CURRICULUM VITAE

I. BIODATA

Name : Ssenyunzi Richard Cliffe

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Marital Status : Married

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Research gate : https://www.researchgate.net/profile/Richard-Ssenyunzi

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Employment status : Senior lecturer

II. ACADEMIC QUALIFICATION

University Education:

University	Period	Qualifications
Makerere University	**2017-2020**	**Ph.D. in Physics**
University of Bergen (UiB), Norway	**2008-2009**	**M.Sc. Physics**
Makerere University	**2002-2009**	**B.Sc. in Education**

Pre-University Education:

School	Period	Qualification
Mityana Secondary School	**2000-2001**	**Uganda Advanced Certificate of Education (U.A.C.E)**
Mityana Secondary School	**1996-1999**	**Uganda Certificate of Education (U.C.E)**
Naama Junior Primary School	**1989-1995**	**Primary Leaving Certificate (P.L.E)**

Courses undertaken

Postgraduate School:	**Ph.D Thesis Title**: Modeling Precipitable Water Vapour using Global Navigation Satellite System data over East African Tropical Region.
Postgraduate School:	**M.Sc. Thesis Title**: Effect of Ultraviolet Radiation on Phytoplankton Photosynthesis measured using Fibre-Optical oxygen Sensors.
Undergraduate:	Physics, Mathematics, Education.

III. WORKING EXPERIENCE

Period	Position	Institution
2006-2007	**Physics teacher**	**Ndejje secondary school, Luwero**
2010-2023	**Lecturer**	**Busitema University**
2013-2014 (2023-present)	**Coordinator of Undergraduate research projects, outreach and exhibitions**	**Physics Department, Busitema Uniersity**
2014-2016	**Acting Head of Physics Department**	**Physics Department, Busitema University**
2024-	**Senior Lecturer**	**Busitema University**

IV. AREAS OF RESEARCH INTEREST

- Study of atmospheric water vapor using ground (AERONET, GNSS) as well as satellite measurements (MODIS, AIRS) and its variability and impact on climate.
- Numerical Weather Prediction
- Atmospheric Sciences, lower atmosphere, Ionosphere and Space Physics

V. AWARDS

- **Norwegian Government Scholarship** for M.Sc. in Physics at the University of Bergen (2008).
- Awarded African Development Bank scholarship through Busitema University for a Ph.D. in Physics.

VI. STUDENTS' SUPERVISION

Postgraduate Supervision:

S/N	Name	Reg.No.	Title	Level	Status
1	Mbayo Peter	BU/GS19/MSP/3	Development and validation of weighted mean temperature model for East African region.	MSc.	completed
2	Ekanyi John	BU/GS20/MSP/1	Assessment of Radionuclide levels in selected foodstuffs and animal products from Tororo markets and its consequence on human health.	MSc	Ongoing
3	Opio Esau	BU/GS20/MSP/7	Modelling and Evaluation of Precipitable Water Vapour from Different sources over low latitude Region.	MSc.	Ongoing

VII. DISSERTATION/THESIS EXAMINATION

S/N	Name	Reg.No.	Title	Level	Date
1	Atino Doris Eggo	BU/GS17/MSP/1 (Busitema University)	Gaia and Kepler observations of New General Catalogue 6811	MSc.	May 2022
2	Bakayana John	2018/HD13/1832U (Makerere University)	Predicting of Global solar radiation incident on horizontal surfaces	MSc.	May 2023

			in Kampala using Markov chain model		
3	Waibi Roggers	BU/GS20/MSP/9 (Busitema University)	Two Dimensional Imaging of the Ionospheric Total Electronic Content over East Africa	MSc	March 2023

