RAMI ALAZRAI

School of Electrical Engineering and Information Technology
German Jordanian University
P.O. Box 35247, Amman
11180 Jordan

rami.azrai@gmail.com
Mob. +962 798 213151
Mob. +971 502027021

EDUCATION

Doctor of Philosophy Jan. 2010 – May, 2013
School of Electrical and Computer Engineering
Purdue University, West Lafayette, IN, United States
Advisor: Prof. C.S. George Lee
Thesis title: On Human Emotion and Activity Analysis
GPA: 3.89

Master of Science Aug. 2008 – Dec. 2009
School of Electrical and Computer Engineering
Purdue University, West Lafayette, IN, United States
Advisor: Prof. C.S. George Lee
GPA: 3.92

Bachelor of Science Oct. 2002 – Jun. 2007
Department of Computer Engineering
Jordan University of Science and Technology, Irbid, Jordan
Advisor: Prof. Mohammad Alrousan
Thesis title: Automatic Arabic Braille Translation Using Neural Networks
GPA: 87.8, Rank: 2^{nd}/120

PROFESSIONAL EXPERIENCE

Professor Oct. 2021 – Present
Department of Computer Engineering
School of Electrical Engineering and Information Technology
German Jordanian University, Amman, Jordan

Visiting Professor Aug. 2022 – Jul.2023
Department of Computer Science and Engineering
Collage of Engineering
American University of Sharjah, Sharjah, UAE

Associate Professor Oct. 2017 – Oct. 2021
Department of Computer Engineering
School of Electrical Engineering and Information Technology
German Jordanian University, Amman, Jordan

Chairman of the Computer Engineering Department Sept. 2015 – Sept. 2019
School of Electrical Engineering and Information Technology
German Jordanian University, Amman, Jordan

Assistant Professor Jun. 2013 – Oct. 2017
Department of Computer Engineering
School of Electrical Engineering and Information Technology
German Jordanian University, Amman, Jordan

Research Assistant Aug. 2008 – May 2013
Assistive Robotics Technology Laboratory
School of Electrical and Computer Engineering
Purdue University, West Lafayette, IN, USA

Teaching Assistant Sept. 2007 – Feb. 2008
Department of Computer Engineering
School of Electrical Engineering and Information Technology
German Jordanian University, Amman, Jordan

RESEARCH INTERESTS

Human activity recognition, emotion recognition, human-human interaction representation and recognition, fall detection and prediction, human activity recognition from partially-observed videos, Wi-Fi-based human activity recognition, EEG-based brain machine interfaces (BCIs) including: EEG-based human emotion recognition, EEG-based motor imagery tasks classification, EMG-based hand kinematics estimation, EEG-based pain detection and level estimation, EEG-based visual imagery recognition, and EEG-based deception detection.

RESEARCH AND SCHOLARLY ACTIVITIES

Refereed Journal Articles

Published and Accepted

[1] **Rami Alazrai**, Yaser Mowafi, and C. S. George Lee "Anatomical-Plane-Based Representation for Human-Human Interactions Analysis," *Pattern Recognition, Elsevier,* Vol.48, pp.2346-2363, 2015 (Impact Factor: 7.19).

[2] Mohammad I. Daoud, Tariq M. Bdair, Mahasen Al-Najar, **Rami Alazrai** "A Fusion-Based Approach for Breast Ultrasound Image Classification Using Multiple-ROI Texture and Morphological Analyses," *Computational and Mathematical Methods in Medicine,* 6740956:1-6740956:12, 2016 (Impact Factor: 1.77).

[3] **Rami Alazrai**, Mohammad Momani, Mohammad I. Daoud, "Fall Detection for Elderly from Partially Observed Depth-Map Video Sequences Based on View-Invariant Human Activity Representation," *Applied Sciences, MDPI,* vol. 7, no. 4, pp. 316, Mar., 2017 (Impact Factor: 2.474).

