

# Maha Abdelhady Almona Ali

Biomedical Engineering



## Personal Data

Nationality | Sudanese

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## Language Proficiency

Language	Read	Write	Speak
Arabic	√	√	√
English	√	√	√

## Academic Qualifications

Date	Academic Degree	Place	Address
2015	M.Sc. in Biomedical Engineering	Sudan University of Science and Technology	Khartoum, Sudan
2011	B.Sc. in Biomedical Engineering	Sudan University of Science and Technology	Khartoum, Sudan

## PhD, Master or Fellowship Research Title

PhD	Mammogram Diagnosis Based on Deep Learning Techniques
Master	A wavelet Decomposition Technique for Breast Abnormalities Detection
B.Sc.	Detection of Breast Cancer Tissues Using Haralick Features

## Professional Record:

Date	Job Rank	Place and Address of Work
Jan. 2019 – Present	Lecturer	Imam Abdulrahman Bin Faisal University (IAU), Dammam, KSA
August 2017	Lecturer	Sudan University of Science and Technology, Khartoum, Sudan
August 2016	Researcher	King Fahad Specialist Hospital, Qassim, KSA
April 2015	TA	Sudan International University, Khartoum, Sudan

## Scientific Achievements

### Published Refereed Scientific Research

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	<b>Maha A.Elhady Almona Ali</b>	Computer-Aided Diagnosis System for Breast Mammography	The proceedings of the International Conference on Breast Cancer – December 2018
2	<b>Maha A.Elhady Almona Ali</b> , and Magdi B. M. Amien	Colored Computer-Aided Diagnosis System for Breast Mammography	4th World Congress on Breast Pathology and Cancer Diagnosis – August 2017
3	<b>Maha A.Elhady Almona Ali</b> , and Magdi B. M. Amien	Development of Breast Abnormality Detection System with Colors Based on the Wavelet Decomposition Technique	Proceedings of the 29th International Conference on Computer Applications in Industry and Engineering – September 2016
4	<b>Maha A.Elhady Almona Ali</b> , and Magdi B. M. Amien	A Wavelet Decomposition Technique for Breast Abnormality Detection	Sudan University of Science and Technology Repository, 2015
5	Garma, Fatehia Bushara; <b>Elhady Almoona, Maha Abd</b> ; Bakry, Mihad Mahmood; Mohamed, Mohamed Elfadil; Osman,	Detection of Breast Cancer Cells by Using Texture Analysis	Journal of Clinical Engineering – June 2013

### Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	<b>Maha A.Elhady Almona Ali</b>	Computer-Aided Diagnosis System for Breast Mammography	The International Conference on Breast Cancer – December 2018
2	<b>Maha A.Elhady Almona Ali</b> , and Magdi B. M. Amien	Colored Computer-Aided Diagnosis System for Breast Mammography	The 4th World Congress on Breast Pathology and Cancer Diagnosis, Toronto, Canada, August 2017
3	<b>Maha A.Elhady Almona Ali</b> , and Magdi B. M. Amien	Development of Breast Abnormality Detection System with Colors Based on the Wavelet Decomposition Technique	The 29th International Conference on Computer Applications in Industry and Engineering (CAINE 2016), USA, September 2016.

### Co-Supervisor for the BME Students' Projects in IAU:

#	Research Title	Date
1	Design of an accurate and low-cost automated mechanical ventilator	August To June 2023
2	Design a Non-invasive Optical Sensor for the Early Detection of Hyperbilirubinemia	August To February 2023
3	Design a 3D Heart Model	2020
4	Using ANSYS to Analyze Fluid in Normal and Abnormal Vein	2019

