

Amos Ssematimba, Ph.D.
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CURRICULUM VITAE

Personal details

Name: Amos Ssematimba

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Key qualifications, research interests and expertise

Ssematimba is a Senior Mathematics Lecturer at Gulu University, Gulu, Uganda having started as a teaching assistant in 2002. He holds a PhD in applied Mathematics from Wageningen University, Wageningen, The Netherlands, a Master of Science degree in Mathematics from Makerere University, Kampala, Uganda, and a Bachelor of Science with education (Hons) degree (Mathematics and Physics) from Mbarara University of Science and Technology, Mbarara, Uganda.

He has been teaching at university level and doing research since 2002. His areas of research interest are in applied mathematics such as dynamical systems, population dynamics and ecological modelling, modelling of infectious disease dynamics, mathematical epidemiology and risk analysis. He has worked on modelling of spread dynamics, control and risk assessment for infectious diseases such as tuberculosis, avian influenza, African swine fever, contagious bovine pleuropneumonia, Foot-and-Mouth disease and most recently, COVID-19.

He has had research collaborations with Wageningen Bioveterinary Research, Lelystad, the Netherlands, the International Livestock Research Institute (ILRI), Nairobi, Kenya, Makerere University, Kampala, Uganda and University of Minnesota, USA. He is an external examiner for Makerere University, Kampala, Uganda, Strathmore University, Nairobi, Kenya, Tshwane University of Technology, Pretoria, South Africa, and The Nelson Mandela African Institution of Science and Technology, Arusha, Tanzania. He has also served as a PhD supervisor for University of Pretoria, Pretoria, South Africa. He has also served as a peer reviewer for several scientific journals as well as assessed several research grant applications.

Academic background

2008 – 2012	Wageningen University	PhD
2003 – 2006	Makerere University	MSc (Mathematics)
1998 – 2001	Mbarara Univ. of Science &Tech	BSc Ed.(Hons) Math/Phy

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Selected working experience

- | | |
|----------------|--|
| 2002 – to-date | Gulu University: Rose through the ranks to Senior Lecturer, Mathematics <ul style="list-style-type: none">• Lecturing and examining students• Coordinating the activities in mathematics department• Contributing to curriculum development• Supervising students' research projects• Headed mathematics department until 2008 |
| 2016 – 2018 | University of Minnesota: Researcher Mathematical modelling <ul style="list-style-type: none">• Applying mathematical modelling techniques livestock disease spread and perform risk assessments |
| 2008 – 2012 | Central Veterinary Institute part of Wageningen University (now Wageningen Bioveterinary Research): PhD Candidate/Research assistant (AIO) <ul style="list-style-type: none">• Mathematical modelling: used plume and diffusion models to assess spatial spread of avian influenza and E.coli• Statistical modelling: to estimate the risk of virus transmission by between farm contacts• Risk assessment: to assess poultry farm biosecurity |

Skills

I.T. skills: programming with Mathematica and basics of R, SAS and GenStat and using Microsoft office packages

Selected training and courses attended

1. The 2nd Helsinki Summer School on Mathematical Ecology and Evolution, Linnasmaki Congress Centre, Turku, Finland, 22nd – 29th August, 2010
2. The Graduate Students Summer Institute and International Workshop in Mathematical and Economic Epidemiology, August 3rd – 5th, 2009, Makerere University, Kampala, Uganda
3. Mathematical models for the spread of infectious diseases, Department of Mathematics, Utrecht University, The Netherlands, January – June 2009
4. Modern statistics for the life sciences, Wageningen University, The Netherlands, January – February, 2010
5. Design and analysis of transmission experiments, Wageningen University, The Netherlands, 2nd – 6th November, 2009
6. Writing for academic publication, CVI-WUR, The Netherlands, October-November, 2010
7. Project and time management, Wageningen University, The Netherlands, October – December, 2010
8. High-Impact Writing in Science, Wageningen University, The Netherlands, August, 2012
9. Management Development Program, Strathmore Business School, Strathmore University, Nairobi, Kenya, November 2012 – June, 2014

Research and Publications

Amos Ssematimba, Ph.D.