[4] **Rami Alazrai**, Hisham Wanni, Yara Baslan, and Mohammad I. Daoud, "EEG-based Brain-Computer Interface for Decoding Motor Imagery Tasks within the Same Hand Using Choi-Williams Time-Frequency Distribution," *Sensors, MDPI,* vol. 17, no. 9, pp. 1937, Aug., 2017 (Impact Factor: 3.275).

[5] **Rami Alazrai**, Mohammad Momani, Hussein Abu Khudair, Mohammad I. Daoud, "EEG-based Tonic Cold Pain Recognition System Using Wavelet Transform," *Neural Computing and Applications, Springer,* vol. 31, no. 7, pp. 3187-3200, Oct., 2017 (Impact Factor: 4.774).

[6] **Rami Alazrai**, Rasha Homoud, Hisham AlWanni, and Mohammad I. Daoud, "EEG-Based Emotion Recognition Using Quadratic Time-Frequency Distribution," *Sensors, MDPI,* vol. 18, no. 8, pp. 2739, Aug., 2018 (Impact Factor: 3.275).

[7] Mohammad I. Daoud, Ahmad Shtaiyat, Adnan Zayadeen, and **Rami Alazrai**, "Accurate Needle Localization Using Two-Dimensional Power Doppler and B-Mode Ultrasound Image Analyses: A Feasibility Study," *Sensors, MDPI,* vol. 18, no. 10, pp. 3475, Oct., 2018 (Impact Factor: 3.275).

[8] Mohammad I Daoud, Abdel-Latif Alshalalfah, Otmane Ait Mohamed, and **Rami Alazrai**, "A hybrid camera-and ultrasound-based approach for needle localization and tracking using a 3D motorized curvilinear ultrasound probe," *Medical Image Analysis, Elsevier,* vol. 50, pp. 145-166, Oct., 2018 (Impact Factor: 11.148).

[9] Mohammad I Daoud, Ayman A Atallah, Falah Awwad, Mahasen Al-Najjar, and **Rami Alazrai**, "Automatic superpixel-based segmentation method for breast ultrasound images," *Expert Systems with Applications, Elsevier,* vol. 121, pp. 78-96, May, 2019 (Impact Factor: 5.542).

[10] **Rami Alazrai**, Hisham Alwanni, and Mohammad I. Daoud, "EEG-based BCI system for decoding finger movements within the same hand," *Neuroscience letters , Elsevier,* vol. 698, pp. 113-120, Apr., 2019 (Impact Factor: 2.274).

[11] Yaser A. Mowafi, Tareq Alaqarbeh, and **Rami Alazrai**, "Putting Context in the Network Access of Mobile Applications Using Fuzzy Analytic Hierarchy Process," *International Journal of Decision Support System Technology (IJDSST), IGI Global,* vol. 11, Apr.-Jun., 2019.

[12] **Rami Alazrai**, Motaz Abuhijleh, Hisham Alwanni, and Mohammad I. Daoud, "A Deep Learning Framework for Decoding Motor Imagery Tasks of the Same Hand Using EEG Signals," *IEEE Access, IEEE,* vol. 7, pp. 109612-109627, Aug., 2019 (Impact Factor: 3.745).

[13] **Rami Alazrai**, Saifaldeen Al-rawi,Hisham Alwanni, Mohammad I. Daoud, "Tonic Cold Pain Detection using Choi-Williams Time-Frequency Distribution Analysis of EEG Signals: A Feasibility Study," *Applied Sciences, MDPI,* vol. 9, no. 16, pp. 3433, Aug., 2019 (Impact Factor: 2.474).

[14] Mohammad I. Daoud , Abdullah Alhusseini, Mostafa Ali, and **Rami Alazrai**, "A Game-Based Rehabilitation System for Upper-Limb Cerebral Palsy: A Feasibility Study," *Sensors, MDPI,* vol. 20, no. 8, pp. 2416, Apr., 2020 (Impact Factor: 3.275).

[15] Mohammad I. Daoud , Aya Abuhani, and **Rami Alazrai**, "Reliable and accurate needle localization in curvilinear ultrasound images using signature-based analysis of ultrasound beamformed radio frequency signals," *Medical Physics,* Apr., 2020 (Impact Factor: 3.317).

