Samuel Kwesi Okyere

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PROFILE

Samuel Okyere holds a PhD in Applied Mathematics, an MPhil. in Applied Mathematics, and a BSc. in Mathematics and Economics and also a Diploma in Education. His research interests are in Infectious disease modelling, Fractional Calculus, Fuzzy sets and Numerical Analysis

RESEARCH

Interests	Biomathematics · Fractional Calculus · Numerical Simulation
Areas	Management Science and Operations Research · Modeling and Simulation · Control and Systems Engineering · Public Health, Environmental and Occupational Health · Statistics and Probability · Artificial Intelligence

RESEARCH SUMMARY

20	152	6	3	1.41	29%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 20 publications listed below, 2012–2025. Field-weighted impact is the mean over the 17 works scored for it; 1.00 is the world average for works of the same field, type and year. 5 of the 17 papers scored for it are among the world's most cited tenth for their field, type and year.

EDUCATION AND QUALIFICATIONS

Kwame Nkrumah University of Science and Technology
Kumasi, Ghana

PUBLICATIONS

Journal articles 19

1. Saleem Abdullah, Saifullah, **Samuel Okyere** (2025). A novel decision-making approach using three-way decision in fractional fuzzy environment. *Complex & Intelligent Systems*. https://doi.org/10.1007/s40747-025-01990-x
2. Zain Khan, Saleem Abdullah, **Samuel Okyere** (2025). Approximate Solution of Intuitionistic Fuzzy Volterra Integral Equation of Separable-Type Kernel Using Elzaki Adomian Decomposition Method. *International Journal of Mathematics and Mathematical Sciences*. https://doi.org/10.1155/ijmm/6673165
3. Muhammad Qiyas, Muhammad Naeem, Zahid Khan, **Samuel Okyer** (2025). Interval-Valued Probabilistic Dual Hesitant Fuzzy Muirhead Mean Aggregation Operators and Their Applications in Regenerative Energy Source Selection. *International Journal of Intelligent Systems*. https://doi.org/10.1155/int/8892299
4. Shakoor Muhammad, Faisal Gulyar, Khalil ullah, Muhammad Farooq, **Samuel Okyere** (2025). Solutions of Mono and Multi-objective Assignment Problems without Modification Matrix. *Journal of Innovative Research in Mathematical and Computational Sciences*. https://doi.org/10.62270/jirmcs.v4i2.50
5. Patricia Adjeley Laryea, F. T. Oduro, Christopher Saaha Bornaa, **Samuel Okyere** (2023). A Transmission Dynamics Model of COVID-19 With Consideration of the Vulnerability of a Population. *Journal of Mathematics Research*. https://doi.org/10.5539/jmr.v15n5p47

6. **Samuel Okyere**, Joseph Ackora-Prah, Saleem Abdullah, Samuel Akwasi Adarkwa, Frank Kofi Owusu, Kwame Bonsu, Mary Osei Fokuo, Mary Ann Yeboah (2023). Analysis of Turberculosis-COVID-19 Coinfection Using Fractional Derivatives. *International Journal of Mathematics and Mathematical Sciences*. https://doi.org/10.1155/2023/2831846
7. Muhammad Qiyas, Neelam Khan, Muhammad Naeem, **Samuel Okyere** (2023). Decision-Making Based on Spherical Linear Diophantine Fuzzy Rough Aggregation Operators and EDAS Method. *Journal of Mathematics*. https://doi.org/10.1155/2023/5839410
8. **Samuel Okyere**, Joseph Ackora-Prah, Kwaku Forkuoh Darkwah, Francis Tabi Oduro, Ebenezer Bonyah (2023). Fractional Optimal Control Model of SARS-CoV-2 (COVID-19) Disease in Ghana. *Journal of Mathematics*. https://doi.org/10.1155/2023/3308529
9. **Samuel Okyere**, Joseph Ackora-Prah, Ebenezer Bonyah, Bennedict Barnes, Maxwell Akwasi Boateng, Ishmael Takyi, Samuel Akwasi Adarkwa (2023). Hypertension and COVID-19 fractional derivative model with double dose vaccination. *F1000Research*. https://doi.org/10.12688/f1000research.133768.1
10. **Samuel Okyere**, Joseph Ackora-Prah, Ebenezer Bonyah, Samuel Akwasi Adarkwa (2023). Numerical Scheme for Compartmental Models: New Matlab Software Codes for Numerical Simulation. *F1000Research*. https://doi.org/10.12688/f1000research.130458.2
11. Joseph Ackora-Prah, **Samuel Okyere**, Ebenezer Bonyah, Atinuke Olusola Adebanji, Yaw Boateng (2023). Optimal control model of human-to-human transmission of monkeypox virus. *F1000Research*. https://doi.org/10.12688/f1000research.130276.2
12. **Samuel Okyere**, Joseph Ackora-Prah (2022). A Mathematical Model of Transmission Dynamics of SARS-CoV-2 (COVID-19) with an Underlying Condition of Diabetes. *International Journal of Mathematics and Mathematical Sciences*. https://doi.org/10.1155/2022/7984818
13. Shakoor Muhammad, Riaz Ali, Saleem Abdullah, **Samuel Okyere** (2022). A New Approach to Decision-Making Problem under Complex Pythagorean Fuzzy Information. *Complexity*. https://doi.org/10.1155/2022/8635521
14. AS Raji, **S Okyere** (2022). A review of the coping strategies adopted by diabetes patients in Ghana. *Special Journal of Open Research and Reviews*. https://doi.org/10.61915/orr.456123
15. Muhammad Qiyas, Saleem Abdullah, Muhammad Naeem, Neelam Khan, **Samuel Okyere**, Thongchi Botmart (2022). Decision Support System Based on Complex q -Rung Orthopair Fuzzy Rough Hamacher Aggregation Operator through Modified EDAS Method. *Journal of Function Spaces*. https://doi.org/10.1155/2022/5437373
16. Samuel Akwasi Adarkwa, Frank Kofi Owusu, **Samuel Okyere** (2022). Impact of Using Double Positive Samples in Deming Regression. *International Journal of Mathematics and Mathematical Sciences*. https://doi.org/10.1155/2022/3984857
17. **Samuel Okyere**, Joseph Ackora-Prah (2022). Modeling and analysis of monkeypox disease using fractional derivatives. *Results in Engineering*. https://doi.org/10.1016/j.rineng.2022.100786
18. **S Okyere**, FT Oduro (2013). Epidemiological model of influenza a (H1N1) transmission in Ashanti Region of Ghana, 2012. *Journal of Public Health*. https://www.researchgate.net/profile/Francis-Oduro/publication/283641669_Epidemiological_model_of_influenza_a_H1N1_transmission_in_Ashanti_Region_of_Ghana_2012/links/5705439a08ae44d70ee31016/Epidemiological-model-of-influenza-a-H1N1-transmission-in-Ashanti-Region-of-Ghana-2012.pdf
19. **S Okyere** (2012). Epidemiological model of influenza A (H1N1) transmission in Ashanti region of Ghana (Unpublished M. Phil thesis). *Kwame Nkrumah University of Science and Technology, Kumasi*.

Reports 1

1. **Samuel Okyere** (2023). Dynamic Transmission of SARS-CoV-2 (COVID-19) in Ghana. *Eliva Press*.