured Population. *Intern. J. Mgt & Syst.* **Vol. 16(2)**: 126-136.
52. Mugisha, J.Y.T. (2003): *Elements of Probability and Statistics*. Published by Department of Distance Education, Makerere University. Kampala. **ISBN 9970 423 11 2**
53. Mugisha, J.Y.T. and Luboobi, L.S. (2003): *Ordinary Differential Equations*. Published by Department of Distance Education, Makerere University. Kampala. **ISBN 9970 423 19 5**.

## List of Graduate Students Supervised

### PhD Students Supervised

1. Tumwiine, Julius: *Mathematical Models for Malaria: The role of immune Response, temporary immunity and preventive interventions*. PhD Mathematics (MUST) [with Professor L.S. Luboobi] [**Completed 2008**] (**Mbarara University of Science & Technology**)
2. Baryarama, Flugentius: *Mathematical Models for HIV/AIDS: Incorporating Behaviour Change, Staged Progression and Complacency*. PhD Mathematics [with Professor L.S. Luboobi] [**Completed 2006**] (**Makerere University**)
3. Agnes Rwashana: *Application of Systems Dynamics modeling to immunization policy analysis* [with Dr. Ddembe & Dr. Neema] (PhD Computer Science) [**Completed 2008**] (**Makerere University**)
4. Tibayungwa, F. *Modeling nitrogen cycling in livestock-forage systems: Incorporating storage losses of excreted nitrogen, animal and forage performance, and sustainability*. PhD Agriculture [with Dr. M. Nabasirye] [**Completed 2010**] (**Makerere University**)
5. Ibrahim Mohammed El Mojtaba. *Modelling the dynamics of Leishmaniasis in a population with Reservoir Hosts in Sudan* PhD (Mathematics) [with Dr. Hashim] (**Completed 2011**) (**University of Khartoum**)
6. Betty Nannyonga. *Modelling the severity of Malaria co-infection and dual infection with persistent and re-emerging infections* PhD (Mathematics) [with Prof. L.S. Luboobi] (**Completed 2011**) (**Makerere University**)
7. Hassan Ddumba. *Modelling the dynamics of two-prey- two-predator systems: The case of Oddo National park* (PhD Mathematics) [with Prof. John Gonsalves & Prof. G. Kelly] (**Completed 2012**) (**Nelson Mandela Metropolitan University, Port Elizabeth**)
8. Damian Kajunguri *Modelling the control of tsetse and African trypanosomiasis through application of insecticides on cattle in Southeastern Uganda* (PhD Mathematics)[with Prof. C. Waiswa, and Prof. J. Hargrove] [**Completed 2012**] (**University of**

## Stellenbosch).

9. Lawi George *Modelling the pediatric co-infections with malaria among children in Kenya*. (PhD Mathematics) Maseno University, Kenya [with Prof. Omolo-Ongati] [**Completed 2013**](Maseno University, Kenya)
10. John M. Kitayimbwa. *Modelling Viral dynamics of HIV during combinational therapy amidst possible emergence of drug-resistant strains*. (PhD Mathematics) (with Roberto Saez) [**Completed 2014**] (Makerere University)
11. Colleta Akinyi Okaka *Modelling the impact of misdiagnosis and treatment on the dynamics of malaria concurrent and with Pneumonia* (PhD Mathematics) Maseno University, Kenya [with Prof. Manyonge, Prof. Ouma] [**Completed 2014**] (Maseno University, Kenya)
12. Hasifa Nampala *Modelling Hepatotoxicity and Antiretroviral Therapeutic effect in HIV Monoinfection and Coinfection with HBV*. (PhD Mathematics) [With Prof. L.S. Luboobi And Prof C Obua] (**Completed 2015**) (Makerere University)
13. Otieno Joyce Oduor *Optimal Control of trypanosomiasis in Cattle in the cattle corridor of central Kenya*. PhD Mathematics) [with Prof. Oleche, P. Dr. Nannyonga, Betty.] (**Completed 2015**) (Maseno University, Kenya)
14. Willard Mbava *Modelling Dispersal Processes in Impala-Cheetah-Lion Ecosystem with Infection in Lions* (PhD Mathematics) Nelson Mandela **Completed 2016** [with Prof. John Gonsalves] Nelson Mandela Metropolitan University, Port Elizabeth, South Africa
15. Ong'ala Jacob Otieno *Modeling the Dynamics of Bacteremic Pneumonia: The role of Control Strategies, Case Detection and Prophylaxis* (PhD Mathematics) (with Prof. Oleche P, (**Completed 2016**) (Maseno University, Kenya)
16. Juliet Nakakawa (2012) *Multi-patch Models for the Dynamics of Banana Xanthomonas Wilt Incorporating Transmission Drivers, Latency and Resurgence* ([ongoing](#))
17. Heinrich Smith (2009) PhD student Nelson Mandela Metropolitan University, Port Elizabeth South Africa: *Modelling the dynamics of sea turtles along the western cape: The case of Kruger National park* (PhD Mathematics) [with Prof. John Gonsalves] (On going)

