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RESEARCH

Interests	Operations research
Areas	Transportation · Management Science and Operations Research · Control and Systems Engineering · Economics and Econometrics · Management Information Systems · Waste Management and Disposal

RESEARCH SUMMARY

28	195	8	7	1.02	15%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 28 publications listed below, 2006–2026. Field-weighted impact is the mean over the 20 works scored for it; 1.00 is the world average for works of the same field, type and year. 3 of the 20 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 28

1. Gabriel Obed Fosu, Fredrick Asenso Wireko, Linus Kweku Labik, **Charles Sebil** (2026). A nonlocal cooperative multiclass macroscopic traffic model with communication delays and V2V interaction. *Transportation Engineering*. https://doi.org/10.1016/j.treng.2026.100458
2. Bernard Atta Adjei, Dominic Otoo, **Charles Sebil**, Joseph Ackora-Prah (2026). Optimization of Tomato Processing and Agrofarm Logistics Through Mathematical Programming. *Journal of Applied Mathematics*. https://doi.org/10.1155/jama/4918539
3. Gabriel Obed Fosu, Fredrick Asenso Wireko, Bright Emmanuel Owusu, **Charles Sebil** (2026). Second-order macroscopic modelling of stop-and-go traffic under fixed and feedback-based signal control. *Results in Engineering*. https://doi.org/10.1016/j.rineng.2026.111323
4. K Mensah, **C Sebil** (2025). Modeling and analysis of the dynamics of rabies using nonstandard finite difference approach with optimal control. *Appl. Math*. https://www.researchgate.net/profile/Mensah-Kennedy/publication/392858771_Modeling_and_Analysis_of_the_Dynamics_of_Rabies_using_Nonstandard_Finite_Difference_Approach_with_Optimal_Control/links/6876f140ae516743559d2079/Modeling-and-Analysis-of-the-Dynamics-of-Rabies-using-Nonstandard-Finite-Difference-Approach-with-Optimal-Control.pdf
5. Fredrick Asenso Wireko, Ignatius Dennis Kwesi Mensah, Emmanuel Nii Apai Aborhey, Samuel Adu Appiah, **Charles Sebil**, Joseph Ackora-Prah (2025). The maximum range method for finding initial basic feasible solution for transportation problems. *Results in Control and Optimization*. https://doi.org/10.1016/j.rico.2025.100551
6. Bernard Atta Adjei, **Charles Sebil**, Dominic Otoo, Joseph Ackora-Prah (2024). A quadratically constrained mixed-integer non-linear programming model for multiple sink distributions. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e38528
7. Isaac Kwasi Adu, Fredrick Asenso Wireko, **Charles Sebil**, Joshua Kiddy K. Asamoah (2023). A fractal–fractional model of Ebola with reinfection. *Results in Physics*. https://doi.org/10.1016/j.rinp.2023.106893

8. Fredrick Asenso Wireko, Isaac Kwasi Adu, **Charles Sebil**, Joshua Kiddy K. Asamoah (2023). A fractal–fractional order model for exploring the dynamics of Monkeypox disease. *Decision Analytics Journal*. https://doi.org/10.1016/j.dajour.2023.100300

9. Fredrick Asenso Wireko, Benedict Barnes, **Charles Sebil**, Joseph Ackora-Prah (2021). The Eigenspace Spectral Regularization Method for Solving Discrete Ill-Posed Systems. *Journal of Applied Mathematics*. https://doi.org/10.1155/2021/4373290

10. Shaibu Osman, Dominic Otoo, **Charles Sebil** (2020). Analysis of Listeriosis Transmission Dynamics with Optimal Control. *Applied Mathematics*. https://doi.org/10.4236/am.2020.117048

11. **C Sebil** (2020). Bifurcation, sensitivity and optimal control analysis of modelling anthrax-listeriosis co-dynamics. *Communications in Mathematical Biology and Neuroscience*. https://scholar.google.com/scholar?cluster=3598194444215416268&hl=en&oi=scholarr

12. Benedict Barnes, Francis Ohene Boateng, **Charles Sebil**, Enock Owusu (2020). Mathematical Modeling of Wastes Pile-Up in Kwadaso Municipality in Ashanti, Ghana. *European Journal of Pure and Applied Mathematics*. https://doi.org/10.29020/nybg.ejpam.v13i4.3813

13. **Charles Sebil** (2020). Onset of Magnetoconvection in a Rotating Darcy-Brinkman Porous Layer Heated from Below with Temperature Dependent Heat Source. *INTERNATIONAL JOURNAL OF MATHEMATICS*. https://scholar.google.com/scholar?cluster=4787098469918310555&hl=en&oi=scholarr