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1. **Ssematimba A.**, Mugisha J.Y.T. and Luboobi L.S. (2005) Mathematical Models for the Dynamics of Tuberculosis in Density-Dependent populations: The case of Internally Displaced Peoples' Camps (IDPCs) in Uganda, *Journal of Mathematics and Statistics*, 1(3): 217-224
2. Mugisha J.Y.T, **Ssematimba A.**, Luboobi L.S. and Ddumba H. (2008) Modelling the critical characteristic area for the control of tuberculosis in densely populated communities, *The Journal of Mathematical Control Science and Application*, 2(2): 231-242
3. **Ssematimba A.**, Hagenaars T.J. and de Jong M.C.M. (2012) Modelling the Wind-Borne Spread of Highly Pathogenic Avian Influenza Virus between Farms. *PLOS ONE* 7(2): e31114. doi:10.1371/journal.pone.0031114
4. **Ssematimba A.**, Elbers A.R.W., Hagenaars T.J. and de Jong M.C.M. (2012) Estimating the per-contact probability of infection by highly pathogenic avian influenza during the 2003 epidemic in The Netherlands. *PLOS ONE* 7(7): e40929; doi:10.1371/journal.pone.0040929
5. **Ssematimba A.**, Hagenaars T.J., de Wit J.J., Ruitkamp F., Fabri T.H., Stegeman J.A. and de Jong M.C.M. (2013), Avian Influenza transmission risks: analysis of biosecurity measures and contact structure in Dutch poultry farming. *Preventive Veterinary Medicine*, 109: 106-115. doi:10.1016/j.prevetmed.2012.09.001
6. van Bunnik B.A.D., **Ssematimba A.**, Hagenaars T.J., Nodelijk G., Haverkate M.R., Bootsma M.C.J., Bonten M.J.M. and de Jong M.C.M. (2014) Small distances can keep bacteria at bay for days. *PNAS*, 111(9): 3556-3560. www.pnas.org/cgi/doi/10.1073/pnas.1310043111
7. **Ssematimba A.**, Hagenaars T.J., Boender G.J., van Bunnik B.A.D. and de Jong M.C.M. (In preparation), Mechanistic modelling of highly pathogenic avian influenza transmission risk: the role of delayed transmission.
8. **Ssematimba A.**, Jores J. and Mariner J.C. (2015) Mathematical modelling of the transmission dynamics of Contagious Bovine Pleuropneumonia reveals minimal target profiles for improved vaccines and diagnostic assays, *PLOS ONE*, 10(2): e0116730. DOI:10.1371/journal.pone.0116730
9. **Ssematimba A.** and Mariner J.C. (in preparation), Modelling the potential impact of antibiotic treatment on the dynamics of Contagious Bovine Pleuropneumonia in sub-Saharan Africa.
10. Barongo M.B., Stahl K., Bett B., Bishop R.P., Fèvre E.M., Aliro T., Masembe C., Okoth E., Knobel D.L. and **Ssematimba A.** (2015) Estimating the basic reproductive number (R_0) for African swine fever virus (ASFV) transmission between pig herds in Uganda, *PLOS ONE*, 10(5): e0125842. DOI: 10.1371/journal.pone.0125842
11. Barongo M.B., Bishop R.P., Fèvre E.M., Knobel D.L. and **Ssematimba A.** (2016) A Mathematical Model that Simulates Control Options for African Swine Fever Virus (ASFV). *PLOS ONE* 11(7): e0158658. doi:10.1371/journal.pone.0158658
12. Kikawa C.R., Kalema B.M., Kloppers P.H. and **Ssematimba A.** (2016) A semi-parametric method for generating time series data: A novel approach for bootstrapping the residuals, *Transylvanian Review*: Vol 24, No. 9
13. **Ssematimba A.**, Okike I., Ahmed G.M., Yamage M., Boender G.J., Hagenaars T.J. and Bett B. (2017) Estimating the between-farm transmission rates for highly pathogenic avian influenza subtype H5N1 epidemics in

