

# Maitham Habool Al-Shamery, PhD

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## PROFESSIONAL SUMMARY

- An **enthusiastic academic** with a: Doctor of Philosophy degree in Engineering and Design, Postgraduate Certificate in Further Education, M.Sc. Physics (Optical Holography), and. BSc. in Physics (Optical Hologram),
- I have more than twelve years of experience in teaching Higher Education courses and collaboration with aerospace industry; teaching Physics, Mathematics, Mechanical Engineering, and Electric and Electronics Engineering.
- Thorough understanding of theoretical principles of robotic engineering.
- Highly creative problem-solving skills
- Good understanding of robotic recommendations to solve manufacturing issues.
- My research interests focus on related areas; Digital hologram in microscopy (biology), Robotics, Electric and Electronics projects, and Image processing.
- Expert innovator evidence by continuous use of innovative ways to simplify lesson topics, and pedagogical approaches that encourage activity, technology, and research led learning, and enhance student participation leading to **98%-100%** overall student satisfaction, and 100% pass rate at first attempt.
- Curriculum development roles.
- Highly organised with excellent time-management skills.
- Preparing and maintaining records of student achievement and quality documents, handbooks, student reports for employers, etc.
- Responsible for the quality of the course
- Coordinate efforts of other members of the team
- Manage design and modification of Ram Robotics and sub-assemblies with Auto CAD (SolidWorks) and Arduino.
- Strong computer programming ability (**MATLAB, C++, and Python**), for analysing the kinematics, dynamics, and control of robotic systems.
- I am able to Configure and operate 3D printer for prototype testing.

## EDUCATION AND TRAINING

- **Sussex University, Brighton, UK** **June 2018**  
PhD, Engineering (Digital Holography in inspection of microscopy):

- Excellent analyst, knowledgeable innovator and creative problem-solver as evidenced in the reconstruction of the point sources from only the modulus of Fourier transform.
- Excellent analyst and knowledge in making the *holographic microscopy* to watch self-assembling systems. In a holographic microscope, the sample is illuminated by laser light, and the resulting image (or hologram) can be used to determine the 3D structure, position, and orientation of a microscopic sample.
- Excellent analyst and knowledge of the holographic imaging market which will witness a sharp growth over the next few years with help from numerous industry players to augment the regional demand
- Excellent knowledge to analyse global Digital Holographic Microscopy (DHM) status, future forecast, growth opportunity, key market and key players.
- **Baghdad University, Baghdad, Iraq** **September 1997-June 2000**  
MSc, Physics (Computer Generated Holography)
- **Almustansiriyah University, Baghdad, Iraq** **September 1992-June 1997**  
BSc, Physics.
- **Other training includes:**
  - ICDL Certification ,January, 2014.
  - Certificate in Education/PGCE, University of Plymouth (2010)
  - Diploma in Teaching in Lifelong Learning Sector, City of Bristol College (2008)
  - GCSE English Language, City of Bristol College (2008)
  - Introduction to Delivering Learning to Adults, City of Bristol College (2006)
  - Visual Basic.Net, City of Bristol College (2005)
  - Visual Basic, City of Bristol College (2004)
  - ESOL English Language, City of Bristol College (2004)

## KEY AREAS OF KNOWLEDGE AND EXPERIENCE

### **BMW GROUP- OXFORD** **September 2021 – Present**

- **Foundation Degree in Electronic Engineering:**
  - Electrical and Electronic Principles
  - Mathematics for Engineering

**BMW GROUP- OXFORD****March 2021 – Present**

- **Higher National Diploma (HNC):**
  - Electrical Machine
  - Engineering Math
  - Engineering Science
  - Engineering Design
  - Mechatronics
  - Project Management

**BMW GROUP- OXFORD****August 2019 – Present****Engineering modulus/units:**

- Math
- Further math
- AUTO CAD (SolidWorks)
- Engineering Materials
- Programmable Logic Controller (PLC).
- Mechanical Principles

**Yeovil College- University Centre  
2019****March 2016 – August**

- **Core Electrical and Electronic Engineering modulus/units:**
  - Electrical and Electronics Engineering Principles.
  - Microcontroller (work with Arduino, Raspberry Pi, and Robotics).
  - Microprocessors
  - Operational Amplifier (OP AMP), theoretical and practical teaching.
  - Programmable Logic Controller (PLC).
  - Further analytical Mathematics.
  - Kinematics.
- **Core Mechanical Engineering modulus/units:**
  - Mechanical Engineering Principles.
  - Engineering Fluid Mechanics.
  - Engineering Thermodynamics Mechanics.

