



Email: declanikechukwu.emegano@neu.edu.tr

ORCID: <https://orcid.org/0000-0003-0258-9624>

SCOPUS:

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Declan Ikechukwu Emegano



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<https://www.scopus.com/authid/detail.uri?authorId=58033368100> **Research**
gate: <https://www.researchgate.net/profile/Declan-Emegano/research>

Google Scholar:

<https://scholar.google.com/citations?user=B0DLW4wAAAAJ&hl=en&oi=ao>

Biography

Declan Ikechukwu Emegano had a Bachelor of Medical Laboratory Science (BMLS) from Imo State University, Owerri, Nigeria. He was inducted and took the oath of the Medical Laboratory profession in 2012 (RA/MLS 16611). As a Medical Laboratory Scientist, specializing in chemical pathology, he has very strong expertise in the assay of reproductive hormones including prolactin, testosterone, estradiol, follicle-stimulating hormones (FSH), Luteinizing hormone (LH), and Progesterone; diabetes monitoring and management assay such as glycated hemoglobin, C-peptide, ketone, etc; Liver function panel including Alpha-fetoprotein (AFP), and Ceruloplasmin; Cardiac makers such as C-reactive Protein (CRP), BNP (B-type Natriuretic Peptide), and NT-proBNP, and Creatine Kinase-MB (CK-MB); other assays like cortisol, viral load, vitamin C, Immunoglobulins (GMADE) using a sophisticated automatic analyzer including COBAS E411, Ortho Clinical Diagnostics VITROS, Mindray CL-2000i, Rayto Chemray 120, Auto Chemistry Analyzer LACA-A40, COBAS C111 for electrolytes, urea and creatinine (E/U/Cr), lipid profile to mention but a few. Declan has a strong passion and also strives well in other aspects of medical laboratory diagnoses, including Microbiology, Histology using Myr automatic tissue analyzer, and Hematology by using Sysmex 5 parts differential counts for a complete blood count.

He participated actively in several projects during his BMLS, such as the evaluation of disinfectant efficacy used in Owerri metropolis, Nigeria, hypertensive disease in pregnancy (HDP), and exchange blood transfusion in neonates. He earned his Master's and PhD in Biomedical Engineering from Near East University in 2022 and 2025, respectively. His doctoral research focused on the multi-modal prediction of prostate cancer by integrating PSA datasets, histology images, and clinical data using Artificial Intelligence (AI). He has served as a research assistant at the Irfan Suat Gunsul Operational Research Institute, Near East University, Nicosia/TRNC, Nicosia/TRNC- Mersin 10, Turkey, contributing to numerous projects at the intersection of medical science and AI. Some of his accomplishments are writing and publishing multiple peer-reviewed articles about the application of biomedical engineering to medical diagnosis, and giving presentations at international conferences on Biomedical Science and Engineering. All can be assessed on his Google Scholar.

Meanwhile, Declan has many certificates and training to his credit, including February 2023 Waste Management Session Rethinking Laboratory Waste Management in Member Countries by the African Society for Laboratory Medicine (ASLM), LabCoP ECHO Session - Quality

Management System (QMS) Part 2 by ASLM, The Revised and New ISO 15189:2022 Standard Part 2 by ASLM, Six Sigma: Green Belt, Good Clinical Practice by NIDA Clinical Trials Network, and Data Analytics by dataleum.com. Also, he had the Training of District Health Professionals on the Integrated Disease Surveillance and Response (IDSR) 3rd Edition; Strengthening of the IDSR vCOP to Support the IDSR Programs in all 47 WHO AFRO Countries by WHO, Medical Laboratory Quality Management System (ISO 15189), and many others. He is a certified member of the following bodies: Medical Laboratory Science Council of Nigeria (MLSCN) with registration number MLS RA 16611. Health and Care professional Council (HCPC) UK - BS082440 and the African Society of Laboratory Medicine (ASLM)-12078/18. It is quite inspiring that Declan's commitment to his community is indeed deeply admired. His contributions to the profession are substantial and motivating, and his passion and knowledge are genuinely remarkable. The lives of individuals across the globe are being profoundly impacted by his genuine dedication.

