

Contact Information

Full Names : Annet Kyomuhangi
 Address : Department of Mathematics, Faculty of Science and Education,
 Busitema University, P.O. Box 236, Tororo, Uganda.
 Telephone : +256-701399837, +256-782399837
 E-mail Address : annet.kyomuhangi@gmail.com; akyomuhangi.sci@busitema.ac.ug

Education

Institutions	Dates	Award/Qualification
Makerere University	2017 - 2022	Ph.D. in Mathematics
University of Pune	2007 - 2009	MSc. in Mathematics
Mbarara University of Science and Technology	2001 - 2004	Bsc.Ed: Mathematics, Physics

Supervisors	Level	Thesis/Dissertation title
Prof. David Ssevviiri and Dr. Alex Samuel Bamunoba	Ph.D	Reduced modules relative to functors

Work Experience

Feb 2026- May 2026	IUCEA Staff Mobility Program, Jaramogi Oginga Odinga University of Science and Technology (JOOUST);
Apr 2024 - to date	Senior Lecturer, Busitema University;
Jan 2023 - June 2024	Part-time Lecturer, Muni University
Sep 2016 - March 2024	Lecturer, Busitema University;
Jan 2010 - Aug 2016	Assistant Lecturer, Busitema University;
Mar 2005 - Jul 2007	Physics and Mathematics teacher at St. Augustine's college-Wakiso;
Sep 2004 - Feb 2005	Physics and Mathematics teacher at Kyeizooba Girls' School.

Courses taught	Commutative Algebra, Abstract Algebra, Rings and Modules, Calculus I& III, Group Theory, Complex Variables, Elements of Mathematics, Real Analysis I & II, Linear Programming and Ordinary Differential Equations.
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Supervision of Students

2025–2026	MSc. Industrial Mathematics: Lokiru John Aleper, Busitema University, ongoing
2024–2025	BSc.Ed: Muzungu Innocent, Busitema University, waiting graduation .
2024	MSc. Mathematics: Taliban Jamal, Muni University, ongoing
2023–2024	MSc. Industrial Mathematics: Diana Nekesa, Busitema University, graduated in November 2024.
2023–2024	BSc.Ed: Khatete Sam, Busitema University, graduated in November 2024.
2023–2024	BSc.Ed: Khalayi Catherine, Busitema University, graduated in November 2024.
2023–2024	BSc.Ed: Grace Cherop, Busitema University, graduated in March 2024.
2022–2023	BSc.Ed: Emmanuela Cherop, Busitema University, graduated in June 2023

Supervision of Students on School Practice

Period	No. of students	University	Area of supervision
Jun - Jul, 2025	25	Busitema University	Tororo and Namisindwa
Mar - Apr, 2022	21	Busitema University	Mukono and Wakiso
Mar - Apr, 2021	19	Busitema University	Mukono and Kapchorwa
Jun - Jul, 2018	23	Busitema University	Busia and Tororo
May - Jun, 2010	12	Busitema University	Mityana and Lyantonde

Examination of Dissertations/Theses

- ◇ Makerere University
- ◇ Busitema University

Reviewer for different Journals

- 2024 Journal of Mathematics, Wiley Publishing Company
- 2025 International Electronic Journal of Algebra

Areas of Research Interest

Rings and Module theory, Homological algebra, Torsion theory, Radical theory, local cohomology. I am also interested in Algebraic Geometry.

Research and Publications

- ◇ D. Sseviiri and **Kyomuhangi, A.**, Nil modules and the envelope of a submodule, *Quaest. Math.*, (2025), 1–9. <https://doi.org/10.2989/16073606.2025.2536068>.
- ◇ Contributed a photo to the MAA Focus (2025), magazine of the Mathematical Association of America, see <http://digitaleditions.walworthprintgroup.com/publication/?i=840016&p=26&view=issueViewer>
- ◇ **Kyomuhangi, A.**, Marangone, E., Raicu, C., & Reed, E. (2025). Computing the cohomology of line bundles on the incidence correspondence and related invariants. arXiv preprint arXiv:2503.17522.
- ◇ **Kyomuhangi, A.**, Marangone, E., Raicu, C., & Reed, E. (2024). Cohomology on the incidence correspondence and related questions. arXiv preprint arXiv:2411.13450.

