



Address: Weill Cornell Medicine, Brain Health Imaging Institute, 407 E 61st Street, New York, NY, 10044 USA

E-mail: ilo4001@med.cornell.edu; ilker.ozsahin@neu.edu.tr

Place of Birth: Adana, Turkey

ORCID ID: <https://orcid.org/0000-0002-3141-6805>

Google Scholar h-index: 19

<https://scholar.google.com/citations?user=-njGloEAAAJ&hl=tr&oi=ao>

SCOPUS h-index: 14

<https://www.scopus.com/authid/detail.uri?authorId=55115748200>

Biography

I have extensive experience in medical imaging devices including modeling, simulation and image reconstruction such as Positron Emission Tomography (PET), Positron Emission Mammography (PEM), Single Photon Emission Computed Tomography (SPECT), and Compton Camera (CC). I have worked on several different fields of science such as high energy physics, solid-state physics, and medical imaging. I have been to the University of Illinois at Urbana-Champaign, Illinois, USA to work on the growth of carbon nanotubes. I worked at Universidad Autonoma de Barcelona in Spain as a PhD student for one year in an ERC funded PET project. In addition to my PhD studies, I have worked as a research assistant for six years in the Physics Department at Cukurova University in Adana, Turkey. After earning my PhD, I won the International Postdoctoral Research Scholarship from The Scientific and Technological Research Council of Turkey (TUBITAK) for Harvard Medical School and Massachusetts General Hospital for one year and then was supported by Harvard for my further postdoctoral studies. As a faculty member in the Department of Biomedical Engineering at Near East University, I am working on the simulation of novel high-sensitivity and high-resolution PET and SPECT scanners. Recently, I have been working on multi-criteria decision-making applications in healthcare and medicine, as well as deep learning in medical imaging such as applying neural network algorithms for neuropsychiatric diseases like AD and PD for high-accuracy classification and early detection. Also, I worked as a visiting fellow at the University of Macau on multi-pinhole SPECT collimator design and implementation for brain imaging, as well as cardiac and small animal imaging by using adaptive collimators. Currently, I am a visiting research fellow at Weill Cornell Medicine and working on quantitative neuroimaging methods such as PET, CT, and functional and structural MRI for neurological disorders.

**ACADEMIC
CURRICULUM VITAE**

1. Name - Surname: Ilker Ozsahin

2. Title: Assoc. Professor

3. Educational Background:

Degree	Department/Program	University	Year
Bachelor's	Physics	Cukurova University	2007
PhD	Physics/Medical Imaging	Cukurova University	2014

Other Education and Courses

July 2021	LHC - Machine, CERN
July 2021	Portable ODH Detector, CERN
July 2021	Electrical Safety - Awareness - Facilities, CERN
July 2021	Electrical Safety - Awareness - Fundamentals, CERN
June 2021	Self-Rescue Mask - Initial (Covid-19), CERN
June 2021	Radiation Protection - Controlled Area - Initial, CERN
April 2021	Radiation Protection - Awareness, CERN
April 2021	Radiation Protection-Supervised Area, CERN
July 2016	Certificate in Applied Biostatistics, Harvard Catalyst's Education Program
December 2015	Medical Imaging Sciences and Applications, Harvard-MIT Division of Health Science Technology
October 2015	Medical Device Development, Harvard Catalyst's Education Program
October 2015	Introduction to Clinical Investigation Course, Harvard Catalyst's Education Program
September 2015	Massachusetts General Hospital General Safety Training
July 2015	Responsible Conduct of Research (RCR) Basic Course: Plagiarism, Authorship, Collaborative Research, Data Management, Financial Responsibility, Mentoring, Peer Review, Research Misconduct
July 2015	Radiation Safety Training, Massachusetts General Hospital Radiation Safety Office
June 2015	Human Research Training
June 2015	Magnetic Resonance Imaging Safety Training

Postdoctoral Training

2022 - present	Postdoctoral Associate	Radiology	Weill Cornell Medicine
2021 - 2022	Postdoctoral Research Fellow	CMS/HCAL	CERN
2018 - 2019	Visiting Research Fellow	Biomedical Imaging Lab	University of Macau
2015 - 2017	Postdoctoral Research Fellow	Radiology	Harvard Medical School

4. Master's / PhD Thesis

4.1. Master's Thesis Title and Thesis Advisor(s):

4.2. PhD Thesis /Medical Specialty Thesis Title and Advisor(s):

5. Academic Titles:

July 2020 -	Assoc. Prof.	Near East University, North Cyprus
September 2017 - July 2020	Asst. Prof.	Near East University, North Cyprus
November 2008 - September 2014	Research Assistant	Cukurova University, Turkey

6. Supervised Master's and PhD Theses:

6.1. Master's Theses: Classification of Arrhythmia using Convolutional Neural network (2024)

6.2. PhD Theses: A Comparative Analysis of the Novel C-DCNN Model, Using DCGAN Generated Synthetic and Augmented Brain and Kidney Tumor Datasets for Image Classification. (2024)

The Integration of the PSA Dataset, Histology Images, and Clinical Data using AI for the Multi-Modal prediction of prostate cancer. (2024)

Evaluating the performance of an integrated multi-modal AI framework for early detection and therapeutic decision-making of pancreatic cancer. (2024)

7.1. Articles Published in International Peer-Reviewed Journals (SCI,SSCI, AHCI, ESCI, Scopus) 2024

1. **Ilker Ozsahin**, Liangdong Zhou, Xiuyuan Wang, Jacob Garetti, Keith Jamison, Ke Xi, Emily Tanzi, Abhishek Jaywant, Abigail Patchell, Thomas Maloney, Mony J. de Leon, Amy Kuceyeski, Sudhin A. Shah, Yi Li, Tracy A. Butler. Diffusion tensor imaging along perivascular spaces (DTI-ALPS) to assess effects of age, sex and head size on interstitial fluid dynamics in healthy subjects. *Journal of Alzheimer's Disease Reports*, 2024. Accepted.
2. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, Galaya Tirah, Abdullah Alchoib, Alaa M.Y. Abuedia, Moayad Alshobaki, Deborah Ishimwe and **Ilker Ozsahin**. Design of interactive neural input device for arm prosthesis. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
3. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, Angelique Rwiyereka, Deborah Ishimwe, Shahida Hassan and **Ilker Ozsahin**. Internet of Things-Based Patient Well-being Monitoring System. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
4. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, Mohamad Khir Hamdan, Ghazy Aljammal, Khaldun Elsafty and **Ilker Ozsahin**. IoT-Based Infant Monitoring Device. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
5. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Omar Haider, Ismail Ibrahim, Basil Bartholomew Duwa, Fadel Alayouti and **Ilker Ozsahin**. Construction of a miniaturized COVID-19 medical kit. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
6. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Mohammed Skaik, Mohammed Al Obied, Obada Abid, Basil Bartholomew Duwa and **Ilker Ozsahin**. Development of a polymerase chain reaction device. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
7. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, Emad Shoaib, Ibrahim Hashi, Mohamed Ismail and **Ilker Ozsahin**. Construction of an electrophysiotherapy device. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
8. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, David Edward, Lama Khorzom, Osama Haj Hussein, Abdulraheem Alsiba, Noor Hamzah and **Ilker Ozsahin**. Voice Control Prosthetic Hand. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
9. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, Waqqas Atiq Ur Raheman Subedar, David Edward, Janee Dinesh Barot and **Ilker Ozsahin**. 3D Bioprinting of Prosthetic Leg. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
10. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, James Gambu, Cemalettin Yagiz Günasti, Tevfik Yavuz and **Ilker Ozsahin**. Face Recognition System to diagnose a disease using Computer Web Camera. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Practical Design and Applications of Medical Devices*, Elsevier, 2024.
11. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, Mohamad Sharaf Eddin and **Ilker Ozsahin**. Detection of Retinal Blood Clots of Eye Using Laser Doppler Technology. Dilber

- Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
12. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, Bartholomew Idoko, Ayman Aleter, John Bush Idoko and **Ilker Ozsahin**. Sleep Apnea Detection Device. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 13. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, John Bush Idoko, Galaya Tirah, Nosaiba Elhassan Eldasougi, Mohamad Naesa, Mubarak Taiwo Mustapha, Saleem Attili and **Ilker Ozsahin**. Design considerations for the Diagnostic Radiology Department. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 14. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, Declan Ikechukwu Emegano, Mubarak Taiwo Mustapha, Natacha Usanase, Efe Precious Onakpojeruo and **Ilker Ozsahin**. Construction of an automated hand sanitizer dispenser used against transmissible diseases. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 15. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, David Edward, Majd Issam Ali, John Bush Idoko and **Ilker Ozsahin**. Design and Modeling of a Novel Blood Sampling (phlebotomy) Chair. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 16. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Abdulsamad Hassan, Mohammad Aldakhil, Ali Mohsen Banat, Basil Bartholomew Duwa and **Ilker Ozsahin**. A speech recognition system using technologies of audio signal processing and characteristics extraction. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 17. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Bahaaeddin A.T. Bader, Basil Bartholomew Duwa and **Ilker Ozsahin**. Blood Circuit in Hemodialysis. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 18. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Abdulsamad Hassan, Mohammad Aldakhil, Ali Mohsen Banat, Basil Bartholomew Duwa and **Ilker Ozsahin**. Design of Endoscopic Medical Devices. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 19. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Riad Alsabbagh, Basil Bartholomew Duwa and **Ilker Ozsahin**. Temperature Reducer Machine. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 20. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, Abdelrahman Himaid, Declan Ikechukwu Emegano and **Ilker Ozsahin**. Development of a brain-computer interface (BCI) device that converts brain signals to audio and written words. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 21. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, David Edward, Dawda Cham, John Bush Idoko and **Ilker Ozsahin**. A Dual Biventricular Resynchronized Pacemaker with a Remote Monitoring System. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 22. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Belal J.N. Abuamsha, Basil Bartholomew Duwa and **Ilker Ozsahin**. The design of a non-invasive blood pressure measurement device. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.
 23. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Samer M.Y. Altartoor, Mohammad Eyad Osama Yousef, Basil Bartholomew Duwa and **Ilker Ozsahin**. Electromechanic Hand Driven by EMG Signal. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In Practical Design and Applications of Medical Devices, Elsevier, 2024.

2023

24. N Usanase, B. Uzun, D. Uzun Ozsahin, **I. Ozsahin**. A look at radiation detectors and their applications in medical imaging. Japanese Journal of Radiology (2023). <https://doi.org/10.1007/s11604-023-01486-z>.

25. A.G. Usman, Natacha Usanase, S.I. Abba, **Ilker Ozsahin**, Berna Uzun, Mohamed A. Yassin, Syed Masiur Rahman, Dilber Uzun Ozsahin. Environmental modelling of CO concentration using AI-based approach supported with filters feature extraction: A direct and inverse chemometrics-based simulation, *Sustainable Chemistry for the Environment*, Volume 2, 2023.
26. T. Butler, X.H. Wang, G.C. Chiang, Y. Li, L. Zhou, K. Xi, N. Wickramasuriya, E. Tanzi, E. Spector, **I. Ozsahin**, X. Mao, Q.R. Razlighi, E.K. Fung, J.P. Dyke, T. Maloney, A. Gupta, A. Raj, D.C. Shungu, P.D. Mozley, H. Rusinek, L. Glodzik. Choroid Plexus Calcification Correlates with Cortical Microglial Activation in Humans: A Multimodal PET, CT, MRI Study. *American Journal of Neuroradiology* Jun 2023, DOI: 10.3174/ajnr.A7903.
27. Tracy Butler, Liangdong Zhou, **Ilker Ozsahin**, Xiuyuan Hugh Wang, Jacob Garetti, Henrik Zetterberg, Kaj Blennow, Keith Jamison, Mony J. de Leon, Yi Li, Amy Kuceyeski, Sudhin A. Shah. Glymphatic clearance estimated using Diffusion Tensor Imaging Along Perivascular Spaces (DTI-ALPS) is reduced after Traumatic Brain Injury and correlates with plasma neurofilament light, a biomarker of injury severity. *Brain Communications*. Volume 5, Issue 3, 2023.
28. **Ozsahin I**, Onakpojeruo EP, Uzun B, Uzun Ozsahin D, Butler TA. A Multi-Criteria Decision Aid Tool for Radiopharmaceutical Selection in Tau PET Imaging. *Pharmaceutics*. 2023; 15(4):1304. <https://doi.org/10.3390/pharmaceutics15041304>
29. Uzun Ozsahin D, Onakpojeruo EP, Uzun B, Mustapha MT, **Ozsahin I**. Mathematical Assessment of Machine Learning Models Used for Brain Tumor Diagnosis. *Diagnostics*. 2023; 13(4):618. <https://doi.org/10.3390/diagnostics13040618>
30. Uzun Ozsahin D, Mustapha MT, Uzun B, Duwa B, **Ozsahin I**. Computer-Aided Detection and Classification of Monkeypox and Chickenpox Lesion in Human Subjects Using Deep Learning Framework. *Diagnostics*. 2023; 13(2):292. <https://doi.org/10.3390/diagnostics13020292>
31. Jemal E Dawd, Dilber Uzun Ozsahin, **Ilker Ozsahin**, Developing Diagnostic Reference Levels for CT Examinations in Addis Ababa, Ethiopia, *Radiation Protection Dosimetry*, Volume 199, Issue 3, March 2023, Pages 235–245, <https://doi.org/10.1093/rpd/ncac263>.
32. Uzun Ozsahin D, Ikechukwu Emegano D, Uzun B, **Ozsahin I**. The Systematic Review of Artificial Intelligence Applications in Breast Cancer Diagnosis. *Diagnostics*. 2023; 13(1):45. <https://doi.org/10.3390/diagnostics13010045>

