

Anwar H. Al Assaf, PhD

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OBJECTIVE

- ❖ 30 + years of industrial, managerial and academic experience in the fields of electrical, information technology, mechanical systems, control, and defense technology.

EDUCATION

- ❖ PhD in Mechanical Engineering “Grade 3.79 out of 4, excellent”, June, 2012 /Jordan University
Thesis title: “The effect of slip velocity and Temperature jump on the hydrodynamics and thermal behaviors of MHD flows in micro channels” . 2012
- ❖ M.Sc. in Embedded systems design / computer engineering, Grade "Excellent" / Yarmouk University
Thesis title: Network synchronization through the use of GPS satellite under Linux.2004
- ❖ B.Sc. In Electrical Engineering, Grade "GOOD" ./ National Technical University of Athens.1989
B.Sc. project title: Using artificial techniques in the electrical and mechanical installations in buildings
Diploma in English Language "distinguished" /USA- Air force academy.2001

EMPLOYMENT

Date: 08/09/2019 –present

Title: Aviation sciences Dean /AMMAN Arab University

Date: 05/2018 – 1/9/2018

Title: Director, Prince Faisal Technology Centre (PFTC)

Job description and duties:

PFTC grants Master Degree under the academic Umbrella of Yarmouk University in Embedded Systems design, Wireless communications and power engineering besides executing different special technical training courses. Other duties are:

- Manage the educational process in the center upon its mission.
- Plan the required training courses that satisfy the user requirements.
- Ensure that the courses are given upon the course curriculum and revise them with the teaching staff.
- Ensure that Labs are up to date.
- Analyze customer’s feedback for more development and enhancements.
- Attend and Participate relative academic events

Date:04/2017 – 04/2018

Title: Director, Research and Scientific cooperation Department / King Abdullah II Design and Development Bureau (KADDB)

Job description and duties:

- Select and supervise the funded projects by King Abdullah Fund for Development (KAFF)

Projects with the universities.

- Propose different projects to the university's faculty that are related to KADDB mission and supervise them.
- Maintain applied scientific research through cooperation with research institutions locally and internationally, and to focus on researches that serve the nature of KADDB work.
- Build strong scientific relations with national and international research institutions through interactive visits, lectures, workshops and signing agreements.
- Participate in national and international events for all categories through attendance and technical support in order to expose and attract scientific competencies.
- Working with Arab and international research institutions and centers to increase the activity of scientific research supported and published research and patent registration.
- Attract local and international talents.
- Increase and sustain research fund through the provision of scientific research institutions, locally and internationally to support scientific research.
- Raising awareness and efficiency of the working capacity in KADDB in the fields of scientific research, scientific papers and intellectual property.
- Review of scientific papers and intellectual property before submitting them to the competent authorities outside KADDB.
- Search for patents and scientific research that serve the interests of KADDB and achieve its strategic objectives and implement them.
- Activate the role of agreements with research centers to include the use of their laboratories and construct scientific incubators at their side.
- Work on the participation of KADDB other Departments with the outputs of the Department of Research and Scientific Cooperation.
- Perform feasibility study for all KADDB projects.
- Active participation in conferences, seminars and events related to the work of KADDB to attract scientific competencies and to present the outputs of scientific research and the capabilities of KADDB.
- Strengthen the relationship with the research centers and increase the number of applied research projects between the local and international researchers in the interest of KADDB.
- Increasing the awareness of the nature of the work of KADDB and its projects among researchers, university students and the local community.
- Responsibility of carrying all research programs related to KADDB interests; UAS, Mechanical design, smart systems, Nano-applications, PV, VR, IoT ...etc.

Date: 6/2014 – 04/2017

Title: CEO Technical Deputy, King Abdullah II Design and Development Bureau (KADDB)

Job description and duties:

- Responsibility of running all KADDB technical projects, starting from collecting the user requirements, systems engineering, design, prototyping, and testing.
- Responsibility of assuring data pack readiness for mass production.
- Heading the design Critical review of all projects.
- Heading the project management committee.
- Heading the systems engineering committee.
- Revising all procedures and processes regarding QA and QC.
- Assuring the readiness of all department (Design, prototype, smart systems and testing) for the external auditing, and ISO preparations.
- Prepare and present the monthly report to the board of directors.

