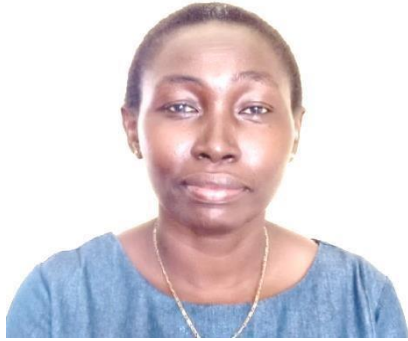


CURRICULUM VITAE



Dr. Saphina Biira (PhD)

Personal Information

Name: BIIRA, Saphina
Gender: Female
Citizenship: Ugandan
Work Address : Deputy Vice Chancellor (F&A), Busitema University P.O Box 236 Tororo
Cell phone: +256772523936
Email: bsaphina@gmail.com sbiira@sci.busitema.ac.ug

Present Position: **Acting Deputy Vice Chancellor (Finance and Administration)**

Personal Statement

I am a self-driven Senior Scientist, Educationist and Administrator with about 20 years of Working in Higher Education Institution. This includes Administration, Teaching, and research and outreach engagements.

I am a team leader with a record of successfully completing critical milestones and delivering products and Services on time and according to specifications. My commitment to duty is beyond expectation.

I am a very versatile senior scientist, educationist, administrator and manager with vast experience and achievements. I am a Quality Assurance Expert in Higher Education Sector and a Monitoring and Evaluation practitioner.

I have a specialization in Materials Science, Nuclear Science and Technology (including nuclear energy), Green Energy, Environmental Technology and General Physics as evidenced by my research over the years.

EDUCATION

June 2021-April 2022: **Postgraduate Diploma in Monitoring and Evaluation (UMI-Uganda Management Institute, Uganda)**

Skills and Competencies acquired: *Project planning and Management, Sustainable Development Strategies, Management Information systems, Quantitative Methods in Decision making, Public Management and Administration, Monitoring and Evaluation in the Public Sector, Consultancy Management, Data analysis and management for Monitoring and Evaluation*

Feb 2015- Apr 2018: **PhD in Physics (Materials Science & Nuclear Materials) University of Pretoria, South Africa**

Skills and Competencies acquired: *Fabrication of CVD reactor, Chemical vapour deposition of layers and coatings, crystal growth, characterisation and analytical skills, assessment of irradiation damage in nuclear grade materials, critical thinking and interpretation skills, communication, writing and presentation skills, interpersonal skills, conducting research, independent learning.*

Dr. Saphina Biira CV

Aug 2008 –Sept 2012: Master of Science (Physics) Makerere University, Uganda

Skills and Competencies acquired: *Advance knowledge in physics courses, Assessment of radioactive sources, Instrumentation and calibration, reporting skills, conducting research,*

Aug 2003 - Jul 2006: BSc. Education (Physics, Maths & Education) Gulu University, Uganda

Skills and Competencies acquired: *Administration and management of Education Institutions, curriculum development and implementation, Improved understanding of physics and mathematical concepts, carrying out science experiments, Teaching skill, Assessment of learners, guidance and counselling of learners,*

Aug 1998 – Jul 2000: Diploma in Secondary Education (Physics, Maths) KYU, Uganda

Skills and Competencies acquired: *Teaching skill, Assessment of learners, school administration, guidance and counselling of learners, curriculum development and implementation*

TRAINING (a sample)

February 2023: Certificate in Financial Management and Accounting for Non-Financial Managers: Uganda Management Institute, Uganda

Skills and Competences Acquired: *General management functions and finance; Accounting principles, cost concepts and generation of accounting data; Structure, composition of financial reports (Statements) and Accountability; Preparation of Bank Reconciliation Statements; Interpretation of financial statements; Managing and controlling working capital; Planning and budgeting; Investment appraisal and capital budgeting; Internal control systems; Sources of finance and their costs; Preparation of financial statements for profit and non-profit making organisations; Basic principles of procurement and contract management; Ethics and integrity in financial reporting; and Application of IT in Accounting.*

