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RESEARCH

Interests	Functional Differential and Difference Equations
Areas	Applied Mathematics · Public Health, Environmental and Occupational Health · Numerical Analysis · Modeling and Simulation · Computational Theory and Mathematics · Control and Systems Engineering

RESEARCH SUMMARY

33	482	10	10	1.85	14%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 33 publications listed below, 2005–2025. Field-weighted impact is the mean over the 21 works scored for it; 1.00 is the world average for works of the same field, type and year. 3 of the 21 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 32

1. Adusei-Poku Afful, **Ernest Yankson**, Agnes Adom-Konadu (2025). Existence and stability of solutions of totally nonlinear neutral Caputo q-fractional difference equations. *Cubo*. https://doi.org/10.56754/0719-0646.2703.635
2. Edem K Netsey, Samuel M Naandam, Joseph Asante Jnr, Kuukua E Abraham, Aayire C Yadem, Gabriel Owusu, Jeffrey G Shaffer, Sudesh K Srivastav, Seydou Doumbia, Ellis Owusu-Dabo, Chris E Morkle, Desmond Yemeh, Stephen Manortey, **Ernest Yankson**, Mamadou Sangare, Samuel Kakraba (2025). Structural and Functional Impacts of SARS-CoV-2 Spike Protein Mutations: Insights From Predictive Modeling and Analytics. *JMIR Bioinformatics and Biotechnology*. https://doi.org/10.2196/73637
3. Adusei-Poku Afful, **Ernest Yankson** (2023). Exponential stability and instability in nonlinear differential equation with multiple delays. *Proyecciones (Antofagasta)*. https://doi.org/10.22199/issn.0717-6279-4197
4. AP Afful, **Ernest Yankson** (2023). Exponential stability and instability in nonlinear differential equations with multiple delays. *Proyecciones (Antofagasta)*. https://www.scielo.cl/scielo.php?pid=S0716-09172023000300681&script=sci_abstract&tlng=pt
5. Agnes Adom-Konadu, **Ernest Yankson**, Samuel M. Naandam, Duah Dwomoh (2022). A Mathematical Model for Effective Control and Possible Eradication of Malaria. *Journal of Mathematics*. https://doi.org/10.1155/2022/6165581
6. Joshua Kiddy K. Asamoah, Eric Okyere, **Ernest Yankson**, Alex Akwasi Opoku, Agnes Adom-Konadu, Edward Acheampong, Yarhands Dissou Arthur (2022). Non-fractional and fractional mathematical analysis and simulations for Q fever. *Chaos Solitons & Fractals*. https://doi.org/10.1016/j.chaos.2022.111821
7. **E YANKSON** (2022). SUFFICIENT CONDITIONS FOR THE STABILITY OF A SYSTEM OF DIFFERENCE EQUATIONS WITH FINITE DELAY. *Electronic Journal of Mathematical Analysis and Applications*. https://journals.ekb.eg/article_292054_cb0456e8eb45a24892c9363583e2b003.pdf
8. **Ernest Yankson** (2021). Exponential stability results for variable delay difference equations. *Opuscula Mathematica*. https://doi.org/10.7494/opmath.2021.41.1.145
9. **Ernest Yankson** (2021). Inequalities and sufficient conditions for exponential stability and instability for

nonlinear Volterra difference equations with variable delay. *Cubo*. https://doi.org/10.4067/s0719-06462021000100109