[16] **Rami Alazrai**, Ali Awad, Baha' A. Alsaify, Mohammad Hababeh, and Mohammad I. Daoud, "A dataset for Wi-Fi-based human-to-human interaction recognition," *Data in Brief, Elsevier,* May, 2020 (Scopus).

[17] **Rami Alazrai**, Amal Al-Saqqaf, Feras Al-Hawari, Hisham Alwanni, Mohammad I. Daoud, "A Time-Frequency Distribution-based Approach for Decoding Visually Imagined Objects using EEG Signals," *IEEE Access, IEEE,*, Jul., 2020 (Impact Factor: 3.745).

[18] **Rami Alazrai**, Mohammad Hababeh, Baha' A. Alsaify, Mostafa Z. Ali, and Mohammad I. Daoud, "An End-to-End Deep Learning Framework for Recognizing Human-to-Human Interactions using Wi-Fi Signals," *IEEE Access, IEEE,*, Oct., 2020 (Impact Factor: 3.745).

[19] Baha' A. Alsaify, Mahmoud M Almazari, **Rami Alazrai**,and Mohammad I. Daoud, "A dataset for Wi-Fi-based human activity recognition in line-of-sight and non-line-of-sight indoor environments," *Data in Brief, Elsevier,* Nov., 2020 (Scopus).

[20] Mohammad I. Daoud, Samir Abdel-Rahman, Tariq M. Bdair, Mahasen S. Al-Najar, Feras H. Al-Hawari, and **Rami Alazrai**, "Breast Tumor Classification in Ultrasound Images Using Combined Deep and Handcrafted Features," *Sensors, MDPI,* Vol. 20, no. 23, pp. 6838, Nov., 2020 (Impact Factor: 3.275).

[21] Feras Al-Hawari, Hala Barham, Omar Al-Sawaeer, Mai Alshawabkeh, Sahel Alouneh, Mohammad I. Daoud, **Rami Alazrai**, "Methods to achieve effective web-based learning management modules: MyGJU versus Moodle," *PeerJ Computer Science,* Vol. 7, pp. e498, Apr., 2021 (Impact Factor: 3.09).

[22] Rami S. Al-Gharaibeh, Mostafa Z. Ali, Mohammad I. Daoud, **Rami Alazrai**, Heba Abdel-Nabi, Safaa Hriez, Ponnuthurai N. Suganthan, "Real-Parameter Constrained Optimization using Enhanced Quality-Based Cultural Algorithm with Novel Influence and Selection Schemes," *Information Sciences, Elsevier,* Vol. 576, pp. 242-273, Oct., 2021 (Impact Factor: 5.91).

[23] Baha A Alsaify, Mahmoud M Almazari, **Rami Alazrai**, Sahel Alouneh, Mohammad I Daoud, "A CSI-Based Multi-Environment Human Activity Recognition Framework," *Applied Sciences, MDPI,* Vol. 12, pp. 930, Jan., 2022 (Impact Factor: 2.47).

[24] Mohammad I Daoud, Ayah F Abu-Hani, Ahmad Shtaiyat, Mostafa Z Ali, **Rami Alazrai**, "Needle detection using ultrasound B-mode and power Doppler analyses," *Medical Physics,* May, 2022 (Impact Factor: 3.317).

[25] **Rami Alazrai**, Motaz Abuhijleh, Mostafa Z Ali, Mohammad I Daoud, "A deep learning approach for decoding visually imagined digits and letters using time–frequency–spatial representation of EEG signals," *Expert Systems with Applications, Elsevier,* vol. 203, pp. 117417, Oct., 2022 (Impact Factor: 8.665).