November 2022: Certificate in Public administration and Management: Uganda Management Institute, Uganda

Skills and Competences Acquired: *Organise, manage and supervise the organizations and communities; principles and practices of Public Administration and Management in the Public Sector; public policy and public management; Performance indicators and management; Communication and interpersonal skills; Strategic Planning and Management; Reforms and emerging issues in public sector; financial management, and organizational behaviour.*

February 2020: Internal and external Quality Assurance, Makerere University

Skills and Competences Acquired: *Higher Education Organization, Leadership and Governance; Foundations of higher Education studies; Higher Education systems and Policies; Designing of Quality, Assurance Monitoring and evaluation tools; improved understanding of principles and practices of quality and quality improvement; Quality Assurance in higher Education; Higher Education and sustainable Development.*

June 2019-2020: Onlinasation of the curriculum: Busitema University, Uganda

Skills and Competencies Acquired: *Designing of blended materials; Blended learning pedagogy; Developing online course development guide & study guide; Creating E-tivities online; Uploading resources and mini-lectures; Creating online discussion forum; Online assessment of learning; Quality assurance procedures for onlinasation of the curriculum.*

May 2018: Training Course in Postgraduate Supervision, Makerere University & African Doctorial Academy

Skills and Competencies Acquired: *Postgraduate (PG) supervision in the global research context; Approach to and models for PG supervision; Allocating and matching students to supervisors; Roles and responsibilities of PG supervisors; Policies and procedures related to PG supervision; Research integrity in PG supervision; How to deal with research proposal and writing; Conceptualisation of PG research; PG writing and feedback; The structure and formulation of manuscripts and research conclusions; Evaluation of the thesis, examination criteria, submission and examination process; Disseminating research.*

WORK EXPERIENCE AND RESPONSIBILITIES HELD

2022-todate: **Acting Deputy Vice Chancellor (Finance & Administration), Busitema University, Uganda**

- Monitoring and coordinating the planning and development of the University,
- Overseeing the finances and Human Resource Management and the general administration of the university.
- Overseeing the preparation and implementation of the university's recurrent & development budgets including the production of performance reports
- Supervising the development, roll out and review of the University's Strategic Plan, investment portfolios and operational plans.
- Coordinating the development and implementation of the policy framework for using and managing the university's fiscal and human resources and other assets in accordance with approved regulations.
- Monitoring income, banking and expenditure of all revenue-generating units for compliance with the university's approved policies, plans, budgets and regulations.
- Establishing systems for the mobilisation and utilisation of resources for various activities of the university.
- Contribute to the promotion of partnerships and networking for the growth and development of the university
- Member of Senate and Its committes
- Member of Council and Its committee
- Member of University Management Committee including Top Management Committee
- Chairperson budget committee

2020-todate: **Deputy Director Quality Assurance, Busitema University, Uganda**

- Facilitating the formulation and implantation of Quality Assurance Policies and Guidelines
- Advising University Management on Quality Assurance matters relating to teaching, learning, assessment, research and consultancy, and other forms of service delivery (Total Quality Management).
- Developing and implementing strategies for awareness creation about Quality Assurance
- Carrying out routine and continuous assessment in respect of service delivery by various units of the University, including student/staff evaluation exercises.
- Facilitating the development of a culture of continuous quality improvement.
- Conducting University wide-self-assessments, Graduate Tracer studies, Employers' Satisfaction surveys, etc.
- Monitoring and Evaluating the performance of all units in the university
- Desk officer to the Quality Assurance, Gender and ICT committee of Council, Busitema University
- Member of Senate and its committees
- Member of University Management
- ODeL Committee member, Steering committee Member to establish Maritime Institute, Member of the Busitema University conference Organisation Committee, Severed as a chairperson of Management committee.
- Participated in the formulation and in the review of several policy documents and guidelines