- ◇ Nekesa, D., Nalule, R. M., **Kyomuhangi, A.**, Muhumuza, A. K., & Oyem, A. O. (2024). Optimization of Heat Transfer in Cassava Flour based Cake Baking: A Computational Fluid Dynamics Approach. *WSEAS Transactions on Heat and Mass Transfer*, 19, 107-113.
- ◇ **Kyomuhangi, A.**, & Ssevviiri, D. (2023). Generalised reduced modules. *Rend. Circ. Mat. Palermo, II. Ser*, **72**(1), 421–431.
- ◇ Batiibwe, M. S. K., Nannyonga, B. K., Nalule, R. M., Mbabazi, F. K., **Kyomuhangi, A.**, Mbabazi, D. S., ... & Nakakawa, J. N. (2023). Factors related to teenage pregnancy during the COVID-19 pandemic: a case of selected villages in Mayuge District, Eastern Uganda. *SN Social Sciences*, **3**(7), 103.
- ◇ Asaph Keikara Muhumuza, Fulgensia Kamugisha Mbabazi, Rebecca Muhumuza Nalule, Abubakar Mwasa, **Annet Kyomuhangi**, Stephen Kadedesya, (2022). Enhancing Research Output in Higher Institutions of Learning: A Case Study of Busitema University Research Model, *The Uganda Higher Education Review*, **9**(2).
- ◇ **Kyomuhangi, A.**, (2022) Reduced modules relative to functors, <http://196.43.133.114/handle/10570/9462>.
- ◇ **Kyomuhangi, A.**, & Ssevviiri, D. (2020). The locally nilradical for modules over commutative rings. *Beiträge zur Algebra und Geometrie/Contributions to Algebra and Geometry*, **61**(4), 759–769.

Curriculum Designs, Development and Reviews

- ◇ 2023 Curriculum Design and Development of PhD. Mathematics and MSc. Mathematics for Busitema University.
- ◇ 2020 Curriculum Review Bsc.(Educ.) Mathematics component for Faculty of Science and Education, Busitema University.
- ◇ 2012 Curriculum Review Bsc.(Educ.) Mathematics component for Faculty of Science and Education, Busitema University.
- ◇ 2017 Development of Online PGDIE programme for Faculty of Science and Education, Busitema University.

Conferences, Workshops, Summer Schools, Seminars and other trainings

- ◇ Workshop on Health Data Analysis in Collaboration with CoRE-MATH, GSU and MATH4SDG at Makerere University, October 27-28, 2025.
- ◇ Speaker at the Algebraic Geometry workshop at University of Nairobi, September 15-19, 2025.
- ◇ Plenary speaker at the Second African Women Workshop in Algebra at University of Abuja, Nigeria, August 11-16, 2025.