## MSc Thesis

1. Tresia Holtzhausen (2011) *Modelling the impact of hiv status and mixed sexual orientation partnerships in a model of hpv 16,18 transmission dynamics and vaccination* (MSc Math Modelling) Nelson Mandela Metropolitan University (**Completed**)
2. Alfred Dratele (2010) *Mathematical model for analysing the Transmission dynamics of plague epidemic in Okoro County, Nebbi district Northwest Uganda* ((MSc Math Modelling) (**Completed**).

3. Alex Tumwesigye (2010) *On the applications of Poincare Bendixson theorem*. M. Mathematics) Makerere University [**Completed**]
4. Michael Samson (2010) *Harvesting of a Single-Species (Nile Tilapia) System Incorporating Stage Structure and Toxicity Using a Delay Model* (MSc Math Modelling) University of Dar es Salaam [**Completed**]
5. Rugumisa, Terentius (2009): *A stochastic approach to the prey predator dynamic system with harvesting using Lattice Gas Model* (MSc Math Modelling) University of Dar es Salaam [**Completed**]
6. Kira Justine William (2010): *Modelling the effect of Optimizing Clean Renewable Energy Revenues Over Rotation Ages*. (MSc Math Modelling) University of Dar es Salaam [**Completed**]
7. Qanne, Slaa (2009) *Modelling the dynamics of TB in sanatorium with detective interventions* (MSc Math Modelling) University of Dar es Salaam [**Completed**]
8. Sanga, Stephano (2009) *Modeling the dynamics of malaria with Temperature variations in Tanzania* (MSc Math Modelling) University of Dar es Salaam [**Completed**]
9. Swai, Mary (2009) *Models for assessing the role of Government interventions on HIV/AIDS* (MSc Math Modelling) University of Dar es Salaam [**Completed**]
10. Akugizibwe Edwin (2008) *Analysis of a one-predator two-preys system with harvesting, Holling type II and ratio-dependent responses* [MSc Mathematics] [**Completed**]
11. Arinaitwe Nicholas (2008) *Modelling transmission and control of human Onchocerciasis in Uganda* [MSc Mathematics] [**Completed**]
12. Mbabazi, Fulgencia (2007). *Mathematical Models for the transmission dynamics of human African Trypanosomiasis with open vector populations*. [MSc Mathematics]. [**Completed**]
13. Ssematimba, Amos (2005). *Mathematical Models for the Dynamics of Tuberculosis in Density-Dependent Populations: The Case of Internally Displaced Peoples' Camps (IDPCs) in Uganda*. MSc Mathematics [with Professor L.S. Luboobi] (**Completed**)
14. Ddumba, Hassan (2005). *The dynamics of a Fisheries model with Harvesting and Feeding habits: The Nile Perch and Tilapia in Lake Victoria*. MSc Mathematics [with Prof. P.E. Mugambi] (**Completed**).
15. Kakooza, Ronald (2005). *Modelling Traffic flow and Management at Un-signalized, Signalized and Roundabout road Intersections*. MSc Mathematics [with Professor L.S. Luboobi] (**Completed**)
16. Nabiyonga, Betty (2004): *Modelling the Immune system response to Malaria parasites*. MSc Mathematics [with Professor L.S. Luboobi] (**Completed**)