2019-2019: Acting Director, Directorate of Graduate Studies Research and Innovations, Busitema University, Uganda

- Developing a robust and internationally competitive postgraduate training framework.
- Initiating and operationalizing effective strategies for increasing student enrolment in postgraduate education.
- Providing guidelines and standards on the supervision of postgraduate research students.
- Providing institutional leadership, guidance, advising to Senate on postgraduate matters.
- Providing guidance to academic units on curriculum development and review for postgraduate courses and programmes.
- Managing partnerships, grants and scholarships geared towards university and staff developments
- Enhancing research capacity and innovations of staff and students in the university
- Member of Senate and its committees
- Member of University Management

2019-date: Senior Lecturer (Physics), Busitema University, Uganda

- Supervising Postgraduate and Undergraduate students research projects
- Teaching Postgraduate and Undergraduate University courses
- Research and publication
- Grant writing and evaluation
- Community engagement
- Ag Director Graduate Studies Research and Innovation
- Deputy Director Quality Assurance

2015-2019: Lecturer, Busitema University, Uganda

- Supervising undergraduate and Postgraduate students research projects
- Teaching undergraduate and Postgraduate university courses
- Research and publication
- Grant writing (in 2018 awarded a grant by TWAS worth USD 15,000 for science equipment currently being used by Postgraduate and undergraduate students)
- Coordinated the Faculty of Science and Education weekly Seminar series (2018-2019)
- Lead the signing of the MOU between Busitema University and Brookhaven National Laboratory (BNL), in the United states Of America (2018)

2015-2018 PhD student, University of Pretoria, Pretoria South Africa

- PhD research on Design, fabrication of a chemical vapour deposition system and deposition of ZrC films for nuclear applications , Materials Modification and Characterisation, Irradiations
- Research and publication
- Research dissemination skills
- Teaching Undergraduate and Master students
- Supervision of Undergraduate paracticals

2010-2014: Assistant Lecturer, Busitema University, Uganda

- Training Students, Assessing and Grading students' work
- Guiding and Supervising of Student Teachers' laboratory project work and School practice
- Carrying out scientific projects and research
- Acting Head Department, Physics (2011-2011)
- Physics Department examination and timetable coordinator
- Vice Chairperson Ceremonies' committee of Senate Busitema University (2010-2014)
- Council member representing academic staff and also a member of finance and students affairs committee (2012-2014)

- Timetable and examination in the Physics Department (2010-2011)
- Member Curriculum development and Review committee of the department of Physics, (reviewed BSE programme (Physics Component) and Developed MSc in Physics)
- Secretary of School Practice committee, at the Faculty of Science and Education

2007-2009: Teaching Assistant: Busitema University, Uganda

- Training Students, Assessing and Grading students' work
- Guiding and Supervising of Student Teachers' laboratory project work and School practice
- Laboratory equipment testing and levelling
- Council Member representing academic staff to Busitema University Council (2008 to 2012)

2007-2007: Teaching Assistant: Gulu University, Uganda

- Tutoring Students, Assessing and Grading students' work
- Helping students with undergraduate physics projects

2001- 2006: Secondary school Teacher: Rwebisengo Secondary School, Uganda

- Head of Science Department.
- Teaching Physics and Mathematics
- Assessment and evaluation of Learners' activities
- Counselling and Guiding Learners
- Senior Woman Teacher
- Member of Board of Governors representing staff

POST GRADUATE SUPERVISIONS TO COMPLETION

03 Masters to completion

05 Masters and 02 ongoing

UNDERGRADUATE SUPERVISIONS TO COMPLETION

I have supervised **over 40** undergraduate students projects in physics to completion