Date: 01/2011 – 06/2014

Title: Head of Applied research, KADDB

Job description and duties:

- Writing research projects abstract to the different universities for selecting the best proposal that should the selected teams will work on under applied research supervision.
- Undergraduate KAFD funded project selection, supervising and guiding.
- Participating in all related workshops, conferences nationally and internationally.

Date: 06/2005- 02/2011

Title: Instructor in Prince Faisal Information and Technology Center (PFITC)/ Yarmouk University Branch

Job description and duties:

Teaching Embedded Engineering courses for graduate students such as:

- C programming
- Linux operating system
- Advanced computer architecture,
- Embedded systems design
- Real time Embedded systems
- Supervising graduate students projects (Over 40 projects till now)
- Teaching special training courses in embedded systems.
- Fuzzy, Neural, machine learning
- Administrative work of PFITC

Date: 06/ 2003-05/ 2005

Title: Technical Manager, Royal Jordanian Air force (RJAF) calibration laboratories.

Job description and duties:

- Managing a staff of about 10 Engineers and over than 80 Technicians.
- Responsible for maintaining and calibrating over than 5000 test equipment's for the military part, and about 3000 different type test equipment's for civilian companies for the purpose of ISO regulations.
- Issuing traceable certificates of the tested and calibrated items.
- Observing the specialized training for the staff internally and externally.
- Administrative work.

Date: 07/ 2002 -05/ 2003

Title: Quality manager, calibration laboratories in the Royal Jordanian Air force (RJAF).

Job description and duties:

- Writing the procedures and forms needed to control work.
- Performing internal and external auditing.
- Training staff using auditing results feedback

Date :07/ 2001-06/2002

Title: Direct current Lab officer/supervisor of the calibration laboratories in the Royal Jordanian Air force (RJAF).

Job description and duties:

- Supervising 20 Engineers and Technicians in the field of DC- 100Mhz test equipment's.
- Staff training.
- Maintaining the traceability on the range of DC- 100Mhz
- Insuring the calibration the correctness of calibration procedures used.
- Issuing calibration certificates.

Date: 08/1999-08/2001

Title: Microwave Lab officer/supervisor of the calibration laboratories in the Royal Jordanian Air force (RJAF).

Job description and duties:

- Supervising 10 Engineers and Technicians in the field of microwave test equipment's.
- Staff training.
- Maintaining the traceability on the range of 100 MHz and above.
- Issuing calibration reports and certificates.

Date: 09/1994-07/1999

Title: Lecturer in Prince Faisal Technical College, Balqa'a University

Job description and duties:

Teaching the following courses for undergraduate students such as:

- Electronics
- Digital circuits.
- Radar
- Microwave and antennas.
- Navigation Systems.
- Statics, strength of materials
- Supervising the corresponding labs

Date: 09/ 1991-08/ 1994

Title: Radar field maintenance Engineer and TSQ "Transportable Special Equipment Special Equipment for special purposes "Engineer in different sites of the RJAF.

Job description and duties:

- Responsible of the maintenance of site radars, first line maintenance.
- Connecting radars to Command and Control sites.
- Managing the received data of the radars.

Date:09/1990-08/1991

Title: Radar workshop Maintenance Engineer, RJAF Radar Workshops.

Job description and duties:

- Maintain radar major components; TWT, Tx, Rx, Antenna, etc.

