

# **Mohammed Sadoon Hathal**

PhD ccomputer engineering Position: Lecturer Address: University of Baghdad/College of Engineering Mobile: 009647732390338 E-mail: dr.mohammed.s.h@coeng.uobaghdad.iq mshm73@gmail.com

### -Personal Profile Statement

A motivated, adaptable and responsible post graduate seeking a position in computer methods at the intersection of computer vision, IoT, deep learning, artificial intelligence, and medical imaging technology. Will utilize the professional and technical skills developed during the PhD studies and past research experiences. With a methodical, customer-focused approach to work, and with a strong drive to see things completed.

### -Research Experience

During research studies with Master students as a supervisor of research studied { Developing An Arabic Handwritten Recognition System by means of Artificial Neural Network } and { developed an Arabic License Plate Recognition System using Artificial Neural Network and Canny Edge Detection }.

During the PhD research studies: { developed Microwave imaging system: {Simulation and experimental results of ultra-wide band (UWB) imaging oriented for early breast detection are presented. The technique is based on radar sensing where tissues are differentiated based on their dielectric permittivity. The developed image reconstruction algorithm combines beam focusing quality and multiply in-pair to identify significant scatterers in the target. The methods and procedures are tested using MRI derived breast phantom and the results are compared with image obtained from x-ray computed tomography}.

During the MS studies: { design and implementation of wireless networks { developed simulator for identifying and verified best MAC protocols supporting to multimedia applications}.

#### First, <u>Scientific Certification</u>: -

| Degree science | University                | College                                 | Date |
|----------------|---------------------------|---|------|
| PhD            | University Sains Malaysia | Engineering                             | 2014 |
| MSc            | University of Technology  | Computer and<br>Software<br>Engineering | 2005 |
| BSc            | University of Technology  | Computer<br>Engineering                 | 1997 |
| Second.        | Career:                   |   |      |

Second, <u>Career</u>:

| No. | Career          | Workplace                                   | From -To  |
|-----|-----------------|---|-----------|
| 1.  | Lecturer        | University of Baghdad/Computer Engineering  | 2014-     |
| 2.  | Assist Lecturer | University of Baghdad /Computer Engineering | 2005-2014 |

# Third, <u>University Teaching</u> -

| No. | University             | The (Institute / College)        | From -To |
|-----|------------------------|----------------------------------|----------|
| 1   | University of Baghdad/ | College of Engineering/ Computer | 2005-    |
|     | Engineering            | Engineering                      |          |

## **Fourth**, <u>Courses Which You Teach</u>:

| No. | Department                | Subject                            | Year             |
|-----|---------------------------|------------------------------------|------------------|
| 1   | Computer Engineering      | Computer Vision<br>Soft Computing  | MSc<br>2016-2020 |
| 2   | Computer Engineering      | Computer Vision                    | MSc<br>2015      |
| 3   | Computer Engineering      | Artificial Intelligence            | 2018-            |
| 4   | University Sains Malaysia | Computer Language C++ DSP          | 2010-2014        |
| 5   | Computer Engineering      | IO interfacing                     | 2015-2018        |
| 6   | Computer Engineering      | Fundamentals of Computer<br>System | 2014-2017        |
| 7   | Computer Engineering      | AutoCAD                            | 2005-2007        |
| 8   | Computer Engineering      | Computer System Architecture       | 2005-2010        |

# Fifth, Thesis which was supervised by :

| No. | Thesis Title  | Department  | Year |
|-----|---|---|------|
| 1   | Arabic Hand Writing Text Recognition using Neural Network.  | Electronic and<br>Communication<br>Eng./Computer<br>Engineering | 2017 |
| 2.  | Arabic License Plate Recognition System using<br>Artificial Neural Network and Canny Edge Detection |   | 2019 |