EXTERNAL EXAMINATIONS OF DISSERTATIONS AND THESIS

06 Masters Dissertation and 1 PhD thesis

LIST OF PEER REVIEW PUBLICATIONS

- (1) Tagumira, A., **Biira, S.**, & Amabayo, E. B. (2022). Concentrations and human health risk assessment of selected heavy metals in soils and food crops around Osukuru phosphate mine, Tororo District, Uganda. *Toxicology Reports*, 9, 2042-2049.
- (2) Okwakol, M. N., Ujeyo, M. S. S., Atibuni, D. Z., **Biira, S.**, & Waako, P. (2022). Overcoming policy and practice fragility and enhancing security of science, technology and innovation educational achievement for females in Uganda. *The Uganda Higher Education Review* Pg 229-243
- (3) Mirzayev, M.N., Slavov, L., Donkov, A., Neov, D., Popov, E., Demir, E., Genov, I., Abdurakhimov, B., Vladescu, A., **Biira, S.** and Karaman, T., 2022. Effects of neutron irradiation at different fluencies on nanosized anatase titanium dioxide. *Radiation Physics and Chemistry*, 194, p.109988.
- (4) **Biira, S.**, Gumuguni, L., Ocen, G., Bwire, F., Waako, P., & Wamakote, L. (2021). COVID19 and Students' Readiness for Online Learning in Higher Education Institutions in Uganda: A Case Study of Busitema University. *Journal of the National Council for Higher Education*, 9(2), 21–33.
- (5) **Biira, S.**, Ochom, P., & Oryema, B. (2021). Evaluation of radionuclide concentrations and average annual committed effective dose due to medicinal plants and soils commonly consumed by pregnant women in Osukuru, Tororo (Uganda). *Journal of Environmental Radioactivity*, 227, 106460.

