

Mahmoud Abdulaziz M. Al-Rumaima (PhD)

PERSONAL INFORMATION

Date of Birth: 07.08.1981

Marital Status: Married

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EDUCATION

- 2008- 2012 **Ph.D., Biomedical Engineering**
Saint-Petersburg State Electrotechnical University"LETI", Russia
Thesis title: Development of Telemedicine System for Mountain Areas.
- 2005-2007 **Master of Science in Engineering and Technology, Biomedical Engineering,**
Saint-Petersburg State Electrotechnical University"LETI", Russia.
- 2001-2005 **Bachelor of Science in Engineering and Technology, Biomedical Engineering,**
Saint-Petersburg State Electrotechnical University"LETI", Russia.

RESEARCH INTERESTE

Biomedical Instrumentation, Biomedical Signals, Biosensors, Telemedicine/ Telehealth, Biotechnical Systems, Mathematics in Medicine, Clinical Engineering, Medical Information Technology.

WORK EXPERIENCE

- **Assistant Professor, Biomedical Engineering Dept.**
University of Science and Technology (UST), Yemen – April 2012 to present
 - Teaching and supervising undergraduate and graduate students.
 - Conducting research and publishing papers in academic journals.
 - Serving the university in the Assurance of Learning and curriculum committee
 - Representing the university at conferences and delivering presentations when necessary
 - Membership in departmental, college-level and university committees, attending departmental meetings and student recruitment

- **Dean, Faculty of Engineering**
University of Science and Technology, Yemen – Oct. 2014 to present
 - Develop, administer, and promote the academic programs and academic support functions of the college
 - Leading college efforts toward achieving University goals;
 - Leading, and coordinating college strategic planning and curriculum development;
 - Develop and coordinate educational policies, planning functions and physical facilities planning and utilization of the college;
 - Provide financial and administrative management responsibility for the College
 - Work with faculty to ensure adherence to accreditation standards, enhanced community engagement, and excellence in scientific research

- **College Dean**

*Applied College of Science and Technology (Private Community College), Thamar, Yemen
– May 2017 to April 2021*

- Set the academic climate
- Developing a college budget;
- Supervising, evaluating, and supporting Departments in a manner that promotes excellence in instruction, scholarly and creative productivity and service
- Evaluating college administrators and staff in consultation with college faculty and staff;
- Evaluating overall Departmental productivity in instruction, research, and service responsibilities.

- **Project consultant, Medical Equipment Management Services**

*CRDF GLOBAL & UST for National Center of Public Health Laboratories (NCPHL)-
Sana'a, Yemen – Dec. 2014- Sept. 2016*

- Prepare and review the plan of medical equipment management, which describes how to minimize the medical equipment risks.
- Select and accommodate a new equipment in the laboratory system to ensure that the laboratory has bought equipment based on the needs required and the equipment is secure and compatible with the other systems of the laboratory, as well as cost effective compared with the other equipment of the same type/brand.
- Develop standards to test the medical equipment
- Follow up the inspection and maintenance strategy for all medical equipment included in the maintenance plan to ensure a reliable, safe, and effective performance.
- Calibrate all medical equipment included in the maintenance plan according to the international standards and the recommendations of the manufacturer.
- Define the intervals of regular calibration and maintenance of the equipment
- Monitor and interact with the observation of danger and recalls.
- Observe the incidents and prepare the reports.
- Document the testing process for the equipment before being used and test its electric safety and efficiency according to the international standards and the recommendations and date of manufacture.
- Review annually of medical equipment management plan and prepare necessary reports and recommendations to maximize the medical equipment efficiency.
- Monitor the services efficiency of the external companies in the maintenance process.
- Monitor the performance of the maintenance team and its commitment to the maintenance rules and report to the management of the laboratory for corrective and motivational actions to be taken to ensure the success of the maintenance plan.

- **Vice dean, Faculty of Engineering**

University of Science and Technology, Yemen – Aug. 2014 to Oct. 2014

- **Head, Biomedical Engineering Dept.**

University of Science and Technology, Yemen – April 2013 to Oct. 2014

COURSES TAUGHT

- Medical equipment I (Medical laboratory Devices)
- Medical equipment II (ICU and Therapeutic Devices)
- Safety of Biomedical equipment
- Biomedical Engineering Design
- Introduction to Biomedical Engineering
- Health systems management
- Seminar in Biomedical Engineering
- Electrical Engineering II
- Measurements and Instrumentations II
- Clinical Engineering I&II
- Signals, Systems and Networks II
- Graduation Project I
- Graduation Project II
- Bio-analytical Instruments

SUPERVISED GRADUATION PROJECTS

Supervised more than 20 graduation (senior) design projects for Biomedical Engineering students with BME related topics as like:

- Design of Smart Air Spirometer
- Artificial Pancreas
- Vein finder
- ECG tester
- NI my DAQ Fetal Doppler Phantom
- Design of Infusion Pump
- Wireless ECG
- Incubator Temperature Control System
- Portable Dental Unit
- Ultrasound Bone Densitometer
- Non-invasive Detection of Liver Fibrosis using Ultrasound
- Design of Infrared Thermometer
- Cranial Electrotherapy Stimulation Device
- Design of Electrical Muscles Stimulator
- NON-invasive Glucose meter
- Visual Field testing device
- Management of medical equipment

PUBLICATIONS

- Husam Y. Al-Hetari; Yasser Alginahi; Muhammad Nomani Kabir; Noman Q. Al-Naggar; **Mahmoud A. Al-Rumaima**; Md Munirul Hasan, "Modeling Lung Functionality in Volume-Controlled Ventilation for Critical Care Patients", 2020 IEEE 2nd International Conference on Artificial Intelligence in Engineering and Technology (IICAJET), Kota Kinabalu, Malaysia, 20 September 2020, pp. 1-4.
- Husam Y. Al-Hetari, Muhammad Nomani Kabir, **Mahmoud M. Al-Rumaima**, Noman Q. Al-Naggar, Yasser Alginahi, Md Munirul Hasan, "A Mathematical Model of Lung Functionality using Pressure Signal for Volume-Controlled Ventilation", 2020 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS 2020), Shah Alam, Malaysia, 20 June 2020, pp. 135 – 140.
- Abdu Alameri, **Mahmoud Al-Rumaima**, Mohammed Almazah, "Y-coindex of graph operations and its applications of molecular descriptors", Journal of Molecular Structure, Volume 1221, 2020, 128754
- Abdu Alameri, Noman Al-Naggar, **Mahmoud Al-Rumaima**, Mohammed Alsharafi, "Y-index of some graph operations", International Journal of Applied Engineering Research, Volume 15, Number 2 (2020), pp. 173-179

- Fadhl Alakwaa, **Mahmoud Alrumaimah**, Ziad Algaboby, The Impact Of Teaching Medical Devices Course Using Active Learning Strategies In The Academic Achievement Of The Fourth Year Biomedical Engineering Students At The University Of Science And Technology, Republic Of Yemen, The Arab Journal for Quality Assurance in Higher Education, Vol. 9, Issue 2, 2016, pp.3-16
- Fadhl M. Al-Akwaa, Husam Elhetari, Noman Al Nggar and **Mahmoud A. Al-Rumaima**, Comparison of the 3D Protein Structure Prediction Algorithms, Int. Journal of Engineering Research and Applications ,Vol. 4, Issue 2(Version 1), February 2014, pp.462-467
- **Mahmoud Abdulaziz Al-Rumaima**, Choice of performance criteria telemedicine system of extreme geographical zones. Biomedical electronics. 2011,№5.-pp. 66-69.
- **M.A. Al-Rumaima**. Features of application of telemedicine systems in mountain regions. Ukrainian Journal of Telemedicine and Medical Telematics.-2010.-Vol.8, №2.-pp.167-169.
- **Al-Rumaima M.A.**, The organization of telemedicine consultations in mountain areas//XXXIX Week of a science SPBSTU: materials of the international scientific and practical conference, Saint Petersburg, Russia,2010.-pp.69-70
- **Al-Rumaima M.A.**, The concept of telemedicine systems development adapted to conditions of mountain areas// Materials of IV International Scientific congress “NeuroBioTelecom- 2010”, Saint Petersburg, Russia,2010.-pp.148-152.
- Y.I. Senkevich, **M.A. Al-Rumaima**. Researches experience of a person’s adaptation in the conditions of mountain areas. Biomedical electronics.2009,№11, pp.63-66
- **Al-Rumaima M.A.**,To the question of telemedicine application in the upland regions, materials of XIV Russian National congress “People and health”, Saint Petersburg, Russia,2009.- №3(37), pp.183-184
- **Al-Rumaima M.A.**, To a question of influence of extreme factors in mountain areas on development of telemedicine systems./Materials of All-Russia school of sciences on biomedical engineering, Saint Petersburg, Russia,2009, pp.207-211.

CONFERENCE/WORKSHOP ATTENDED

- 2020 IEEE 2nd International Conference on Artificial Intelligence in Engineering and Technology (IICAIET), 26 September 2020, Kota Kinabalu, Malaysia.
- 2020 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS2020), 20 June 2020, Shah Alam, Malaysia
- 14th Russian National congress “People and health”, 20-23 Oct. 2009, Saint Petersburg, Russia.
- International Conference «Telemedicine– Experience@Prospects” supported by International Society for Telemedicine & eHealth(ISfTeH),24-25 March, 2010, Donetsk, Ukraine.
- All-Russian Scientific School of Biomedical Engineering «BME-2009»,LETI university, 26-30 October, 2009, Saint Petersburg, Russia.
- IV International Scientific congress “NeuroBioTelecom- 2010”, 7-10 December, 2010, Saint Petersburg, Russia.

