Emmanuel Obuobi Kwame Addo

Department of Electrical and Electronic Engineering
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PROFILE

Results-driven Optometrist and Vision scientist specializing in translational clinical research in the eye. Proficient in designing and managing clinical trials, data analysis, and cross-functional team leadership. Adept at advanced retinal imaging and biomarker assessment, including autofluorescence imaging, fluorescence lifetime imaging ophthalmoscopy, high-resolution optical coherence tomography, and resonance Raman and reflectance spectroscopic assessments. Passionate about advancing eye health research through innovative, evidence-based approaches that ultimately inform public health guidelines and improve the quality of life.

RESEARCH

Areas: Epidemiology · Ophthalmology · Electrical and Electronic Engineering · Aerospace Engineering · Cognitive Neuroscience · General Health Professions

RESEARCH SUMMARY

19	209	7	7	1.44	16%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 19 publications listed below, 2014–2025. Field-weighted impact is the mean over the 19 works scored for it; 1.00 is the world average for works of the same field, type and year. 3 of the 19 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Post Doctoral Research Associate 2025–present
Ophthalmology, University of Utah, Salt Lake City, United States

Graduate (Doctoral) Researcher 2019–2025
Ophthalmology, University of Utah, Salt Lake City, United States

Resident Optometrist 2018–2019
Friends Eye Center, Kumasi, Ghana

Clinical Research & Teaching Assistant 2017–2020
Optometry and Visual Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

Doctor of Philosophy 2019–2025
Nutrition and Integrative Physiology, University of Utah, Salt Lake City, United States

Doctor of Optometry 2011–2017
Optometry and Visual Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

DISTINCTIONS, MEMBERSHIPS AND SERVICE

Member 2021–present
Association for Research in Vision and Ophthalmology, Rockville, United States

Member 2021–present
International Carotenoid Society, Ventura, United States

Member 2020–present
American Academy of Optometry, Orlando, United States

Member 2020–present
American Society for Nutrition, Bethesda, United States

Early Investigator Society Member 2020–present
Brain and Ocular Nutrition, Cambridge, United Kingdom

PUBLICATIONS

Journal articles 16

1. Emmanuel Ampoma Affum, **Emmanuel Obuobi Kwame Addo**, Samuel Tweneboah-Koduah, Louis Owusu Annan, Owusu Agyeman Antwi, Willie Ofosu (2025). Maximizing intelligent reflecting surface (IRS) positioning in 5G wireless communication and beyond using genetic algorithms for enhanced spectral efficiency. *Annals of Telecommunications*. https://doi.org/10.1007/s12243-025-01140-x
2. Abdul-Sadik Ahmed, Abdul-Kabir Mohammed, Winifred Yeboah, Shiella Emefa Kokui Amedoe, **Emmanuel Addo**, Sylvester Kyeremeh (2024). Dry Eye and Sleep Disorders among Optometry Students in KNUST Amidst On-Line Teaching and Learning: A Cross- Sectional Study. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v42i3.2
3. Elvis Twumasi, Ebenezer Archer, **Emmanuel O. Addo**, Emmanuel A. Frimpong (2024). Modification of coot optimization algorithm (COA) with adaptive sigmoid increasing inertia weight for global optimization. *Applied Computing and Intelligence*. https://doi.org/10.3934/aci.2024006
4. Kwadwo Owusu Akuffo, Billy R. Wooten, Wendy Ofori-Asare, Isaiah Osei Duah Junior, David Ben Kumah, Moses Awuni, Stephannie Rhoda Obiri-Yeboah, Stacy Ewurama Horthman, **Emmanuel Kofi Addo**, Eldrick Adu Acquah, Bridget Senya Boateng, Elizabeth J. Johnson (2023). Macular Pigment, Cognition, and Visual Function in Younger Healthy Adults in Ghana. *Journal of Alzheimer s Disease*. https://doi.org/10.3233/jad-230233
5. Hubert Osei Acheampong, David Ben Kumah, **Emmanuel Kofi Addo**, Akosua Kesewah Asare, Eldad Agyei-Manu, Abubakar Sadik Mohammed, Benjamin Baah-Konadu, Isaiah Osei Duah Junior, Prince Mintah, Samson Darrah, Kwadwo Owusu Akuffo (2022). Practice patterns in the management of amblyopia among optometrists in Ghana. *Strabismus*. https://doi.org/10.1080/09273972.2021.2022715
6. Kofi Addo Annan, **Emmanuel Obuobi Kwame Addo**, Jephthah Afedzi Baidoo, Kwame Opare Anim (2021). Design and Implementation of an Emergency Traffic Light Pre-emption System Using PLC Automation. *International Journal of Innovative Research and Development*. https://doi.org/10.24940/ijird/2021/v10/i1/157073-386715-1-sm
7. Kwadwo Owusu Akuffo, Akosua Kesewah Asare, Elsie Emelia Yelbert, Emmanuel Kobia-Acquah, **Emmanuel Kofi Addo**, Eldad Agyei-Manu, Thomas Brusah, Prince Antwi Asenso (2021). Job satisfaction and its associated factors among opticians in Ghana: a cross-sectional study. *Human Resources for Health*. https://doi.org/10.1186/s12960-021-00612-0
8. Kwadwo Owusu Akuffo, Eldad Agyei-Manu, David Ben Kumah, Anthony Danso-Appiah, Abubakar Sadik Mohammed, Akosua Kesewah Asare, **Emmanuel Kofi Addo** (2021). Job satisfaction and its associated factors among optometrists in Ghana: a cross-sectional study. *Health and Quality of Life Outcomes*. https://doi.org/10.1186/s12955-020-01650-3
9. **Emmanuel Kofi Addo**, Kwadwo Owusu Akuffo, Ronel Sewpaul, Natisha Dukhi, Eldad Agyei-Manu, Akosua