### **Sixth,** <u>Conferences which I participated</u>:

| No | name   | Туре      | Research  |
|----|--|-----------|---|
| 1. | <i>IEEE</i><br><i>International</i><br><i>Conference on</i> ,<br>2012.<br>Manchester,<br>United Kingdom        | IEEE      | HATHAL, M. S., ZANOON, T. F., AIN, M. F. & ABDULLAH, M. Z. Year. Experimental ultra wide band imaging using heterogeneously dense breast phantom for early cancer detection. <i>In: Imaging Systems and Techniques (IST), 2012 IEEE International Conference on, 2012.</i> Manchester, United Kingdom, 130-135. |
| 2. | International<br>Conference on,<br>2012.<br>Manchester,<br>United Kingdom<br>International                     | IEEE      | ZANOON, T. F., <b>HATHAL, M. S.</b> & ABDULLAH, M.<br>Year. Microwave imaging at resolution and super-<br>resolution with ultra-wide band sensors. <i>In: Imaging</i><br><i>Systems and Techniques (IST), 2012 IEEE International</i><br><i>Conference on, 2012.</i> Manchester, United Kingdom, 538-<br>543.   |
| 3. | Workshop on<br>Imaging Systems<br>and Techniques,<br>Penang,<br>Malaysia.2011<br>International<br>Symposium on | IEEE      | ZANOON, T. F., <b>HATHAL, M.</b> S. & ABDULLAH, M.<br>Z. Comparing image reconstruction algorithms for<br>microwave camera featuring ultra wide band sensor.<br><i>IEEE International Workshop on Imaging Systems and</i><br><i>Techniques, IST 2011.</i> , 17-18 Oct. 2011, Penang,<br>Malaysia. 112-117.      |
| 4. | Symposium on<br>Multimedia and<br>Communication<br>Technology<br>(ISMAC),<br>2013.Bangkok,<br>Thailand         | ISMA<br>C | <b>MOHAMMED S HATHAL</b> , TAREQ F ZANOON, and<br>MOHD Z ABDULLAH. Early Breast Cancer Detection<br>by Means of Ultra-wide Band Imaging. <i>International</i><br><i>Symposium on Multimedia and Communication</i><br><i>Technology (ISMAC)</i> , February 4-5, 2013.Bangkok,<br>Thailand.                       |
| 5. | <i>IEEE Sensors</i><br><i>Applications</i><br><i>Symposium (SAS)</i> ,<br>2014,<br>Queenstown, new<br>Zealand. | IEEE      | S. S. TIANG, M. S. Hathal, Nik Anwar, M.F. Ain and M.<br>Z ABDULLAH. Wide-Slot Antenna for Ultra-Wideband<br>Breast Imaging. 2014 IEEE Sensors Applications<br>Symposium (SAS), February 18-20, 2014, Queenstown,<br>New Zealand.   |
| 6. | Postgraduate<br>Colloquium<br>EEPC 2011.<br>Pahang,<br>Malaysia.   | EEPC      | <b>M. S. Hathal</b> , & M. Z. ABDULLAH. Experimental Ultra<br>Wide Band Imaging Using Enhanced Delay and Sum<br>Algorithm. <i>School of Electrical and Electronic 3rd</i><br><i>Postgraduate Colloquium EEPC 2011</i> . USM, 2-4 Dec.<br>2011, Bentong, Pahang.   |

| 7. | PIERS 2019 in<br>Rome Photonics &<br>Electromagnetics<br>Research<br>Symposium also | PIERS<br>2019 | Mohammed S. Hathal, , Suhair S. Salih and Alaa H. Hasan<br>Ultra-wideband Featuring Enhanced Delay and Sum Algorithm<br>and Oriented for Detecting Early Stage Breast Cancer.<br>PIERS 2019 in Rome. Photonics & Electromagnetics Research<br>Symposium. |
|----|---|---------------|--|
|    | known as Progress   |               |  |
|    | In Electromagnetics   |               |  |
|    | Research  |               |  |
|    | Symposium   | 100           |  |
|    | >   |               |  |

# Seventh, <u>Scientific Activities</u>:

| Within the College                 | Outside the College                      |
|------------------------------------|--|
| within the Conege                  | Outside the Conege                       |
|                                    |  |
| 1. Consult Member in Journal of    | Scientific Reviewer of the following ISI |
| Engineering/ University of Baghdad | and Scopas Scientifics Internationals    |
|                                    | Journals such as:                        |
| 2. Consult Member in Scientific of | 7. 1 1 to 1-                             |
| Computer Engineering/ University   | 1.Progress in Electromagnetic Research   |
| of Baghdad                         | Journal(PIER) - United States.           |
|                                    |  |
| 3.Member of committee of           | 2. Transaction of Institute              |
| Engineering college for Plagiarism | of Measurement and control Journal –     |
| 88                                 | United Kingdom                           |
|                                    |  |
|                                    | 3. IGL journals -United States           |
|                                    | 5. TOT Journais Onice States             |
|                                    |  |
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## Eighth, <u>Research Projects in the Felid of Specialization to the Environment and Society</u>