Refereed Book Chapters

Published and Accepted

[1] Yaser Mowafi, **Rami Alazrai** and Ahmad Zmily , "User-centered Approaches to Context Awareness: Prospects and Challenges," *Brezillon, Patric, Gonzalez Avelino (Eds.), Context in Computing: A cross-disciplinary approach for modeling the real world through contextual reasoning, Springer, New York, 2014.*

[2] Mohammad I. Daoud, **Rami Alazrai**, Abdullah Alhusseini, Dima Shihan, Ekhlass Alhwayan, Dhiah El Diehn I. Abou-Tair, and Talal Qadoummi , "Interactive Kinect-based Rehabilitation Framework for Assisting Children with Upper Limb Cerebral Palsy," *ICTs for improving Patients Rehabilitation Research Techniques,* Springer, New York, Accepted, Oct., 2017.

[3] **Rami Alazrai**, Mohammad I. Daoud, Ala Khalifeh, Nasim Alnuman, Yaser Mowafi, and Deena Alabed , "A Wavelet-based Approach for Estimating the Joint Angles of the Fingers and Wrist using Electromyography Signals," *Communications in Computer and Information Science (CCIS),* Springer, New York, Accepted, Feb., 2019.

[4] Mostafa Z. Ali, Mohammad I. Daoud, **Rami Alazrai**, and Robert G. Reynolds, "Evolving Emergent Team Strategies in Robotic Soccer using Enhanced Cultural Algorithms," *Cultural Algorithms : Tools to Model Complex Dynamic Social Systems,* John Wiley and Sons Ltd, United States, Nov., 2020.

Articles in Refereed Conferences and Workshops

[1] **Rami Alazrai** and C. S. George Lee, "Real-Time Emotion Identification for Socially Intelligent Robots," *Proc. of 2012 IEEE International Conference on Robotics and Automation (ICRA)*, pp. 4106-4111, St. Paul, Minnesota, May 14-18, 2012.

[2] **Rami Alazrai** and C. S. George Lee, "Connectionist-Based Approach for Human Action Identification," *Proc. of 2012 IEEE International Conference on Robotics and Automation (ICRA)*, pp. 1212-1217, St. Paul, Minnesota,

May 14-18, 2012.

[3] **Rami Alazrai** and C. S. George Lee, "An NARX-based Approach for Human Emotion Identification," *Proc. of 2012 IEEE International Conference on Intelligent Robots and Systems (IROS)*, pp. 4571-4576, Vilamoura, Algarve, Oct. 7-12, 2012.

[4] **Rami Alazrai**, Ahmad Zmily and Yaser Mowafi, "Fall Detection for Elderly Using Anatomical-Plane-Based Representation," *Proc. of the* 36^{th} *IEEE International Conference on Engineering in Medicine and Biology society (EMBC)*, Chicago, IL, USA, pp. 5916–5919, Aug. 26-30, 2014.

[5] **Rami Alazrai**, Yaser Mowafi and Eyad Hamad, "A Fall Prediction Methodology for Elderly Based on a Depth Camera," *Proc. of the* 37^{th} *IEEE International Conference on Engineering in Medicine and Biology society (EMBC)*, Milan, Italy, pp. 4990-–4993, Aug. 25-29, 2015.

[6]**Rami Alazrai**, Deena Alabed, Nasim Alnuman, Ala Khalifeh, and Yaser Mowafi, "Continuous Estimation of Hand's Joint Angles from sEMG using Wavelet-based Features and SVR," the 2016 Workshop on ICTs for improving Patients Rehabilitation Research Techniques, *Proc. 2016 Workshop ICTs Improving Patients Rehabilitation Research Techniques (Published by ACM),* pp. 65-68, Lisbon, Portugal, October 13-14, 2016.

[7] **Rami Alazrai**, Ala Khalifeh, Nasim Alnuman, Deena Alabed, and Yaser Mowafi, "An ensemble-based regression approach for continuous estimation of wrist and fingers movements from surface electromyography," *Proc. of the* 38^{th} *IEEE International Conference on Engineering in Medicine and Biology society (EMBC)*, Orlando Florida, USA, pp. 319-322, Aug. 16-20, 2016.

[8] Yaser mowafi, Tareq Alaqarbeh, and **Rami Alazrai**, "A Context-Based Personalization for Mobile Applications' Network Access," *Proc. of the* 13^{th} *International Conference of Mobile Web and Intelligent Information Systems (MobiWIS)*, Vienna, Austria, 2016.