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- Bangladesh between 2007 and 2013. *Transboundary Emerging Diseases*. 00: 1–8. <https://doi.org/10.1111/tbed.12692>
14. **Ssematimba A.**, Malladi S., Hagenaars T.J., Weaver T.J., Bonney P., Patyk K.A., Halvorson D.A. and Cardona C.J. (2017) How fast was highly pathogenic avian influenza virus spreading within turkey flocks during the 2015 H5N2 epidemic in the United States. *Proceedings of the 66th Western Poultry Disease Conference*
 15. St. Charles K.M., **Ssematimba A.**, Malladi S., Bonney P., Linskens E., Culhane M., Goldsmith T., Halvorson D.A. and Cardona C.J. (2018) Avian Influenza in the U.S. Commercial Upland Game Bird Industry: Analysis of Surveillance Systems and Selected Practices as Exposure Pathways. *Avian Diseases*, 62(3), 307-315. <https://doi.org/10.1637/11814-021518-Reg.1>
 16. **Ssematimba, A.**, Malladi, S., Bonney, P.J., Flores-Figueroa, C., Muñoz-Aguayo, J., Halvorson, D.A., Cardona, C.J., (2018) Quantifying the effect of swab pool size on the detection of influenza A viruses in broiler chickens and its implications for surveillance. *BMC Veterinary Research* 14, 265.
 17. Barongo M.B., Bishop R.P., Knobel D.L. and **Ssematimba A.** (undergoing journal peer review) Spatial-Deterministic model for the epidemiological dynamics and control of African swine fever virus
 18. Barongo M.B., Bishop R.P., Fèvre E.M., **Ssematimba A.** and Knobel D.L. (undergoing journal peer review) An Analysis of Key Parameters of Low Input Pig Production Systems along the Kenya-Uganda Border
 19. **Ssematimba A.**, Malladi S., Hagenaars T.J., Weaver T.J., Bonney P., Patyk K.A., Halvorson D.A. and Cardona C.J. (2019) Estimating Within-flock Transmission Rate Parameter for H5N2 Highly Pathogenic Avian Influenza Virus in Minnesota Turkey Flocks during the 2015 Epizootic. *Epidemiology and Infection* 147, e179, 1–8. <https://doi.org/10.1017/S0950268819000633>
 20. **Ssematimba A.**, Bonney P., Malladi S., St. Charles K.M., Culhane M.R., Goldsmith T.J., Halvorson D.A. and Cardona C.J. (2019) Mortality-Based Triggers and Premovement Testing Protocols for Detection of Highly Pathogenic Avian Influenza Virus Infection in Commercial Upland Game Birds. *Avian Diseases* 63(sp1):157-164
 21. Bonney P., Malladi S., Boender G.J., Weaver T.J., **Ssematimba A.**, Culhane M.R., Goldsmith T.J., Halvorson D.A. and Cardona C.J. (2018) Spatial Transmission of H5N2 Highly Pathogenic Avian Influenza between Minnesota Poultry Premises during the 2015 Outbreak. *PLOS ONE* 13, e0204262
 22. Bonney P., Malladi S., **Ssematimba A.**, Weaver T.J., Halvorson D.A. and Cardona C.J. (2019) Evaluating the effect of the within-flock disease transmission rate on pre-movement active surveillance in low pathogenic avian influenza infected flocks. *Avian Diseases* 63(sp1):238 -245
 23. Linskens E.J., Neu A.E., Walz E.J., St. Charles K.M., Culhane M.R., **Ssematimba A.**, Goldsmith T.J., Halvorson D.A. and Cardona C.J. (2018) Preparing for a Foreign Animal Disease Outbreak Using a Novel Tabletop Exercise. *Prehospital and Disaster Medicine*, 1-7. doi:10.1017/S1049023X18000717
 24. Malladi S., Bonney P., Weaver T.J., **Ssematimba A.**, Ham C., Walz E.J., St. Charles K.M., Culhane M.R., Halvorson D.A. and Cardona C.J. (2018) Application of Diagnostic Tests to Inform Disposal Option Choice for