2022

33. Balcioglu O, Usanase N, Uzun B, Ozsahin I, Uzun Ozsahin D. A comparative analysis of DOACs vs warfarin for venous thromboembolism treatment in renal insufficiency. *Turk J Vasc Surg* 2022;32(1):42-50.
34. Usanase, N.; Uzun, B.; **Ozsahin, I.**; Ozsahin, D. U.: 'The preference ranking of gold nanoparticle synthesis methods using a multi-criteria decision-making model', IET Conference Proceedings, p. 314-320, DOI: 10.1049/icp.2022.2481. IET Digital Library, <https://digital-library.theiet.org/content/conferences/10.1049/icp.2022.2481>
35. O. Balcioglu, U. Ozad, B. Uzun, **I. Ozsahin** and D. U. Ozsahin, "A decision-making model for treatment alternatives of different clinical abdominal aortic aneurysm presentations," The 3rd International Conference on Distributed Sensing and Intelligent Systems (ICDSIS 2022), Hybrid Conference, Sharjah, United Arab Emirates, 2022, pp. 272-281, doi: 10.1049/icp.2022.2477.
36. Balcioglu O, Usanase N, Uzun B, Ozsahin I, Uzun Ozsahin D. A comparative analysis of DOACs Vs warfarin for venous thromboembolism treatment in renal insufficiency. *Turk J Vasc Surg* 2022; 32: I-II.
37. Uzun Ozsahin D, Ozgocmen C, Balcioglu O, **Ozsahin I**, Uzun B. Diagnostic AI and Cardiac Diseases. *Diagnostics*, 12(12):2901, 2022.
38. Uzun Ozsahin D, Balcioglu O, Usman AG, Ikechukwu Emegano D, Uzun B, Abba SI, **Ozsahin I**, Yagdi T, Engin C. Clinical Modelling of RVHF Using Pre-Operative Variables: A Direct and Inverse Feature Extraction Technique. *Diagnostics*. 2022; 12(12):3061.

39. Uzun Ozsahin D, Mustapha MT, Bartholomew Duwa B, **Ozsahin I**. Evaluating the Performance of Deep Learning Frameworks for Malaria Parasite Detection Using Microscopic Images of Peripheral Blood Smears. *Diagnostics*. 2022; 12(11):2702.
40. **I. Ozsahin**, B. Uzun, and D. Uzun Ozsahin. Selection of Photodetectors in Nuclear Medical Imaging Using MCDM Methods. *Journal of Instrumentation*, 17 C06003, 2022.
41. Mubarak Taiwo Mustapha, Dilber Uzun Ozsahin, **Ilker Ozsahin**, Berna Uzun. Breast Cancer Screening Based on Supervised Learning and Multi-criteria Decision-making. *Diagnostics*, 2022.
42. Jemal Edris Dawd, Dilber Uzun Ozsahin, **Ilker Ozsahin** "A Review of Diagnostic Reference Levels in Computed Tomography". *Curr Med Imaging*. 18(6); 2022, pp. 623-632. doi: 10.2174/1573405617666210913093839.
43. Q. A. Alyazji, D. Uzun Ozsahin, B. Uzun and **I. Ozsahin**, "Evaluating electronic blood pressure measurement devices with fuzzy TOPSIS technique," 2022 *Advances in Science and Engineering Technology International Conferences (ASET)*, 2022, pp. 1-5, doi: 10.1109/ASET53988.2022.9735025.
44. M. T. Mustapha, D. Uzun Ozsahin, B. Uzun and **I. Ozsahin**, "Evaluation of the Thyroid Cancer Treatment Techniques with Fuzzy VIKOR," 2022 *Advances in Science and Engineering Technology International Conferences (ASET)*, 2022, pp. 1-5, doi: 10.1109/ASET53988.2022.9735083.
45. **Ilker Ozsahin**, Dilber Uzun Ozsahin and Mustapha Taiwo Mubarak. Introduction to biomedical instrumentation. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
46. Dilber Uzun Ozsahin, Majed Hejazi, Omar Sameer Adnan, Hamza Alloush, Ahmad Khabbaz, John Bush Idoko, Basil Bartholomew Duwa, and **Ilker Ozsahin**. Designing a 3D printed artificial hand. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
47. Dilber Uzun Ozsahin, John Bush Idoko, Ahmad Jarwah, Hasan Badran, Noman Abdul Wajid, and **Ilker Ozsahin**. Construction of smart assistive gloves for paralytic people. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
48. Dilber Uzun Ozsahin, Abdulrahim S.A. Almoqayad, Abdullah Ghader, Hesham Alkahlout, John Bush Idoko, Basil Bartholomew Duwa, and **Ilker Ozsahin**, Development of smart jacket for disc. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
49. Dilber Uzun Ozsahin, John Bush Idoko, Basel Almagharby, Mohammed Bin Merdhah, **Ilker Ozsahin**, Evaluation of a finite element laminectomy, Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
50. Dilber Uzun Ozsahin, John Bush Idoko, Abdullah A. Usman, Rehemah Namatovu, Kamil A. Ibrahim, and **Ilker Ozsahin**. Construction of an ultrasonic sight device for visually impaired people. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
51. Dilber Uzun Ozsahin, John Bush Idoko, Mandy Sizalobuhle Mpofu, Ismail Ramadan Swalehe. and **Ilker Ozsahin**. Development of medical dispatcher: A robot that delivers medicine. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
52. Dilber Uzun Ozsahin, John Bush Idoko, Mohamad Hejazi, Rayan Allaia, Mennatullah Ahmed, Zuhdi Badawi, and **Ilker Ozsahin**. Design and implementation of wireless helmet and mechanical wheelchair. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
53. Dilber Uzun Ozsahin, John Bush Idoko, Basil Bartholomew Duwa, Majd Zeidan, and **Ilker Ozsahin**. Construction of vehicle shutdown system to monitor driver's heartbeats. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.

54. Dilber Uzun Ozsahin, John Bush Idoko, Busayo Oluwatobiloba Aderotoye, Laith M. Alasais, Hamdi Burakah, Jamil Hilal Seif Abu Shaban, and **Ilker Ozsahin**. Development of a modern electronic stethoscope. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.
55. Dilber Uzun Ozsahin, John Bush Idoko, Nyasha T. Muriritirwa, Sabareela Moro, and **Ilker Ozsahin**. Application and impact of phototherapy on infants. Dilber Uzun Ozsahin and Ilker Ozsahin (Ed). In *Modern Practical Healthcare Issues in Biomedical Instrumentation*, Elsevier, 2022.

