MARAM ABDULLAH ALQARNI

POSITION: LECTURER

Personal Data

Nationality | Saudi

Department | Biomedical Engineering

Official IAU Email | maalqarni@iau.edu.sa

Language Proficiency

Language	Read	Write	Speak
Arabic	Fluent	Fluent	Fluent
English	Excellent	Excellent	Excellent

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
1/11/2019 2018-2019	MSc in medical engineering & physics	King's college London	London(UK)
31/05/2016 2011-2016	BSc in biomedical engineering	Imam Abdurahman bin Faisal university	Dammam(SA)

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	-
Master	Automatic Segmentation of the Left Ventricle in 3-D Echocardiography Images
Fellowship	-

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Lecturer	Imam Abdurahman bin Faisal university	12/12/2019 to Date
Demonstrator	Imam Abdurahman bin Faisal university	02/08/2016 -14/07/2018

Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date
Female Engineering Club	Imam Abdurahman bin Faisal university	2017-2021
Public Relation committee in engineering college	Imam Abdurahman bin Faisal university	2019-2021
Community Service committee	Imam Abdurahman bin Faisal university	2020-2021
Advisory committee member	Imam Abdurahman bin Faisal university	2017-2018
Academic and curriculum development committee member	Imam Abdurahman bin Faisal university	2017-2018
Academic affairs member	Imam Abdurahman bin Faisal university	2017-2018
Lab safety supervision member	Imam Abdurahman bin Faisal university	2017-2020

Scientific Achievements

Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
	Dr. Andrew King, Dr. Esther Paul, Eng. Maram Alqarni	Automatic segmentation of the left ventricle in 3-D echocardiography images	Under progress/ Not published yet
	Maram Alqarni,Maha Alshammari-Haneefa Barnawi - Mahbubunnabi Tamal	Determination of a robust threshold value against statistical fluctuation for PET image segmentation for two different filters (phantom study only)	Under progress/Not published yet

Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	Maram Alqarni,Maha Alshammari-Leena Basri–Haneefa Barnawi –Yara Abu- Almajd Supervised by Dr. Dr.Mahbubunnabi Tamal	Investigation of Volume Independent Textural Metrics as Biomarkers of Cancer Staging and Prognosis for PET-CT	08/05/ 2016
2	Maram Alqarni Supervised by: Dr Esther Puyol and Dr Andrew King	Automatic segmentation of the left ventricle in 3-D echocardiography images	27/08/2019

Current Researches

#	Research Title	Name of Investigator(s)
	Dr. Andrew King, Dr. Esther Paul, Eng. Maram Alqarni	Automatic segmentation of the left ventricle in 3-D echocardiography images

Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	The International Conference on Radiation Medicine (ICRM2020)	Riyadh, 2021	Presenter

Membership of Scientific and Professional Societies and Organizations

- IEEE
- SSSBE

Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
	Biomedical Imaging Systems	BIOEN 553	Conduction Labs
	Ultrasound	BIOEN 583	Conduction Tutorials- Courseworks
	Introduction to Biomedical Optics	BIOEN 504	Conduction Labs
	Medical Image Processing & Communication	BIOEN 563	Conduction Labs / Lectures
	Computer programming	COMP 212	Conduction Labs
	Project Management	BIOEN 511	Lectures
	Summer Training I	BIOEN 333	Lectures/Labs
	Senior Design Project II	BIOEN 531	Co-supervisor
	Senior Design Project II	BIOEN 532	Co-supervisor

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

BIOEN 553 Biomedical Imaging Systems:

Introducing the main biomedical imaging modalities such as X- Ray, Radiography, Computed Tomography, Ultrasound and Magnetic Resonance Imaging (MRI). The focus of the course is a series of labs using PHYWE training units and Gate 4 simulation software and home works that will enable students to perform useful biomedical imaging experiments that in turns not only will help them to understand the principle of imaging systems but also will familiarize them with basic parameters that matter most for clinical applications.

BIOEN 583 Ultrasound:

Discussing the ultrasound imaging system more deeply e.g. Image formation in Ultrasound, pulse-echo ultrasound instrumentation; image storage and display; Doppler instrumentation; color doppler and color flow imaging; image characteristics and artifacts; bio-effects; safety regulations, Applications and future trends.

BIOEN 504 Introduction to Biomedical Optics:

Background and understanding of the fundamentals of optical engineering e.g. the propagation of light in tissue, optical components, fluorescence, Raman, two- photon, spectral microscopy.