## Contribution to Scientific Conferences / Symposia / Meetings / Initiatives

#	Conference / Initiative Title	Place and Date	Extent of Contribution
1	Health and Biotechnology Innovation Hup by Dammam BioTech Valley: Innovation & Technology	Dammam, KSA, April 2022 – September 2022	Startup
2	AI Artathon 2.0	Riyadh, Saudi Arabia. October 19 – 22, 2021	AI Expert
3	Saudi Forum for Startups	Dhahran Expo, Dharhnan, KSA. November 14 – 16, 2019	Poster in IAU Entrepreneurs section.
4	Youth Business Exhibition & Forum 2019	Dhahran Expo, Dharhnan, KSA. November 4 – 6, 2019	Poster in IAU Entrepreneurs section.
5	Medical Imaging Physics 1st meeting	King Fahad Hospital, Dammam. October 29, 2019	Participation
6	Global Health Exhibition	Riyadh International Convention & Exhibition Center, Riyadh, Saudi Arabia Sep 12, 2019	Participation
7	The 2 <sup>nd</sup> Forum and Exhibition for Renewable Energy	Imam Abdulrahman bin Faisal University, Dammam, KSA. March 12 – 13, 2019	Participation
8	Conference of Concerning Sustainable Development in Desert Areas	Imam Abdulrahman bin Faisal University, Dammam, KSA. January 22 – 24, 2019	Participation
9	B2B Meeting Forum	Vienna, Austria. 17-18 December 2018	Speaker
10	International Conference on Breast Cancer.	Dubai, United Arab Emirates. December 3 – 4, 2018	Speaker
11	Africa Talks Jobs	Addis Ababa, Ethiopia. October 30 – 31, 2018	Speaker
12	Startup Fair	Abidjan, Ivory Coast. November 2017.	Poster
13	World Entrepreneurs Investment Forum 2017	Manama, Bahrain. October 23 to November 2, 2017	Project
14	The 4 <sup>th</sup> World Congress on Breast Pathology and Cancer Diagnosis	Toronto, Canada. August 23 – 24, 2017	Speaker
15	The 29 <sup>th</sup> International Conference on Computer Applications in Industry and Engineering (CAINE 2016)	Denver, Colorado, USA. September 26 – 28, 2016	Speaker
16	Startup Weekend Taif	Taif, KSA. August 12 – 15, 2016	Project
17	Code First Girls	London, UK. April 2016	Speaker
18	Westminster Kingsway College Meeting Forum	London, UK. April 2016	Speaker

## Membership in Scientific and Professional Societies and Organizations

- IEEE
- IEEE Engineering in Medicine & Biology Society (EMBS)
- IEEE Signal Processing Society
- Biomedical Engineering Society
- IEEE Saudi Arabia
- Saudi Google Cloud Developer Community

## Awards, Honors, and Recognitions

1. The First Place in Prince Mohammad Bin Fahd Global Foundation Insignia for Best Voluntary Work. 4<sup>th</sup> Edition. Cairo, Egypt. February 1, 2023.
2. Invitation (Full Funded) by Saudi Data & AI Authority (SDAIA) to participate as an AI expert in AI Artathon 2.0 in Riyadh, Saudi Arabia. October 19 – 22, 2021.
3. Invitation (Full Funded) by African Union (AU) to participate in Africa Talks Jobs in Addis, Ethiopia. October 201
4. Invitation (Full Funded) by the United Nations Industrial Development Organization (UNIDO) to participate in the B2B Meeting Forum in Vienna, Austria. December 2018.
5. Invitation (Full Funded) by African Union (AU) to participate in Africa Talks Jobs in Addis, Ethiopia. October 2018.
6. Selected by the European Commission as one of the 50 African startups supported and sponsored to showcase their services and technology at the “Startup Fair” organised during the 6th EU-Africa Business Forum in Abidjan, Ivory Coast, and participate at several side events dedicated to entrepreneurship. November 2017.
7. I have been Selected by the United Nations Industrial Development Organization (UNIDO) and the Arab International Center for Entrepreneurship & Investment (AICEI) to participate in the World Entrepreneurs Investment Forum 2017, Manama, Bahrain. October 2017.
8. Startup Weekend Taif Award, Organized by Badir Program for Technology Incubators and King Abdulaziz City for Science and Technology, Taif, KSA. August 15, 2016.
9. Achieved an approval letter from the Regional Research Ethics Committee to apply my Colored Computer-Aided Diagnosis Algorithm for Breast Mammography in King Fahad Specialist Hospital, Buraydah, Qassim, KSA. August 2, 2016.
10. The Second Prize Winner "awarded with a significant monetary prize and two weeks fully paid study tour to the UK" in Mashrouy (MY project) TV Competition for Sudanese entrepreneurs – Season 3 (Mashrouy is the most significant entrepreneurship initiative in Sudan by the British Council and British Embassy, Sudan), Khartoum, Sudan. March 20, 2016

## Patents and Copyrights

#	Date	Place of Issue	Address
1	March 2, 2018	United States Patent and Trademark Office (USPTO)	USA
2	Oct. 29, 2016	Council for Protection of Copyrights, Related Rights, Literary and Artistic Works	Sudan