[9] **Rami Alazrai**, Deena Alabed, Nasim Alnuman, Ala Khalifeh, and Yaser Mowafi, "sEMG-based approach for estimating wrist and fingers joint angles using discrete wavelet transform," *Proc. of the 2016 IEEE EMBS Conference on Biomedical Engineering and Sciences (IECBES)*, Kuala Lumpur, Malaysia, pp. 596–599, Dec. 4-8, 2016.

[10] **Rami Alazrai**, Sarah Aburub, Farah Fallouh, and Mohammad I. Daoud, "EEG-based BCI System for Classifying Motor Imagery Tasks of the Same Hand Using Empirical Mode Decomposition," *Proc. of the 2017 IEEE International Conference on Electrical and Electronics Engineering, (ELECO)*, Bursa, Turkey, Nov. 30- Dec.2, 2017.

[11] Mohammad I. Daoud, Samira Khraiwesh, Adnan Zayadeen, and **Rami Alazrai**, "Accurate Needle Localization in Two-Dimensional Ultrasound Images," *Proc. of the 2017 IEEE International Conference on Electrical and Electronics Engineering, (ELECO)*, Bursa, Turkey, Nov. 30- Dec.2, 2017.

[12] **Rami Alazrai**, Faisal Alqasem, Saqr Alaarag, Khalil M. Ahmad Yousef, and Mohammad I. Daoud, "A Bispectrum-based Approach for Detecting Deception using EEG Signals," *Proc. of the IEEE 20th International Conference on e-Health Networking, Applications and Services (Healthcom)*, Ostrava, Czech Republic, Sept.17 - Sept.20, 2018.

[13] Mohammad I. Daoud, Ahmad Shtaiyat, and **Rami Alazrai**, "Enhanced Needle Detection in Ultrasound Images using Acoustic Excitation and Ultrasound Image Analyses," *Proc. of the IEEE 11th Biomedical Engineering International Conference (BMEiCON)*, Chiang Mai, Thailand, Thailand, Nov.21 - Nov.24, 2018.

[14] Mohammad I. Daoud, Nedaa Abu-Sabbah, Abdel-Latif Alshalalfah, Mahasen Al-Najar, and **Rami Alazrai**, "Investigating the Influence of the Kernel Size on the Performance of Three-Dimensional Ultrasound Volume Reconstruction Methods," *Proc. of the IEEE 11th Biomedical Engineering International Conference (BMEiCON)*, Chiang Mai, Thailand, Thailand, Nov.21 - Nov.24, 2018.

[15] Mohammad I. Daoud, Amro Saleh, Ismail Hababeh, and **Rami Alazrai**, "Content-based Image Retrieval for Breast Ultrasound Images using Convolutional Autoencoders: A Feasibility Study," *Proc. of the IEEE 3rd International Conference on Bio-engineering for smart technologies (BioSMART)*, Paris, France, Apr.24 - Apr.26, 2019.

[16] **Rami Alazrai**, Khalil M. Ahmad Yousef, and Mohammad I. Daoud, "Emotion Recognition Based on Decoupling the Spatial Context from the Temporal Dynamics of Facial Expressions," *Proc. of the IEEE 6th International Symposium on Networks, Computers and Communications (ISNCC)*, Istanbul, Turkey, Jun.18 - Jun.20, 2019.

[17] **Rami Alazrai**, Saifaldeen Al-Rawi, and Mohammad I. Daoud, "A Time-Frequency Distribution Based Approach for Detecting Tonic Cold Pain using EEG Signals ," *Proc. of the IEEE 19th International conference on Bioinformatics and Bioengineering (BIBE)*, Athens, Greece, Oct.28 - Oct.30, 2019.

[18] Mohammad I. Daoud, Samer Abdel-Rahman, and **Rami Alazrai**, "Breast Ultrasound Image Classification using a Pre-trained Convolutional Neural Network," *Proc. of the 15th IEEE International Conference on Signal-Image Technology and Internet-Based Systems (SITIS)*, Sorrento, Italy, Nov.26 - Nov.29, 2019.