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- Diseases Where Animals Can Recover. Proceedings for the 6th International Symposium on Animal Mortality Management
25. Spackman E., Malladi S., **Ssematimba A.** and Stephens C.B. (2019) Assessment of replicate numbers for titrating avian influenza virus using dose-response models. *Journal of Veterinary Diagnostic Investigation*, 1-4. <https://doi.org/10.1177/1040638719853851>
 26. Carol Cardona, Carie Alexander, Justin Bergeron, Peter Bonney, Marie Culhane, Timothy Goldsmith, David Halvorson, Eric Linskens, Sasidhar Malladi, **Amos Ssematimba**, Emily Walz, Todd Weaver, Umber., J., 2018a. An Assessment of the Risk Associated with the Movement of Turkeys to Market Into, Within, and Out of a Control Area during a Highly Pathogenic Avian Influenza Outbreak in the United States. Collaborative agreement between USDA:APHIS:VS and University of Minnesota Center for Secure Food Systems, Fort Collins, CO., 217 pgs.
 27. Carol Cardona, Carie Alexander, Peter Bonney, Francesca Contadini, Marie Culhane, Timothy Goldsmith, David Halvorson, Eric Linskens, Sasidhar Malladi, **Amos Ssematimba**, Jamie Umber, Todd Weaver, Walz, E., 2018b. An Assessment of the Risk Associated with the Movement of Broilers to Market Into, Within, and Out of a Control Area during a Highly Pathogenic Avian Influenza Outbreak in the United States. Collaborative agreement between USDA:APHIS:VS and University of Minnesota Center for Secure Food Systems, Fort Collins, CO., 221 pgs.
 28. **Ssematimba, A.**, St. Charles, K.M., Bonney, P.J., Malladi, S., Culhane, M., Goldsmith, T.J., Halvorson, D.A., Cardona, C.J. (2019) Analysis of geographic location and pathways for influenza A virus infection of commercial upland game bird and conventional poultry farms in the United States of America. *BMC Veterinary Research*, 15: 147
<https://doi.org/10.1186/s12917-019-1876-y>
 29. **Ssematimba, A.**, Kinyera, J, Okello, A., Akena, R., Nsamba, S., Canpwonyi, S. Abola, B., Kayanja. A., and Kikawa, C.R. (2019) Mathematical Modelling of the Population Dynamics of Two- Prey and One- Predator Systems at the Human-Livestock-Wildlife Interface?. *EC Veterinary Science* 4(5): 311-321
 30. CR. Kikawa, MN. Ngungu, D. Ntirampeba, **A. Ssematimba** (2020). Support Vector Regression and Beta Distribution for the Modeling of Incumbent Party vote for Presidential Elections. *Appl. Math.* 14(4): 721-727.
[doi:10.18576/amis/140420](https://doi.org/10.18576/amis/140420)
 31. Bonney PJ, Malladi S, **Ssematimba A**, Spackman E, Torchetti MK, Culhane M, Cardona CJ. (2021) Estimating epidemiological parameters using diagnostic testing data from low pathogenicity avian influenza infected turkey houses. *Scientific reports*. 11(1):1602. Epub 2021/01/17. doi: 10.1038/s41598-021-81254-z. PubMed PMID: 33452377; PubMed Central PMCID: PMC7810853.
 32. Mugisha JYT, Ssebuliba J, Nakakawa JN, Kikawa CR, **Ssematimba A.** (2021) Mathematical modeling of COVID-19 transmission dynamics in Uganda: Implications of complacency and early easing of lockdown. *PLOS ONE*. 2021;16(2):e0247456. doi: 10.1371/journal.pone.0247456.