BIOEN 563: Medical Image Processing & Communication:
Computational and mathematical aspects of medical image processing and communication. Students will learn the fundamentals behind image processing and analysis methods and algorithms with an emphasis on biomedical applications. It covers principles and algorithms for processing both deterministic and random signals presented in images. Topics include filtering, coding, feature extraction and modeling. The focus of the course is a series of labs and home works that provide practical experience in processing of real medical images using MATLAB.

COMP 212 Computer programming:
This course aims at the provision of the concepts of algorithm, programming language, and program and developing basic problem solving skills to the learner. The course topics include: Overview of computer programming and programming languages (machine, assembly and High-level languages). Programming principles of algorithm and flow of control, including sequential execution, selection, iteration, and subroutine. Basics of a typical programming language (e.g. Matlab). Introduction to computer methods and algorithms for analysis and solution of engineering problems using numerical methods in a workstation environment (Numerical integration, roots of equations, simultaneous equation solving and matrix analysis).

BIOEN 511 Project Management:
Explanation of the Project Management principles and main tools through the example of a simple four phases Project Life Cycle. The course is compliant with Project Management Institute standard.

BIOEN 333 Summer Training I:
Engineering student is obliged to make a summer practice of 20 working days (8 Hours/day) in a specialized workshop either onsite or offsite where students learn to work safely in a workshop. Students are introduced to the use of hand tools, the lathe, the milling machine, drill press, saws, and precision measuring tools. Students should also gain basic skills required to build simple electrical and electronic circuits. Students apply these skills by completing a project. Observations from the summer practice must be documented and presented in the form of a clear and concise technical report.

BIOEN 531 Senior Design Project I:
Official Description inside the Program: Individual research in a field of special interest under the supervision of a faculty member as a requirement for the B.Sc. degree, culminating in a written report/thesis. The central goal of which is a substantive paper or written report containing significant analysis and interpretation of a previously approved topic. The Graduation Project is divided between two semesters. Methodology is developed and pre-data are collected in the first semester. Experiment is run, data is analyzed, and conclusions are sought in the second semester.

BIOEN 532 Senior Design Project II:
Official Description inside the Program: Individual research in a field of special interest under the supervision of a faculty member as a requirement for the B.Sc. degree, culminating in a written report/thesis. The central goal of which is a substantive paper or written report containing significant analysis and interpretation of a previously approved topic. The Graduation Project is divided between two semesters. Methodology is developed and pre-data are collected in the first semester. Experiment is run, data is analyzed, and conclusions are sought in the second semester.

Course Coordination

#	Course Title and Code	Coordination	Co-coordination	Undergrad.	Postgrad.	From	To
	BIOEN 511 Project Management:	Eng. Maram Alqarni		✔		August 2020	December 2020

Student Academic Supervision and Mentoring

#	Level	Number of Students	From	To
	Undergraduate	5	2017	2018
	Undergraduate	4	2020	2021

Volunteer Work

#	From	To	Type of Volunteer	Organization
1	2020-2021		Presenting lectures in BME under "Enrichment porgoramm" in 2020 and 2021 for secondary school students	Imam Abdurahman bin Faisal university
2	2020-2021		Motivational lecture for irreqular students	Imam Abdurahman bin Faisal university
3	2015 -2016		1st & 2nd annual BME day (participant)	Imam Abdurahman bin Faisal university
4	2015 - 2016		1st & 2nd BME students experience gathering (presenter)	Imam Abdurahman bin Faisal university
5	2014 -2016		Engineering club periodic activities (organizer)	Imam Abdurahman bin Faisal university
6	2015		Lecturer in Talent enrichment 2015 program in PCB design	King Fahad specialist hospital
7	2014-2015		Engineering collage activities (organizer)	Imam Abdurahman bin Faisal university
8	2014		Induction of Biomedical engineering in schools (presenter)	Ministry of education
9	2013		Saudi scientific society for biomedical engineering corner (presenter)	Saudi scientific society for biomedical engineering

Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Management and planning
2	Leadership & Teamwork
3	Passionate about Scintfic Research
4	Ability to effecintly use computer softwares: Microsoft Office, MATLAB, Programing using C++ and Python. Segmentation using 3D SLICER and ITK snap, PROTEUS, MULTISIM, LABVIEW.
5	Good communication and organization

Last Update

...22...../...02.../2021