- ◇ Austria – Uganda workshop on geometry and representation theory at University of Vienna, July 22-23, 2025
- ◇ Speaker at the conference on Rings and Polynomials organized by TU Graz, Graz, Austria, July 14-19, 2025.
- ◇ Virtual learning seminars in Algebraic Geometry by Prof. Balazs Szendroi and team that started November 16, 2023 to date.
- ◇ Training workshop on COMSOL multiphysics software for computational fluid dynamics, modelling and simulations at Piedmont Hotel, Tororo from February 19-21, 2025.
- ◇ Makerere-CIMPA research school on Effective Algebra and the LMFDB from January 13-24, 2025 at the Department of Mathematics, Makerere University.
- ◇ The work-life balance training workshops for women in Mathematics organized by NAFEMREP from March to December 2024.
- ◇ The EAALG workshop on some topics in Algebra and Geometry from November 25-29, 2024 at the Department of Mathematics, Makerere University.
- ◇ Effective Graduate Students' Supervision Training Course organized by the African Institute for Capacity Development from September 9-13, 2024.
- ◇ Inaugural African Women in Algebra workshop at Kabale University from July 1-6, 2024.
- ◇ Gender and Mathematics conference and research day by Association of Women Mathematicians on March 14, 2024.
- ◇ Training for elearning from September 25-26, 2023 at Busitema University.
- ◇ Women in Sage workshop from September 4-8, 2023 at Makerere University.
- ◇ The EAALG workshop on some topics in Algebra and Geometry from August 14-18, 2023 at the department of Mathematics, Makerere University.
- ◇ The Joint African-Nordic conference in Mathematics from August 1-4, 2023 at Makerere University.
- ◇ A research school, PRAGMATIC 2023 from 11th June to 1st July 2023 at University of Catania, Italy
- ◇ Stakeholders' workshop for developing new programs of MSc. and Ph.D. in Mathematics for Busitema University at Benedictine Fathers' Retreat centre, Nyangole - Tororo on 12th January 2023.
- ◇ Team building workshop organised by Eastern Africa Network for Women in Basic Sciences (EANWoBAS) on January 6-7, 2023 at Hotel La Vena, Entebbe road.
- ◇ Writing workshop organised by Eastern Africa Network for Women in Basic Sciences (EANWoBAS) on 15th December 2022 at Hotel La Vena, Entebbe road.

- ◇ Weekly African Mathematics Seminar, details can be found on <https://sites.google.com/view/africa-math-seminar/home>.
- ◇ Weekly IIT Bombay Virtual Commutative Algebra Seminar, details can be found on <https://groups.google.com/d/msgid/virtual-ca-seminars/CAAbEtB5und0crwVk5Uq9ZVAOFwpLLkT6gZ0Un4t1THh7pV>
- ◇ Mini-course on Graded ring geometry, September 1-2, 2022 at Makerere University.
- ◇ ICTP-EAUMP School on Mathematical Programming and Algorithms, hosted by University of Nairobi July 11-29, 2022.
- ◇ Writing Retreat organized by Faculty of Science and Education Busitema University, July 3 – 8, 2022 at Benedictine Fathers' Monastery Nyangole - Tororo.
- ◇ Algebraic Geometry lectures by Dr. Dominic Bunnett, June - July 2022 at Makerere University
- ◇ International Research and Innovations dissemination conference, May 9 - 10, 2022 at Speke Resort Munyonyo, Kampala.
- ◇ Eastern Africa Algebra Group(EAALG) Workshop on Introduction to Homological Algebra and Discrete Geometry, December 13-16, 2021 at Makerere University.
- ◇ Lunch seminar for the Institute of Mathematics and its applications, University of Reading on 16th December, 2021.
- ◇ Attended virtually the EAUMP-ICTP School: Topics in Concrete Mathematics (smr 3604) hosted by University of Rwanda, August 11-20, 2021.
- ◇ Conference on Rings and Polynomials organized by TU Graz, Graz, Austria, July 19-24, 2021.
- ◇ 6th Strathmore International Mathematics Conference held in Strathmore University, 28th June - 2nd July, 2021.
- ◇ International conference titled Emerging Trends in Pure and Applied Mathematics (ICETPAM-2021), 21st - 22nd June, 2021.
- ◇ International E-Conference on Pure and Applied Mathematical Sciences (ICPAMS-2021), June 7-10, 2021.
- ◇ International Webinar on Focusing on Mathematical Models and analysis of COVID-19 Crisis, jointly organized by Office of International Affairs, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India and Lappeenranta University of Technology, Finland, June 17-18, 2020.
- ◇ Event on Collaborative introduction to the algebra software Macaulay2 organized by Abram Gannibal Project, May 27, 2020.
- ◇ EAUMP-ICTP summer School on Algebraic Topology and its Applications held at Makerere University, Kampala, Uganda, July 14-31, 2019.

