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RESEARCH

Areas: Modeling and Simulation · Numerical Analysis · Statistical and Nonlinear Physics · Applied Mathematics · Economics and Econometrics · Media Technology

RESEARCH SUMMARY

27	70	5	2	0.45	0%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 27 publications listed below, 2012–2026. Field-weighted impact is the mean over the 27 works scored for it; 1.00 is the world average for works of the same field, type and year. 0 of the 27 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 27

1. Kusi Ankrah Bonsu, Ebenezer Baidoo BAIDOO Bediako, **Kwaku Fokuoh Darkwah**, John Amoah-Mensah, Kwame Oteng Gyasi (2026). Energy-Efficient Power Allocation for Cell-Free Massive MIMO Systems. *Applied Mathematics and Statistics*. https://doi.org/10.53941/ams.2026.100011
2. Leticia Amanor, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2026). Mittag-Leffler Algorithm to Solve Linear Fractional Ordinary Differential Equations. *Journal of Applied Mathematics*. https://doi.org/10.1155/jama/7366832
3. Emmanuel Mensah, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2026). The Two Modified G′G-Expansion Methods for Obtaining Solitons of the Korteweg-De Vries Equation. *Advances in Mathematical Physics*. https://doi.org/10.1155/admp/9869666
4. Henry Kwasi Asiedu, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2025). Exact solution of system of nonlinear fractional partial differential equations by modified semi-separation of variables method. *Partial Differential Equations in Applied Mathematics*. https://doi.org/10.1016/j.padiff.2025.101247
5. Isaac Addai, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2025). Fractional Gauss Hypergeometric Power Series Method for Solving Fractional Partial Differential Equations. *Abstract and Applied Analysis*. https://doi.org/10.1155/aaa/7650251
6. Henry Kwasi Asiedu, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2025). Modified Semiseparation of Variables Methods for Solving the System of Nonlinear Fractional Partial Differential Equations. *International Journal of Differential Equations*. https://doi.org/10.1155/ijde/3634269
7. Henry Kwasi Asiedu, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2025). Solving system of nonlinear fractional partial differential equations by fractional semi-separation of variables method. *Research in Mathematics*. https://doi.org/10.1080/27684830.2025.2476871
8. Henry Kwasi Asiedu, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2025). The Analytic Methods for Solving the System of Fractional Order Brusselator Equations. *International Journal of Differential Equations*. https://doi.org/10.1155/ijde/8436408
9. Francis Tuffour, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2025). The Exact Solution of the Fractional Burger's Equation using the Modified Homogeneous Balance Method. *Scientific*