Dr. Saphina Biira CV

- (6) **Biira, S.**, Thabethe, T. T., Hlatshwayo, T. T., Bissett, H., Ntsoane, T., & Malherbe, J. B. (2020). Investigating the thermal stability of the chemical vapour deposited zirconium carbide layers. *Journal of Alloys and Compounds*, 155003.
- (7) Chepkurui, J., & **Biira, S.** (2020). Thermal Performance Evaluation of the Funnel Solar Cooker of Different Funnel Lengths Implemented in Nagongera, Uganda. *Tanzania Journal of Science*, Vol 46(1), pp 53-60.
- (8) Mirzayev, M.N., Demir, E., Mammadov, K.F., Sukratov, V.A., Jabarov, S.H., **Biira, S.**, Asgerov, E.B., Abdurakhimov, B.A. and Tuğrul, A.B., (2020). Amorphisation of boron carbide under gamma irradiation. *Pramana*, 94(1), pp.1-8.
- (9) Mbabazi, F. K., Gavamukulya, Y., Awichi, R., Olupot–Olupot, P., Rwahwire, S., **Biira, S.**, & Luboobi, L. S. (2020). A Mathematical Model Approach for Prevention and Intervention Measures of the COVID–19 Pandemic in Uganda.
- (10)Thabethe, T.T., Ntsoane, T.P., **Biira, S.**, Njoroge, E.G., Hlatshwayo, T.T., Skuratov, V.A. and Malherbe, J.B., (2020). Investigating the structural changes induced by SHI on W-SiC samples. *Vacuum*, Vol 174 pp.109230.
- (11)Mirzayev, M.N., Popov, E., Demir, E., Abdurakhimov, B.A., Mirzayeva, D.M., Sukratov, V.A., Mutali, A.K., Tiep, V.N., **Biira, S.**, Tashmetov, M.Y. and Olejniczak, K., 2020. Thermophysical behavior of boron nitride and boron trioxide ceramics compounds with high energy electron fluence and swift heavy ion irradiated. *Journal of Alloys and Compounds*, 834, p.155119.
- (12)**Biira,S.** (2019). Overview of nuclear energy reactor safety and the key issues for Uganda. *Eng. J. Eng. Regist. Board, Uganda*.Vol 1 pp. 92–95. [https://www.erb.go.ug/publications/.](https://www.erb.go.ug/publications/)
- (13)Kilama, G., Lating, P. O., Byaruhanga, J., & **Biira, S.** (2019). Quantification and characterization of cocoa pod husks for electricity generation in Uganda. *Energy, Sustainability and Society*, 9(1), pp22.
- (14)**Biira, S.**, Hlatshwayo, T. T., Crouse, P. L., Bissett, H., Thabethe, T. T., Mlambo, M., & Malherbe, J. B. (2019). Effect of the ZrCl₄ static vaporiser system and deposition time on growth characteristics of chemical vapour deposited zirconium carbide layers. *Applied Physics A*, 125(3), pp. 185.
- (15)Mirzayev, M. N., Mammadov, K., Skuratov, V. A., Demir, E., Jabarov, S. H., Ismayilova, N. A., **Biira, S.**, Abdurakhimov, B & Popov, E. (2019). Oxidation kinetics and thermophysical properties of gamma irradiated silicon hexaboride. *Journal of Alloys and Compounds*, 801, pp151-157.
- (16)Thabethe, T.T., Ntsoane, T., **Biira, S.**, Njoroge, E.G., Hlatshwayo, T.T., Skuratov, V.A. and Malherbe, J.B., (2019). Irradiation effects of swift heavy ions on palladium films deposited on 6H-SiC substrate. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, 442, pp.19-23.
- (17)Mirzayev, M., Demir, E., Mammadov, K., Mehdiyeva, R., Jabarov, S., Tugrul, A.B., **Biira, S.**, Tiep, N. and Thabethe, T., (2019). Thermodynamics kinetics of boron carbide under gamma irradiation dose. *International Journal of Modern Physics B*, 33(09), p.1950073.
- (18)Mirzayev, M.N., Jabarov, S.H., Asgerov, E.B., Mehdiyeva, R.N., Thabethe, T.T., **Biira, S.** and Tiep, N.V., (2019). X-ray diffraction and thermodynamics kinetics of SiB₆ under gamma irradiation dose. *Silicon*, 11(5), pp.2499-2504.
- (19)Mirzayev, M.N., Mehdiyeva, R.N., Melikova, S.Z., Jabarov, S.H., Thabethe, T.T., **Biira, S.**, Kurbanov, M.A. and Van Tiep, N., (2019). Formation of Color Centers and Concentration of Defects in Boron Carbide Irradiated at Low Gamma Radiation Doses. *Journal of the Korean Physical Society*, 74(4), pp.363-367.
- (20)Mirzayev, M. N., Jabarov, S. H., Asgerov, E. B., Mehdiyeva, R. N., Thabethe, T. T., **Biira, S.**, & Tiep, N. V. (2018). Crystal structure changes and weight kinetics of siliconhexaboride under gamma irradiation dose. *Results in Physics*, 10, 541-545
- (21)**S. Biira**, P.L. Crouse, H. Bissett, T.T. Hlatshwayo, J.H. van Laar, J.B. Malherbe (2017).“*Design and fabrication of a chemical vapour deposition system with special reference to ZrC layer growth characteristics*”, The Journal of the Southern African Institute of Mining and Metallurgy. Vol. 117 pp. 931-938.
- (22)**S. Biira**, B.A.B. Alawad, H. Bissett, J.T. Nel, T.P. Ntsoane, T.T. Hlatshwayo, P.L. Crouse, J.B. Malherbe (2017). “*Influence of the substrate gas-inlet gap on the growth rate, morphology and*

microstructure of zirconium carbide films grown by chemical vapour deposition", Ceramics International Vol 43 pp. 1354-1361.