- ◇ 4th Network meeting for Sida and ISP-funded PhD students and postdocs in Mathematics that took place at Bishoftu, Ethiopia, August 5-9, 2019.
- ◇ Advanced research methods organized by Directorate of research and graduate training of Makerere University, September 10-21, 2018.
- ◇ Scholarly writing and communications organized by Directorate of research and graduate training of Makerere University, March 20-23, 2018.
- ◇ Completed training in HERS-EA women leadership academy, July 2-7, 2017.
- ◇ Philosophy of methods organized by Directorate of research and graduate training of Makerere University, June 12-23, 2017.
- ◇ Third Network meeting for Sida and ISP-funded PhD and Post-doc students in Mathematics that took place at Imperial botanical beach hotel, Entebbe, Uganda, August 20-24, 2018.
- ◇ EAUMP-ICTP summer school and Workshop on Homological Methods in Algebra and Geometry II, University of Dar-es-Salaam, Tanzania, July 9-20, 2018.
- ◇ Summer school on Inverse Problems, Makerere University, November 13-15, 2017.
- ◇ 3rd Conference on Inverse Problems in Africa, Makerere University, November 6-10, 2017.
- ◇ HERS-EA inaugural Academy from July 2-7, 2017 at Grand Global Hotel, Kampala, Uganda.
- ◇ Online course development for open and distance learning training, 9th - 13th January, 2017 in Tororo sponsored by Common Wealth of Learning.
- ◇ E-resources workshop held at Makerere University, 8th – 10th August, 2016
- ◇ Workshop on research proposal writing, publications in peer reviewed journals and outreach organised by Busitema University and held at Prime Hotel, Tororo, July 21-22, 2016.
- ◇ HEI-ICI workshop on Mathematics Education and Working Life Relevance held at Makerere University in collaboration with Lappeenranta University of Technology, Finland, December 8-12, 2014.
- ◇ HEI-ICI workshop on Mathematics Education and Working Life Relevance held at Makerere University in collaboration with Lappeenranta University of Technology, Finland, December 3-12, 2013.
- ◇ Programming in “C”, Algorithms & Flow charts & Programming Techniques, organised by Byte Computer Academy, Pune - 1, India, 2nd May – 2nd July 2008.
- ◇ Performance Management workshop by Competitive Choices Limited at St. Augustine’s college - Wakiso, December 28-29, 2006.

Membership

- ◇ Co-founder and Deputy Convenor of African Women in Algebra (AWA), <https://sites.google.com/view/africanwomeninalgebra/home?authuser=0>
- ◇ Member and Mentor, Forum For African Women Educationalists Uganda (FAWE-U)
- ◇ Katerera County Education Forum (KACEF)
- ◇ Busitema University Academic Staff Association (BUASA)
- ◇ Eastern Africa Algebra Research Group (EAALG)
- ◇ Uganda Mathematical Society (UMS)
- ◇ Alumni of Higher Education Resource Services, East Africa (HERS-EA)
- ◇ Association of Women Mathematicians Uganda (AWoM)
- ◇ Eastern Africa Network for Women in Basic Sciences (EANWoBAS)
- ◇ African Women in Mathematics Association (AWMA)
- ◇ Organization for Women in Science for the Developing World (OWSD)
- ◇ Mothers Union, All Saints Church, Nakasero Kampala.

Grants, Fellowships and Scholarships

- ◇ EUR 40,000 Uganda-Austria Collaboration in Algebra and Geometry, Africa - UniNet Research Cooperation project, July 2024.
- ◇ ISP grant of 2,000 Euros towards organizing the Inaugural African women in Algebra workshop, March 2024;
- ◇ EMS-CDC grant of 1,000 Euros towards organizing the Inaugural African women in Algebra workshop, March 2024;
- ◇ IMU-CWM grant of 2,500 Euros towards organizing the Inaugural African women in Algebra workshop, March 2024;
- ◇ IMU-CDC grant of 2,000 Euros towards organizing the Inaugural African women in Algebra workshop, March 2024;
- ◇ African Women in Mathematics (AWMA) grant of 1,000 Euros towards organizing the Inaugural African women in Algebra workshop, January 2024;
- ◇ EMS-CDC grant of 2,000 Euros towards organizing the Women in Sage-Uganda workshop, April 2023;
- ◇ CIMPA grant of 3,000 Euros towards organizing the Women in Sage-Uganda workshop, March 2023;