[19] **Rami Alazrai**, Mohammad Hababeh, Baha' A. Alsaify, and Mohammad I. Daoud, "Anatomical Planes-Based Representation for Recognizing Two-Person Interactions from Partially Observed Video Sequences: A Feasibility Study ," *Proc. of the IEEE 8th International Conference On Electrical And Electronics Engineering (ICEEE 2021)*, Antalya, Turkey, Apr. 9 - Apr.11, 2021.

[20] Mohammad I. Daoud, Ayah Abuhani, Adnan R. Zayadeen, and **Rami Alazrai**, "Needle Detection in Ultrasound Images using Ultrasound Beamformed RF Signals," *Proc. of the IEEE 8th International Conference On Electrical And Electronics Engineering (ICEEE 2021)*, Antalya, Turkey, Apr. 9 - Apr.11, 2021.

[21] Baha A. Alsaify, Mahmoud M. Almazari, **Rami Alazrai**, and Mohammad I. Daoud, "Exploiting Wi-Fi Signals for Human Activity Recognition," *Proc. of the IEEE 12th International Conference on Information and Communication Systems (ICICS 2021)*, Valencia, Spain, May 24 - May 26, 2021.

[22] **Rami Alazrai**, Ali Awad, Baha A. Alsaify, and Mohammad I. Daoud, "A Wi-Fi-based Approach for Recognizing Human-Human Interactions," *Proc. of the IEEE 12th International Conference on Information and Communication Systems (ICICS 2021)*, Valencia, Spain, May 24 - May 26, 2021.

[23] Mohammad I. Daoud, Yara Alrahahleh, Samir Abdel-Rahman, Baha A. Alsaify, and **Rami Alazrai**, "COVID-19 Diagnosis in Chest X-ray Images by Combining Pre-trained CNN Models with Flat and Hierarchical Classification Approaches," *Proc. of the IEEE 12th International Conference on Information and Communication Systems (ICICS 2021)*, Valencia, Spain, May 24 - May 26, 2021.

[24] **Rami Alazrai**, Ali Awad, Mostafa Z Ali, Mohammad I Daoud, "An Approach for Recognizing Two-Human Interactions Using Channel State Information," *Proc. of the IEEE 9th International Conference On Electrical And Electronics Engineering (ICEEE 2022)*, Antalya, Turkey, Mar. 28 - Mar.31, 2022.

Invited Presentations

[1] **Rami Alazrai**, "Brain Computer Interface and Human Behaviour Understanding," *The Fourth Arab American Frontiers of Science, Engineering, and Medicine Symposium*, U.S. National Academy of Sciences, hosted by the Masdar Institute of Science Technology, Abu Dhabi, UAE, Nov. 2016.

[2] **Rami Alazrai**, "Human-Centered Computing," *First Annual GJU Research Day*, German Jordanian University, Jordan, Oct. 2016.

Research Grants and Funded Projects

[1] Project title: EEG-based BCI System for Motor Imagery Task Classification.
Funding agency: Seed Grant Program, Deanship of Graduate Studies and Scientific Research, German Jordanian University, Jordan
Investigators: **Rami Alazrai** and Yaser Mowafi
Project period: 2014 - 2016
Amount of fund: 10,000.00 USD.

[2] Project title: Activities of Daily Living (ADLs) Monitoring System.
Funding agency: Seed Grant Program, Deanship of Graduate Studies and Scientific Research, German Jordanian University, Jordan
Investigators: **Rami Alazrai** and Yaser Mowafi
Project period: 2014 - 2016
Amount of fund: 33,898.00 USD.

[3] Project title: A Combined EMG and EEG-based BCI System for Hand Motor Imagery Task Classification and Controlling Prosthetic Hand.
Funding agency: Scientific Research Support Fund, Jordan
Investigators: **Rami Alazrai**, Nasim Alnuman, Ala Khalifeh, and Yaser Mowafi
Project period: 2016 - 2018
Amount of fund: 98,870.00 USD.