2021

56. **Ozsahin, I.**, Sekeroglu, B. and Butler, T. Classification of Alzheimer's disease by using tau PET images and deep convolutional neural networks. *Alzheimer's Dement.*, 17: e049148, 2021. <https://doi.org/10.1002/alz.049148>
57. **I. Ozsahin**, D. U. Ozsahin, P. A. Makarov and G. S. P. Mok, "BoXPECT: High Sensitivity Multi-Pinhole Brain SPECT," 2020 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), 2021, pp. 1-2.
58. **Ilker Ozsahin**, Mubarak Taiwo Mustapha, Safa Albarwary, Burcin Sanlidag, Dilber Uzun Ozsahin. Tracy A. Butler "An Investigation to Choose the Proper Therapy Technique in The Management of Autism Spectrum Disorder". *Journal of Comparative Effectiveness Research*, 2021.
59. Figen Sarigul Yildirim, Murat Sayan, Tamer Sanlidag, Berna Uzun, Dilber Uzun Ozsahin, **Ilker Ozsahin**. "Comparative Evaluation of the Treatment of COVID-19 with Multi-Criteria Decision-Making Techniques" *Journal of Healthcare Engineering*, 2021.
60. Basil Bartholomew Duwa, Dilber Uzun Ozsahin and **Ilker Ozsahin**. Introduction to Machine Learning in Healthcare. Ilker Ozsahin and Dilber Uzun Ozsahin (Ed). In *Applied Machine Learning and Multi-Criteria Decision-Making in Healthcare*, Bentham Science Publisher, 2021.
61. Basil Bartholomew Duwa, Dilber Uzun Ozsahin and **Ilker Ozsahin**. Machine Learning in Healthcare. Ilker Ozsahin and Dilber Uzun Ozsahin (Ed). In *Applied Machine Learning and Multi-Criteria Decision-Making in Healthcare*, Bentham Science Publisher, 2021.
62. Mordecai Maisaini, Mustafa Taseli, Dilber Uzun Ozsahin and **Ilker Ozsahin**. Analysis of Retinoblastoma Treatment Techniques with Fuzzy PROMETHEE. Ilker Ozsahin and Dilber Uzun Ozsahin (Ed). In *Applied Machine Learning and Multi-Criteria Decision-Making in Healthcare*, Bentham Science Publisher, 2021.
63. Abdulaziz Tabbakha, Dilber Uzun Ozsahin, Berna Uzun and **Ilker Ozsahin**. Selection of Hemorrhoid Treatment Techniques using a Multi-Criteria Decision-Making Technique. Ilker Ozsahin and Dilber Uzun Ozsahin (Ed). In *Applied Machine Learning and Multi-Criteria Decision-Making in Healthcare*, Bentham Science Publisher, 2021.
64. **I Ozsahin**, DU Ozsahin. B Uzun, MT Mustapha. Introduction. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 3-40, Elsevier, 2021.
65. B Uzun, **I Ozsahin**, VO Agbor, DU Ozsahin. Theoretical aspects of multi-criteria decision-making (MCDM) methods. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 3-40, Elsevier, 2021.
66. DU Ozsahin, K Meck, ST Halimani, B Uzun, **I Ozsahin**. Fuzzy PROMETHEE-based evaluation of brain cancer treatment techniques. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 41-58, Elsevier, 2021.
67. **I Ozsahin**, DU Ozsahin, K Meck, ST Halimani, B Uzun. Fuzzy PROMETHEE-based evaluation of skin cancer treatment techniques. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 81-98, Elsevier, 2021.
68. **I Ozsahin**, NA Isa, K Meck, ST Halimani, B Uzun, DU Ozsahin. Fuzzy PROMETHEE-based evaluation of prostate cancer treatment techniques. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 99-116, Elsevier, 2021.

69. MT Mustapha, DU Ozsahin, **I Ozsahin**. Comparative evaluation of point-of-care glucometer devices in the management of diabetes mellitus. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 117-136, Elsevier, 2021.
70. DU Ozsahin, R Salawu, B Uzun, **I Ozsahin**. Application of fuzzy PROMETHEE on hearing aid. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 153-162, Elsevier, 2021.
71. MT Mustapha, B Uzun, DU Ozsahin, **I Ozsahin**. A comparative study of X-ray based medical imaging devices. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 163-180, Elsevier, 2021.
72. DU Ozsahin, **I Ozsahin**, K Nyakuwanikwa, TW Simbanegavi, B Uzun. Evaluation and simulation of dental instrument sterilization techniques with fuzzy PROMETHEE. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 181-195, Elsevier, 2021.
73. MT Mustapha, DU Ozsahin, B Uzun, **I Ozsahin**. Application of fuzzy TOPSIS in the sterilization of medical devices. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 197-216, Elsevier, 2021.
74. DU Ozsahin, L Hamidat, FD Alimi, B Uzun, **I Ozsahin**. Evaluation of migraine drugs using MCDM methods. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 261-275, Elsevier, 2021.
75. NA Isa, DU Ozsahin, **I Ozsahin**. Top cancer treatment destinations: a comparative analysis using fuzzy PROMETHEE. *Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering*, 277-308, Elsevier, 2021.

2020

76. **Ozsahin I**, Chen L, Könik A, King MA, Beekman FJ, Mok GSP. The clinical utilities of multi-pinhole single photon emission computed tomography. *Quant Imaging Med Surg* 2020;10(10):2006-2029.
77. **Ilker Ozsahin**, Boran Sekeroglu, Musa Sani Musa, Mubarak Taiwo Mustapha, Dilber Uzun Ozsahin. "Review on Diagnosis of COVID-19 from Chest CT Images Using Artificial Intelligence". *Computational and Mathematical Methods in Medicine*, 2020, 9756518.
78. Sekeroglu B, **Ozsahin I**. "Detection of COVID-19 from Chest X-Ray Images Using Convolutional Neural Networks". *SLAS TECHNOLOGY: Translating Life Sciences Innovation*. September 2020. doi:10.1177/2472630320958376.
79. Murat Sayan, Figen Sarigul Yildirim, Tamer Sanlidag, Berna Uzun, Dilber Uzun Ozsahin, **Ilker Ozsahin**. "Capacity Evaluation of Diagnostic Tests For COVID-19 Using Multicriteria Decision-Making Techniques" *Computational and Mathematical Methods in Medicine*, 2020. Article ID 1560250. <https://doi.org/10.1155/2020/1560250>.
80. **Ilker Ozsahin**. Identifying a Personalized Anesthetic with Fuzzy PROMETHEE. *Healthc Inform Res*. 2020;26(3):201-211.
81. **Ilker Ozsahin**, Boran Sekeroglu, Pwadubashiyi Coston Pwavodi, and Greta S. P. Mok "High-Accuracy Automated Diagnosis of Parkinson's Disease" *Current Medical Imaging*, 2020; 16(6): 688-694. doi: 10.2174/1573405615666190620113607.
82. **Ilker Ozsahin**, Samuel Tadesse Abebe, Greta S. P. Mok. "A Multi-Criteria Decision-Making Approach for Schizophrenia Treatment Techniques" *Archives of Psychiatry and Psychotherapy*, 2020; 2: 52–61.
83. **I. Ozsahin**, "Preliminary Performance Evaluation of Adjustable-FOV Full-Body PET", *Journal of Instrumentation*, 2020, 15 C06038.
84. **I Ozsahin**, C Onyebuchi, B Sekeroglu "Differentiating COVID-19 from other types of pneumonia with convolutional neural networks" medRxiv, 2020
85. **I. Ozsahin**, D. Uzun Ozsahin, P. A. Makarov, M. S. Musa and G. S. P. Mok "Simulation of novel scintillator crystals for brain PET", *Journal of Instrumentation*, 2020, 15 C05024.