African. https://doi.org/10.1016/j.sciaf.2025.e02789

10. Francis Tuffour, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2025). The Modified Homogeneous Balance Method for solving fractional Cahn–Allen and equal width equations. *Partial Differential Equations in Applied Mathematics*. https://doi.org/10.1016/j.padiff.2025.101246
11. Kwasi Frempong Sarfo, William Obeng-Denteh, Ishmael Takyi, **Kwaku Forkuoh Darkwah** (2024). A Force Function Formula for Solutions of Nonlinear Weakly Singular Volterra Integral Equations. *European Journal of Pure and Applied Mathematics*. https://doi.org/10.29020/nybg.ejpam.v17i2.5071
12. Francis Tuffour, Benedict Barnes, Isaac Kwame Dontwi, **Kwaku Forkuoh Darkwah** (2024). The Modified Homogeneous Balance Methods for solving Korteweg–DeVries equations. *Partial Differential Equations in Applied Mathematics*. https://doi.org/10.1016/j.padiff.2024.101035
13. 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
14. Michael Kofi Ahenkan, Emmanuel S. Adabor, **Kwaku F. Darkwah** (2022). Determination of relationships among cancer-related genes using Bayesian networks. *International Journal of Computational Biology and Drug Design*. https://doi.org/10.1504/ijcbdd.2022.126989
15. Amos Odoom, Francis T. Oduro, **Kwaku Darkwah**, Ishmael Takyi (2022). Determination of the Exact Eigenvalues and Eigenfunctions of a Class of Quantum Anharmonic Oscillators with Polynomial Potential Functions. *Journal of Mathematics Research*. https://doi.org/10.5539/jmr.v14n1p72
16. Justice Kwame Appati, Huzaifa Abu, Ebenezer Owusu, **Kwaku Darkwah** (2021). Analysis and Implementation of Optimization Techniques for Facial Recognition. *Applied Computational Intelligence and Soft Computing*. https://doi.org/10.1155/2021/6672578
17. Justice Kojo Kangah, Justice Kwame Appati, **Kwaku F. Darkwah**, Michael Agbo Tettey Soli (2021). Implementation of an H-PSOGA Optimization Model for Vehicle Routing Problem. *International Journal of Applied Metaheuristic Computing*. https://doi.org/10.4018/ijamc.2021070106
18. James Owusu Asare, Justice Kwame Appati, **Kwaku Darkwah** (2020). Formulation and Analysis of Patterns in a Score Matrix for Global Sequence Alignment. *International Journal of Mathematics and Mathematical Sciences*. https://doi.org/10.1155/2020/3858057
19. Kennedy Gyimah, Justice Kwame Appati, **Kwaku Darkwah**, Kwabena Ansah (2019). An Improved Geo-Textural Based Feature Extraction Vector For Offline Signature Verification. *Journal of Advances in Mathematics and Computer Science*. https://doi.org/10.9734/jamcs/2019/v32i230141
20. Beatrice Boatemaa, Justice K. Appati, **Kwaku F. Darkwah** (2018). Multi-criteria ranking of voice transmission carriers of a telecommunication company using PROMETHEE. *Applied Informatics*. https://doi.org/10.1186/s40535-018-0056-7
21. Anthony Donkor, **Kwaku Darkwah**, Justice Appati, Prosper Gakpleazi, Naninja Wisdom (2018). Optimal Allocation of Funds for Loans Using Karmarkar's Algorithm: Capital Rural Bank, Sunyani-Ghana. *Journal of Economics Management and Trade*. https://doi.org/10.9734/jemt/2018/40292
22. **Kwaku Darkwah**, Bashiru Abubakari (2017). GAME THEORY MODEL OF CONSUMERS' RESPONSE TO MOBILE TELECOMMUNICATION SERVICE OFFERS. A CASE STUDY OF MOTENS AND VODAG IN THE TAMALE METROPOLIS IN GHANA. *International Journal of Advanced Research*. https://doi.org/10.21474/ijar01/6094
23. Hawa Adusei, M.T. Agyei Frempong, **Kwaku Darkwah**, Emmanuel Osei- Frimpong (2015). Mathematical Model of the Behaviour of T Cytotoxic, T Helper, B and Natural Killer Cells in the Presence of Viruses. *Journal of Medical Sciences(Faisalabad)*. https://doi.org/10.3923/jms.2015.160.177
24. Wallace Agyei, **Kwaku Darkwah**, William Obeng-Denteh, Emmanuel Andam (2015). Modeling Newspaper Distribution as Capacitated Vehicle Routing Problem with Time Window: Case Study of Daily Graphic Newspaper, Ashanti Region, Ghana. *Archives of Current Research International*. https://doi.org/10.9734/acri/2015/13943
25. **Kwaku F. Darkwah**, Richard Tawiah, Maxwell Adu-Gyamfi (2015). Two-Way Anova for the Study of

Revenue Mobilization Inequalities. *Lithuanian Journal of Statistics*. https://doi.org/10.15388/ljs.2015.13879

26. Benedict Barnes, Anthony Y. Aidoo, **Kwaku Forkuoh Darkwah**, E. Osei-Frimpong (2013). Mathematical Analysis of the Impact ofVaccination in the Spread of Diseases in a Large Susceptible Population. https://doi.org/10.7392/openaccess.23050423

27. **Kwaku Forkuoh Darkwah**, Gabriel Asare Okyere, Boakye Agyemang (2012). Intervention analysis of serious crimes in the eastern region of Ghana. https://doi.org/10.18533/ijbsr.v2i7.125