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RESEARCH

Interests	Statistics
Areas	Statistics and Probability · Management Science and Operations Research · Economics and Econometrics · Statistics, Probability and Uncertainty · Applied Mathematics · Artificial Intelligence

RESEARCH SUMMARY

32	123	7	6	0.37	0%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 32 publications listed below, 1999–2026. Field-weighted impact is the mean over the 15 works scored for it; 1.00 is the world average for works of the same field, type and year. 0 of the 15 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 25

1. David Kwamena Mensah, Emmanuel Kojo Amoah, **Nathaniel Howard** (2026). Statistical Methods for Consolidated Fire Outbreak Data Extraction in Ghana. *Engineering Reports*. https://doi.org/10.1002/eng2.70895
2. **Nathaniel Howard**, David Kwamena Mensah (2024). LINEAR MODEL IN THE PRESENCE OF MULTICOLLINEAR PREDICTORS AND AUTOCORRELATED ERRORS: INSIGHTS FROM REGULARIZED AND ROBUST REGRESSION METHODS. *Journal of Data Acquisition and Processing*. https://scholar.google.com/scholar?cluster=17345525504653793278&hl=en&oi=scholarr
3. Jones Asante Manu, **Nathaniel Howard**, Bismark Kwao Nkansah (2024). Quartic Transmuted Exponential Distribution: Characteristics and Parameter Estimation. *International Journal of Statistical Distributions and Applications*. https://doi.org/10.11648/j.ijsd.20241002.13
4. **Nathaniel Howard** (2024). Statistical approach to enhancing performance of logistic regression model: Application to HIV/AIDS data. *International Journal of Research and Innovation in Applied Science*. https://www.academia.edu/download/113552566/Statistical_Approach_to_Enhancing_Performance_of_Logistic_Regression_Model_Application_to_HIVAIDS_Data.pdf
5. Mustapha Adams, **Nathaniel Howard**, Ishaque Mahama (2022). Long-term Predictors of Stroke Severity among Patients on Secondary Prevention in Northern Ghana. *Asian Research Journal of Mathematics*. https://doi.org/10.9734/arjom/2022/v18i12627
6. **Nathaniel Howard**, Mustapha Adams (2022). Multi-State analysis of secondary prevention of stroke in Northern Ghana. *International Journal of Statistics and Applied Mathematics*. https://doi.org/10.22271/maths.2022.v7.i6b.911
7. David Kwamena Mensah, Michael Arthur Ofori, **Nathaniel Howard** (2022). Traumatic Systolic Blood Pressure Modeling: A Spectral Gaussian Process Regression Approach with Robust Sample Covariates. *Mathematics and Statistics*. https://doi.org/10.13189/ms.2022.100312
8. Michael J. Adjabui, Jakperik Dioggban, **Nathaniel K. Howard** (2021). Stepwise Procedure for Toxicological Assessment Based on Ratio of Mean Differences for a Normally Distributed Data. *Asian Research Journal*