PROFESSIONAL MEMBERSHIPS

- A member of Jordan Engineers Association (JEA) since 1989
- A member of the council of the Faculty of Engineering / Hashemite University.
- A member in the technical committee of ESCWA
- A member in the Industrial Advisory Committee at Sumayya University
- A member in the industrial Advisory Committee at Yarmouk University
- A member in the higher technical Committee of the Jordan Engineers Association
- A member in the RTO/NATO organization
- ABET industrial committee member in Jordan University
- Hashemite University board member
- Arab Robotic Association
- Armed Forces Communications & Electronics Association (AFCEA)
- A member of the council of the Faculty of Engineering / Zaytona University
- A member of the council of the scientific research / Zaytona University

Professional Training and skills

- Microsoft applications, a 70 hours training course, RJAF computer centre, Jordan, Sep.1997.
- Training course in Greek Electrical Utility, DEH, 1988, Athens, Greece.
- Basic instructor Techniques, a 70 hours intensive course in the techniques of instructing, Prince Faisal Technical College, Jordan, Sep. 1998.
- Officer's Basic training, a 4 months intensive military course, Royal Army College, Jordan 1991.
- American Language course, * weeks course held at Lack land Air Force Base, Texas, USA, June 1997.
- Diploma in English Language, English language Center, Defense Language Institute, Texas, USA, May 2001.
- Advanced Calibration, Measurement and diagnostics, 3 months advanced course (11 credit hours), KEESLER AFB, and MISSISSIPI, USA. July 2001.
- Certificate of Calibration, Department of Air force USA, 2001.
- USAF TQP orientation attendance, AF Metrology and calibration, USA 2001.
- Certificate of Metrology key stamp, RJAF, Jordan, Jan 2003. 36 Hours RAB - accredited QMS Lead
- Auditor Course with specific reference to ISO/IEC 17025 presented by Excel Partnership, Inc. Ohio, USA, 2004.
- Certificate of appreciation from AFMETCAL.
- Using Quality Tools for continuous Quality Improvement and Technical Assessment, JAS, Jordan, December 2005.
- Quality Management, Accreditation and assessment Techniques according to ISO/TEC 17025, JAS and D/P, Germany, Jordan program, June 2006.
- STI policy Monitoring and Evaluation, HCST ,Amman ,Jordan ,6-8 Dec. 2011
- PMP course
- CIM " Certified Innovation Manager

Grants and Awards

- Industrial partner for the project NATO SPS G4936 (Hybrid sensor networks for emergency critical scenarios)
- Scholarship from the Jordanian university as a distinguished PHD student 2008
- Royal Medal of faithful service, RJAF, 2007.
- Medal of Calibration, AFMETCAL, Ohio, USA, 2004.
- Certificate of Appreciation from AFMETCAL, Ohio, USA.
- Certificates of Appreciation from RJAF Commander for my achievements in training courses as getting the first ranks in many training courses.
- Royal Medal of Military worthiness, RJAF, 1994.
- National Economy ministry of Greece Scholarship, for B.Sc. in the national Technical university of Athens for 5 years.

Teaching Experience

- Fluids
- Thermodynamics.
- Mechanical design
- Computer Programming (FORTRAN, PASCAL, C, C++, Verilog, VHDL on FPGA)
- Numerical Analysis.
- Artificial intelligence.
- Expert systems.

- Digital logic
- Electronics.
- Statics, dynamics and strength of materials
- Microprocessors and microcontrollers.
- Embedded systems design (Graduate)
- Computer hardware design
- Advanced computer Architecture and Organization (Graduate)
- Electric circuit design.
- Fuzzy logic
- Neural Networks and Machine learning

Research Interest

- Radar systems.
- Antenna design.
- Embedded systems design.
- Electronic circuits modelling.
- GPS applications.
- Microwave systems.
- MEMS.
- microfluidics
- Fluids.
- Controllers.
- Robotics
- Optimization

Publications and Technical papers

Journals

[1] **Anwar Al-Assaf** Artificial intelligence Techniques. Al-Afaq Journal, RJAF, pp 83-87, first quarter Jan, 2000.

[2] **Anwar Al –Assaf** Mobile communication systems. Al Afaq Journal, RJAF, third quarter 1999.

Conferences and workshops

[3] A. Khalifeh, H. Salah, S. Alouneh, **A. Al-Assaf**, K. Darabkh, "Performance Evaluation of DigiMesh and ZigBee Wireless Mesh Networks", IEEE International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET), March 2018 Chennai, India.