[4] Project title: A Bottom-up Approach for Opening up Education in South-Mediterranean Countries (OpenMEd).
Funding agency: Erasmus+ programme - Key Action 2 - Capacity Building in the Field of Higher Education, European Commission
Investigators: Mohammad Daoud, Manar Fayyad, Salem Al-Agtash, Loay Salhieh, Rana Sabri, Sahel Alouneh, and **Rami Alazrai**
Project period: 2015 - 2018
Amount of fund: 871,229.00 Euro.

[5] Project title: Jordan Opportunity for Virtual Innovative Teaching And Learning (JOVITAL).

Funding agency: Erasmus+ programme, European Commission
Investigators: Mohammad Daoud, **Rami Alazrai**, Sahel Alouneh, and Firas Hawari
Project period: 2017 - 2019
Amount of fund: 999, 901.00 Euro.

[6] Project title: A Fusion-based Approach for Fall Detection in Indoor Environment Using the Channel State Information of Wi-Fi Signals and Depth-Map videos.
Funding agency: Seed Grant Program, Deanship of Graduate Studies and Scientific Research, Jordan University of Science and Technology, Jordan
Investigators: Baha' Alsaifi and **Rami Alazrai**
Project period: 2018 - 2020
Amount of fund: 22, 325.16 JOD.

[7] Project title: Three-Dimensional Ultrasound imaging using Virtual reality sensing technology.
Funding agency: Seed Grant Program, Deanship of Graduate Studies and Scientific Research, German Jordanian University, Jordan
Investigators: Mohammad I.Daoud, **Rami Alazrai**, and Mahasen Al-Najar
Project period: 2018 - 2020
Amount of fund: 30, 000.00 JOD.

[8] Project title: A Deep Learning Framework for Decoding Visually Imagined Objects using EEG Signals.
Funding agency: Seed Grant Program, Deanship of Graduate Studies and Scientific Research, German Jordanian University, Jordan
Investigators: **Rami Alazrai**
Project period: 2020 - 2022
Amount of fund: 50, 285.00 JOD.

SCHOLARSHIPS AND AWARDS

[1] NSF Graduate Scholarship, National Science Foundation Graduate Research Assistantship, Purdue University, West Lafayette, IN, USA, 2009–2013, (Level: National, Value: 54,000.00 USD/yr).

[2] Graduate Scholarship, Master and Ph.D. scholarships, German Jordanian University, Ministry of Higher Education, Jordan, 2008–2013, (Level: National, Value: 55,000.00 USD/yr).

[3] Honour List, Faculty of Engineering, Jordan Univeristy of Science and Technology, Irbid, Jordan, 2004–2007.

[4] Tuition Scholarship, Jordan Univeristy of Science and Technology, Irbid, Jordan, 2004–2007, (Level: Institutional, Value: 2050 USD/yr).

TEACHING AND ADVISING

Courses Taught

School of Electrical Engineering and Information Technology,
German Jordanian University

[1] CS116 – Computing Fundementals

[2] CE211 – Digital Design

[3] CE2110 – Digital Design Lab

[4] CME319 – Numerical Analysis and Linear Algebra

[5] CE355 – Data Communication

[6] CE521 – Machine Learning

[7] CE701 – Probability and Stochastic Modeling

[8] CE716 – Pattern Recognition

[9] CE717 – Optimization Methods

[10] CE715 – Computer Vision

Courses Taught

Department of Computer Science and Engineering,
American University of Sharjah

[1] COE221 – Digital Systems

[2] COE251 – Introduction to Computer Systems (Intel 8086 Microprocessor)

[3] COE370 – Communications Networks

Course and Curriculum Development

School of Electrical Engineering and Information Technology,
German Jordanian University

[1] Lead the efforts to establish the non-thesis track of the Master's program in Computer Engineering at GJU – 2016.

[2] Lead the efforts to establish the CISCO networking academy at the Computer Engineering department, German Jordanian University – 2016.

