

PERSONAL INFORMATION

Name Place and Date of Birth Marital Status Current Position Mobile Phone Number Email Address Work Address Ibrahim Izziddin Mousa Al-Naimi Kuwait, 1/7/1980 Married Assistant professor 0096898997497 i.alnaimi@squ.edu.om College of Electrical and Computer Engineering Sultan Qaboos University P.O. Box 50, P.C. 123 Muscat-Oman

RESEARCH INTEREST/FIELDS

- Smart homes and Energy managements
- Modeling, identification, and real time control of mechatronics systems
- Sensor fusion
- Fault detection in 3-phase power systems
- Human tracking and identification

EDUCATION AND EMPLOYMENT

EDUCATION

- Ph.D., Mechatronics Engineering, De Montfort University, Leicester, UK, August 2011. Thesis Title: "Advanced Multimodal Approach for Non-Tagged Indoor Identification and Tracking Using Smart Floor and Pyroelectric Infrared Sensors"
- M.Sc., Mechatronics Engineering, AL-Balqa Applied University, Amman, Jordan, August 2006 Total GBA of 3.64 out of 4.00 Excellent
- B.Sc., Mechatronics Engineering, AL-Balqa Applied University, Amman, Jordan, August 2003 Total GBA of 3.20 out of 4.00 Very good

EMPLOYMENT HISTORY

- Assistant professor (Sep 2021 until now)
 College of Electrical and Computer Engineering, Sultan Qaboos University, Muscat-Oman
- Assistant professor (Sep 2020 Sep 2021) Mechatronics Engineering Department, Faculty of Engineering Technology, Philadelphia University, Amman-Jordan
- Chairman /Assistant professor (Sep 2019 Sep 2020)
 Chairman of Mechatronics Engineering Department, Faculty of Engineering Technology, Philadelphia University, Amman-Jordan
- Assistant professor (Sep 2016 Sep 2019) Mechatronics Engineering Department, Faculty of Engineering Technology, Philadelphia University, Amman-Jordan
- Chairman /Assistant professor (Sep 2014 Sep 2016)
 Chairman of Mechatronics Engineering Department, Faculty of Engineering Technology, Philadelphia University, Amman-Jordan
- Assistant professor (Sep 2011 Sep 2014) Mechatronics Engineering Department, Faculty of Engineering Technology, Philadelphia University, Amman-Jordan
- Lecturer (Sep 2006 Sep 2008) Mechatronics Engineering Department, Faculty of Engineering Technology, Philadelphia University, Amman-Jordan
- Lab Supervisor (Sep 2003 Sep 2006) Mechatronics Engineering Department, Faculty of Engineering Technology, Philadelphia University, Amman-Jordan

WORK EXPERIENCE

MANAGERIAL EXPERIENCE

1- Chairman of Mechatronics Engineering Department

Responsibilities at a glance:

- Supervise the academic process in the department.
- Teaching courses.
- Monitor the students' attendances and conduct examinations of the theoretical and practical courses.
- Prepare the course schedule for materials posed by the department, taking into account the teaching load of each faculty member and meet the needs of students within the available possibilities at the university.
- Supervise the academic advising process in the department.
- Coordinate the performance of faculty members, engineers and technicians working in laboratories.
- Take the problems faced by students into account and develop appropriate solutions according to authorities.
- Distribute of tasks among faculty members in the department in order to achieve proper functioning.
- Encourage scientific research among members in the department.
- Monitor the work of laboratories and workshops; validate their hardware and complete the deficiencies.

- Work, and according to the needs of the department, to attract an experienced staff.
- Follow up and implement the requirements that ensure the quality control in the educational process according to ABET standards.
- Generate the annual scientific research plan and monitor its implementation.
- 2- Member of University Counsel/University level

Responsibilities at glance:

- Discuss and modify the University rules and regulations.
- Study the University annual budget.
- Generate planes to enhance the University facilities in learning, research, training, and community affairs.

3- Member in ABET Accreditation Coordination Committee/Faculty level Chairman of ABET Student Criteria Responsibilities at a glance:

- Design the general framework/plan and the associated time table for the work.
- Create specific forms to evaluating student performance and progress.
- Generate a plane for advising student properly.
- Write the self-study report.
- 4- Chairman of Student Advising Committee/Faculty level Responsibilities at glance:
 - Generate student advising plan.
 - Conduct several lectures to explain the student advising process.
 - Monitor the student advising process in departments.
 - Prepare statistical analysis to evaluate the efficiency of student advising process.
 - Evaluate the process weaknesses to improve the proposed process.
- 5- Member in Research and Development Committee/Faculty level Responsibilities at glance:
 - Generate a research plan for the engineering faculty.
 - Conduct statistics regarding research publications for each faculty member.
 - Study the proposals for degree promotion submitted by the faculty members.
 - Construct and organize research groups.
 - Study the proposed funded projects.