[4] **Anwar Al-Assaf**, Factors Affecting the Performance of Photovoltaic Systems CATAEE-97, second international conference on Computational Aspects and their Applications in Electrical Engineering, pp 142- 156, , pp 142-156, Philadelphia university. 1997

[5] **Anwar Al-Assaf** et. all, Reconfigurable High performance Integrated Micro strip Yagi-Uda antenna for frequencies between 75- 100Ghz, Journal of Ubiquitous Systems and Persasive Networks, Sep./Dec. 2011 volume 3, pp 29-33

[6] **Anwar Al-Assaf** et. all, The role of KADDB in the applied research crises of scientific research in Arab world, Princesses Sumyya University for Technology, 2011

[7] Ahmad Al ja'afreh, **Anwar Al-Assaf**, A wireless sensor network design and implementation for vehicle detection, classification, and tracking, SPIE Defense, Security, and Sensing 2013, 29 April - 3 May, Baltimore, Maryland, United States.

[8] Al-Sheikh, Bahaa, Elshelbi, Ayah, **Al-Assaf, Anwar**, Sound source direction estimation in horizontal plane Using Microphone array, IEEEExplore, 2013

[9] Design and development of 6-Flight Simulator prototype Using Stewart platform, Al, khedher Mohammad, **Al-Assaf, Anwar**, 2nd Arab Robotics conference, 2013

[10] Smart pharmacy System, Abu Hammour Zaer, **Al Assaf, Anwar**, 2nd Arab Robotics Conference, 2013.

[11] Mon`d Nimer, **Anwar Al-Assaf**, Mohamad Hamdan, The effect of slip velocity and temperature jump on the Hydrodynamics and thermal behaviors of MHD Forced Convection Flows in Horizontal Microchannels, the 8th international mechanical Engineering Conference 2013.

[12] **Anwar Al-Assaf**, A. AlNimer and Mohammad A. Hamdan. "The effect of slip velocity and temperature – jump on the Hydrodynamics and thermal behaviors of MHD free convection flows in vertical Microchannels ". The 8th international mechanical Engineering Conference 2013.

[13] **Anwar Al-Assaf** et. all, Increasing the saturated output RF power for RF amplifiers using passive technique, DOI:10.1109/JIEEEEC.2015.7470740. Conference: 2015 9th Jordanian International Electrical and Electronics Engineering Conference (JIEEEEC)

[14] **Anwar Al-Assaf** et. all, Single loop synthesizer and SDR modulator, DOI: 10.1109/IACS.2017.7921971 Conference: 2017 8th International Conference on Information and Communication Systems (ICICS)

Master thesis supervision

- Frequency Tunable Antenna (FTA)
- Radio Frequency ID (RFID) \ Visitor Management System (VMS)
- Solar Tracking System
- GSM Based Patient Monitoring System
- Car Park guidance System
- Asthma Diagnosis from Cough Sound
- Earthquake Alarm and Mounting System Model
- Entrance Security System (ESS)
- Smart Irrigation System
- Height Finder
- A Wearable Obstacle Detector for the Blind
- Intelligent Central Heating Controller (IHC)

Projects been supervised (undergraduate)

Renewable Energy

- Design of parabolic trough collector system for domestic heating and air conditioning.
- Use of Recycled Vertical Flow Constructed Wetland Operated by Solar Energy to Treat Grey water for Irrigating Home
- Gardens in the Deir Alla District in the Central Jordan Valley.

- Phase Change Materials for solar thermal energy storage.
- Solar panel cleaner
- An integrated solar desalination system for enhanced performance.
- Concentrating solar power via the use of parabolic trough technology.
- Design of a solar cooling system of a capacity 1.5 tons (5 kW) for doctors office in Jordan university of science and technology.
- Solar desalination.
- Standalone Off-Grid Closed- Loop tow – Axis Photovoltaic Solar Tracker: Design, Fabrication.
- Series hybrid kart.
- High Performance Hybrid Vertical Wind-Solar Turbine.
- Design and Construction of a Testing Setup for Solar Water Heaters.
- The commercial version of the Automated Dual Solar-Diesel Thermal System for Residential Space and Water Heating phase II.
- Design and implementation of electro-mechanical Sun tracking device for different solar distillation systems.
- Solar Air Conditioning.