## Administrative Responsibilities, Committee, and Community Service

### Committee Membership

#	From	To	Committee
1	2022	Present	Scientific Research and Innovation Committee, BME department, CoE, IAU
2	2022	Present	Academic Affairs Committee, BME department, CoE, IAU
3	2021	Present	Quality and Academic Accreditation Committee, BME department, CoE, IAU
4	2021	Present	Thoman (The magazine of Collge of Engineering, IAU)
5	2021	Present	Public Relationship, College of Engineering, IAU
6	2019	Present	Alumni and Career Development Committee, College of Engineering, IAU
7	2019	Present	Entrepreneurship Committee, BME Department, College of Engineering
8	2020	2021	Examination Committee, Female Side, College of Engineering, IAU
9	2019	Present	Summer Training Committee, BME Department, College of Engineering
10	2019	Present	Laboratory and Safety Committee, BME Department, CoE, IAU
11	2020	Present	Learning Resources Unit, College of Engineering, IAU
12	2019	2020	Student Elections Committee, Female Side, College of Engineering, IAU
13	2019	2020	Graduation Projects Committee, BME Department, CoE, IAU

### Volunteer Work

#	Date	Type of Volunteer	Organisation
1	Nov. 8, 2022	Planting Mangrove Trees	The Ministry of Environment Water and Agriculture
2	2021 – Present	An interlocutor in a program for Talent	Sudanese Society of Biomedical Engineers in Saudi Arabia
3	Jan. 25 – 27, 2021	Give a workshop, “Programming Using MATLAB,” to Mawhiba Students	College of Engineering, IAU.
4	March 7, 2020 July 20, 2020	Supervised training talented students (Mawhiba) in the Innovation Camp.	Tamakkni, Enjaz Saudi Arabia, PepsiCo, and Office of the Vice President for Innovation and Entrepreneurship_IAU.
5	Feb. 26 – 27, 2020	Give a workshop, “Engineering and Artificial Intelligence,” to Mawhiba Students.	College of Engineering, IAU.
6	Oct. 29, 2019	Give an awareness workshop, “Breast Cancer Awareness.”	College of Engineering, IAU.
7	April 6, 2019	Making a video for the day of “Sulaf of Engineering.”	College of Engineering, IAU.
8	February 13, 2019	Accompanying the students of the BME department on a beach picnic	College of Engineering, IAU.

9	Oct. 17, 2018	Give an awareness workshop, “Breast Cancer Awareness.”	SUDATEL Telecom Group (Telecommunications and Internet Service Provider in Sudan)
10	April 14, 2016	Give a lecture to inspire, train, and support students on how to be entrepreneurs.	Westminster Kingsway College, London, UK
11	April 11, 2016	Give a workshop to support women in developing additional personal and professional skills.	Code First Girls - London, UK
12	April 1, 2016	Give a Lecture, “How to Turn Your Project into Reality”	University of Medical Sciences and Technology – Khartoum, Sudan
13	February 2016	Give a workshop to support the students in developing their knowledge, confidence, and ability to realise their potential through entrepreneurial activities.	Ahfad University for Women, Omdurman, Sudan

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

1	Computer (Internet, Microsoft Office)
2	Programming software and tools (MATLAB - SPSS - ANSYS - C - C ++)
3	Research and writing skills

### References

#	Name	Position / Place	Email
1	Prof Altahir Hussein (My PhD. Supervisor)	Professor, BME Department, College of Engineering, Sudan University of Sciences and Technology	<a href="mailto:altahir_33@yahoo.com">altahir_33@yahoo.com</a>
2	Dr. Magdi B. M. Amien (MSc Supervisor)	Associate Professor / The Dean of the BME Department / University of Gezira	<a href="mailto:magdy_baker@yahoo.com">magdy_baker@yahoo.com</a>
3	Dr. Alnazier Hamza (BSc Supervisor)	Associate Professor, Sudan University of Sciences and Technology, College of Engineering	<a href="mailto:alnazier_67@hotmail.com">alnazier_67@hotmail.com</a>
4	Dr Jeremy Horne (Apply for me for the USPTO)	IAL CEO, Science Advisor, and Curriculum Coordinator-The president emeritus of the Southwest Division (SWARM) of the American Association of the Advancement of Science (AAAS) and CEO of the Inventors Assistance League/ (IAL) Inventors Assistance League (IAL)	<a href="mailto:jhorne.ial@gmail.com">jhorne.ial@gmail.com</a>
5	Dr. Abdulhakeem AlOmari	Head BME Department, Imam Abdulrahman Bin Faisal University (IAU)	<a href="mailto:ahhalomari@iau.edu.sa">ahhalomari@iau.edu.sa</a> <a href="mailto:ce.bed@iau.edu.sa">ce.bed@iau.edu.sa</a>