ACADEMIC CURRICULUM VITAE

1. Name - Surname: Emegano Declan Ikechukwu

2. Title: Dr

3. Educational Background:

Degree	Department/Program	University	Year
Bachelor's	Medical Laboratory Science	Imo State University (IMSU) Owerri	2010
Master's	Biomedical Engineering	Near East University TRNC	2022
PhD	Biomedical Engineering	Near East University	2025

4. Master's / PhD Thesis

4.1. Master's Thesis Title and Thesis Advisor(s): EVALUATION OF CARCINOID TUMOR TREATMENT OPTIONS USING MULTI-CRITERIA DECISION MAKING (MCDM). Prof Dr. Dilber Uzun ÖZŞAHİN

4.2. PhD Thesis /Medical Specialty Thesis Title and Advisor(s): The Integration of the PSA Dataset, Histology Images, and Clinical Data using AI for the Multi-Modal prediction of prostate cancer. Prof Dr. Dilber Uzun ÖZŞAHİN

5. Academic Titles:

Date of Assistant Professorship: NA

Date of Associate Professorship: NA

Date of Professorship: NA

6. Supervised Master's and PhD Theses:

6.1. Master's Theses: NA

6.2. PhD Theses: NA

7. Publications

7.1. Articles Published in International Peer-Reviewed Journals (SCI, SSCI, AHCI, ESCI, Scopus)

1. Emegano, D.I., Mustapha, M.T., Isaac, E.P. et al. Predictive modeling of vocal biomarkers for the diagnosis of Parkinson's disease. *Cogn Neurodyn* 20, 54 (2026).
<https://doi.org/10.1007/s11571-026-10426-2> (Q2, I.F 3.9 (2024))
2. Emegano, Declan Ikechukwua,b; Ozsahin, Ilkera,c; Isaac, Emeje Pauld; Ozsahin, Dilber Uzune,f,a; Silas, Oyibo Saidug; Emegano, Chinonye Lyndah; Uzun, Bernaa,c,i. Artificial intelligence and diagnosis and management of tuberculosis disease in children. *Current Opinion in Pediatrics* 38(2):p 155-161, April 2026. | DOI: 10.1097/MOP.0000000000001551 (Q1, I.F 2.5)
3. Ozsahin, D.U., Emegano, D.I., Uzun, B. et al. A detailed review of large language models in the healthcare sector. *Journal of Electrical Systems and Inf Technol* 13, 22 (2026).
<https://doi.org/10.1186/s43067-026-00327-z>
4. Ilker Ozsahin Dilber U. Ozsahin, Declan I. Emegano, Mubarak T. Mustapha, Berna Uzun
Artificial intelligence–assisted diagnosis of prostate cancer based on prostate biopsy
(2026-01-29) 122, Vol. 122 No. 1/2 (2026), *South African Journal of Science*
<https://doi.org/10.17159/sajs.2026/18193> (Q2, I. F =2.3)
5. Mehita Iqani, Anna Feigenbaum, Jennifer Rudd, Dominic A Okoliko, Phillipa K Gillingham, Mqhelewenkoso A Mpofu, Mlamuli Dhlamini, Adolf Ndlovu, Nqobile A Chirwa, Dilber U Ozsahin, Declan I Emegano, Mubarak T Mustapha, Berna Uzun, Ilker Ozsahin, Charles W Helm, Mark G Dixon, Willo M Stear, Fred van Berkel, Dorothy Stevens, Liezel Frick, Rozanne Peacock, Matthew A Orolowitz, James N Blignaut, Bernadette Snow, Cassandra Upton, Gerhard Prinsloo, Paul Steenkamp, Moses Okpeku, Tracey L Laban, Pieter G van Zyl, Shawn C Liebenberg, Johan P Beukes, Jacques M Berner, PD Riekert van Heerden, Caradee Y Wright, Thandeka Ndlela, Lungile S Sifundza, Heinz Beckedahl, Thandi Kapwata, Nomfundo Mahlangeni, Caradee Y Wright, David R Walwyn, Marc Kalina, Catherina Schenck. *South African Page 1 eISSN: 1996-7489 South African Journal of Science Leader. Structured Conversation.* (Q2, I. F= 2.3)
6. Emegano, D.I., Ozsahin, D.U., Uzun, B. et al. The Integration of Virtual Reality (VR), Augmented Reality (AR), and Artificial Intelligence in Revolutionizing Healthcare: A Systematic Review. *Augment Hum Res* 10, 9 (2025). <https://doi.org/10.1007/s41133-025-00082-2>
7. D. I. Emegano, D. U. Ozsahin, B. Uzun, I. Ozsahin and A. J. Hussain, "Machine Learning Prediction for Appendicitis: A Comprehensive Study of Blood Markers and Clinical Variables," 2025 18th International