- (23) **S. Biira**, P.L. Crouse, H. Bissett, T.T. Hlatshwayo, E.G. Njoroge, J.T. Nel, T.P. Ntsoane, J.B. Malherbe (2017). " *The role of $ZrCl_4$ partial pressure on the growth characteristics of chemical vapour deposited ZrC layers*", Ceramics international. Vol 43 pp. 15133-15140.
- (24) **S. Biira**, P.L. Crouse, H. Bissett, B.A.B. Alawad, T.T. Hlatshwayo, J.T. Nel, J.B. Malherbe (2017). " *Optimisation of the synthesis of ZrC coatings in an RF induction-heating CVD system using surface response methodology*", Thin Solid Films. Vol 624 pp. 61-69.
- (25) Alawad, B. A. B., **Biira, S.**, Bissett, H., Nel, J. T., Hlatshwayo, T. T., Crouse, P. L., & Malherbe, J. B. (2016). CVD Growth of ZrC Layers at Different Temperatures. *Science and Education*, 4(1), 6-9.
- (26) **S. Biira** and G. Kilama (2014). " *Analysis of solar radiation in Uganda (A case study of Kasese, Jinja and Soroti Districts)*", International Journal of Current Research. Vol. 6 pp.8110-8115.
- (27) **S. Biira**, A. Kisolo and F.M. D'ujanga (2014). " *Concentration levels of radon in mines, industries and dwellings in selected areas of Tororo and Busia districts, Eastern Uganda*", Advances in Applied Science Research. Vol. 5 pp. 31-44.
- (28) D'ujanga, F. M., **Biira, S.**, & Akoba, R. (2019, June). Trends and status of women in physics in Uganda. In *AIP Conference Proceedings* (Vol. 2109, No. 1, p. 050038). AIP Publishing.
- (29) Thabethe, T. T., Njoroge, E. G., Hlatshwayo, T. T., **Biira, S.**, & Malherbe, J. B. (2018, October). Investigating thermal treatment of W thin film deposited on 6H-SiC in vacuum, hydrogen and argon. In *2018 Open Innovations Conference (OI)* (pp. 34-39). IEEE.
- (30) **S. Biira**, B.A.B. Alawad, H. Bissett, J.T. Nel, T.T. Hlatshwayo, J.B. Malherbe, " *Effect of temperature and $CH_4/ZrCl_4$ molar ratio on ZrC layers deposited in a vertical-wall CVD system*", South Africa Institute of Physics (SAIP 2016). pp.1-7. ISBN: 978-0-620-77094-1.
- (31) D'ujanga, F.M., Ssentongo, G.S., Ayugi, G., Akoba, R. and **Saphina, B.**, 2015, December. Female physicists in Ugandan universities. In *AIP Conference Proceedings* (Vol. 1697, No. 1, p. 060043). AIP Publishing LLC.

List of Reviewed Theses

- (32) **Saphina Biira** (2018) *Construction of a chemical vapour deposition reactor and the deposition of ZrC layers*, PhD Thesis, University of Pretoria, South Africa
- (33) **Saphina Biira** (2012). *Measurement of the concentration of radon in mines, industries and dwellings in selected areas of Tororo and Busia Districts (Eastern Uganda)*, Masters Dissertation, Makerere University, Uganda
- (34) **Saphina Biira** (2006). *Analysis of solar radiation in Uganda: A case study of Jinja, Kasese and Soroti Districts*. BSc Physics Research Project, Gulu University, Uganda.

MOST RECENT CONFERENCES ATTENDED

- (1) Uganda Conservation conference held on February 09, 2023 at Makerere Uganda.
- (2) The 4th Symposium of the Forum for African Women Vice Chancellors (FAWOVC) held at Holiday Inn, Harare Zimbabwe from 11-13th December 2023 (Oral Presentation and Symposium Rapporteur).
- (3) 7th IUPAP International Conference on Women in Physics (ICWIP) held virtually 11-16 July 2021 by invitation only (Oral Talk and Poster presentation).
- (4) Forum for African Women Vice Chancellors (FAWOVC) Symposium held at the University of Cape Coast, Ghana, from 2-6 December 2019 (Oral Presentation and Symposium Rapporteur).
- (5) Career Development Workshop for Women in Physics held on October 28 to November 01 2019 in ICTP in Trieste Italy (Oral Talk and Poster presentation).