- ◇ EMS-CDC grant of 1,200 Euros to attend the research school, PRAGMATIC 2023 at University of Catania, Italy;
- ◇ International Mathematical Union Committee for Women in Mathematics (IMU-CWM) grant of 3,000 Euros towards organizing the Women in Sage-Uganda workshop, January 2023;
- ◇ African Women in Mathematics (AWMA) grant of 1,500 Euros towards organizing the Women in Sage-Uganda workshop, January 2023;
- ◇ Busitema University Research and Innovation Fund (BU-RIF) of UGX 15,000,000 under the project: “Enhancing Research Capacity in Mathematics with Industry through Development of New MSc. and Ph.D. in Mathematics”, Project Grant No.: 07/DGRSI-/2022-2023;
- ◇ Makerere - Sida Bilateral Research grant to attend 4th Network meeting in Addis Ababa (Ethiopia), 2019 - August;
- ◇ Makerere - Sida Bilateral Research grant to attend 3rd Network meeting at Entebbe (Uganda), 2018 - August;
- ◇ Makerere - Sida Bilateral Research grant to attend Summer school at University of Dar-es Salaam, July 2018;
- ◇ Makerere - Sida Bilateral Research Scholarship to study PhD (Math), 2017;
- ◇ Indian Council for Cultural Relations (ICCR) Scholarship to study MSc. in Mathematics at University of Pune, India in 2007;
- ◇ Government of Uganda sponsorship to study BSc.(Education) Degree, 2001 - 2004 at Mbarara University of Science and Technology.

Projects

- ◇ Co-PI for Busitema University Research and Innovation Fund (BU-RIF) project: Further Product Development on the Use of CFD in Optimal Production of Clean Energy from Animal and Agro-Waste Products: Briquettes Making, Project No.: BURIF-MGC2026-12-2025-01
- ◇ Coordinator, Busitema University for Africa-Uninet Project (2024–2026): Uganda-Austria Collaboration in Algebra and Geometry
<https://africa-uninet.at/en/projects/call4/p142-uganda>
- ◇ Member for the Busitema University Research and Innovation Fund (BU-RIF) project: “Enhancing Research Capacity in Mathematics with Industry through Development of New MSc. and Ph.D. in Mathematics”, Project Grant No.: 07/DGRSI-/2022-2023;

Awards and Achievements

- 2026 IUCEA Staff Mobility Program 2025/2026, Jaramogi Oginga Odinga University of Science and Technology (JOOUST);
- 2025 Best teaching staff in the Faculty of Science and Education, Busitema University

Organisation of Scientific Meetings

- 2025 On organising committee for the Busitema University 3rd Science, Technology and Innovation symposium held at Faculty of Engineering, Busitema University from October 15-17, 2025.
- 2025 On the organising committee for Second African Women in Algebra workshop to take place in August 11-16, 2025 at University of Abuja, Nigeria, see <https://sites.google.com/view/second-awa-workshop/home>
- 2025 On the organising committee for the International Day of Mathematics, Uganda that was held at Tororo Girls school, Tororo on March 15, 2025.
- 2025 On the organising committee for Makerere-CIMPA research school on Effective Algebra and the LMFDB that took place in January 13-24, 2025 at the Department of Mathematics, Makerere University, see <https://www.math.mak.ac.ug/cimpa-uganda/index.html>
- 2024 On organising committee for the Busitema University second science, technology and innovation symposium held at Faculty of Engineering, Busitema University from October 15-17, 2024.
- 2024 Deputy convenor for the Inaugural African Women in Algebra workshop that took place in July 01-07, 2024 at Kabale University, Uganda, see <https://sites.google.com/view/inaugural-awa-workshop/>
- 2024 Executive committee member of Association of Women Mathematicians, Uganda organising for the Launch of International Day of Mathematics (IDM), Uganda.
- 2023 todate Coordinator, Uganda Mathematical Society activities at Busitema University.
- 2023 Event Coordinator for the RUN4MATH6 marathon and mentorship that took place on March 18, 2023 at Buyala Junior Primary School, Mpigi-Uganda.
- 2023 Secretary, Women in Sage-Uganda workshop, 4th-8th September, 2023 see <https://sites.google.com/must.ac.ug/wis-uganda/home>