Kesewah Asare, David Ben Kumah, Moses Awuni, Priscilla Reddy (2021). Prevalence and associated factors of vision loss in the South African National Health and Nutrition Examination Survey (SANHANES-1). *BMC Ophthalmology*. https://doi.org/10.1186/s12886-020-01714-4

10. Kwadwo Owusu Akuffo, Ronel Sewpaul, Samson Darrah, Natisha Dukhi, David Ben Kumah, Eldad Agyei-Manu, **Emmanuel Kofi Addo**, Akosua Kesewah Asare, Isaiah Osei Duah, Priscilla Reddy (2021). Vision loss, vision difficulty and psychological distress in South Africa: results from SANHANES-1. *BMC Psychology*. https://doi.org/10.1186/s40359-021-00558-x
11. Kwadwo Owusu Akuffo, Mohammed Abdul-Kabir, Eldad Agyei-Manu, Josiah Henry Tsiquaye, Christine Karikari Darko, **Emmanuel Kofi Addo** (2020). Assessment of availability, awareness and perception of stakeholders regarding preschool vision screening in Kumasi, Ghana: An exploratory study. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0230117
12. Kwadwo Owusu Akuffo, Akosua Kesewah Asare, Ronel Sewpaul, Natisha Dukhi, David Ben Kumah, Eldad Agyei-Manu, **Emmanuel Kofi Addo**, Priscilla Reddy (2020). Eye care utilization among diabetics in the South African National Health and Nutrition Examination Survey (SANHANES-1): a cross-sectional study. *BMC Research Notes*. https://doi.org/10.1186/s13104-020-05245-5
13. Kwadwo Owusu Akuffo, Ronel Sewpaul, Natisha Dukhi, Akosua Kesewah Asare, David Ben Kumah, **Emmanuel Kofi Addo**, Eldad Agyei-Manu, Priscilla Reddy (2020). Eye care utilization pattern in South Africa: results from SANHANES-1. *BMC Health Services Research*. https://doi.org/10.1186/s12913-020-05621-8
14. Akosua Kesewah Asare, Kwadwo Owusu Akuffo, David Ben Kumah, Eldad Agyei-Manu, Christine Karikari Darko, **Emmanuel Kofi Addo** (2020). Prevalence and pattern of amblyopia in a rural hospital in Ghana. *Strabismus*. https://doi.org/10.1080/09273972.2020.1779319
15. Mohammed Abdul-Kabir, David Ben Kumah, Ernest Kyei Nkansah, Ahmed Abdul- Sadik, Crystabel Chizoba Okohu, **Emmanuel Kofi Addo**, Stephen Ankamah-Lomotey (2017). Eye Health Seeking Behavior among Staff of Kwame Nkrumah University of Science and Technology. *International Journal of open Access Ophthalmology*. https://doi.org/10.15226/2474-9249/2/2/00126
16. Christian Kwaku Amuzuvi, **Emmanuel Obuobi Kwame Addo** (2015). A Microcontroller-Based Automatic Transfer Switching System for a Standby Electric Generator*. *Ghana Mining Journal*.

Conference papers 3

1. Emmanuel Ampoma Affum, Matthew O. Adigun, Kofi Anane Boateng, Sunday Adeola Ajagbe, **Emmanuel Addo** (2022). Enhancing UAV Communication Performance: Analysis Using Interference Based Geometry Stochastic Model and Successive Interference Cancellation. *Lecture notes in computer science*. https://doi.org/10.1007/978-3-031-10522-7_17
2. E. A. Affum, S. A. Ajagbe, K. A. Boateng, M. O. Adigun, **E. Addo** (2022). Response Analysis of Varied Q-Power Values of Cosine Distribution In Spatial Correlation. *2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI)*. https://doi.org/10.1109/ap-s/usnc-ursi47032.2022.9887202
3. **Emmanuel Obuobi Kwame Addo**, Johnson Asumadu, Philip Yaw Okyere (2014). Optimal design of renewable hybrid energy system for a village in Ghana. https://doi.org/10.1109/iciea.2014.6931410