of Mathematics. https://doi.org/10.9734/arjom/2021/v17i1130341

9. **NK Howard** (2020). A Markov-modulated tree-based gradient boosting model for auto-insurance risk premium pricing. *Risk and Decision Analysis*.
10. Ernest Kofi Davis, Wee Tiong Seah, **Nathaniel Howard**, Eric Magnus Wilmot (2020). The attributes of mathematics learning which Ghanaian senior high school students value. *Journal of Global Education and Research*. https://doi.org/10.5038/2577-509x.5.1.1096
11. Michael J. Adjabui, **Nathaniel K. Howard**, Mathias Akamba (2019). Biostatistical Assessment of Mutagenicity Studies: A Stepwise Confidence Procedure. *Journal of Probability and Statistics*. https://doi.org/10.1155/2019/3249097
12. B. K. Nkansah, Arimiyaw Zakaria, **Nathaniel Howard** (2019). Effect of measurement scales on results of item response theory models and multivariate statistical techniques. *Journal of Informatics and Mathematical Sciences*. https://doi.org/10.26713/jims.v11i1.951
13. Carl Hope Korkpoe, **Nathaniel Howard** (2019). Volatility Model Choice for Sub-Saharan Frontier Equity Markets - A Markov Regime Switching Bayesian Approach. *EMAJ Emerging Markets Journal*. https://doi.org/10.5195/emaj.2019.172
14. Dennis Arku, Kwabena Doku-Amponsah, **Nathaniel K. Howard** (2018). A Markov-modulated tree-based gradient boosting model for auto-insurance risk premium pricing. *Risk and Decision Analysis*. https://doi.org/10.3233/rda-180050
15. **HOWARD NATHANIEL** (2018). FLEXIBLE STATISTICAL MODELLING OF THE OCCURRENCES OF TRANSCRIPTION FACTOR BINDING SITES ALONG A DNA SEQUENCE. *ADVANCES AND APPLICATIONS IN STATISTICS*. https://www.researchgate.net/profile/Gabriel-Kallah-Dagadu/publication/329627392_FLEXIBLE_STATISTICAL_MODELLING_OF_THE_OCCURRENCES_OF_TRANSCRIPTION_FACTOR_BINDING_SITES_ALONG_A_DNA_SEQUENCE/links/5c18ccd84585157ac1ca541e/FLEXIBLE-STATISTICAL-MODELLING-OF-THE-OCCURRENCES-OF-TRANSCRIPTION-FACTOR-BINDING-SITES-ALONG-A-DNA-SEQUENCE.pdf
16. **HOWARD NATHANIEL** (2018). Modelling age at first marriage among Ghanaians in Urban Southern Ghana. *Math Theory Model*. https://ir.ucc.edu.gh/server/api/core/bitstreams/587b92b0-564a-4e48-94c1-6582afee1cde/content
17. **HOWARD NATHANIEL** (2018). On the exponential power distribution. *Journal of Mathematical Theory and Modeling*. https://scholar.google.com/scholar?cluster=16019996027164048035&hl=en&oi=scholarr
18. **HOWARD NATHANIEL** (2018). Probabilistic graphical modelling of causal effects among the occurrences of transcription factors in DNA sequence. *JP JOURNAL OF BIOSTATISTICS*. https://ir.ucc.edu.gh/server/api/core/bitstreams/924dff0e-0f20-4786-be99-5109353ba168/content
19. Michael Adjabui, **Nathaniel Howard**, Albert Luguterah (2017). Nonparametric Stepwise Procedure for Identification of Maximum Safe Dose (MSD). *Asian Research Journal of Mathematics*. https://doi.org/10.9734/arjom/2017/36377
20. **HOWARD NATHANIEL** (2016). Nonparametric Stepwise Procedure for Identification of Minimum Effective Dose (MED). *International Journal of Statistics and Systems.*. https://scholar.google.com/scholar?cluster=4202750021582237763&hl=en&oi=scholarr
21. **HOWARD NATHANIEL** (2014). On the Detection of Influential Outliers in Linear Regression Analysis. *American Journal of Theoretical and Applied Statistics*. https://doi.org/10.11648/j.ajtas.20140304.14
22. **NK Howard** (2006). A guide to questionnaire surveys. *Mathematics Group Cape Coast, Ghana*. https://scholar.google.com/scholar?cluster=12169218773073213900&hl=en&oi=scholarr
23. **Nathaniel K Howard** (2006). Introduction to statistical methods. *Ghana Mathematics Group*. https://scholar.google.com/scholar?cluster=18414032078316926640&hl=en&oi=scholarr
24. **HOWARD NATHANIEL** (2000). Elements of statistical analysis. *Accra, Ghana: The Printers*. https://scholar.google.com/scholar?cluster=7943993786185380958&hl=en&oi=scholarr
25. **NK Howard** (1999). Who is heavy and who is light? *Journal of Natural Sciences*. https://www.africabib.org/rec.php?RID=Q00034508

Conference papers 2

1. Irene Kafui Vorsah Amponsah, Henry De-Graft Acquah, **Nathaniel Howard** (2019). A Monte Carlo Comparison of rMDL, gMDL, eMDL, nMDL, AIC and BIC Under the Effect of Stochastic Variance for Asymmetric Price Transmission Linear Models. https://doi.org/10.1109/icmrsisiit46373.2020.9405933
2. Irene Kafui Vorsah Amponsah, Henry De-Graft Acquah, **Nathaniel Kwamena Howard** (2019). Comparative Evaluation of Asymmetric Price Transmission Linear Models Using rMDL, eMDL, nMDL, gMDL, AIC and BIC Across Varying Sample Sizes. https://doi.org/10.1109/iccma.2019.00030

Reports 4

1. **HOWARD NATHANIEL** (2016). Introduction to Probability Theory. *Ghana Universities Press. P. O. Box*.
2. **HOWARD NATHANIEL** (2008). Black Star Series: Core Mathematics for Senior High Schools Book 1. *Cambridge University Press*.
3. **HOWARD NATHANIEL** (2008). Black Star Series: Core Mathematics for Senior High Schools Book 2. *Cambridge University Press*.
4. **HOWARD NATHANIEL** (2008). Black Star Series: Core Mathematics for Senior High Schools Books 3 & 4. *Cambridge University Press*.

Theses 1

1. **N. K. Howard** (2005). Multiscale Analysis of Landscape data sets from Northern Ghana: Wavelets and pattern metrics. *Ecology and Development Series No. 31. Cuvillier Verlag Göttingen, Germany*. https://books.google.com/books?hl=en&lr=&id=aA3_DwAAQBAJ&oi=fnd&pg=PA5&dq=info:6J8neqvYYcMJ:scholar.google.com&ots=TomUj8yiW8&sig=E3sc8nzBYzNvsx3pes3Ly6cZVpk