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33. **Ssematimba A**, Nakakawa JN, Ssebuliba J, Mugisha JYT (2021) Mathematical Model for COVID-19 Management in Crowded Settlements and High-Activity Areas. *Int. journal of dynamics. & control.* doi: 10.1007/s40435-021-00781-9.
34. Cardona CJ, Wileman B, Malladi S, Ceballos R, Culhane MR, Munoz-Aguayo J, Flores-Figueroa C, Halvorson D, Walz E, St. Charles KM, Bonney PJ, **Ssematimba A**, Goldsmith T, 2021. The Risk of Highly Pathogenic Influenza A Virus Transmission to Turkey Hen Flocks Through Artificial Insemination. *Avian Diseases* 65, 303-309.
35. **Ssematimba A**, Malladi S, Bonney PJ, St. Charles KM, Boyer TC, Goldsmith T, Cardona CJ, Corzo CA, Culhane MR (submitted) African swine fever detection and transmission estimates using homogeneous versus heterogeneous model formulation in stochastic simulations within pig premises
36. Malladi S, **Ssematimba A**, Bonney PJ, St. Charles KM, Boyer TC, Goldsmith T, Cardona CJ, Culhane MR (submitted) Predicting the time to detect moderately virulent African Swine Fever virus in finisher swine herds using a stochastic disease transmission model

Books, Theses and Dissertations

1. Mathematical Modelling of the Dynamics of Tuberculosis in Densely populated communities: The case of IDPCs in Uganda: Makerere University-Department of Mathematics: 2004 – 2005 (MSc Dissertation supervised by Prof. J.Y.T. Mugisha and Prof. L.S. Luboobi)
2. Mechanisms of avian influenza virus transmission between farms: combining data collection and mathematical modelling. Wageningen University 2013, Wageningen, The Netherlands. 148 pages. ISBN, 9789461734549 (PhD thesis supervised by Prof. Mart C.M. de Jong and Dr. Thomas J. Hagenaars)

Conference and workshop contributions

1. **Ssematimba A.**, Hagenaars T.J. and de Jong, M.C.M. Using mathematical models to determine the spatial extent of Virus/dust dispersal by wind. WIAS Science day, 12th March 2009, Wageningen. Poster.
2. **Ssematimba A.**, Hagenaars T.J. and de Jong M.C.M. Revising the cost of controlling Avian Influenza epidemics: Using mathematical models to explore the possibility of airborne spread in the Dutch 2003 epidemic. International Workshop in Mathematical and Economic Epidemiology August 3rd – 5th, 2009, Makerere University, Kampala, Uganda. Poster.
3. **Ssematimba A.**, Hagenaars T.J. and de Jong, M.C.M. Assessing the role of dust dispersion in neighbourhood transmission of HPAI based on the Dutch 2003 H7N7 epidemic data. ISVEE Conference XII, 2009, Durban, South Africa, 10th – 14th August 2009. Oral.
4. **Ssematimba A.**, Hagenaars T.J. and de Jong M.C.M. Modelling airborne spread of avian influenza between flocks, Proceedings of the Symposium on Epidemiology and Welfare, Dutch Society for Veterinary Epidemiology and Economics, Deventer, The Netherlands, 26th November 2009, p. 18 – 20. Oral.
5. **Ssematimba A.**, Hagenaars T.J. and de Jong M.C.M. Highly Pathogenic Avian Influenza transmission risks: analysis of biosecurity measures and