10. Joshua Kiddy K. Asamoah, **Ernest Yankson**, Eric Okyere, Gui-Quan Sun, Zhen Jin, Rashid Jan, Fatmawati (2021). Optimal control and cost-effectiveness analysis for dengue fever model with asymptomatic and partial immune individuals. *Results in Physics*. https://doi.org/10.1016/j.rinp.2021.104919
11. Joshua Kiddy K. Asamoah, Zhen Jin, Gui-Quan Sun, Baba Seidu, **Ernest Yankson**, Afeez Abidemi, F.T. Oduro, Stephen E. Moore, Eric Okyere (2021). Sensitivity assessment and optimal economic evaluation of a new COVID-19 compartmental epidemic model with control interventions. *Chaos Solitons & Fractals*. https://doi.org/10.1016/j.chaos.2021.110885
12. Youssef N. Raffoul, **Ernest Yankson** (2019). Positive periodic solutions of functional discrete systems with a parameter. *Cubo*. https://doi.org/10.4067/s0719-06462019000100079
13. **E YANKSON** (2018). PERIODICITY IN MULTIPLE DELAY VOLTERRA DIFFERENCE EQUATIONS OF NEUTRAL TYPE. *Electronic Journal of Mathematical Analysis and Applications*. https://ejmaa.journals.ekb.eg/article_312552_8530e120f824f4291b62d65333a7867c.pdf
14. **Ernest Yankson**, Samuel E. Assabil (2017). Positive periodic solutions for neutral functional differential systems. *Proyecciones (Antofagasta)*. https://doi.org/10.4067/s0716-09172017000300423
15. **Ernest Yankson** (2017). Stability Results for Neutral Integro-Differential Equations with Multiple Functional Delays. *Khayyam journal of mathematics*. https://doi.org/10.22034/kjm.2017.43831
16. **Ernest Yankson** (2016). Existence and uniqueness of solutions for neutral periodic integro-differential equations with infinite delay. *Caspian Journal of Mathematical Sciences (CJMS)peer*.
17. **Ernest Yankson** (2016). Periodic solutions for a system of totally nonlinear dynamic equations on time scale. *Miskolc mathematical notes/Mathematical notes*. https://doi.org/10.18514/mmn.2016.1468
18. E.K. Essel, **E. Yankson**, S.M. Naandam, A.S. Lanor (2015). ASYMPTOTIC BEHAVIOUR OF THE WRONSKIAN OF BOUNDARY CONDITION FUNCTIONS FOR A FOURTH ORDER BOUNDARY VALUE ROBLEM (A SPECIAL CASE). *International Journal of Pure and Apllied Mathematics*. https://doi.org/10.12732/ijpam.v99i4.6
19. **ERNEST YANKSON** (2015). EXISTENCE AND UNIQUENESS OF PERIODIC SOLUTIONS FOR A SYSTEM OF DIFFERENCE EQUATIONS WITH FINITE DELAY. *Electronic Journal of Mathematical Analysis and Applications*. https://journals.ekb.eg/article_310763_0882541f1a058a5b48b30b2c91746041.pdf
20. **Ernest Yankson**, Emmanuel K. Essel (2015). Stability in delay Volterra difference equations of neutral type. *Proyecciones (Antofagasta)*. https://doi.org/10.4067/s0716-09172015000300003
21. **Ernest Yankson** (2014). Existence of bounded solutions for almost linear Volterra difference equations using fixed point theory and Lyapunov functionals. *Nonlinear Studies*. https://openurl.ebsco.com/contentitem/gcd:99890656?sid=ebsco:plink:crawler-gcd&id=ebsco:gcd:99890656&crl=c&jrnl=13598678
22. Emmanuel K. Essel, **Ernest Yankson** (2014). On the existence of positive periodic solutions for totally nonlinear neutral differential equations of the second-order with functional delay. *Opuscula Mathematica*. https://doi.org/10.7494/opmath.2014.34.3.469
23. **Ernest Yankson** (2014). Periodicity in a System of Differential Equations with Finite Delay. *Caspian Journal of Mathematical Sciences (CJMS)peer*.
24. EK Essel, **Ernest Yankson** (2013). Asymptotic behaviour of boundary condition functions for a fourth-order boundary value problem. *Theoretical Mathematics & Applications (TMA)*. http://www.scienpress.com/Upload/TMA/Vol%203_3_10.pdf
25. **Ernest Yankson** (2012). Existence and positivity of solutions for a nonlinear periodic differential equation. *Arch. Math.(Brno)*. https://eudml.org/doc/251422
26. **Ernest Yankson** (2012). Existence of periodic solutions for totally nonlinear neutral differential equations with functional delay. *Opuscula Mathematica*. https://doi.org/10.7494/opmath.2012.32.3.617
27. **Ernest Yankson** (2012). Positive periodic solutions for second-order neutral differential equations with functional delay. *Electron. J. Differential Equations*. https://ejde.math.txstate.edu/Volumes/2012/14/

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28. **Ernest Yankson** (2011). Positive solutions for a system of periodic neutral delay difference equations. *African Diaspora Journal of Mathematics. New Series*. https://projecteuclid.org/journals/african-diaspora-journal-of-mathematics/volume-11/issue-2/Positive-Solutions-for-a-System-of-Periodic-Neutral-Delay/adjm/1323180288.full
29. **Ernest Yankson** (2010). Positive periodic solutions in neutral delay difference equations. *Adv. Dyn. Syst. Appl*. https://campus.mst.edu/adsa/contents/v5n1p9.pdf
30. **Ernest Yankson** (2009). Stability in discrete equations with variable delays. *Electronic Journal of Qualitative Theory of Differential Equations*. https://real.mtak.hu/23021/1/p361.pdf
31. **Ernest Yankson** (2006). Stability of Volterra difference delay equations. *Electronic journal of qualitative theory of differential equations*. https://doi.org/10.14232/ejqtde.2006.1.20
32. Muhammad Islam, **Ernest Yankson** (2005). Boundedness and stability in nonlinear delay difference equations employing fixed point theory. *Electronic journal of qualitative theory of differential equations*. https://doi.org/10.14232/ejqtde.2005.1.26

Theses 1

1. **Ernest Yankson** (2013). Fixed points and some qualitative properties of neutral functional differential equations, neutral functional difference equations, and dynamic equations on time scale. *University of Cape Coast*. https://ir.ucc.edu.gh/server/api/core/bitstreams/09c1ce96-40cd-4de7-abf7-37147a38d384/content