Regina Esi Turkson

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RESEARCH

Interests: Artificial Intelligence · Computing Security · Machine Learning · Spiking Neural Network

Areas: Artificial Intelligence · Computer Vision and Pattern Recognition · Information Systems · Cognitive Neuroscience · Electrical and Electronic Engineering · Radiology, Nuclear Medicine and Imaging

RESEARCH SUMMARY

24	196	4	2	0.85	6%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 24 publications listed below, 2016–2026. Field-weighted impact is the mean over the 18 works scored for it; 1.00 is the world average for works of the same field, type and year. 1 of the 18 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Research Assistant 2013–present
Computer Science and Information Technology, University of Cape Coast, Cape Coast, Ghana

Teaching Assistant 2011–2012
Computer Science and Information Technology, University of Cape Coast, Cape Coast, Ghana

EDUCATION AND QUALIFICATIONS

PHD Student in Computer Science and Engineering 2017–present
Computer Science and Technology, University of Electronic Science and Technology of China, Chengdu, China

Masters in Computer Science and Engineering 2015–2017
Computer Science and Technology, University of Electronic Science and Technology of China, Chengdu, China

BSc. Information Technology 2007–2011
Computer Science and Information Technology, University of Cape Coast, Cape Coast, Ghana

PUBLICATIONS

Journal articles 14

1. Gabriel Assamah, Emmanuel Derry, **Regina Esi Turkson** (2026). LaSeCure: Lattice Encryption with OTP Rotation for Post-Quantum Cloud Security. *International Journal of Network Security*. https://www.airitilibrary.com/Article/Detail/18163548-N202607070016-00022
2. Anderson O. Akponeware, Sandra Chukwudumebi Obiora, Mercy Ogunnusi, Temitope Omotayo, Kudirat Ayinla, **Regina E. Turkson**, Agnes Adom-Konadu, Vanessa B. Sappor (2026). Reframing Gendered Leadership in STEM Higher Education: Comparative Insights on Power, Progression, and Institutional

Disruption. *Education Sciences*. https://doi.org/10.3390/educsci16060841

3. Edward Yellakuor Baagyere, Light Quashigah, Peter Awonnatemi Agbedemnab, **Regina Esi Turkson**, Gideon Evans Wenya, Iven Aabaah (2025). A Novel Cryptographic Approach for Enhanced Data Security in Cloud Computing Environments Using Residue Number System and Advanced Encryption Standard. *Earthline Journal of Mathematical Sciences*. https://doi.org/10.34198/ejms.15525.779802
4. Edward Y Baagyere, Emmanuel B Batowise, Peter A Agbedemnab, Gideon E Wenya, **Regina E Turkson** (2025). An RNS-based all-or-nothing transform for CP-ABE in IoT distributed systems. *Journal of Cybersecurity*. https://doi.org/10.1093/cybsec/tyaf015
5. EK Attipoe, AS Yussiff, Maame Gyamfua Asante-Mensah, ED Tetteh, **RE Turkson** (2025). An ensemble learning approach for diabetes prediction using the stacking method. *Computer Science and Information Technologies*. http://iaesprime.com/index.php/csit/article/view/482
6. Alimatu-Saadia Yussiff, **Regina E Turkson**, Enoch A Frimpong, Alimatu-Saadia Yussif, Daniel A Asante, Elliot Attipoe (2025). Bcrypt-Based Optimized Password Hashing Against Targeted Internet of Things Attacks. *Cureus Journal of Computer Science.*. https://doi.org/10.7759/s44389-025-05167-y
7. Evans Ankomah, **Regina Turkson** (2025). Emotion-Aware AI Chatbots for Mental Health Support in Low-Resource Public Health Systems: A Case Study from Ghana. *World Journal of Public Health*. https://doi.org/10.11648/j.wjph.20251003.17
8. Edem Ahialey, **Regina E Turkson**, Abdul-Lateef Yussif, Enoch A Frimpong, Elliot Attipoe, Emmanuel D Tetteh (2025). Hybrid Encryption Models for Optimal Balance of Security, Scalability, and Computational Efficiency in Cloud Computing. *Cureus Journal of Computer Science.*. https://doi.org/10.7759/s44389-025-05146-3
9. **Regina Esi Turkson** (2025). Outlier Detection and Correction in Wireless Sensor Networks Using a 2-Level Hierarchical Clustering and Gaussian Process Regression Methods. *Engineering Letters*. https://openurl.ebsco.com/contentitem/gcd:186335221?sid=ebsco:plink:crawler-gcd&id=ebsco:gcd:186335221&crl=c&jrnl=1816093X
10. Gabriel Assamah, Alimatu Latiff Yussif, Benjamin Appiah, **Regina Esi Turkson**, Emmanuel Derry (2025). Ring-LWE Identity-Based Encryption with Dynamic Revocation for Cloud Data Sharing. *Indian Journal of Cryptography and Network Security*. https://doi.org/10.54105/ijcns.b1441.05021125
11. Enoch A. Frimpong, Zhiguang Qin, **Regina E. Turkson**, Bernard M. Cobbinah, Edward Y. Baagyere, Edwin K. Tenagyei (2023). Enhancing Alzheimer's Disease Classification using 3D Convolutional Neural Network and Multilayer Perceptron Model with Attention Network. *KSII Transactions on Internet and Information Systems*. https://doi.org/10.3837/tiis.2023.11.002
12. **Regina Esi Turkson**, Hong Qu, Cobbinah Bernard Mawuli, Moses J. Eghan (2021). Classification of Alzheimer's Disease Using Deep Convolutional Spiking Neural Network. *Neural Processing Letters*. https://doi.org/10.1007/s11063-021-10514-w
13. **Regina Esi Turkson** (2018). Identity-Based Encryption Technique with Ranking for Multi-Keywords Search in Cloud (IDERMKS). *International Journal of Cyber-Security and Digital Forensics*. https://go.gale.com/ps/i.do?id=GALE%7CA570819768&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=23050012&p=AONE&sw=w
14. **Regina Esi Turkson** (2018). Multi-keyword Search Employing Identity-Based Encryption Technique (MKS-IDE). *The Fifth International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAEECE2018)*. https://www.researchgate.net/profile/Natalie-Walker-15/publication/327848193_Proceedings_of_The_Fifth_International_Conference_on_Technological_Advances_in_Electrical_Electronics_and_Computer_Engineering_TAEECE2018_Trabzon_Turkey_2018/links/5ba94d9c92851ca9ed236ddb/Proceedings-of-The-Fifth-International-Conference-on-Technological-Advances-in-Electrical-Electronics-and-Computer-Engineering-TAEECE2018-Trabzon-Turkey-2018.pdf#page=15