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- contact structures in Dutch poultry farming. Annual meeting: Society of Veterinary Epidemiology and Preventive Medicine March 24th – 26th, 2010, Nantes, France. Poster.
6. **Ssematimba A.**, Hagenaars T.J. and de Jong M.C.M. Modelling the windborne spread of Highly Pathogenic Avian Influenza virus between farms. WIAS Science day, 3rd February 2011, Wageningen. Oral.
 7. **Ssematimba A.**, Elbers A.R.W., Hagenaars T.J. and de Jong, M.C.M. Estimating the per-contact probability of infection by highly pathogenic avian influenza during the 2003 epidemic in The Netherlands. Annual meeting: Society of Veterinary Epidemiology and Preventive Medicine March 23rd – 25th, 2011, Leipzig, Germany. Poster.
 8. **Ssematimba A.**, Elbers A.R.W., Hagenaars T.J. and de Jong M.C.M. Estimating the per-contact probability of infection by highly pathogenic avian influenza during the 2003 epidemic in The Netherlands. The fourth Influenza conference, September 7th – 9th, 2011, Oxford, United Kingdom. Oral.
 9. **Ssematimba A.**, Hagenaars T.J. and de Jong, M.C.M. The role of airborne transmission in the spatial spread of highly pathogenic avian influenza. The 4th Cees Wensing Lecture, Auditorium, Edelhertweg 15, Lelystad, the Netherlands, 24th November 2011. Oral
 10. **Ssematimba A.**, Hagenaars T.J., de Wit J.J., Ruitkamp F., Fabri T.H., Stegeman J.A. and de Jong M.C.M. HPAI transmission risks: analysis of biosecurity measures and contact structures in Dutch poultry farming The 6th Epizone Annual meeting, Brighton, United Kingdom, 12th – 14th June, Oral
 11. **Ssematimba A.**, Elbers A.R.W., Hagenaars T.J. and de Jong M.C.M. Assessing the contributions of the various between farm contacts to the spread of highly pathogenic avian influenza (H7N7) virus during the 2003 epidemic in the Netherlands. ISVEE Conference XIII, 2012, Maastricht, The Netherlands, 20th – 24th August 2012. Oral.
 12. van Bunnik B.A.D., **Ssematimba A.** Hagenaars T.J., Nodelijk G., Haverkate M.R., Bootsma M.C.J., Bonten M.J.M. and de Jong M.C.M. Small distances can keep bacteria at bar for days. ISVEE Conference XIII, 2012, Maastricht, The Netherlands, 20th – 24th August 2012. Oral.
 13. **Ssematimba A.**, Elbers A.R.W., Hagenaars T.J. and de Jong M.C.M. Estimating the per-contact probability of infection by highly pathogenic avian influenza during the 2003 epidemic in The Netherlands. Epidemics 4 conference, 2013, Amsterdam, The Netherlands, 19th – 22nd November 2013. Poster.
 14. van Bunnik B.A.D., **Ssematimba A.** Hagenaars T.J. , Nodelijk G., Haverkate M.R., Bootsma M.C.J., Bonten M.J.M. and de Jong M.C.M. Small distances can keep bacteria at bar for days. Epidemics 4 conference, 2013, Amsterdam, The Netherlands, 19th – 22nd November 2013. Poster.
 15. **Ssematimba A.** and Mariner J.C. Modeling the effect of improved diagnostics and antibiotic treatment on the dynamics of Contagious Bovine Pleuropneumonia. Epidemics 4 conference, 2013, Amsterdam, The Netherlands, 19th – 22nd November 2013. Poster.
 16. **Ssematimba A.**, Malladi S., Hagenaars T.J., Weaver T.J., Bonney P., Patyk K.A., Halvorson D.A. and Cardona C.J. A comparison of modeling approaches for estimating within-flock disease transmission parameters for the 2015 H5N2 highly pathogenic avian influenza virus outbreak in the United

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States, The 120th AAVLD and 59th United States Animal Health Association Annual Conference, Greensboro, North Carolina, USA, October 13th – 19th, 2016. Oral.