- (6) Joint meeting of the Pan African Conference on Crystallography - PCCr2 and The African Light Source - AfLS2 2019, Accra, Ghana 28 January – 02 February, 2019. (Aral Talk)
- (7) Advanced Metals (AMI), Precious metals conference 2017, Limpopo, South Africa October 17- 20 2017. (Oral talk).
- (8) Ion-Surface Interaction (ISI) conference 2017, Moscow, Russia August 21-25, 2017. (Poster presentation)
- (9) Surface Modifications of Materials by ion Beam (SMMIB) conference 2017, Lisbon Portugal July 10-14, 2017. (Poster Presentation).
- (10) Nuclear Materials Conference 2016, Montpellier, France Novemver 7-10, 2016. (Poster presentation).
- (11) Advanced Metals (AMI), Ferrous metals conference 2016, Durban, South Africa October 17- 20 2016. (Invited delegate).
- (12) South African institute of Physics (SAIP), 2016, University of Cape town, South Africa 4-8 July 2016. (Oral talk.
- (13) Advanced Metals (AMI), Nuclear materials conference 2015, Port Elizabeth, South Africa October 28- 30, 2015. (Poster presentation).

GRANTS AWARDED

- **2023** OWSD Early Career Fellowship (*Energy recovery from solid waste and water treatment in Tororo, Uganda*) **USD 50,000 (Principal Investigator)**
- **2022** STEMpower (*Development of STEMpower Center at Busitema University*) **USD 32,000. (Project Coordinator)**
- **2022** BURIF (*Staff Development for Change to Problem Based Learning and Project Based Learning*) **Ugx 30,000,000 (Principal Investigator)**
- **2022** BURIR (*'Seeding Engineering-based Entrepreneurship: The novel multi-chamber silo for Uganda's 4-acre homestead'*) **Ugx 40,000,000 (Team Member)**
- **2022** MakRIF (*Adult Diagnostic Reference Levels based on clinical indications and Weight in Computed Tomography in Uganda*) **Ugx 50,000,000 (Team Member)**
- **2021** BURIF (*Determining Quality of Courses in The Busitema University Online Learning Environment (BUOLE) Busitema University Research*) **Ugx 9,000,000 (Team Member)**
- **2019** IsBD Transformer grant (*Strengthening Capacity of the Forum for African Women Vice Chancellors to Promote Gender inclusive Participation in Science, Technology and Innovation in Mozambique, Sudan and Uganda*) **USD 149,970 (Co- Principal Investigator and Project manager)**
- **2019** DGSRI competitive publication grant worthy **Ugx 5,000,000. (Principal Investigator)**
- **2018** TWAS Research Grants Programme in Basic Sciences (Individuals). Science Equipment were acquired worth **USD 15,000. (Principal Investigator)**
 - **2018** DGSRI competitive small research grant worthy **Ugx 5,000,000. (Principal Investigator)**

SERVICE TO THE COMMUNITY

- **2021-2022:** I have been an expert reviewer and assessor with NCHE to assess readiness of Academic institutions, validate facilities and review academic programmes for possible accreditation by NCHE.
- **2018 to date:** I am Mentor for the emerging women in science, technology and innovations (STI) in Uganda, Sudan and Mozambique (a project under FAWoVC).

- **2018 to date:** I am a member of the Steering Committee of the African Light Source (AfLS), a technical committee spearheading the coming up of the first ever African Light Sources (i.e. Synchrotron). <http://www.africanlightsource.org/organizational-chart/afls-executive-committee/>
- **2019 to date:** Team Leader Uganda International committee of women in Physics (ICWIP). <https://wp.csiro.au/icwip2020/abstract-submission/team-leaders/>
- **2018 to date:** I am a steering committee member for the formation of OWSD Uganda Chapter which is in its final stages of being registered of OWSD. <https://owsd.net/member/biira-saphina-0>
- **2020 to date:** Member of Uganda University Quality Assurance forum (UUQAF) and East Africa quality Assurance Network (EAQAN)
- **2018 to date:** I have been as an external examiner for a number Postgraduate student Dissertations for Makerere University and Kyambogo University.
- **2018 to date:** I have served Postgraduate Research supervisor for other universities, for example Makerere University.
- **2018 to date:** I have served as a reviewer of several Journals and conferences. For example *Journal of Advanced Ceramics (Springer)*, *Global Conference on Materials Science and Engineering*, among others
- **2019 to date:** I voluntarily visit a number of schools to inspired and motivate students towards science subjects and specifically Physics.
- **2014 to date:** I have contributed widely to the body of knowledge as evidenced to the number of my publications, reads, views, citations and conferences attended.
- **2004-2006:** Member of Gulu University council representing students and member of finance committee and students affairs.