14. Dominic Otoo, Patrick Opoku, **Sebil Charles**, Asekiya Prince Kingsley (2019). Deterministic epidemic model for (S V C S y C A s y I R) pneumonia dynamics, with vaccination and temporal immunity. *Infectious Disease Modelling*. https://doi.org/10.1016/j.idm.2019.11.001

15. Dominic Otoo, **Charles Sebil**, Justice Amenyo Kessie, Ernest Larbi (2019). Probabilistic Distance, Capacity Clustering Location Model of a Semi-Obnoxious Facility, a Real Case of Tafo, Kumasi, Ghana. *American Journal of Operations Research*. https://doi.org/10.4236/ajor.2019.93009

16. Benedict Barnes, I. A. Adjei, **C. Sebil** (2019). The Mathematical Modelling of Refuse Build-up on the University Campus: A Case Study of KNUST Campus. *European Journal of Pure and Applied Mathematics*. https://doi.org/10.29020/nybg.ejpam.v12i4.3546

17. CSEH Benedict Barnes, **C Sebil** (2018). A Note on the Quasi-normed linear space. *Advances in Theoretical and Applied Mathematics*.

18. **Charles Sebil**, Veronica Owusu, Samuel Gyamerah (2016). Demand Responsive Transportation Service Problem with Time Windows. *British Journal of Mathematics & Computer Science*. https://doi.org/10.9734/bjmcs/2016/24872

19. Ali Napari Seidu, Iddrisu Wahab Abdul, **Charles Sebil** (2015). MODELLING THE CAUSES OF TAX DEFAULT AMONG SMALL AND MEDIUM SCALE ENTERPRISES (SMEs) IN THE TAMALE METROPOLIS OF GHANA. *European Scientific Journal ESJ*.

20. **C Sebil**, GO Fosu (2015). Measurement of Relative Efficiency of Senior High Schools Using Data Envolpement Analysis. *International Journal of Applied Science and Mathematics (IJISM)*. https://scholar.google.com/scholar?cluster=4988258279046909571&hl=en&oi=scholarr

21. **C Sebil** (2014). Capacitated clustering and collection of solid waste in kwadaso estate, Kumasi. *Journal of Asian scientific research*. http://carrels.distantreader.org/journal-journalOfAsianScientificResearch-ojsoai/cache/joasr-3662.pdf

22. **C Sebil** (2014). Mathematical modeling of domestic violence and its trends, case study Tamale Metropolis, Ghana. *Journal of Asian Scientific Research*. http://carrels.distantreader.org/journal-journalOfAsianScientificResearch-ojsoai/cache/joasr-3659.pdf

23. **Charles Sebil**, A. K. Quainoo, Napoleon Bellua Sam (2013). MEASURING THE ACADEMIC EFFICIENCY OF THE FOUR CAMPUSES OF THE UNIVERSITY FOR DEVELOPMENT STUDIES USING DATA ENVELOPMENT ANALYSIS. *European Scientific Journal ESJ*.

24. Sam Napoleon Bellua, **Charles Sebil**, Bumbokuri Jude (2013). MEASURING THE EDUCATIONAL EFFICIENCY OF AREA DEVELOPMENT PROGRAMMES OF WORLD VISION GHANA-NORTHERN SECTOR.

25. **Charles Sebil**, Sam Napoleon Bellua, Bumbokuri Jude (2013). MEASURING THE EFFICIENCY OF WORLD VISION GHANA'S EDUCATIONAL PROJECTS USING DATA ENVELOPMENT ANALYSIS.

26. John Awuah Addor, S. K. Amponsah, Jonathan Annan, **Charles Sebil** (2013). School Bus Routing: A Case Study of Wood Bridge School Complex, Sekondi-Takoradi, Ghana. *International Journal of Business and Social Research*. https://doi.org/10.18533/ijbsr.v3i12.346

27. François Mahama, **C Sebil** (2013). Study of Vehicular Traffic Congestion in the Sekondi-Takoradi Metropolis. *RePEc: Research Papers in Economics*. https://doi.org/10.18533/ijbsr.v3i7.271

28. **C Sebil** (2006). Giving out loans, the best way out case study: Atwima Kwanwuma rural bank, Ashanti Region of Ghana. *Journal of Science and Technology (Ghana)*. https://www.ajol.info/index.php/just/article/download/69756/57823