17. Tumwiine, Julius (2002). *Mathematical Models for Quantifying Resistance of Malaria Parasites to Drugs*. MSc Mathematics [with Professor L.S. Luboobi (**Completed**)
18. Nakiyimba, Irene (2005). *Performance Monitoring and evaluation system for telecentres in Uganda*. MSc (Computer Science). (**Completed**)
19. Mwebaze Ernest (2005). *A Thin Client Open Source Model for a Rural Health Facility*. MSc (Computer Science) (**Completed**)
20. Mbabazi, Mary (2005). *On Efficient Delivery of Multimedia Streams in Packet Switched Networks*. MSc Computer Science. (**Completed**)
21. Sanya, Rahman (2005). *A Framework for Hospital Workflow Systems*. MSc Computer Science (**Completed**)
22. Kivunike, Florence (2003): *A framework for an improved intranet Development Process in higher institutions of learning*. MSc Computer Science (**Completed**)
23. Tumwine, Elly (2003) *The Impact of Automated Management Systems On Secondary Schools Administration*. MSc Computer Science (**Completed**)
24. Kiwana, David (2003) *Designing and developing a Finance Management system*. MSc Computer Science (**Completed**)

### **Makerere University Activities and Committees**

- Senate Member, Makerere University - 2009 – Present
- Member Makerere University Staff Tribunal - 2015 - present
- Chairperson, Deputy Vice Chancellor (F&A) Search Committee - 2012
- Chairperson, Principals Forum - 2012
- Representative of Principals on Senate - 2012
- Acted as Deputy Vice Chancellor (Academic Affairs) and F&A - Many times
- Departmental Representative Faculty Research and Higher Degrees
- Programmes Developed and presented until final approval: MSc in Mathematical Modelling
- Co-opted member Establishment and Appointments committee – College of Education and External Studies on three occasions, CEDAT, CEES and in COBAMS
- Board Member, Institute of Statistics and Applied Economics 2009, 2010

### **Some Other Committees**

- Chairperson and Member, Adhoc Committee on streamlining Makerere University Examination Results Management
- Member, Steering Committee on African Development Bank IV Project, Makerere University
- Team Leader, Northern Corridor Integration Projects Human Capacity Building Cluster Skills Audit
- Member, Governing Council of Uganda Petroleum Institute Kigumba

- Chair, Governing Council of Uganda Petroleum Institute Kigumba
- Chaired Public Universities Joint Admissions Board on a couple of times

### **Professional Assignments**

- Research Associate, Faculty of Science, Nelson Mandela Metropolitan University, 2011-2013, 2014 - 2016
- Examinations Moderator/External Examiner, Nelson Mandela Metropolitan University 2008, 2009, 2010
- External Examiner, National University of Science and Technology, Bulawayo, Zimbabwe, 2013, 2014, 2015, 2016
- External Examiner, Stellenbosch University 2008, 2010 (MSc & PhD Theses)
- External Examiner, University of Nairobi, Kenya 2008, 2009, 2010, 2013, 2014, 2015
- External Examiner, Moi University, 2015, 2016, 2017
- External Examiner, Mbarara University of Science and Technology 2008, 2009, 2010, 2013, 2014, 2015
- External Examiner, University of Botswana, Botswana 2007, 2009 ( MSc & PhD Thesis)
- External Examiner, Kenyatta University, Kenya 2007, 2008, 2009, 2010 (and theses)
- Visiting Professor, University of Dar es Salaam 2008, 2010
- Reviewer for Research Proposal for DST, South Africa 2009
- Team member for Selection of Research grants to African Biomathematics Graduate Students, University of Rutgers & Princeton University USA, 2008, 2009
- Consultant International Mathematical Union 2008 and 2012
- United Nations Volunteer on ICT in charge of recruit of UNV participants in Uganda 2006

### **Post Doctoral Research**

11<sup>th</sup> June - 11<sup>th</sup> Aug 2001 Cornell University, Ithaca, NY:- A Two-Months Postdoctoral research at The Mathematical and Theoretical Biology Summer Institute (MTBI)

1<sup>st</sup> September – 30<sup>th</sup> October 2002 University of Bergen, Norway:- A Two-Months Postdoctoral Research Support by NUFU, at Department of Mathematics, University of Bergen.