Other Responsibilities and outreaches

2025- todate 2024-2025	Mentor, FAWE supported students at Busitema University Coordinator Rubirizi district schools to participate in the Uganda Mathematical Society activities
2024 - todate	Undergraduate coordinator, Department of Mathematics, Busitema University
2024	Organiser, Faculty of Science and Education end of year party.
2024	Member of electoral commission, Busitema University Academic Staff Association
2024- todate	Advisor, Katerera County Education Forum
Feb 21, 2023 todate	Secretary, Welfare committee, Faculty of Science and Education, Busitema University
Feb 21, 2023 todate	Member of Academics, Curriculum issues committee, Faculty of Science and Education, Busitema University
March, 2023	Academic staff representative, Interim Committee, Busitema University In-House Retirement Benefits Scheme Nagongera Campus
Jan 31, 2023	Represented Busitema University in the inaugural breakfast meeting for Women in Energy and Extractives Network Limited by Uganda National Oil Company (UNOC) at Sheraton Hotel, Kampala
Jan 7, 2023 todate	Welfare, Eastern Africa Network for Women in Basic Sciences (EANWoBAS)-Uganda
Sep 21, 2022	Chairperson, women fundraising Archdeaconry house project, Rugando C.O.U, Katerera, Rubirizi
Mar 22, 2022	Facilitator - Linear Algebra for the Artificial Intelligence & Interdisciplin- ary Research Group, Faculty of Engineering, Busitema University.
13th March 2021	Supported mothers, elderly and babies with food and clothings in Podut and Yoboke villages, Tororo.
Jan 5 - 10, 2020	Facilitator, 1st Math Camp organized by Uganda Women Mathematicians (UGAWOM) at Mbogo Junior School-Uganda
2013 - to date	Finance secretary for Department of Mathematics saving scheme, Busitema University;
2013 - 2018	In charge of staff welfare, Department of Mathematics, Busitema University;
2013 - 2016	Examination coordinator, Department of Mathematics, Busitema University
2012 - 2015	One of the contact persons for the HEI-ICI project at Busitema University.

Referees

- Prof. David Ssevviiri Department of Mathematics, Makerere University,
P.O. Box 7062, Kampala.
Tel: +256-778486571
Email: david.ssevviiri@mak.ac.ug
- Prof. Claudiu Raicu Department of Mathematics,
University of Notre Dame, 255 Hurley, Notre Dame, IN 46556
Email: craicu@nd.edu
- Prof. Balázs Szendroi Institut für Mathematik, Universität Wien,
Oskar-Morgenstern-Platz 1, 1090 Wien, Raum 11.120.
Tel: +43-1-4277-50482
Email: balazs.szendroi@univie.ac.at
- Prof. David Olema Kani Dean, Faculty of Science and Education, Busitema University,
P.O. Box 236, Tororo, Uganda.
Tel: +256-772 862 362/+256-701 958 101
Email: dkaniolema@gmail.com /davidolema@yahoo.co.uk
- Dr. Abubakar Mwasa Head, Department of Mathematics,
Faculty of Science and Education, Busitema University,
P.O. Box 236, Tororo, Uganda.
Tel: +256-772925584/ +256-758536663
Email: amwasa@sci.busitema.ac.ug /mwasabu15@gmail.com