MEMBERSHIP TO ORGANISATIONS AND BODIES

- **2022 to date:** Member African Materials Research Society (AMRS) Membership #: AMRS 006
- **2021 to date:** Founding member of OWSD Uganda Chapter and Publicity and Outreach Coordinator for the OWSD Uganda Chapter
- **2019 to date:** Member Forum for African Women Vice Chancellors (FAWoVC)
- **2018 to date:** member OWSD (Membership number <https://owsd.net/member/biira-saphina-0>)
- **2018 to date:** Member of the Executive Committee of the African Light Source (AfLS), a technical committee spearheading the coming up of the first ever African Light Sources (i.e. Synchrotron). <http://www.africanlightsource.org/organizational-chart/afls-executive-committee/>
- **2019 to date:** Team Leader Uganda International committee of women in Physics (ICWIP). <https://wp.csiro.au/icwip2020/abstract-submission/team-leaders/>
- **2020 to date:** Member of Uganda University Quality Assurance forum (UUQAF) and East Africa quality Assurance Network (EAQAN)

PEER REVIEWER

I have been a reviewer for a number of Journals, conference series and Research grants Organisation. These are:

- **05** Journals, **02** Conference Series and **03** Research Grants awarding organisation

FELLOWSHIPS AND SCHOLARSHIPS

1. **2018** LAAMP (Light sources for Africa, the Americas and Middle East Project), Travel grant to conduct experiments at National Synchrotron Light Source II (NSLS-II) at Brookhaven National Laboratory (BNL), New York, USA.
2. **2018:** IAEA Travel grant to attend a one week conference AfLS2 and

3. **2017** NRF-JINR Travel grant to conduct experiments at Joint institute for Nuclear research (JINR), Dubna in Moscow, Russia.
4. **2014-2017 Busitema university** -AfDB scholarship. This was awarded to me to study a PhD in Physics at University of Pretoria.
5. **2008-2010** Germany academic exchange services (DAAD) In-country scholarship for Post Graduate studies. This was to pursue a Master of Science (Physics) at Makerere University, Uganda.
6. **2003-2006** Government of Uganda merit admission scholarship to undergraduate programmes. This was to pursue Bachelor of Science Education at Gulu University, Uganda.

Courses Facilitated

Postgraduate Courses

- | | |
|-------------------------------|-----------------------------------|
| 1. Nuclear Technology | 4. Energy Physics |
| 2. Advance Nuclear Physics | 5. Advanced Statistical Mechanics |
| 3. Advance Materials Sciences | 6. Advanced Quantum Physics |

Undergraduate Courses

- | | |
|---------------------------|------------------------------|
| 1. Environmental Physics | 7. Physics Projects |
| 2. Solid State Physics | 8. Statistical Mechanics |
| 3. Nuclear Physics | 9. Measurements and Analysis |
| 4. Solar Energy Radiation | 10. Mathematical Physics |
| 5. Classical Mechanics | 11. Electromagnetism |
| 6. Materials Science | 12. Atomic Physics |

Research interests:

- Materials Science (materials fabrication and modification)
- Radiation Physics and nuclear technology
- Environmental Science and Waste Management
- Renewable and Green energy
- Gender and STEM Education
- Quality Assurance in Higher Education

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More information on my publications can be accessed through these links:

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