6- Member in Student Projects and Laboratories Committee/Faculty level Responsibilities at glance:

- Generate a project framework.
- Study the proposed projects from the engineering department and encourage the applied projects.
- Communication with the industrial fields to solve practical problems through student projects.
- Monitor and evaluate the project progress in engineering departments.
- Construct a templet for project dissertation.
- Generate forms for project evaluation.
- Instruct the Lab inventory operation.
- Evaluate the lab materials and equipment.

- 7- Member in Educational Resources Committee/Faculty level Responsibilities at glance:
 - Evaluate, update, and supply the educational resources/references.
 - Conduct statistics to study and evaluate the effectiveness of student/lecturers resource usage.

EDUCATIONAL/ACADEMIC EXPERIENCE

1- Full time lecturing/Assistant Professor

Taught courses:

- Advanced Measurements, Instrumentations, and Sensors (Master Degree)
- Advance Manufacturing Systems (Master Degree)
- Advance Robotics and Mechatronics Systems (Master Degree)
- Computer Aided Instrumentation (CAI)
- Mechatronics System Design (MSD)
- Pneumatic and Hydraulic Systems
- Process Control
- Autotronics
- Programmable Logic Controllers (PLC)
- Robotics and Automation
- Computer Aided Design and Manufacturing (CAD/CAM)
- Computer Numerical Control (CNC)
- Automatic Control Theory
- Transducers and Sensors
- Modelling and Simulation
- Electrical Machines
- Electrical Machine Drive
- Machine Theory
- Engineering Skills
- Statics and Strength of Materials
- Dynamics
- Electrical Circuits I
- Electrical Circuits II

2- Part time lecturing

Taught courses

- Transducers and Sensors (Mechatronics Engineering Department, Faculty of Engineering, The University of Jordan, 2011 2013, Amman-Jordan).
- Automation (Industrial Engineering Department, Faculty of Engineering, The University of Jordan, 2011 – 2012, Amman-Jordan).

3- Lab Supervision/Instructor

- Mechatronics System Design Lab
- Automation and Fluid Control Lab
- Electrical Machine and Power Electronics Lab
- Measurements and sensors Lab
- Automatic Control Lab

Mechanical Vibration Lab

4- Master Thesis Supervision

- "Design and Implementation of Control System to Enhance the Performance of Air-Cooled Chiller Condenser at High Ambient Temperature" Supervisor, in progress, 2019.
- "Neural Network Control to Enhance the Response of Thyristor-Controlled-Reactor Compensator" Co-Supervisor, 2017.
- "System Identification and Model Predictive Control for a Water Tank System" Co-Supervisor, 2016.

5- Master Thesis Defense Committee

- "A PSO ANN Algorithm to Control TCR for Voltage Balancing" Internal Examiner, 2019.
- "Controlling a Robotic Arm Using Image-Based Feedback and Deep Reinforcement Learning" Internal Examiner, 2019.
- "Development of a MATLAB Remote Control Package for Kuka Robots", Internal Examiner, 2018.
- "System Identification of Quadcopter Using Experimental Data", Internal Examiner, 2018.
- "Design and Control of Miniature Coaxial Flying Robot Using Principle of Changing Center of Gravity" External Examiner, Jordan University of Science and Technology (JUST), 2017.
- "Temperature Control of a Heat Sink based on Hardware-In-The-Loop", Internal Examiner, 2017
- "Obstacle Avoidance of a Mobile Robot Using Linear Model Adaptive Control", Internal Examiner, 2016.
- "Temperature and Voltage Control of Photovoltaic Solar Cell Panel for Hybrid Cars Applications", Internal Examiner, 2016.

6- Training Courses and Workshops

I attended many workshops and taught many training courses; some of them are mentioned here.

- Accreditation Boards for Engineers and Technologists (ABET), Amman-Jordan, 2018.
- Industrial Instrumentation and Process Control, Festo Company, Poland, 2017.
- Industrial Robot Manipulators, KUKA Company, Poland, 2017.
- Power Electronics and Drive, International Engineers, De Lorenzo, 2015.
- Advance PLC and SCADA Systems, Jordan Engineers Association, 2013.
- Autotronics and maintenance of Internal Combustion Engines, Al-Buthaina Modern Industrial Technology Center, Amman Jordan, 2012.
- Siemens PLC, Tishreen University, Latakia Syria, 2006.

7- Final Year projects Supervision

I supervised many final year projects; some of them are mentioned here.

- "Design and Implementation of Automatic Drawing Machine", 2019.
- "Design and Implementation of a Fully Automated Water System in Smart Homes", 2018.
- "Intelligent Fully-Automated Parallel Kinematic Robot for Multitask Industrial Operations", 2017.
- "Smart Finger Protection System", 2016.
- "Underwater Remotely Operated Vehicle (ROV)", 2015.
- "Multimodal System for Inattentive Driver Detection", 2014.