Communication, control and Embedded System (undergraduate)

- GPS Vehicle management System
- Efficient wireless Electricity Transfer
- Vacuum tubes for Non-radiative wireless power transfer
- Entrance Security System
- Design of liquid filling machine
- Unmanned Mine detection system
- Two dimensional coordinate Measuring machine using a laser sensors
- Laser guided UGV
- Intelligent traffic light
- Automated parking management system
- VTOL for quad UAV
- heart monitoring system
- Mobile jamming system
- RFID applications
- Voice commanded robotic arm
- Smart wireless irrigation and forest protection System
- Sound source localization system
- Smart pharmacy system
- Video jamming System
- Unmanned submarine
- 6 DOF flight simulator

Conferences, competitions and workshops

- The 1st Yarmouk University Scientific Research Symposium (YUSR 2017) & The 3rd International Conference on Open Source Software Computing (OSSCOM 2017) \ Participant
- SRTD-II Bridging Science and Business \ Participant
- JUBILEE CENTER FOR EXCELLENCE IN EDUCATION (FIRST LEGO LEAGUE & ANIMAL ALLIES) \ leader of the Advisory Committee and Arbitration Committees.
- Scientific day of the Deanship of Scientific Research and Graduate Studies \ formal speaker

- 1st International Conference on Industrial, System and Manufacturing Engineering 11-12 Nov,2014 \ Participant
- The 8th Arab Open Robot Championship 2015 \ The leader of the arbitration
- Eighth National Technology Parade \ Company representatives
- The Scientific Day of the Aviation Engineering Department) Jordan University of Science and Technology(\ CEO)
- TECHNICAL ASSISTANT (KADDB)
- The Expo – Science Asia 2014 \ Participant
- SOFEX JORDAN 2014 (Head of Applied Research) \ EXHIBITOR
- SOFEX JORDAN 2016 (CEO TECHNICAL ASSISTANT / KADDB) \ EXECUTIVE
- EUROSATORY 13-17 JUNE 2016/ PARIS & NAMMO \ EXHIBITOR (KADDB)
- CHINA – ARAB STATES EXPO 2015 \ Guest
- ADEX 2014 11-13 September 2014 (CEO TECHNICAL ASSISTANT (KADDB) \ VISITOR.
- International Conference on New Trends in Computing Sciences 2017 ICTCS \ Attendee
- Seventh National Technological Festival 2014 \ Supreme National Directive Committee
- The 14th Jordanian Chemical Conference (KADDB) 8 April, 2015 \ Participant
- The 3rd Arab Robotics Conference 2014 (KADDB) \ Organizing Committee of the Conference
- GCREEDER 2018 (University of Jordan) \ ATTENDEE
- Zain Innovation Campus ZINC (University of Jordan) \ Participant
- Award of the annual Arab Council of talented and creative (KADDB) 17 Nov, 2013 \ Participant
- NAVDEX, IDEX, UMEX 2015 \ EXHIBITOR
- WMD and Security forum 12-13 Nov, 2014 \ ATTENDEE

Exhibitions

- SOFEX "Special Force Exhibition" for four times.
- Petra University Exhibition, 2002.
- Hashemite University Exhibition, 2003.
- IDEX UAE
- IDEF Turkey
- Indian Defense
- Eurosatory , France
- Azerbaijan Defense

Cooperation with industry

- The smart heat controller, 2006, Qalanzi Company.
- Automatic calibration system, RJAF, 2006
- VIP traffic controller, Amman municipality, 2006.
- Remote heart diagnosis through GSM, AL Hussein Medical City, 2007.

Personal interests

Robotics design • jury robotics national and international • mathematics modelling • horse riding

References

Available upon request