TRAINING AND WORKSHOP ATTENDED

28 January 2021	Certificate of Participation in workshop as External Examiner, Development of program document for Biomedical Engineering Program, Emirates International University, Yemen
8-12 Dec. 2018	Certificate of Participation, Evaluation of the outcomes of academic programs, Teaching and Learning Center, UST, Yemen
3-4 June 2017	Training Certificate, Design of E-Courses According Quality Matters, Deanship of open education and E-learning, UST, Yemen
24 May 2017	Training Certificate, Key Performance Indicators Preparation, Consultant& Development Center, UST, Yemen
12-17 April 2017	Training Certificate, Strategic Planning using Balanced Scorecard, Consultant& Development Center, UST, Yemen
25-27 Dec. 2016	Training Certificate, “Skills of Effective Supervision of Theses”, Teaching and Learning Center, UST, Yemen
27-28 Sep. 2016	Training Certificate, “Electrical Safety in healthcare facilities“, National Center of Public Health Laboratories (NCPHL)- Sana'a, Yemen
27-31 Aug. 2016	Training Certificate, training workshop ”Roche Cobas Integra 400 plus and Cobas TaqMan 48– Field service & maintenance “, National Center of Public Health Laboratories (NCPHL)- Sana'a, Yemen
20-23 Aug. 2016	Training Certificate, training workshop ”Roche Cobas 6000[c501] Analyzer– Field Service & Maintenance “, National Center of Public Health Laboratories (NCPHL)- Sana'a, Yemen
25-31 July 2016	Training Certificate, training workshop ”Architect i2000 SR– Field Service & Maintenance “, National Center of Public Health Laboratories (NCPHL)- Sana'a, Yemen
27May-8 June 2015	Training Certificate, training workshop ”ADVIA CBC 2120i, Centaur XP, Centaur CP – Field service & maintenance “, National Center of Public Health Laboratories (NCPHL) and SIEMENS company (BAINOUNAH)- - Sana'a, Yemen
21-22 April 2015	Participation Certificate, training workshop: “Water Purification Systems”, National Center of Public Health Laboratories (NCPHL)- Sana'a, Yemen
2/3/2015 -30/1/2016	Course Certificate, Instructional technology, Professional Development Program for the Teaching Staff in Higher Education, UST, Yemen.
3 April 2014	Training Certificate, Problem solving skills and decisions making (Theory TREZ), Consultant& Development Center, UST, Yemen

6 March- 28 May 2014	Course Certificate , Learning psychology in Higher Education, Professional Development Program for the Teaching Staff in Higher Education, UST, Yemen.
1-2 March 2014	Training Certificate , Scientific Research Publishing, UST, Yemen
25 Sep.2013 -28 Jan. 2014	Course Certificate , Educational Research Methodology, Professional Development Program for the Teaching Staff in Higher Education, UST, Yemen.
22 Sep.2013 –1 Jan. 2014	Course Certificate , Effective Teaching Methods in higher education and Professional Development Program for the Teaching Staff in Higher Education, UST, Yemen.
17March – 4 June 2013	Course Certificate , Measurement and evaluation in higher education, Professional Development Program for the Teaching Staff in Higher Education, UST, Yemen.
2 July 2013	Training Certificate , Preparing Self Evaluation Document for academic Programs, UST, Yemen
13April–5 June 2013	Certificate , Development Program Specification Document (PSD) for Biomedical Engineering Program, UST, Yemen.
5-17 January 2013	Training Certificate for Biomedical Lab, Electronics& training systems Manufacturing (Beda Precision), Saudi Arabia.
18-19 Dec.2012	Course Certificate , Research Methodology and Practical Biostatistics Course (SPSS), Ataturk University-Turkey and UST University-Yemen.
13-14 August 2008	Training Certificate , Analyzing results of students, UST, Yemen.
3 - 4 June 2008	Training Certificate , Graduation projects evaluation, UST, Yemen.
17 - 19 Feb. 2008	Training Certificate , Design and evaluation of examinations, University of science &Technology (UST), Yemen

ORGANIZATION& MEMBERSHIP

- Institute of Electrical and Electronics Engineers (IEEE)
- Yemeni Engineers Association

SPECIAL SKILLS

Languages:

- Arabic (mother tongue)
- English (intermediate)
- Russian (advanced)

Computer skills:

- Proficient at MS Office applications and internet use.
- Engineering Software: Mathcad; LabView, SPSS

REFERENCES

Available upon request