# or the Development of Education:

| No. | Research Title   | Place of Publication                                     | Year |
|-----|--|--|------|
| 1   | Development of a Compact Wide-<br>Slot Antenna for Early Stage Breast<br>Cancer Detection Featuring Circular<br>Array in Full-View Geometry. | International Journal of Antennas<br>and Propagation,    | 2014 |
| 2.  | Radar Sensing Featuring Biconical<br>Antenna and Enhanced Delay and<br>Sum Algorithm for Early Stage<br>Breast Cancer Detection.             | Progress In Electromagnetics<br>Research (PIERS) Journal | 2013 |
| 3.  | Developing An Arabic Handwritten<br>Recognition System by means of<br>Artificial Neural Network  | Journal of Engineering and Applied<br>Sciences           | 2019 |
| 4.  | Developing Arabic License Plate<br>Recognition System using Artificial<br>Neural Network and Canny Edge<br>Detection.                        | Baghdad Science Journal,                                 | 2019 |

| 5. | Development of Iraqi License Plate | Journal of Engineering | 2020 |
|----|------------------------------------|------------------------|------|
|    | Recognition System based on Canny  | University of Baghdad  |      |
|    | Edge Detection Method.             |                        |      |
|    |                                    |                        |      |
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# Ninth, <u>Membership</u>:

- Member in Iraqi Engineers Union
- Firaqi Academics Syndicate

# Tenth, <u>Awards and Certificates of Appreciation</u>:

| No. | Name of Awards and Certificates | Donor   | Year |
|-----|---------------------------------|---|------|
| 1   | Acknowledgement and Appreciate  | President of the<br>University of Baghdad   | 2008 |
| 2   | Acknowledgement and Appreciate  | President of the<br>University of Baghdad   | 2009 |
| 3   | Acknowledgement and Appreciate  | Universiti Sains Malaysia /<br>Electrical and Electronic 3rd<br>Postgraduate Colloquium           | 2011 |
| 4   | Best Paper Award                | IEEE International<br>Conference on Imaging<br>Systems and Techniques<br>(IST), 2012. Manchester, | 2012 |
| 5   | Acknowledgement and Appreciate  | Dean of College of<br>Engineering   | 2014 |
| 6   | Acknowledgement and Appreciate  | President of University of<br>Tikrit  | 2014 |

| 7  | Acknowledgement and Appreciate | President of the<br>University of Baghdad            | 2015 |
|----|--------------------------------|--|------|
| 8  | Acknowledgement and Appreciate | Dean of College of<br>Engineering                    | 2015 |
| 9  | Acknowledgement and Appreciate | Dean of College of<br>Engineering                    | 2015 |
| 10 | Acknowledgement and Appreciate | Dean of College of<br>Engineering                    | 2015 |
| 11 | Acknowledgement and Appreciate | President of the<br>University of Baghdad            | 2016 |
| 12 | Acknowledgement and Appreciate | Dean of College of<br>Engineering                    | 2017 |
| 13 | Acknowledgement and Appreciate | President of the<br>University of Al_Saadeq          | 2018 |
| 14 | Acknowledgement and Appreciate | Dean of College of<br>Engineering                    | 2019 |
| 15 | Acknowledgement and Appreciate | President of the<br>University of Dohuk and<br>Zakho | 2019 |
| 16 | Acknowledgement and Appreciate | President of the<br>University of Dohuk              | 2020 |

| 17 | Acknowledgement and Appreciate | President of the<br>University of Baghdad                  | 2020 |
|----|--------------------------------|--|------|
| 18 | Acknowledgement and Appreciate | Minister of Higher<br>Education and scientific<br>Research | 2020 |
| 19 | Acknowledgement and Appreciate | Minister of Higher<br>Education and scientific<br>Research | 2020 |

# Eleventh, languages:

- English Arabic

### -Skills

Programming skills Matlab, C++, Python and Robot Operating System (ROS)

-Computer skills

LUNIX, Windows, LaTeX and Microsoft office

-Hobbies and Interests I enjoy solving puzzles, .....