86. **Ilker Ozsahin**, Greta S. P. Mok, "Preliminary Performance Evaluation of Adaptive Multi-Pinhole Collimators for SPECT," 2019 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), Manchester, United Kingdom, 2020, pp. 1-2.
87. **Ilker Ozsahin**, Dilber Uzun Ozsahin. Neural network applications in medicine. Walid Zgallai (Ed). In Developments in Biomedical Engineering and Bioelectronics. Biomedical Signal Processing with Artificial Intelligence in Healthcare, Elsevier, 2020: 183-206.
88. Dilber Uzun Ozsahin, Berna Uzun, **Ilker Ozsahin**, Mubarak Taiwo Mustapha, Musa Sani Musa. Chapter 6 Fuzzy logic in medicine. Walid Zgallai (Ed). In Developments in Biomedical Engineering and Bioelectronics. Biomedical Signal Processing with Artificial Intelligence in Healthcare, Elsevier, 2020: 153-182.
89. Saad Eddin Abdulaal, Ali Sawtari, Sinem Akman, Hamza Alhajiibrahim1, Sabareela Victory Moro, Fadi Al-Turjman, **Ilker Ozsahin** and Dilber Uzun Ozsahin. Evaluation of mobile patient monitoring: a study in practice. Wireless Medical Sensor Networks for IoT-based eHealth. Fadi Al-Turjman (Ed). Institution of Engineering & Technology, 2020.
90. Auny El Jundi, Omran Alkhalidi1, Mohamad Elamin, Sharmain Dube, Fadi Al-Turjman, **Ilker Ozsahin** and Dilber Uzun Ozsahin. The development of a blood infusion warmer device: a new device. Fadi Al-Turjman (Ed). Wireless Medical Sensor Networks for IoT-based eHealth. Fadi Al-Turjman (Ed). Institution of Engineering & Technology, 2020.
91. Mohamad Bassl Alramli, Mohamad Dib, Mohammad Amrou Dib, Hussam Macha Alghazalat, Mubarak Mustapha, Fadi Al-Turjman, **Ilker Ozsahin** and Dilber Uzun Ozsahin. Toward a smart hospital room and automated systems. Wireless Medical Sensor Networks for IoT-based eHealth. Fadi Al-Turjman (Ed). Institution of Engineering & Technology, 2020.
92. Ahmad Mohammed, Shaif Zahrah, Muaadh Al-Bahri, Basil Bartholomew Duwa1, Fadi Al-Turjman, **Ilker Ozsahin** and Dilber Uzun Ozsahin. Acoustic glass for deaf people: a new device. Wireless Medical Sensor Networks for IoT-based eHealth. Fadi Al-Turjman (Ed). Institution of Engineering & Technology, 2020.
93. Mostafa Fakhouri, Ameer Jubran, Rashad Ghaleb, Timipawopri Adada, Fadi Al-Turjman, **Ilker Ozsahin** and Dilber Uzun Ozsahin. A framework for blind people using wireless medical sensors network. Wireless Medical Sensor Networks for IoT-based eHealth. Fadi Al-Turjman (Ed). Institution of Engineering & Technology, 2020.
94. Yousaif Esaam Ismaeel, Mohammed Bin Merdiah, Abdullah Omar Alani, Fadi Al-Turjman, **Ilker Ozsahin** and Dilber Uzun Ozsahin. Smart system for the blind. Wireless Medical Sensor Networks for IoT-based eHealth. Fadi Al-Turjman (Ed). Institution of Engineering & Technology, 2020.

2019

95. **Ilker Ozsahin**, Boran Sekeroglu, Greta S. P. Mok. "The use of back propagation neural networks and 18F-Florbetapir PET for early detection of Alzheimer's disease using Alzheimer's Disease Neuroimaging Initiative Database" PLOS ONE, 2019.
96. **Ilker Ozsahin**, Berna Uzun, Nuhu Abdulhaqq Isa, Greta S. P. Mok, Dilber Uzun Ozsahin, "Comparative Analysis of the Common Scintillation Crystals Used in Nuclear Medicine Imaging Devices", 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference Record, 2019.
97. **Ilker Ozsahin**, Musa Sani Musa, Greta S. P. Mok, "Simulation of a High-Sensitivity Adjustable-FOV PET Scanner", 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference Record, 2019.
98. **Ozsahin I.**, Uzun Ozsahin D., Maisaini M., Mok G. S.P. "Fuzzy PROMETHEE analysis of leukemia treatment techniques" World Cancer Research Journal, 6: e1315, 2019.
99. **I Ozsahin**, DU Ozsahin, K Nyakuwanikwa, TW Simbanegavi "Fuzzy PROMETHEE for Ranking Pancreatic Cancer Treatment Techniques", Advances in Science and Engineering Technology International Conferences (ASET) 2019, IEEE Xplore, 2019.

100. MT Mubarak, **I Ozsahin**, DU Ozsahin "Evaluation of Sterilization Methods for Medical Devices", Advances in Science and Engineering Technology International Conferences (ASET) 2019, IEEE Xplore, 2019.
101. MS Musa, DU Ozsahin, **I Ozsahin** "A Comparison for Liver Cancer Treatment Alternatives", Advances in Science and Engineering Technology International Conferences (ASET) 2019, IEEE Xplore, 2019.
102. DU Ozsahin, K Nyakuwanikwa, T Wallace, **I Ozsahin** "Evaluation and Simulation of Colon Cancer Treatment Techniques with Fuzzy PROMETHEE" Advances in Science and Engineering Technology International Conferences (ASET) 2019, IEEE Xplore, 2019.
103. **I. Ozsahin**, T. Sharif, D. Uzun Ozsahin and B. Uzun "Evaluation of solid-state detectors in medical imaging with fuzzy PROMETHEE", Journal of Instrumentation, 14 C01019, 2019.
104. Mordecai Maisaini, Berna Uzun, **Ilker Ozsahin**, Dilber Uzun, "Evaluating Lung Cancer Treatment Techniques Using Fuzzy PROMETHEE Approach", In: Aliev R., Kacprzyk J., Pedrycz W., Jamshidi M., Sadikoglu F. (eds) 13th International Conference on Theory and Application of Fuzzy Systems and Soft Computing — ICAFS-2018. ICAFS 2018. Advances in Intelligent Systems and Computing, vol 896. pp. 209–215, Springer, Cham. 2019.