### **Journal Reviewer**

Worked as Reviewer for the following International Journals:

- Mathematical Biosciences – Elsevier
- Journal of Agricultural, Biological and Ecological Statistics, American Statistical Society
- Ecological Modelling
- Mathematical Modelling and Analysis
- Africa Journal of Science and Technology
- South African Journal of Sciences
- Mathematical Biosciences and Engineering
- Computers and Mathematics with Applications
- Computational and Applied Mathematics
- Mathematical and Computer Modelling

## Membership to professional bodies

<u>Year</u>	<u>Society</u>
2009	President African Society for Biomathematics
2008	Steering Committee member, African Society for Biomathematics
2003 – Present	Founder member, African Society for Biomathematics
1996 - Present	Member American Mathematical Society
1990 - Present	Member Uganda Mathematical Society
1998 - Present	Member Uganda Biometric Society

## SOME CONFERENCES / SEMINARS / COURSES ATTENDED

- 18 – 20 August 2010 Strathmore University 1st Conference in Mathematics Invited speaker and Scientific Organising Committee member
- 20 – 26 November 2011 Stellenbosch University Biomathematics Conference Invited Speaker
- 28 – 04 December 2010 University of Botswana SAMSA Conference Contributed Speaker
- 13 – 17 July 2010 AIMS Cape Town Mathematics Conference on Diversity in Mathematics invited Speaker
- 3<sup>rd</sup> – 8<sup>th</sup> January 2008 Marrakech International conference and workshop on Mathematical Biology, Cadi Ayyad University, Marrakech, Morocco
- 12<sup>th</sup> - 15<sup>th</sup> March 2007 Mathematical Biology Workshop, Mathematical Biosciences Institute, The Ohio State University, USA
- 23<sup>rd</sup> – 26<sup>th</sup> January, 2007 Biomathematics Conference, Department of Mathematics and Applied Mathematics, University of Cape Town, South Africa
- 03<sup>rd</sup> – 10<sup>th</sup> December, 2006 East African Mathematics conference and Mathematical Biology Workshop, University of Nairobi, Kenya
- 15<sup>th</sup> – 22<sup>nd</sup> June, 2006: International Conference on Differential Equations and Applications, University of Marrakech, Morocco
- 31<sup>st</sup> Jan. – 2<sup>nd</sup> Feb. 2006: Conference on Mathematical Biology and Biocomplexity in Africa, Department of Mathematics and Applied Mathematics, University of Cape Town, South Africa

## SOME CONFERENCE ORGANIZATION

- Member Organizing and Scientific Committee, Pan African Congress of Mathematicians RABAT Morocco, July 2017
- Scientific Committee, Marrakech International Conference and workshop on Mathematical Biology, 3-8 January 2008
- Co-Organizer and Host, with Professor Abba Gumel, Canada-African Biomathematics Initiative meeting, 11-13 November 2007, Kampala, Uganda
- Co-Organizer of the 2<sup>nd</sup> Biomathematics Conference 23 – 26 January, 2007 at University of Cape Town, South Africa
- Co-Director (with Professor Abba Gumel of University of Manitoba), Mini-course on

Mathematical Biology, Mathematical Biology Workshop, University of Nairobi, Kenya,  
07 – 10 December 2006

- International Scientific Committee member of Mathematical Biology Workshop organized by AMMSI, 07 – 10 December 2006, University of Nairobi
- Secretary, Local Organizing Committee (Chairman: Professor L.S. Luboobi) for the 1<sup>st</sup> Pan African Biomathematics Congress that took place on 8<sup>th</sup> –12<sup>th</sup> December, 2003 where I was elected the Pioneer Secretary of the African Biomathematics Society (ASB).

### **Referees**

Professor L.S. Luboobi  
Department of Mathematics  
Makerere University  
P.O. Box 7062, Kampala

Professor Juma Kasozi  
Department of Mathematics  
Makerere University  
P.O. Box 7062, Kampala