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RESEARCH

Interests	Antennas · Electromagnetics · AI · IoT · Machine Learning
Areas	Electrical and Electronic Engineering · Aerospace Engineering · Computer Networks and Communications · Biomedical Engineering · Electronic, Optical and Magnetic Materials · Media Technology

RESEARCH SUMMARY

43	609	11	12	27.20	50%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 43 publications listed below, 1994–2026. Field-weighted impact is the mean over the 26 works scored for it; 1.00 is the world average for works of the same field, type and year. 13 of the 26 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Lecturer 2016–present
Telecommunication Engineering Department, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

MSc
Chalmers University of Technology, Gothenburg, Sweden

BSc
Kwame Nkrumah University of Science and Technology, KUMASI, Ghana

PhD
University of Electronic Science and Technology, Chengdu, China

PUBLICATIONS

Journal articles 36

1. Eric Amoateng, **Ellis Mubarak Sani**, Kingsford Sarkodie Obeng Kwakye, Alexandros Pitilakis (2026). Analysis and Design of a Hybrid Graphene/Vanadium-Dioxide Terahertz Metasurface with Independently Reconfigurable Reflection Phase and Magnitude. *Photonics*. https://doi.org/10.3390/photonics13020195
2. **Mubarak S. Ellis**, David Amoako, Elijah Atiigah, Derrick Dompreh, Christian Agyekum, George A. Prah, Kwame O. Gyasi, Kingsford S.O. Kwakye, Abdul R. Ahmed, Jerry J. Kponyo (2025). A Miniaturized Shorted Radiator-Ground Monopole Antenna with High Gain End-Fire Radiation Pattern. *IEICE Communications Express*. https://doi.org/10.23919/comex.2025xbl0074
3. Kwaku Kwarteng, Kwame O. Gyasi, Justice O. Agyemang, Kwame Agyekum, Kingsford Kwakye, **Ellis M. Sani**, Emmanuel A. Ampomah, Kusi A. Bonsu (2025). Cat Swarm Optimization with Lévy Flight for Link Load Balancing in SDN. *Journal of Telecommunications and Information Technology*. https://doi.org/

10.26636/jtit.2025.1.1773

4. **Mubarak S. Ellis**, Christian Agyekum, George A. Prah II, Derrick Dompreh, Elijah Atiigah, David Amoako, Kwame O. Gyasi, Kingsford S.O. Kwakye, Abdul R. Ahmed, Jerry J. Kponyo (2025). End-fire radiation characteristics and high gain performance of a miniaturized printed monopole antenna based on theory of characteristic modes. *IEICE Electronics Express*. https://doi.org/10.1587/elex.22.20250355
5. **Mubarak S. Ellis**, Abdul-Rahman Ahmed, Jerry J. Kponyo, Isaac Acquah, Nouman Rasool (2023). Characteristic modal analysis in miniaturization and bandwidth-enhancement of monopole antenna for WLAN/WiMAX/LTE applications. *Microwave and Optical Technology Letters*. https://doi.org/10.1002/mop.33921
6. Kwame Oteng Gyasi, Abdelheq Boukarkar, Kingsford Sarkodie Obeng Kwakye, **Mubarak Sani Ellis**, Abdul-Rahman Ahmed, Jerry John Kponyo, Muhammad Abdul Basit, Nosherwan Shoaib (2023). Characteristic mode analysis of a compact circularly polarized rotated square slot antenna. *Microwave and Optical Technology Letters*. https://doi.org/10.1002/mop.33616