2018

105. M. S. Musa, D. Uzun Ozsahin and **I. Ozsahin**, "Simulation and evaluation of high-performance cost-effective positron emission mammography scanner", Journal of Instrumentation, 2018.
106. **Ilker Ozsahin**, Codi Gharagouzloo, Vasily Belov, Nathaniel M. Alpert, and Georges El Fakhri, "Awake Animal Functional Imaging to Investigate the Effects of General Anesthesia on Brain", Advances in Science and Engineering Technology International Conferences (ASET) 2018, IEEE Xplore, 2018.
107. Dilber Uzun Ozsahin, Nuhu Abdulhaqq Isa, Berna Uzun, **Ilker Ozsahin**, "Effective analysis of image reconstruction algorithms in nuclear medicine using fuzzy PROMETHEE", Advances in Science and Engineering Technology International Conferences (ASET) 2018, IEEE Xplore, 2018.
108. Dilber Uzun Ozsahin and **Ilker Ozsahin**, "A Fuzzy PROMETHEE Approach for Breast Cancer Treatment Techniques", International Journal of Medical Research & Health Sciences, 7(5): 29-32, 2018.
109. Dilber Uzun Ozsahin, Berna Uzun, Musa Sani Musa, **Ilker Ozsahin**, "Evaluating X-Ray based Medical Imaging Devices with Fuzzy Preference Ranking Organization Method for Enrichment Evaluations" International Journal of Advanced Computer Science and Applications, Volume 9 Issue 3, 2018.

2017

110. MS Musa, DU Ozsahin, **I Ozsahin**, "Simulation and evaluation of a cost-effective high-performance brain PET scanner", Journal of Biomedical Imaging and Bioengineering, Volume 1, Issue 2, 2017.
111. DU Ozsahin, B Uzun, MS Musa, N Şentürk, FV Nurçin, **I Ozsahin**, "Evaluating nuclear medicine imaging devices using fuzzy PROMETHEE method" Procedia Computer Science 120, 699-705, 2017.
112. Dilber Uzun Ozsahin, Berna Uzun, Musa Sani Musa, Abdulkader Helwan, Chidi Nwekwo Wilson, Fatih Veysel Nurçin, Niyazi Şentürk, **Ilker Ozsahin**, "Evaluating Cancer Treatment Alternatives using Fuzzy PROMETHEE Method", International Journal of Advanced Computer Science & Applications, Vol. 8, No, 10, 177-182, 2017.

2016

113. A. Andreyev, A. Celler, **I. Ozsahin**, and A. Sitek, "Resolution recovery for Compton camera using origin ensemble algorithm", Medical Physics, Aug; 43(8); 4866, 2016.

2014

114. **I Ozsahin**, M Z Unlu, "Modeling and Simulation of Positron Emission Mammography (PEM) Based on Double-Sided CdTe Strip Detectors", Journal of Instrumentation 9 C03055, 2014.

2013

115. M Kolstein, G De Lorenzo, E Mikhaylova, M Chmeissani, G Ariño, Y Calderón, **I Ozsahin**, D Uzun, "Evaluation of Origin Ensemble Algorithm for Image Reconstruction for Pixelated Solid-State Detectors with Large Number of Channel", Journal of Instrumentation 8 P04030, 2013.
116. G De Lorenzo, M Chmeissani, D Uzun, M Kolstein, **I Ozsahin**, E Mikhaylova, P Arce, M Cañadas, G Ariño, Y Calderón, "Pixelated CdTe Detectors to Overcome Intrinsic Limitations of Crystal Based Positron Emission Mammographs", Journal of Instrumentation 8 C01030, 2013.

2011

117. Mikhaylova E., Canadas M., De Lorenzo G., Chmeissani M., Arce P., Arino G., Cabruja, E., Calderon Y., Kolstein M., Gabriel Macias- Montero, J., Martinez, R., **Ozsahin I.**, Puigdengoles, C. Uzun D., "Simulation of pseudo-clinical conditions and image quality evaluation of PET scanner based on pixelated CdTe detector", 2011 IEEE Nuclear Science Symposium and Medical Imaging Conference Record, 2716-2722.
118. Calderon Y., Kolstein M., Uzun D., De Lorenzo G., Chmeissani M., Arce P., Arino G., Cabruja, E., Canadas M., Gabriel Macias-Montero, J., Martinez, R., Mikhaylova E., **Ozsahin I.**, Puigdengoles, C., "Modeling, simulation and evaluation of a compton camera based on a pixelated solid-state detector", 2011 IEEE Nuclear Science Symposium and Medical Imaging Conference Record, 2708-2715.
119. Arino G., Chmeissani M., Puigdengoles, C., De Lorenzo G., Diener R., Arce P., Cabruja, E., Calderon Y., Canadas M., Kolstein M., Gabriel Macias-Montero, J., Martinez, R., Mikhaylova E., **Ozsahin I.**, Uzun D., "Characterization of CdTe detector for use in PET", 2011 IEEE Nuclear Science Symposium and Medical Imaging Conference Record, 4598-4603.

7.2. Articles Published in Other International Peer-Reviewed Journals

7.3. Papers Presented at International Scientific Conferences and Published in Conference Proceedings

Oral/Poster Presentations

1. Ozlem Balcioglu, Declan Ikechukwu Emegano, Berna Uzun, Türker Şahin, **Ilker Ozsahin**, Dilber Uzun Ozsahin. "Comparative evaluation of blood conservation techniques in cardiovascular surgery using multicriteria decision-making methods". Advances in Science and Engineering Technology International Conferences (ASET), Dubai, UAE, 2023.
2. Dilber Uzun Ozsahin, Basil Bartholomew Duwa, Efe Precious Onakpojeruo, Berna Uzun, **Ilker Ozsahin**. "Comparative Evaluation of 3D Filaments, Used in Additive Manufacturing of Biomedical Tools; Using Fuzzy PROMETHEE". Advances in Science and Engineering Technology International Conferences (ASET), Dubai, UAE, 2023.
3. Dilber Uzun Ozsahin, Natacha Usanase, Ozlem Balcioglu, **Ilker Ozsahin**, Berna Uzun, " The Efficacy and Safety of Direct Oral Anticoagulants for The Treatment of Venous Thrombosis in Cancer Using Fuzzy PROMETHEE". Advances in Science and Engineering Technology International Conferences (ASET), Dubai, UAE, 2023.
4. Dilber Uzun Ozsahin, Efe Precious Onakpojeruo, Berna Uzun, **Ilker Ozsahin** "Selection Methods for the Treatment of Spinal Cord Tumors Using Analytical Evaluation Models". Advances in Science and Engineering Technology International Conferences (ASET), Dubai, UAE, 2023.
5. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, **Ilker Ozsahin** and Berna Uzun " Machine Learning Approaches For River Discharge Prediction Us-ing Acoustic Doppler Current Profiler (ADCP) data". 3rd International Conference of Water Problems in Mediterranean Countries, Nicosia/TRNC, Turkey, 2023.

6. Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Berna Uzun and **Ilker Ozsahin** "Predictive Modeling of Groundwater Contaminant Transport: Integrating Environmental Factors and Hydrochemical Parameters". 3rd International Conference of Water Problems in Mediterranean Countries, Nicosia/TRNC, Turkey, 2023.
7. Natacha Usanase, Berna Uzun, **Ilker Ozsahin**, Ali Denker and Dilber Uzun Ozsahin "The Predictive Modeling for Water Potability: Integrating Physical and Chemical Attributes through Machine Learning". 3rd International Conference of Water Problems in Mediterranean Countries, Nicosia/TRNC, Turkey, 2023.
8. Natacha Usanase, Berna Uzun, **Ilker Ozsahin**, Dilber Uzun Ozsahin "Optimizing Melanoma Therapy Decision-Making with A Multi-Criteria Analytical Approach". 13th International Conference on Theory and Application of Fuzzy Systems and Soft Computing - ICAFS-2023
9. **Ilker Ozsahin** and Greta S. P. Mok. "Assessment of Adaptive Multi-Pinhole Collimators for Multi-Purpose SPECT" 16th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD23), Siena, Italy, 2023
10. Dilber Uzun Ozsahin, Berna Uzun , Basil B. Duwa, and **Ilker Ozsahin**. "Evaluation of new scintillation crystals with multi-criteria decision-making methods for brain PET" 16th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD23), Siena, Italy, 2023
11. **Ilker Ozsahin**, Liangdong Zhou, Xiuyuan Hugh Wang, Jacob Garetti, Ke Xi, Emily Tanzi, Amy Kuceyeski, Sudhin Shah, Yi Li, Tracy A Butler. "Diffusion tensor image analysis along the perivascular space inversely correlates with age in healthy subjects" Alzheimer's Association International Conference, Amsterdam, Netherland, 2023.
12. **Ilker Ozsahin**, Efe Precious Onakpojeruo, Berna Uzun, Dilber Uzun Ozsahin, Tracy A Butler. "Comparative evaluation of FDA-approved drugs for managing the symptoms of AD". Alzheimer's Association International Conference, Amsterdam, Netherland, 2023
13. **Ilker Ozsahin**, Efe Precious Onakpojeruo, Berna Uzun, Dilber Uzun Ozsahin, Tracy A Butler. "Radiopharmaceutical selection for tau PET imaging". Alzheimer's Association International Conference, Amsterdam, Netherland, 2023
14. **Ilker Ozsahin**, Efe Precious Onakpojeruo, Berna Uzun, and Dilber Uzun Ozsahin. "A Comparative Study for Selecting the Antiparkinsonian Medications with Fuzzy PROMETHEE", World Parkinson Congress, Barcelona, Spain, 2023
15. **Ilker Ozsahin**, Boran Sekeroglu, Dilber Uzun Ozsahin, and Tracy A. Butler. "Using Dual Block CNN Model and MRI Images for Detection of Autism Spectrum Disorder", IEEE Nuclear Science Symposium and Medical Imaging Conference, Milano, Italy, 2022
16. **Ilker Ozsahin**, Berna Uzun, Dilber Uzun Ozsahin. "Evaluation of new scintillator crystals with multi-criteria decision-making methods for brain PET", iWoRiD 23rd International Workshop on Radiation Imaging Detectors, Riva del Garda, Italy, 2022.
17. **Ilker Ozsahin**, Berna Uzun, Basil Bartholomew Duwa, Dilber Uzun Ozsahin. "Radiation detectors and their applications in medical imaging", iWoRiD 23rd International Workshop on Radiation Imaging Detectors, Riva del Garda, Italy, 2022
18. Basil Bartholomew Duwa, Berna Uzun, **Ilker Ozsahin**, Dilber Uzun Ozsahin. "Comparative Evaluation of Non-Contact Fever Detection Devices Against COVID-19 Using Fuzzy MCDM Methods", International Conference on Mathematics, Statistics and Applied Science (ICMSAS-22). Dubai, UAE, 2022
19. Q. A. Alyazji, D. Uzun Ozsahin, B. Uzun and **I. Ozsahin**, "Evaluating electronic blood pressure measurement devices with fuzzy TOPSIS technique," 2022 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, UAE, 2022.
20. M. T. Mustapha, D. Uzun Ozsahin, B. Uzun and **I. Ozsahin**, "Evaluation of the Thyroid Cancer Treatment Techniques with Fuzzy VIKOR," 2022 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, UAE, 2022.
21. **I. Ozsahin**, B. Sekeroglu, T. A. Butler, "Classification of Alzheimer's disease by using tau PET images and deep convolutional neural networks", Alzheimer's Association International Conference, Denver, USA, 2021.

