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Appointments

Job Rank	Place and Address of Work			Date
Dean	College of Engineering	Imam Abdul Rahman bin Faisal University (IAU)	Dammam, KSA	2021-presnet
Vice Dean for Academic Affairs	College of Engineering	Imam Abdul Rahman bin Faisal University (IAU)	Dammam, KSA	2019-2021
Associate Professor	College of Engineering	Imam Abdul Rahman bin Faisal University (IAU)	Dammam, KSA	2023-present
Assistant Professor	College of Engineering	Imam Abdul Rahman bin Faisal University (IAU)	Dammam, KSA	2017-2023
Lecturer	College of Engineering	Imam Abdul Rahman bin Faisal University (IAU)	Dammam, KSA	2013- 2017
Graduate Researcher	Optical and Ultrasound Imaging Lab	University of Connecticut	Storrs CT, USA	2014-2017
Graduate Researcher	Biomedical Imaging Lab	Wright State University	Dayton OH, USA	2012-2013
Intern	Clinical Engineering Department	King Faisal Specialist Hospital and Research Center	Jeddah, KSA	Summer 2011

Academic Qualifications

Date	Academic Degree	Place of Issue	Address
December 2017	PhD in Biomedical Engineering	University of Connecticut	Storrs CT, USA
June 2013	M.S. in Biomedical Engineering	Wright State University	Dayton OH, USA
June 2011	B.S. in Biomedical Engineering	Wright State University	Dayton OH, USA

PhD Research Title:

- Methods for Improving the Reconstruction of Diffuse Optical Tomography for Breast Cancer Detection

Research Interests:

- Medical Imaging, Biomedical Instrumentation, Bio-photonics, fNIRS technology



Scientific Achievements

United States Patents

#	Name of Inventor(s)	Invention Title	US Patent App.	Publication /Filed Date
1	Althobaiti M, et al.	Epidural Needle	18/454,863	August 24, 2023 (Filed Date)
2	Althobaiti M, et al.	Systems and Methods for Controlling a Robotic Arm Based on Brain Activities	18/154,083	January 13, 2023 (Filed Date)
3	Althobaiti M, et al.	Non-Invasive Sensor and Method for Determining Blood Glucose	17/553,181	June 22, 2023 (Publication Date)

Published Journal Papers

#	Name of Investigator(s)	Research Title	Journal	Publication Date
1	Althobaiti M, et al.	Recent Advances in Smart Epidural Spinal Needles	<i>Sensors</i>	2023
2	Althobaiti M	Estimation of the Differential Pathlength Factor for Human Skin Using Monte Carlo Simulations	<i>Diagnostics</i>	2023
3	Althobaiti M	Silico Investigation of SNR and Dermis Sensitivity for Optimum Dual-Channel Near-Infrared Glucose Sensor Designs for Different Skin Colors	<i>Biosensors</i>	2022
4	Tamal M., Althobaiti M, et al.	Synchrotron X-ray Radiation (SXR) in Medical Imaging: Current Status and Future Prospects	<i>Applied Sciences</i>	2022
5	Almulla A, Al-Naib I, Ateeq I, Althobaiti M	Observation and motor imagery balance tasks evaluation: An fNIRS feasibility study	<i>PLOS ONE</i>	2022
6	Alsunaidi B, Althobaiti M, et al.	A Review of Non-Invasive Optical Systems for Continuous Blood Glucose Monitoring	<i>Sensors</i>	2021
7	Althobaiti M, Al-Naib I	Optimization of Dual-Channel Near-infrared Non-invasive Glucose Level Measurement Sensors based on Monte-Carlo Simulations	<i>IEEE Photonics Journal</i>	2021
8	Althobaiti M, Al-Naib I	Recent Developments in Instrumentation of Functional Near-Infrared Spectroscopy Systems	<i>Applied Sciences</i>	2020
9	Almulla A, Al-Naib I, Althobaiti M	Hemodynamic responses during standing and sitting activities: a study toward fNIRS-BCI	<i>Biomed. Phys. Eng. Express</i>	2020
10	Vavadi H, Mostafa A, Zhou F, Uddin K, Althobaiti M, Xu C, Zhu Q	Compact ultrasound-guided diffuse optical tomography system for breast cancer imaging	<i>Journal of Biomedical Optics</i>	2018
11	Althobaiti M, Vavadi H, Zhu Q	An automated preprocessing method for Diffuse Optical Tomography to improve breast cancer diagnosis	<i>Technology in Cancer Research & Treatment</i>	2018



12	Althobaiti M , Vavadi H, Zhu Q	Diffuse optical tomography reconstruction method using ultrasound images as prior for regularization matrix	<i>Journal of Biomedical Optics</i>	2017
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Published Conference Papers