- Conference on Development in eSystem Engineering (DeSE), Bucharest, Romania, 2025, pp. 124-129, doi: 10.1109/DeSE68208.2025.11367917. keywords: {Support vector machines;Radio frequency;Accuracy;Surgery;Receivers;Predictive models;Safety;Space vector modulation;Blood;Random forests;Appendicitis;algorithm;blood markers;diagnosis;machine learning}
8. Emegano DI, Awosusi AA, Wouanche YM, Isaac EP, Ozsahin DU. Machine learning modelling and explainability of coronary heart disease based on Mediterranean diet. *Mediterranean Journal of Nutrition and Metabolism*. 2025;18(4):261-273. doi:10.1177/1973798X251342451
 9. Emegano D, Sultanoğlu N, Onakpojeruo EP, Uzun B, Ozsahin DU, Şanlıdağ T. Evaluating the Latent Tuberculosis Diagnostic Tests Using Fuzzy PROMETHEE: A Multi-Criteria Decision Approach. *Cyprus J Med Sci*. 2025 Jun 4;10(1):55-59. doi: 10.4274/cjms.2025.2024-127. (Q4, I.F =0.4)
 10. A.G. Usman, May Almousa, Hanita Daud, Declan Ikechukwu Emegano, Aliyu Ismail Ishaq, Ahmad Abubakar Suleiman, Soft computing approaches for energy-efficiency modelling: An sight into multi-attributes utilization, *Journal of Radiation Research and Applied Sciences*, 18, Issue 2, 2025, 101444,ISSN 1687-8507, <https://doi.org/10.1016/j.jrras.2025.101444>. (Q2, I.F =2.5)
 11. Emegano, D.I., Mustapha, M.T., Ozsahin, D.U. et al. Histopathology-Based Prostate Cancer Classification Using ResNet: A Comprehensive Deep Learning Analysis. *J Digit Imaging. Inform. med*. 39, 604–619 (2026) (Q1, I. F= 3.1). <https://doi.org/10.1007/s10278-025-01543-1>
 12. Declan Ikechukwu Emegano, Mubarak Taiwo Mustapha, Dilber Uzun Ozsahin, Ilker Ozsahin, Machine learning prediction of overall survival in prostate adenocarcinoma using ensemble techniques, *Computers in Biology and Medicine*, Volume 189, 2025, 110008, ISSN 0010-4825, (Q1, I.F = 6.3) <https://doi.org/10.1016/j.combiomed.2025.110008>.
 13. Emegano, D.I., Duwa, B.B., Usman, A.G. et al. A comparative study on TB incidence and HIVTB coinfection using machine learning models on WHO global TB dataset. *Sci Rep* 15, 13690 (2025). <https://doi.org/10.1038/s41598-025-94378-3> (Q1, I. F= 3.9)
 14. An ensemble Fuzzy-MCDM approach for evaluation of approved Monkeypox vaccines. Natacha Usanase, Declan Ikechukwu Emegano, Berna Uzun, Dilber Uzun Ozsahin, Ilker Ozsahin. *European Biotechnology Thematic Network Association. The EuroBiotech Journal*
 15. Emegano, D. I., Mustapha, M. T., Ozsahin, I., Ozsahin, D. U., & Uzun, B. (2025). Advancing Prostate Cancer Diagnostics: A ConvNeXt Approach to Multi-Class Classification in Underrepresented Populations. *Bioengineering*, 12(4), 369. <https://doi.org/10.3390/bioengineering12040369>. (Q2, I. F = 3.3)
 16. D. U. Ozsahin, D. I. Emegano, L. R. David, B. Uzun and I. Ozsahin, "Evaluating ELISA for Prostate Cancer Detection: A Hybrid PROMETHEE-TOPSIS Approach Using Prostate-Specific Antigen Levels," 2024 17th International Conference on Development in eSystem Engineering (DeSE), Khorfakkan, United Arab Emirates, 2024, pp. 433-438, doi: 10.1109/DeSE63988.2024.10911948. keywords:

{Antigens;Accuracy;Sensitivity;Linearity;Organizations;Prostate cancer;Cancer;Diagnosis;ELISA;PROMETHEE;Prostate}

17. D. U. Ozsahin, D. I. Emegano, L. R. David, A. J. Hussain, B. Uzun and I. Ozsahin, "Global Life Expectancy Prediction Using Machine Learning Ensemble Techniques," 2024 17th International Conference on Development in eSystem Engineering (DeSE), Khorfakkan, United Arab Emirates, 2024, pp. 423-427, doi: 10.1109/DeSE63988.2024.10912031. keywords: {Radio frequency;Adaptation models;Machine learning algorithms;Biological system modeling;Predictive models;Boosting;Prediction algorithms;Planning;Resource management;Socioeconomics;ensemble;global life expectancy;health;ML use predictions}

18. D. U. Ozsahin, D. I. Emegano, L. R. David, A. J. Hussain, B. Uzun and I. Ozsahin, "Machine Learning-Based Predictive Modeling of Mental Health Comorbidities," 2024 17th International Conference on Development in eSystem Engineering (DeSE), Khorfakkan, United Arab Emirates, 2024, pp. 428-432, doi: 10.1109/DeSE63988.2024.10911997. keywords: {Support vector machines;Measurement;Radio frequency;Analytical models;Accuracy;Mental health;Nearest neighbor methods;Predictive models;Predictive analytics;Random forests;comorbidities;mental health;models;treatment;well-being},

19. Emegano, D.I., Battal, D. & Kocadal, K. Metabolomics-based biomarkers of probiotic efficacy in toxicological settings. *Beni-Suef Univ J Basic Appl Sci* **13**, 85 (2024).
<https://doi.org/10.1186/s43088-024-00546-1> (Q2/ I. F= 2.6)

20. D. U. Ozsahin, D. Ikechukwu Emegano, B. Uzun and I. Ozsahin, "A Comparative Study on Male Breast Cancer Treatment Alternatives Using a Multi-Criteria Decision-Making (MCDM) Approach," 2024 Advances in Science and Engineering Technology International Conferences (ASET), Abu Dhabi, United Arab Emirates, 2024, pp. 1-5, doi: 10.1109/ASET60340.2024.10708657. keywords: {Sensitivity;Decision making;Surgery;Glands;Focusing;Breast tissue;Organizations;Radiation therapy;Prognostics and health management;Tumors;biopsy;breast cancer;male;mammogram;treatment;decision making},

21. Dilber Uzun Ozsahin Declan Ikechukwu Emegano,Abdullahi Garba, Auwalu Saleh Mubarak, Berna Uzun, Ilker Ozsahin. The Application of PROMETHEE and K-means Clustering Techniques for Enhancing Robotic Assistance in Bariatric Surgery. Vol. 1 No. 2 (2024) Global Journal of Sciences

22. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Riad Alsabbagh, Basil Bartholomew Duwa, Ilker Ozsahin, Chapter eighteen - Temperature reducer machine, Editor(s): Dilber Uzun Ozsahin, Ilker Ozsahin, Practical Design and Applications of Medical Devices, Academic Press, 2024, Pages 243-254, ISBN 9780443141331, <https://doi.org/10.1016/B978-0-443-14133-1.00005-7>.

23. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, Declan Ikechukwu Emegano, Mubarak Taiwo

- Mustapha, Natacha Usanase, Efe Precious Onakpojeruo, Ilker Ozsahin, Chapter thirteen - Construction of an automated hand sanitizer dispenser used against transmissible diseases, Editor(s): Dilber Uzun Ozsahin, Ilker Ozsahin, Practical Design and Applications of Medical Devices, Academic Press, 2024, Pages 179-190, ISBN 9780443141331, Science Direct.
<https://doi.org/10.1016/B978-0-443-14133-1.00023-9>.
24. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Belal J.N. Abuamsha, Basil Bartholomew Duwa, Ilker Ozsahin. The design of a noninvasive blood pressure measurement device. Practical Design and Applications of Medical Devices, Academic Press, 2024, Pages 179-190, ISBN 9780443141331, Science Direct. <https://doi.org/10.1016/B978-0-443-14133-1.00004-5>
25. Blood circuit in hemodialysis. DU Ozsahin, DI Emegano, BAT Bader, BB Duwa, I Ozsahin Practical design and applications of medical devices, 217-230. 2024
<https://doi.org/10.1016/B978-0-443-14133-1.00010-0>
26. A speech recognition system using technologies of audio signal processing
DU Ozsahin, DI Emegano, A Hassan, M Aldakhil, AM Banat, BB Duwa, ... Practical Design and Applications of Medical Devices, 203-216. 2024
<https://doi.org/10.1016/B978-0-443-14133-1.00001-X>
27. Electromechanical hand-driven electromyogram signal
DU Ozsahin, DI Emegano, SMY Altartoor, MEO Yousef, BB Duwa, ... Practical Design and Applications of Medical Devices, 299-311.2024
<https://doi.org/10.1016/B978-0-443-14133-1.00007-0>
28. Construction of a miniaturized Covid-19 medical kit
DU Ozsahin, DI Emegano, O Haider, I Ibrahim, BB Duwa, F Alayouti, ... Practical Design and Applications of Medical Devices, 59-71. 2024
<https://doi.org/10.1016/B978-0-443-14133-1.00012-4>
29. Development of a polymerase chain reaction device
DU Ozsahin, DI Emegano, M Skaik, M Al Obied, O Abid, BB Duwa, ... Practical Design and Applications of Medical Devices, 73-85. 2024
<https://doi.org/10.1016/B978-0-443-14133-1.00022-7>
30. Development of a brain–computer interface device converting brain signals to audio and written words
DU Ozsahin, BB Duwa, A Himaid, DI Emegano, I Ozsahin Practical Design and Applications of Medical Devices, 255-271. 2024
<https://doi.org/10.1016/B978-0-443-14133-1.00021-5>

31. Design of endoscopic medical device
DU Ozsahin, DI Emegano, A Hassan, M Aldakhil, AM Banat, BB Duwa, ...
Practical Design and Applications of Medical Devices, 231-241.2024
<https://doi.org/10.1016/B978-0-443-14133-1.00013-6>
32. Ozsahin, D.U., Emegano, D.I., Uzun, B., Ozsahin, I. (2025). Predictive Modeling of Groundwater Contaminant Transport: Integrating Environmental Factors and Hydrochemical Parameters. In: Gökçekuş, H., Kassem, Y. (eds) Climate Change and Water Resources in Mediterranean Countries. WPMC 2023. Environmental Earth Sciences. Springer, Cham.
https://doi.org/10.1007/978-3-031-65960-7_18
33. O. Balcioglu, D. Ikehukwu Emegano, B. Uzun, T. Şahin, I. Ozsahin and D. Uzun Ozsahin, "Comparative evaluation of blood conservation techniques in cardiovascular surgery using multicriteria decision-making methods," 2023 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, United Arab Emirates, 2023, pp. 1-8, doi: 10.1109/ASET56582.2023.10180430. keywords: {Heart;Toxicology;Decision making;Surgery;Organizations;Complexity theory;Task analysis;Open heart surgery;blood transfusion;preservation;multi-criteria;Fuzzy PROMETHEE}
34. Uzun Ozsahin, D., Ikehukwu Emegano, D., Uzun, B., & Ozsahin, I. (2023). The Systematic Review of Artificial Intelligence Applications in Breast Cancer Diagnosis. *Diagnostics*, 13(1), 45.
<https://doi.org/10.3390/diagnostics13010045> (Q2, I.F =3.3)