- **Project Design.**
- **Engineering and Business Management.**
- **Health and Safety in the Engineering workshops.**

## **University of Sussex- Engineering and Design      March 2012- June 2017**

I have been teaching:

- Embedded Systems
- Digital systems and Microprocessor design.
- Mathematics
- Thermodynamics
- Applied Technology
- Electrical Circuits and Devices

## **Teaching Related Transferable Skills and Capabilities Summary:**

**Teaching:** Excellent pedagogical, facilitation, inspirational, mentoring, verbal and written communication, presentation, research, inter-personal, and documentation skills, Proficient in using Virtual Learning Environments- Moodle, and Google classroom.

### **Course Manager:**

Curriculum development roles, Preparing and maintaining records of student achievement and quality documents, handbooks, student reports for employers, etc. Contribute to any required changes in college procedures. Assess students' ability and determine any changes required in their studies. Attending meeting with senior manager, Responsible for the quality of the course, and Coordinate efforts of other members of the team.

## **Education Based Employment History**

**Lecturer in Electrical and Electronic Engineering and Mechanical Engineering: Study Programme Manager, Pearson BTEC Extended Certificate and Foundation Diploma in Engineering Qualifications, and Higher National Diploma (HNC/HND) in Electrical & Electronics and Aeronautical Engineering. Engineering Department, Yeovil College University Centre March 2016 – Date**

- Develop Scheme of Work, teaching in learning resources for assigned FE, HNC and HND units,
- Plan and deliver teaching; develop and administer formative and summative assessments,

- Sample learner work in line with defined specifications to ensure assessment outcomes and internal verification processes meet national standards. Advise corrective actions where necessary.
- Conduct student recruitment interviews into the Pearson BTEC Foundation Diploma in Engineering programme; organise and manage tester and new student events.
- Ensure effective quality assurance and overall integrity of the programme.
- Conduct periodic student progress review and produce reports with relevant recommendations towards enhancing student performance and learning experience.
- Develop awareness of equality and diversity, PREVENT, Fundamental British Values; and adopt in-class strategies that enhance students' English language and Maths knowledge and skills.

### **Sharjah English School, Sharjah, and SABIS, UAE November 2013– January 2016**

- Key role in making the learning community safe and successful
- Worked one to one with a child with very little English and helped their progress.
- Science to grades 7-9.
- Physics to grades 11, 12-13.
- Math and Applied Math to grades 8-12.

### **City of Bristol College liaising with University West England (UWE), and Kingston University     September 2008- November 2013**

- Designed and taught Engineering Science, Maths, Fluid mechanics, Thermodynamics, Further Maths, and Aerodynamics for students of the Higher National Diploma.
- Designed and taught Aeronautical Engineering, Maths, Theory of Flight, Mechanical Principles, Science of Aviation, Physics, Aerodynamics, and Electronics to BTEC programme.
- Designed taught Physics and Maths of the Foundation Degree Programme.
- Designed and taught Aeronautical Engineering preparatory to qualifying for EASA Part 66, B1 (Avionics Engineering) and B2 (Mechanical Engineering) licensing by the European Aviation Safety Agency.
- Conducted conferences with students for each major paper assignment to address individual goals and progress.

- Worked with a diverse population of students, including many international students, and developed strategies for responding effectively to a wide range of Engineering skills.

### **Monarch Education, Bristol, UK** **April 2008 – July 2008**

Supply Teacher

Functioned in supply teaching at Fairfield High School, St. Mary Redcliffe, and Temple School

### **Cotham School, Bristol, UK** **October 2008-October 2013**

Arabic Language Teacher

Taught Arabic language to non-native speakers

## **Industry Experience**

### **QC Data UK Ltd, Bristol, UK** **July 2006-August 2008**

GIS Technical Data Analyst (ESRI Programme)  
DT2 Modelling Data Technician

Contracted for Wales and West and Northern Gas Companies for the following:

- Loading of Digital Field Update Survey update from Ordnance Survey
- Quality Assurance
- Digitisation Backlog Recovery
- Undigitised Pipes Backlog Recovery
- Mobile Data Solutions Inc. Backlog Data Capture in SAP R/3 and Advantex

### **Higher Institute for Teachers Training, Brack Al-Shatti, Libya** **December 2001-March 2003**

Lecturer

Taught Physics, Theory and Practical, Computing Language and Excel

### **Baghdad University, Baghdad, Iraq** **June 2000-September 2001**

Researcher, Physics Department

## **PUBLICATIONS**

1. Kinoform Optimisation Using Gerchberg- Saxton Iterative Algorithm, Dubai, 17th International Conference on Digital Holography and Three-Dimensional Imaging November 2015
2. The Effect of the Number of Lines and their Distribution on the Distribution of Cells in the Computer Binary Hologram.
3. Producing Grating by a Computer Hologram.

## **LANGUAGES**

Fluent in English and Arabic

## **HOBBIES AND INTERESTS**

My interests include reading (current affairs, science, novels), sports (playing football, table-tennis and walking), and music.

## **Reference:**

Available upon request.