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	Vavadi H, Althobaiti M , Mostafa A, Uddin, F. Zhou, C. Xu, R. Bansal, and Q. Zhu,	A calibration method for diffuse optical tomography based on extracted target depth and size from Ultrasound images	<i>Biophotonics Congress: Biomedical Optics Congress (April, 2018)</i>
2	Althobaiti M , and Zhu Q	An automated preprocessing method based on multiple wavelength measurements for image reconstruction of ultrasound-guided DOT	<i>Proc. SPIE 10685, Biophotonics: Photonic Solutions for Better Health Care VI (May, 2018)</i>
3	Althobaiti M , Vavadi H, Zhu Q	Assessment of using ultrasound images as prior for diffuse optical tomography regularization matrix	<i>Proc. SPIE 10059, Optical Tomography and Spectroscopy of Tissue XII, 1005921 (February, 2017)</i>
4	Althobaiti M , Zhu Q	Evaluation of a Dual-Mesh for Reconstruction of Diffuse Optical Tomography using NIRFAST	<i>Proc. OSA BIOMEDICAL OPTICS, Cancer Imaging and Therapy (April, 2016)</i>
5	Althobaiti M , Salehi H, Zhu Q	Assessment of Diffuse Optical Tomography Image Reconstruction Methods Using Photon Transport Model	<i>Proc. of the 2015 COMSOL Conference in Boston (October 2015) Boston, USA</i>

Funded Research

#	Research Title	Name of Investigator(s)	Funded Institution
1	Near infrared imaging for non-invasive detection and assessment of brain functional activities (2019-013-Eng)	Althobaiti M (PI)	Deanship of Scientific Research, IAU
2	Smart Prosthetic Knees Controlled by Motor Imagery via fNIRS Measurements (2019-391-Eng)	Al-Naib I (PI) Althobaiti M (Co-Investigator)	Deanship of Scientific Research, IAU
3	Development of Novel Non- invasive Systems for the Characterization of the Blood Glucose Levels (IF-2020-Eng-13)	Al-Naib I (PI) Althobaiti M (Co-Investigator)	Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia
4	Design of an automated spinal needle (IF-2022-046-Eng)	Althobaiti M (PI)	Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia

Membership of Scientific and Professional Societies and Organizations

- Member, Saudi Council of Engineers (2021-present)
- Member, Biomedical Engineering Society of the US (BMES)
- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, Optical Society of America (Optica)
- Chief Financial Officer (CFO), SPIE- UConn Chapter (2015-2017)
- Chief Financial Officer (CFO), OSA - UConn Chapter (2016-2017)



Teaching Activities

Undergraduate

#	Course Title	No./Code	Extent of Contribution
1	Biomedical Electronics & Measurements	BMEN 431	Lectures/Lab
2	Biomedical Optics	BIOEN504	Lectures/Lab
3	Ultrasound	BIOEN583	Lectures/Lab
4	Medical Imaging Systems	BIOEN553	Lectures/Lab
5	Senior Design Project	BIOEN531	Supervisor

Postgraduate

#	Course Title	No./Code	Extent of Contribution
1	Advanced Physiology and Anatomy for Engineers	BMEN 601	Lectures
2	Digital Health	BMEN 612	Lectures

Ongoing Research Supervision

#	Degree Type	Title	Institution	Date
1	Undergraduate	A Dual-Intensity fNIRS Detection System for MDD Diagnosis	IAU, KSA	2020/2021
2	Undergraduate	Insulin infusion pump with Ketoacidosis detection	IAU, KSA	2019/2020
3	Undergraduate	Development of microcontroller prosthetic knee for transfemoral amputees	IAU, KSA	2018/2019

Guest/Invited Lectures

Title	Subject	Organization	Date
NeuroArab2020 conference	Talk title: Seeing through light: a new way to image the brain: " <i>fNIRS technology</i> "	Invited Lecture to the NeuroArab2020 conference	16/6/2020
2019 Radiation in Medicine Courses & Workshops	Lecture title: Image Quality in Medical Imaging	King Faisal Specialist Hospital & Research Centre in Riyadh , Saudi Arabia	11/2/2019
Third Biomedical Engineering Forum	Lecture title: Biomedical engineering programs: a comparative study	Saudi Council of Engineers: Biomedical Engineering Division	2018/5/15
MAWHIBA Summer trainer for the " <i>Engineering Design Track</i> "	Engineering Design course	King Abdulaziz & His Companions Foundation for Giftedness and Creativity (Mawhiba) , Saudi Arabia	Summer 2019 & Summer 2020 & Summer 2021



Administrative Responsibilities

Committee Membership

#	From	To	Position	Organization
1	May 2023	Present	ABET Program Evaluator (PEV)	ABET, Baltimore, USA
2	Jan 2021	Dec 2021	Member	Standards Technical Committee for surgical implants , Saudi Food & Drug Authority, Saudi Arabia
3	April 2019	Dec 2020	Member	Standards Technical Committee for Electromedical equipment (SFDA/MDS/TC 62D), Saudi Food & Drug Authority, Saudi Arabia
4	Dec 2022	Present	Member	University Standing Committee for Graduate Studies, IAU