Conference papers 10

1. Madior Gueye, Ousmane Khouma, Mandicou Ba, Idy Diop, **Regina Esi Turkson** (2026). Comparative Study of Deep Learning Models for Strabismus Diagnosing Using Facial Images. *Lecture notes in networks and systems*. https://doi.org/10.1007/978-3-032-11521-8_5
2. Madior Gueye, Ousmane Khoum, Mandicou Ba, Idy Diop, Alassane Bah, Doudou Dione, **Regina Esi Turkson**, Aly Mb Kâ (2025). Strabismus Diagnosis and Angular Deviation Calculation Based on Artificial Intelligence Approaches: A Review. *Lecture notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*. https://doi.org/10.1007/978-3-031-86493-3_14
3. Evans Ankomah, **Regina Esi Turkson**, K.E. John Edumadze, N. T. Alexander Kissiedu, Benedict A. Biney (2025). The Impact of Emotion Re-Categorization on Deep Learning Models for Text-Based Emotion Classification: A Case Study with the ISEAR Dataset. *2025 5th International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME)*. https://doi.org/10.1109/iceccme64568.2025.11277986
4. Daniel Agyei Asante, Mark Tetteh, **Regina Esi Turkson**, Lucy Manu Agyei, Obadiah Denteh Asare (2024). Predicting Electricity Market Price Using Machine Learning and Quantifying Dependency Beyond Renewable Energy. *2024 International Conference on Sustainable Technology and Engineering (i-COSTE)*. https://doi.org/10.1109/i-coste63786.2024.11024934
5. Isaac Osei, Benjamin Appiah-Kubi, Bill Kissi Frimpong, James Ben Hayfron-Acquah, Kwabena Owusu-Agyemang, Samuel Ofori-Addo, **Regina Esi Turkson**, Cobbinah Bernard Mawuli (2023). Multimodal Brain Tumor Segmentation Using Transformer and UNET. *2023 20th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP)*. https://doi.org/10.1109/iccwamtip60502.2023.10387113
6. Browne Judith Ayekai, Chen Wenyu, Gyarteng Emmanuel Sarpong Addai, Ativi Wisdom Xornam, Klugah Stephanie Mawuena, Cobbinah Bernard Mawuli, Delanyo Kulevome, Bless Lord Agbley, **Regina Esi Turkson**, Ewald Erubaar Kuupole (2023). Personalized Federated Learning for Histopathological Prediction of Lung Cancer. *2023 20th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP)*. https://doi.org/10.1109/iccwamtip60502.2023.10387013
7. Enoch Adjei Frimpong, Qin Zhiguang, Tenagyei Edwin Kwadwo, Patamia Agbeshi Rutherford, Edward Y. Baagyere, **Regina Esi Turkson** (2022). Heart Sound Classification using Residual Neural Network and Convolution Block Attention Module. *2022 19th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP)*. https://doi.org/10.1109/iccwamtip56608.2022.10016549
8. **Regina Esi Turkson**, Hong Qu, Yuchen Wang, Moses J. Eghan (2020). Unsupervised Multi-layer Spiking Convolutional Neural Network Using Layer-Wise Sparse Coding. *Lecture notes in computer science*. https://doi.org/10.1007/978-3-030-63836-8_30
9. **Regina Esi Turkson**, Sichao Liu, Edward Y. Baagyere, Moses J. Eghan (2019). Using Meta-Heuristic Algorithm in Spiking Neural Network for Pattern Recognition Tasks. https://doi.org/10.1109/iccwamtip47768.2019.9067549
10. **Regina Esi Turkson** (2016). A machine learning approach for predicting bank credit worthiness. *2016 Third International Conference on Artificial Intelligence and Pattern Recognition (AIPR)*. https://ieeexplore.ieee.org/abstract/document/7585216/