VIII. PUBLICATIONS

1. **Ssenyunzi, R.C.**, Oruru, B., Dujanga, F.M., Realini, E., Barindelli, S., Tagli aferro, G., & van de Giesen, N. (2019). Variability and accuracy of Zenith Total Delay over the East African Tropical Region. *Advances in Space Research, 64, 900–920*. https://doi.org/10.1016/j.asr.2019.05.027
2. **Ssenyunzi, R. C.**, Oruro, B., D'ujanga, F.M., Realini, E., Barindelli, S., Tagliaferro, G., van de Giesen, N., & von Engeln, A. (2020). Performance of ERA5 data in retrieving Precipitable Water Vapour over East African tropical region. *Advances in Space Research, 65, 1877–1893.* https://doi.org/10.1016/j.asr.2020.02.003.
3. **Ssenyunzi, R. C.**, Oruro, B., D'ujanga, F.M. (2021). Linear regression models to predict the tropospheric parameters at the Global Positioning systems' sites over the East African region. *East African Journal of Science, Technology and Innovation: Vol. 2 No. 3 (2021): Volume 2 Issue 3.* https://doi.org/10.37425/eajsti.v2i3.274.
4. Amabayo, E. B, Andima, G., **Ssenyunzi, R. C**. (2021). Instantaneous Ionospheric Scintillation Mapping over the East African Region by use of GPS Derived Amplitude Scintillation Proxy. *Asian Journal of Research and Reviews in Physics 4(2): 6-20.*
5. **Ssenyunzi, R. C.,** Andima, G., Amabayo, E. B., Realini, E. (2023). Performance of ray- traced VMF3 products in retrieving Zenith Tropospheric Delay over the African tropical region. *Journal of Atmospheric and Solar–Terrestrial Physics 243, 106014*. https://doi.org/10.1016/j.jastp.2023.106014.
6. **Ssenyunzi, R. C.,** Andima, G., Amabayo, E. B., Kiroe, A. J. (2024). Assessment of ERA5 derived zenith tropospheric delay data over East African region. *Advances in Space Research 74, 695–710.*

IX. CONFERENCE PROCEEDINGS

1. Realini, E., Mascitelli, A., Tagliaferro, G., Gatti, A., Fumagalli, A., **Ssenyunzi, R. C**., Van De Giesen, N. (2022). Deployment and Operation of Low-cost GNSS Stations for Atmospheric Monitoring in the East Africa Tropical Region. In *Fall Meeting 2022*. AGU.

X. SCHOOLS, WORKSHOPS AND TRAININGS.

- **Licensing and Inspection** (3rd-4th October 2011) – Organized by the Government of Uganda in collaboration with the International Atomic Energy Agency (IAEA) through the Ministry of Energy and Mineral Development, Uganda.
- **Space Science School** (21st October - 1st November 2013) – Organized by the Scientific Committee on Solar-Terrestrial Physics School (SCOSTEP) at Kenya Institute of Education, Nairobi.
- **Writing for Publication Training** (6th-9th August 2018) – Makerere University.
- **Advanced Research Methods Training** (10th-21st September 2018) – Makerere University.
- **Scholarly Writing and Communication Skills Training** (19th-23rd August 2019) – Makerere University.
- **Philosophy of Methods Training** (15th-26th March 2021) – Makerere University.
- **Instructional Materials Workshop for the Revised Lower Secondary School Curriculum** (4th November-4th December 2020, 16th August-15th September 2021)
- **Curriculum Development Skills Enhancement Workshop** (13th-14th December 2022), National Council for Higher Education

XI. COMMITTEES

- Member of the space science research group (2024 – present)
- Team member, TWIGA research project at Makerere University (2018-2021)
- Member of the faculty school practice committee. (2018-2021)
- Member Curriculum review committee, Physics Department, Busitema University.

XII. SERVICES

- Reviewer for Advances in Space Research, Acta Geophysica, International Journal of Climatology, Survey Review, and Remote sensing

XIII. PROJECTS

- **Principal-Investigator:** Enhancing Learning Outcomes through Principle and Project-Based Delivery Methods in Higher Secondary Schools (UGX 199,509,911, 2024-2025)
- **Member:** A space weather based early warning tool (UGX 2 billion, 2024-2025)

XIV. REFREES

1. Assoc. Prof. Olema Kani

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Busitema University,
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2. Dr. Andima Geoffrey

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University,
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3. Prof. D'ujanga Florence

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