17. **Ssematimba A.** Highly Pathogenic Avian Influenza H5N8 in Uganda: A case report on the 2017 Outbreak in Poultry and wild birds, The 67th North Central Avian Disease Conference, Saint Paul, Minnesota, USA, March 13th -14th, 2017. Oral
18. **Ssematimba A.**, Malladi S., Hagenshaars T.J., Weaver T.J., Bonney P., Patyk K.A., Halvorson D.A. and Cardona C.J. How fast was highly pathogenic avian influenza virus spreading within turkey flocks during the 2015 H5N2 epidemic in the United States, The 66th Western Poultry Disease Conference, Sacramento, California, USA, March 19th – 22nd, 2017. Oral.
19. **Ssematimba A.**, Malladi S., Bonney P., Flores C., Muñoz J., Halvorson D.A. and Cardona C.J. Assessing the Performance of Diagnostic Tests in Detecting Low Pathogenic Avian Influenza Viruses in pooled swab samples. The 121st AAVLD and 60th United States Animal Health Association Annual Conference, San Diego, California, USA, October 12th – 18th, 2017. Oral.
20. St. Charles K.M., **Ssematimba A.**, Cardona C.J. Avian Influenza in the United States' Commercial Gamebird Industry: Occurrences and Selected Practices as Potential Pathways to Infection. The 121st AAVLD and 60th United States Animal Health Association Annual Conference, San Diego, California, USA, October 12th – 18th, 2017. Oral.
21. **Ssematimba A.** Using Mathematical Models to Improve Preparedness for Avian Influenza Epizootics. Quantitative Epidemiology (EpiQ) Seminar Series. UMN Saint Paul, Minnesota, USA, March 26, 2018. Oral
22. **Ssematimba A.**, Malladi S., Bonney P., St. Charles K.M., Culhane M.R., Goldsmith T.J., Halvorson D.A. and Cardona C.J. Using fluctuations in daily mortality proportions and pre-movement testing protocols to detect influenza A virus infections in commercial upland gamebird flocks. April 15th – 18th, 2018. The 10th International Symposium on Avian Influenza, Brighton, United Kingdom. Poster.
23. St. Charles K.M., **Ssematimba A.**, Bonney P., Malladi S., Culhane M.R., Halvorson D.A., Cardona C.J. Controlled Marketing: The Evolution and Future of a Responsible Response for Controlling Low Pathogenicity Avian Influenza. April 15th – 18th, 2018. The 10th International Symposium on Avian Influenza, Brighton, United Kingdom. Poster.

Selected conference, seminar and workshop participations

1. December 8th – 12th, 2003. The first Pan African Biomathematics Congress. Department of Mathematics, Makerere University, Kampala, Uganda.
2. August 10th – 14th, 2009. International Symposium on Veterinary Epidemiology and Economics (ISVEE 12), Durban, South Africa.
3. March 9th – 11th, 2011. The UCID symposium on infection dynamics, Spoorwegmuseum Utrecht, The Netherlands
4. March 23rd – 25th, 2011. The annual meeting: Society of Veterinary Epidemiology and Preventive Medicine, Leipzig, Germany.