8- Funded projects

- Sultan Qaboos University internal grant for "Intelligent Exoskeleton-Based Parallel Robot with Smart Cane for Guiding Blind People", Principal investigator, 5810 OMR, 2022-2025.
- Sultan Qaboos University internal grant for "Adaptive Neural Network Control of Wheeled Mobile Robot with Uncertain Closed Control Architecture", Co-Principal investigator, 5810 OMR, 2022-2024.
- Philadelphia University fund for "Design and Implementation of Intelligent Fully-Automated Parallel Kinematic Robot for Multitask Industrial Operations", 7000 JD, 2015-2017.
- Trans-European Mobility Scheme for University Studies (TEMPUS) fund for "Development of Joint International Master's Degree and Lifelong Learning Framework in Mechatronics", 50000 €, 2011-2014.
- King Abdullah II Design and Development Bureau (KADDB) fund for "Design and Development of CNC Machine", 15000 JD, 2005-2007.

9- Publications

- I. Al-Naimi, G. Ghommam, M. Mesbah, G. Khan, "Advanced Machine Learning Based Strategy for Indoor Human Identification", Accepted for publication as a book chapter in "Advances in Sensors-Circuits & Diagnosis", Springer, 2022.
- I. Al-Naimi, M. BanyYounis, "Indoor Human Identification Using Advanced Machine-Learning-Based Strategy", 18th International Multi-Conference on Systems, Signals & Devices (SSD), Setif Algeria, IEEE, 2022.
- I. Al-Naimi, J. Ghaeb, "Fast Detection Technique for Voltage Unbalance in Three-Phase Power Systems", Journal of Power Electronics and Drive Systems (IJPEDS), Vol 12, No. 4, 2021.
- D. Rajab, J. Ghaeb, I. Al-Naimi, "Enhancing the response of thyristor-controlled reactor using neural network", International Transactions on Electrical Energy Systems, Wiley, 29 (12), PP. 1-16, 2019.
- I. Al-Naimi, S. Mami, M. Sandoukah, E. Haddad, "Multimodal Approach for Inattentive Driver Detection", 15th International Multi-Conference on Systems, Signals & Devices (SSD), Istanbul Turkey, IEEE, 2019.
- J. Ghaeb, D. Rajab, I. Al-Naimi, "Fast correction of voltage unbalance factor in three-phase power system using neural network", 11th International Symposium on Mechatronics and its Applications (ISMA), Al Sharjah UAE, IEEE, 2018.
- I. Al-Naimi, A. Taeim, N. Alajdah, "Fully-Automated Parallel-Kinematic Robot for Multitask Industrial Operations", 15th International Multi-Conference on Systems, Signals & Devices (SSD), Hammamet Tunisia, IEEE, 2018.
- I. Al-Naimi, C. Wong, P. Moore, and X. Chen, "Multimodal Approach for Non-Tagged Indoor Identification and Tracking Using Smart Floor and Pyroelectric Infrared Sensors", International Journal of Computational Science and Engineering, Inderscience, 14 (1), PP. 1-15, 2017.
- M. Al-Khawaldeh, I. Al-Naimi, X. Chen, and P. Moore, "Knowledge-based auto-configuration system using ubiquitous robotics for services delivery in smart home", International Journal of Embedded Systems, Inderscience, 11 (2), PP. 182-199, 2017.
- I. Al-Naimi, C. Wong, "Indoor human detection and tracking using advanced smart floor", 8th International Conference on Information and Communication Systems (ICICS), Irbid – Jordan, IEEE, 2017.
- W. Araydah, T. Tutunji, I. Al-Naimi, "System identification for a liquid flow process", Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT), Amman Jordan, IEEE, 2017
- M. Al-Khawaldeh, I. Al-Naimi, X. Chen, and P. Moore, "Ubiquitous robotics for knowledge-based autoconfiguration system within smart home environment", 7th International Conference on Information and Communication Systems (ICICS), Irbid – Jordan, IEEE, 2016.

- I. Al-Naimi, C. Wong, and P. Moore, "Indoor Identification and Tracking Using Advanced Multimodal Approach", 10th International Symposium on Mechatronics and its Applications (ISMA), Al Sharjah UAE, IEEE, 2015.
- I. Al-Naimi, C. Wong, P. Moore, and X. Chen, "Advanced Approach for Indoor Identification and Tracking Using Smart Floor and Pyroelectric Infrared Sensors", 5th International Conference on Information and Communication Systems (ICICS), Irbid Jordan, IEEE, 2014.

AWARDS

- First Place, Jordan Engineering Association (JEA) Competition, for the project entitled "Design and Implementation of Intelligent Fully-Automated Parallel Kinematic Robot for Multitask Industrial Operations", 2018.
- First Place, National Technology Parades (NTP10), German Jordanian University, for the project entitled "Design and Implementation of Intelligent Fully-Automated Parallel Kinematic Robot for Multitask Industrial Operations", 2017.
- Ph.D. Scholarship Award, Philadelphia University, 2008-2011.

REFERENCES

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• Prof. Philip Moore

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