22. **I. Ozsahin**, D. Uzun Ozsahin, C. Onyebuchi, G. S. P. Mok, "BoXPECT: High Sensitivity Multi-Pinhole Brain SPECT", IEEE Nuclear Science Symposium and Medical Imaging Conference, Boston, USA, 2020.
23. **I. Ozsahin**, G. S. P. Mok, "Preliminary Performance Evaluation of Adaptive Multi-Pinhole Collimators for SPECT," IEEE Nuclear Science Symposium and Medical Imaging Conference, Manchester, UK, 2019
24. **Ilker Ozsahin**, Pavel Makarov, Greta S. P. Mok "Design and Performance Evaluation of an Adjustable-FOV PET Scanner", 15th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD19), Siena, Italy, 2019
25. **Ilker Ozsahin**, Dilber Uzun Ozsahin, Samuel Tadesse Abebe, Pavel Makarov, Greta S. P. Mok "Optical Transparent Ceramic Scintillators for High Performance Brain PET", 15th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD19), Siena, Italy, 2019
26. **Ilker Ozsahin**, "Design and Evaluation of a Multi-Pinhole Collimator for Cardiac SPECT" Molecular Imaging Instrumentation Conference, Hong Kong, 2019
27. **Ilker Ozsahin**, Dilber Uzun Ozsahin. "Fuzzy PROMETHEE for Ranking Pancreatic Cancer Treatment Techniques" ASET Engineering Innovations in Healthcare International Conference, Dubai, UAE, 2019
28. Musa Sani Musa, Dilber Uzun Ozsahin, **Ilker Ozsahin**. "A Comparison for Liver Cancer Treatment Alternatives" ASET Engineering Innovations in Healthcare International Conference, Dubai, UAE, 2019
29. Dilber Uzun Ozsahin, Kudakwashe Nyakuwanikwa, Tapiwa Wallace Simbanegavi, **Ilker Ozsahin**, "Evaluation and Simulation of Colon Cancer Treatment Techniques with Fuzzy PROMETHEE" ASET Engineering Innovations in Healthcare International Conference, Dubai, UAE, 2019
30. Mubarak Taiwo Mubarak, **Ilker Ozsahin**, Dilber Uzun Ozsahin. "Evaluation of Sterilization Methods for Medical Devices" ASET Engineering Innovations in Healthcare International Conference, Dubai, UAE, 2019
31. **Ilker Ozsahin**, Gulcem Altinoglu and Boran Sekeroglu. "Back Propagation Neural Network and
32. 18F-Florbetapir PET for Early Detection of Alzheimer's Disease", IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia, 2018
33. **Ilker Ozsahin**, Boran Sekeroglu, Gulcem Altinoglu. "High Accuracy Automated Diagnosis of Parkinson's Disease", IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia, 2018
34. Berna Uzun, **Ilker Ozsahin**, Nuhu Abdulhaqq Isa, Dilber Uzun Ozsahin. "Comparative Analysis of Common Scintillation Crystals in Emission Tomography Using Fuzzy PROMETHEE", IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia, 2018
35. **Ilker Ozsahin**, Musa Sani Musa. "Simulation of a High-Sensitivity Adjustable-FOV PET Scanner", IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia, 2018
36. **Ilker Ozsahin**, Tazeen Sharif, Dilber Uzun Ozsahin, Berna Uzun. "Evaluations Of Common Solid-State Detectors with Multi-Criteria Decision-Making Theory Fuzzy PROMETHEE", iWoRiD 20th International Workshop on Radiation Imaging Detectors, Sundsvall, Sweden, 2018
37. Musa Sani Musa, **Ilker Ozsahin**. "Simulation of New Scintillation Crystals for Brain PET", iWoRiD 20th International Workshop on Radiation Imaging Detectors, Sundsvall, Sweden, 2018
38. **Ilker Ozsahin**, Codi Gharagouzloo, Vasily Belov, Nathaniel M. Alpert, and Georges El Fakhri. "Awake Animal Functional Imaging to Investigate the Effects of General Anesthesia on Brain", ASET Engineering Innovations in Healthcare International Conference, Sharjah, UAE, 2018
39. Dilber Uzun Ozsahin, Nuhu Abdulhaqq Isa, Berna Uzun, **Ilker Ozsahin**. "Effective Analysis of Image Reconstruction Algorithms in Nuclear Medicine Using Fuzzy PROMETHEE", ASET Engineering Innovations in Healthcare International Conference, Sharjah, UAE, 2018
40. **Ilker Ozsahin**. "Awake Animal Imaging with MicroPET and Motion Tracking System", 14th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD16), Siena, Italy, 2016

41. **I. Ozsahin**, M. Z. Unlu. "Modeling and simulation of Positron Emission Mammography (PEM) based on double-sided CdTe strip detectors", 13th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD13), Siena, Italy, 2013
42. Mikhaylova E., Canadas M., De Lorenzo G., Chmeissani M., Arce P., Arino G., Cabruja, E., Calderon Y., Kolstein M., Gabriel Macias- Montero, J., Martinez, R., **Ozsahin I.**, Puigdengoles, C. Uzun D., "Simulation of pseudo-clinical conditions and image quality evaluation of PET scanner based on pixelated CdTe detector", IEEE Nuclear Science Symposium and Medical Imaging Conference, Valencia, Spain, 2011
43. Calderon Y., Kolstein M., Uzun D., De Lorenzo G., Chmeissani M., Arce P., Arino G., Cabruja, E., Canadas M., Gabriel Macias-Montero, J., Martinez, R., Mikhaylova E., **Ozsahin I.**, Puigdengoles, C., "Modeling, simulation and evaluation of a Compton camera based on a pixelated solid-state detector", IEEE Nuclear Science Symposium and Medical Imaging Conference, Valencia, Spain, 2011
44. Arino G., Chmeissani M., Puigdengoles, C., De Lorenzo G., Diener R., Arce P., Cabruja, E., Calderon Y., Canadas M., Kolstein M., Gabriel Macias-Montero, J., Martinez, R., Mikhaylova E., **Ozsahin I.**, Uzun D., "Characterization of CdTe detector for use in PET", IEEE Nuclear Science Symposium and Medical Imaging Conference, Valencia, Spain, 2011

7.4. National/international Books or Book Chapters

Books Edited

2023

1. Dilber Uzun Ozsahin, **Ilker Ozsahin**. Practical Design and Applications of Medical Devices. Elsevier, 2023.

2022

2. Dilber Uzun Ozsahin, **Ilker Ozsahin**. Modern Practical Healthcare Issues in Biomedical Instrumentation. Elsevier, 2022.

2021

3. **Ilker Ozsahin**, Dilber Uzun Ozsahin, Berna Uzun. Applications of Multi-Criteria Decision-Making Theories in Healthcare and Biomedical Engineering. Elsevier, 2021.
4. **Ilker Ozsahin**, Dilber Uzun Ozsahin. Applied Machine Learning and Multi-Criteria Decision-Making in Healthcare. Bentham Science, 2021.

7.5. Articles Published in National Peer-Reviewed Journals

8. Art and Design Activities

9. Projects

10. Administrative Responsibilities

11. Memberships in Scientific and Professional Organizations

12. Awards

2023 Alzheimer's Association International Conference (AAIC) Conference Fellowship

2015 - 2016 International Postdoctoral Research Fellowship, The Scientific and Technological Research Council of Turkey (TUBITAK), Harvard Medical School and Massachusetts General Hospital, Boston, Massachusetts, USA

2011 - 2012 PhD student, research position in a European Research Council (ERC) awarded project, IFAE (Institut de Fisica d'Altes Energies – Institute of High Energy Physics), Universitat Autònoma de Barcelona (UAB) in Barcelona, Spain

2009 Summer internship at Frederick Seitz Materials Research Laboratory at the University of Illinois at Urbana-Champaign, Illinois, USA

13. Undergraduate and Graduate Courses Taught in the Last Two Years

Undergraduate

Calculus

Physics

Electromagnetic Theory

Radiology Physics

Nuclear Medicine

Biomedical Instrumentation

Biomedical Signal Processing

Postgraduate

Medical Imaging Science and Technologies

Neuroscience

Neuroimaging