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5. March 24th – 26th, 2010. The annual meeting: Society of Veterinary Epidemiology and Preventive Medicine, Nantes, France.
6. April 11th – 14th, 2011. The fifth annual meeting EPIZONE “Science on alert”, Arnhem, The Netherlands
7. December 15th – 17th, 2008. wANPE 08: Workshop on analysis and numerics of population dynamics and epidemics, Udine, Italy.
8. September 7th – 9th, 2011. The fourth Influenza conference, Oxford, United Kingdom.
9. November 24th, 2011. The 4th Cees Wensing Lecture, Auditorium, Edelhertweg 15, Lelystad, the Netherlands.
10. June 12th – 14th, 2012. The 6th Epizone Annual meeting, Brighton, United Kingdom.
11. August 20th – 24th, 2012. International Symposium on Veterinary Epidemiology and Economics (ISVEE 13), 2012, Maastricht, The Netherlands.
12. November 19th – 22nd, 2013. Epidemics 4 conference, Amsterdam, The Netherlands.
13. October 8th – 10th, 2014. Expert Workshop on developing a Global PPR Control and Eradication Strategy, FAO, Rome, Italy
14. March 14th – 15th, 2016. The 67th North Central Avian Disease Conference, Saint Paul, Minnesota, USA.
15. June 22nd, 2016. Infectious Diseases Modeling Symposium, Saint Paul, Minnesota, USA.
16. October 13th – 19th, 2016. The 120th AAVLD and 59th United States Animal Health Association Annual Conference, Greensboro, North Carolina, USA.
17. March 13th – 14th, 2017. The 68th North Central Avian Disease Conference, Saint Paul, Minnesota, USA.
18. March 19th – 22nd, 2017. The 66th Western Poultry Disease Conference, Sacramento, California, USA.
19. October 12th – 18th, 2017. The 121st AAVLD and 60th United States Animal Health Association Annual Conference, San Diego, California, USA.
20. March 12th – 13th, 2018. The 69th North Central Avian Disease Conference, Minneapolis, Minnesota, USA.
21. April 15th – 18th, 2018. The 10th International Symposium on Avian Influenza, Brighton, United Kingdom.
22. August 20th – 24th, 2018. The 3rd Network meeting for SIDA and ISP-funded PhD students and Postdocs in Mathematics, Entebbe, Uganda

Selected outreach exercises

1. October 5th, 2016. Improved permitting during an animal disease emergency: The Example of HPAI, Bloomington, Minnesota, USA.
2. October 28th, 2016. Using the 2015 Minnesota H5N2 outbreak mortality data to estimate the adequate contact rate within turkey flocks, Vet Monthly meeting, Willmar, Minnesota, USA.
3. May 24th, 2017. Tabletop exercise for Utah state animal health regulators and poultry industry for HPAI outbreak response/permitting, Provo, Utah, USA.
4. October 3rd, 2017. HPAI poultry movement exercise, Spencer, Iowa, USA.

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Selected academic supervisory and research support roles

1. PhD supervision, Mike Bitamale Barongo, University of Pretoria, Pretoria, South Africa. Title: “Modelling the transmission dynamics and the effect of different control strategies for African Swine Fever virus in East Africa” (Completed September 2018) (with Prof. Darryn Knobel and Dr. Richard Bishop).
2. Advising and guiding university students at all levels on their research projects, theses and dissertations at various institutions.
3. Postgraduate students mentoring and group leadership at the University of Minnesota, USA.
4. Supervising research projects and advising students academically since 2004 at Gulu University, Gulu, Uganda.
5. Outreach activities involving translation of scientific information for tools to communicate risk and intervention approaches as well as dissemination of this information.

Professional Association Memberships

1. Dutch Society of Theoretical Biology since 2008

Selected career roles

1. Headed mathematics department at Gulu University until 2008.
2. Served as zonal leader during several school practice supervision sessions at Gulu University.
3. Served as external Examiner postgraduate theses for Makerere University, Kampala, Uganda.
4. Supervised PhD research for University of Pretoria, Pretoria, South Africa, titled “Modelling the transmission dynamics and the effect of different control strategies for African swine fever virus in East Africa”
5. Serves as an external Examiner for PhD theses, The Nelson Mandela African Institution of Science and Technology, Arusha, Tanzania
6. External Examiner PhD theses, Tshwane University of Technology, Pretoria, South Africa
7. Served as a lead Discussant at PhD (Mathematics) defences, Makerere University, Kampala, Uganda. September 15th, 2015 and September 4th, 2018
8. Reviewer for various peer-reviewed journals.
9. Independent Reviewer/Assessor of various grant proposals.
10. Organizing committee leader for the June 2016, Infectious Disease Modeling Symposium, Saint Paul, Minnesota, USA.
11. Editorial Panel Member for EC Veterinary Science journal

Grants and Funding

1. With Secure Food Systems team, funding from North American Gamebird Association (NAGA) for six months in 2018-2019 to perform a risk assessment for the Secure Upland Gamebird Supply Plan.

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