7. **Mubarak S. Ellis**, Nana A. Owusu-Achiaw, Stephen A. Osei, David Nakojah (2023). Circularly polarized edge-placed printed monopole antenna using theory of characteristic modes. *Microwave and Optical Technology Letters*. https://doi.org/10.1002/mop.33681
8. **M.S. Ellis**, J. Nourinia, Ch. Ghobadi, K. Hosseini, F. Alizadeh, B. Mohammadi (2023). Compact wideband printed antenna with circularly polarized tilted beam radiation using a Quasi-Radiator. *AEU - International Journal of Electronics and Communications*. https://doi.org/10.1016/j.aeue.2023.154883
9. Kingsford Sarkodie Obeng Kwakye, Nouman Rasool, Kwame Oteng Gyasi, Joseph Abroquah, **Mubarak Sani Ellis**, Ohemeng Lord Owusu, Abdul-Rahman Ahmed, Jerry John Kponyo (2023). Design and Analysis of a Low-Profile Dual-Band Circularly Polarized Monopole Antenna Based on Characteristic Mode Analysis. *International Journal of RF and Microwave Computer-Aided Engineering*. https://doi.org/10.1155/2023/7855907
10. **Mubarak S. Ellis**, Nana Afia Owusu-Achiaw, Stephen Asante Osei, David Nakojah (2023). Design of a circularly polarized printed open-slot antenna using theory of characteristic modes. *Microwave and Optical Technology Letters*. https://doi.org/10.1002/mop.33598
11. **Mubarak S. Ellis**, Javad Nourinia, Changiz Ghobadi, Bahman Mohammadi (2022). Compact planar ultra-wideband pattern diversity antenna. *Microwave and Optical Technology Letters*. https://doi.org/10.1002/mop.33402
12. Philip Arthur, **Mubarak Sani Ellis**, Abdul-Rahman Ahmed, Jerry John Kponyo (2022). Design of pattern-reconfigurable circularly polarized unidirectional antenna based on quasi-radiator for ISM applications. *Heliyon*. https://doi.org/10.1016/j.heliyon.2022.e11721
13. **M.S. Ellis**, A.-R. Ahmed, J.J. Kponyo, K.O. Gyasi, K.S.O. Kwakye, S. Ameyaw (2022). Improved bandwidth and F/B ratio of a CPW-fed planar monopole antenna. *Heliyon*. https://doi.org/10.1016/j.heliyon.2022.e10037
14. **Mubarak Sani Ellis**, Philip Arthur, Abdul Rahman Ahmed, Jerry John Kponyo, Benedicta Andoh-Mensah, Bob John (2021). Design and circuit analysis of a single and dual band-notched UWB antenna using vertical stubs embedded in feedline. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e08554
15. **Mubarak Sani Ellis**, Francis B. Effah, Abdul-Rahman Ahmed, Jerry J. Kponyo, Javad Nourinia, Changiz Ghobadi, Bahman Mohammadi (2020). Asymmetric circularly polarized open-slot antenna. *International Journal of RF and Microwave Computer-Aided Engineering*. https://doi.org/10.1002/mmce.22141
16. **M.S. Ellis**, A.R. Ahmed, J.J. Kponyo, F.B. Effah, J. Nourinia, C. Ghobadi, B. Mohammadi (2019). Compact broadband circularly polarized printed antenna with a shifted monopole and modified ground plane. *Journal of Instrumentation*. https://doi.org/10.1088/1748-0221/14/11/p11026
17. AR Ahmed, **SE Mubarak** (2019). Design and implementation of remote rfi monitoring system for ghana radio telescope observatory-nkutunse. *Am. J. Electr. Electron. Eng*.
18. **Mubarak S. Ellis**, Abdul Rahman Ahmed, Jerry John Kponyo, Javad Nourinia, Changiz Ghobadi, Bahman Mohammadi (2019). Simple circularly polarized planar monopole inverted T-shaped antenna. *Microwave*