8. Art and Design Activities. NA

9. Projects. None

SCIENTIFIC CONFERENCES/SEMINARS/SYMPOSIUM ATTENDED

1. Emegano D, Sultanoğlu N, Onakpojeruo EP, Uzun B, Ozsahin DU, Şanlıdağ T. Evaluating the Latent Tuberculosis Diagnostic Tests Using Fuzzy PROMETHEE: A Multi-Criteria Decision Approach. *Cyprus J Med Sci*. 2025 Jun 4;10(1):55-59. doi: 10.4274/cjms.2025.2024-127. (Q4, I.F =0.4)
2. [Machine Learning Prediction for Appendicitis: A Comprehensive Study of Blood Markers and Clinical Variables](#)
DI Emegano, DU Ozsahin, B Uzun, I Ozsahin, AJ Hussain
2025 18th International Conference on Development in eSystem Engineering
3. THE APPLICATION OF PROMETHEE AND K-MEANS CLUSTERING TECHNIQUES FOR ENHANCING

ROBOTIC ASSISTANCE IN BARIATRIC SURGERY*

DI EMEGANO, AG USMAN, AS MUBARAK, B UZUN... - GLOBAL JOURNAL OF SCIENCES Учредители:
ACS ..., 2025

4. Evaluating ELISA for Prostate Cancer Detection: A Hybrid PROMETHEE-TOPSIS Approach Using Prostate-Specific Antigen Levels
DU Ozsahin, DI Emegano, LR David, B Uzun, I Ozsahin - 2024 17th International Conference on Development in ..., 2024
5. Global Life Expectancy Prediction Using Machine Learning Ensemble Techniques
DU Ozsahin, DI Emegano, LR David, AJ Hussain... - 2024 17th International Conference on Development in ..., 2024
6. Machine Learning-Based Predictive Modeling of Mental Health Comorbidities
DU Ozsahin, DI Emegano, LR David, AJ Hussain... - 2024 17th International Conference on Development in ..., 2024
7. Metabolomics-based biomarkers of probiotic efficacy in toxicological settings
DI Emegano, D Battal, K Kocadal - Beni-Suef University Journal of Basic and Applied ..., 2024
8. A Comparative Study on Male Breast Cancer Treatment Alternatives Using a Multi-Criteria Decision-Making (MCDM) Approach
DU Ozsahin, DI Emegano, B Uzun, I Ozsahin - 2024 Advances in Science and Engineering ..., 2024
9. Comparative evaluation of blood conservation techniques in cardiovascular surgery using multicriteria decision-making methods
O Balcioglu, DI Emegano, B Uzun, T Şahin, I Ozsahin... - 2023 Advances in Science and Engineering ..., 2023

10. Administrative Responsibilities. None**11. Memberships in Scientific and Professional Organizations: Medical Laboratory Science Council of**

Nigeria (MLSCN) RA/MLS 16611

Association of Medical Laboratory Scientists of Nigeria (AMLSN) 16611

African Society of Laboratory Medicine (ASLM) ID: 0923/20

12. Awards

2025 Annual Excellence Award for Best Reviewers for Cardiovascular Innovations and Applications journal

13. Undergraduate and Graduate Courses Taught in the Last Two Years: None

Academic Year	Semester	Course Name	Weekly Hours		Number of Students
			Theoretical	Practical	
2026 - 2027	SPRING	BIOINFORMATICS BME 453	1Hr		26

2022 - 2023					