and Optical Technology Letters. https://doi.org/10.1002/mop.32026

19. Francis Boafo EFFAH, Philip OKYERE, **Mubarak Sani ELLIS**, Patrick WHEELER, Alan WATSON, Jon CLARE, Joseph OJO (2019). THREE-LEVEL INDIRECT MATRIX CONVERTER WITH TWO SERIES Z-SOURCE NETWORKS. *DOAJ (DOAJ: Directory of Open Access Journals)*.
20. Mehdi Ghahremani, Changiz Ghobadi, Javad Nourinia, **Mubarak Sani Ellis**, Farzad Alizadeh, Bahman Mohammadi (2018). Miniaturised UWB antenna with dual-band rejection of WLAN/WiMAX using slitted EBG structure. *IET Microwaves Antennas & Propagation*. https://doi.org/10.1049/iet-map.2018.5674
21. **M.S. Ellis**, A.-R. Ahmed, J.J. Kponyo, J. Nourinia, Ch. Gbobadi, B. Mohammadi (2018). Miniaturised printed monopole antenna with a linked ground plane and radiator. *Electronics Letters*. https://doi.org/10.1049/el.2018.0756
22. **Mubarak Sani Ellis**, Ahmed Abdul-Rahman, Jerry John Kponyo (2018). Miniaturized Planar Monopole UWB Antenna with Integrated RFID/GPS/GSM/WLAN Bands Using Capactively Loaded Loop Resonator (CLLRs). *International Journal of Wireless and Microwave Technologies*. https://doi.org/10.5815/ijwmt.2018.06.03
23. **Mubarak Sani Ellis**, Abdul-Rahman Ahmed, Jerry John Kponyo, Javad Nourinia, Changiz Ghobadi, Bahman Mohammadi (2018). Unidirectional Planar Monopole Antenna Using a Quasi-Radiator. *IEEE Antennas and Wireless Propagation Letters*. https://doi.org/10.1109/lawp.2018.2883579
24. **SM Ellis**, JJ Kponyo, AR Ahmed (2017). A compact wideband circularly polarized L-slot antenna edge-fed by a microstrip feedline for C-band applications. *Progress In Electromagnetics Research Letters*. https://www.jpier.org/PIERL/pier.php?paper=16111105
25. **Mubarak Sani Ellis**, Joyce Acquah (2017). Investigation of potential rfi threats to ghana radio telescope observatory-nkutunse. *IJERT*. https://www.academia.edu/download/62402413/V6I8_IJERTV6IS08008220200318-39753-1qvhrdi.pdf
26. **Mubarak Sani Ellis**, Zhiqin Zhao, Jiangniu Wu, Xiaoxiang Ding, Zaiping Nie, Qing-Huo Liu (2016). A Novel Simple and Compact Microstrip-Fed Circularly Polarized Wide Slot Antenna With Wide Axial Ratio Bandwidth for C-Band Applications. *IEEE Transactions on Antennas and Propagation*. https://doi.org/10.1109/tap.2016.2526076
27. **MS Ellis** (2015). Small planar monopole ultra-wideband antenna with reduced ground plane effect. *IET Microwaves, Antennas & Propagation*. https://doi.org/10.1049/iet-map.2014.0538
28. **SM Ellis** (2014). A Planar Monopole UWB Antenna with Improved Lower End Bandwidth Using an L-shaped Stub Extended on the Ground Plane. *Progress In Electromagnetics Research C*. https://www.jpier.org/PIERC/pier.php?paper=14052001
29. **SM Ellis** (2014). A new compact microstrip-fed monopole antenna for triple band WLAN/WiMAX applications. *Progress In Electromagnetics Research Letters*. https://www.jpier.org/pierl/pier.php?paper=14061004
30. **SM Ellis** (2014). A printed Vivaldi antenna with improved radiation patterns by using two pairs of eye-shaped slots for UWB applications. *Progress In Electromagnetics Research*. https://www.jpier.org/PIER/pier.php?paper=14043003
31. **SM Ellis** (2014). Dual-Band Dual-Sense Unidirectional Circularly Polarized Antenna with CPW-Fed for Wireless Applications. *Progress in Electromagnetics Research C*. https://www.jpier.org/pierc/pier.php?paper=14111701
32. **MS Ellis** (2014). Enhanced directivity and bandwidth of a stepped open-slot antenna with L-shaped slots and parasitic strip. *IET Microwaves, Antennas & Propagation*. https://doi.org/10.1049/iet-map.2013.0304
33. **MS Ellis** (2014). Printed double-dipole antenna with high directivity using a new feeding structure. *IET Microwaves, Antennas & Propagation*. https://doi.org/10.1049/iet-map.2014.0245
34. **MS Ellis** (2014). Unidirectional planar monopole ultra-wideband antenna using wrench-shaped feeding structure. *Electronics Letters*. https://doi.org/10.1049/el.2014.0298
35. **MS Ellis** (2013). A novel miniature band-notched wing-shaped monopole ultrawideband antenna. *IEEE antennas and wireless propagation letters*. https://ieeexplore.ieee.org/abstract/document/6679234/

36. **MS Ellis** (1994). Current and energy in external cardiac defibrillation. *Australasian Physical & Engineering Sciences in Medicine*. https://europepmc.org/article/med/7872902

Conference papers 7

1. **Mubarak Sani Ellis**, Javad Nourinia, Changiz Ghobadi, Keyhan Hosseini, Farzad Alizadeh, Bahman Mohammadi (2024). Wideband Compact Circularly Polarized Monopole Printed Antenna. https://doi.org/10.1109/ist64061.2024.10843628
2. **M. S. Ellis**, Ph. Arthur, J. Nourinia, Ch. Ghobadi, A. Lalbakhsh, B. Mohammadi (2021). Compact Low-profile Unidirectional Antenna at 2.45GHz for Body-centric Communications. https://doi.org/10.1109/piers53385.2021.9695075
3. Mahdi Ghahremani, Changiz Ghobadi, Javad Nourinia, Seyed Vahid Masuminia, **Mubarak Sani Ellis**, Bahman Mohammadi (2020). Compact WLAN/C-Band Multiple-Input Multiple-Output Antenna. https://doi.org/10.1109/ist50524.2020.9345906
4. **MS Ellis** (2019). Compact planar UWB elliptical Vivaldi antenna. *2019 5th conference on knowledge based engineering and innovation (KBEI)*. https://ieeexplore.ieee.org/abstract/document/8735010/
5. Jerry John Kponyo, **MS Ellis** (2013). A wideband single fed circularly polarized slot antenna for multi-band applications. *2013 2nd International Symposium on Instrumentation and Measurement, Sensor Network and Automation (IMSNA)*. https://ieeexplore.ieee.org/abstract/document/6743353/
6. **MS Ellis** (2013). Miniature staircase profile printed monopole antenna for ultrawideband applications. *2013 Cross Strait Quad-Regional Radio Science and Wireless Technology Conference*. https://ieeexplore.ieee.org/abstract/document/6657397/
7. **MS Ellis** (2012). Metamatrial based packaging method for improved isolation of circuit elements in microwave modules. *2012 7th European Microwave Integrated Circuit Conference*. https://ieeexplore.ieee.org/abstract/document/6483930/