[3] Revising and updating the study plan of the Bachelor program in Computer Engineering to meet the requirements of the Study Plan Committee at GJU and the Higher Education Accreditation Commission, Jordan – 2016.

[4] Developing the material for several courses of the Master's program in Computer Engineering, including: CE701 – Probability and Stochastic Modeling, CE714 – Principles of Cognitive Robots, CE715 – Computer Vision, CE716 – Pattern Recognition, and CE717 – Optimization Methods.

[5] Preparing the lab assignments for the CE2110 – Digital Design Lab.

[6] Lead the efforts to establish the computer networks lab at the Computer Engineering department, German Jordanian University – 2016.

Advising (non-research)

[1] Academic advisor for the undergraduate computer engineering students class of 2015, 2016, 2017, and 2018.

[2] Academic advisor for the students of the Master's program in computer engineering class of 2015, 2016, 2017, and 2018.

Advising – Bachelor Theses Supervised/Co-Supervised

Department of Computer Engineering
School of Electrical Engineering and Information Technology
German Jordanian University

[1] Project title: An EEG-based BCI for Human Emotion Identification.
Role: Supervior
Student(s): Ali Malhas
Completion date: Jun. 2015

[2] Project title: EEG-based Tonic Cold Pain Identification Using Discrete Wavelet Transform.
Role: Supervior
Student(s): Mohammad Momani
Completion date: Jun. 2016

[3] Project title: Continuous Estimation of Wrist and Fingers Joint Angles from sEMG Signals using Wavelet-based Features and Support Vector Regression.
Role: Supervior
Student(s): Deena Alabed
Completion date: Jun. 2016

[4] Project title: A Kinect-based System for Cerebral Palsy Rehabilitation
Role: Co-supervior with Dr. Mohammad Daoud
Student(s): Abdullah Alhusseini, Dima Shihan, and Ekhlass Alhwaya
Completion date: Jun. 2016

[5] Project title: EMD-based Approach for Classifiyng MI Tasks within the Same Limb Using EEG Signals.
Role: Supervior
Student(s): Farah Fallouh and Sarah Abualrub
Completion date: Jun. 2017

[6] Project title: A Time-Frequency Distribution-Based Approach for Deception Detection Using EEG Signals.
Role: Supervior
Student(s): Fasial Alqasem and Saqer Alaraj
Completion date: Jan. 2018

[7] Project title: Human-Human Interaction Recognition from Partially Observed Video Sequences
Student(s): Mohammad Hababeh
Completion date: Aug. 2018

[8] Project title: Deep Learning Approach for Classifying MI Movements
Student(s): Motaz AbuHijleh
Completion date: Jan. 2019

[9] Project title: A Deep Learning Approach for Decoding Four Visually Imagined Objects
Student(s): Mohammad Kaylani
Completion date: Jul. 2020

[10] Project title: An EMD-based Approach for recognizing human-human interactions using CSI signals
Student(s): Hussam Malkawi
Completion date: Aug. 2021

[11] Project title: A deep learnign approach for recognizing human emotions using EEG signals
Student(s): Tala Khlaif
Completion date: Jun. 2022

Advising – Master Theses Supervised/Co-Supervised

Department of Computer Engineering
School of Electrical Engineering and Information Technology
German Jordanian University

[1] Project title: A TFD-based Approach for Classifying Human Emotions Using EEG signals.
Role: Supervior
Student(s): Rasha Alhmoud
Completion date: Aug. 2018

[2] Project title: An EEG-Based Approach for Detecting Tonic Cold Pain using Time-Frequency Distribution.
Role: Supervior
Student(s): Saifaldeen AL-Rawi
Completion date: May 2019

[3] Project title: A Game-based Approach for Cerebral Palsy Rehabilitation.
Role: Co-supervior with Dr. Mohammad Daoud
Student(s): Abdulla Alhusseini
Completion date: Aug. 2019

[4] Project title: Wi-Fi-Based Human Interaction Recognition System.
Role: Supervior
Student(s): Ali Mohamad Awad
Completion date: Jan. 2020

[5] Project title: An EEG-Based Approach for Decoding Visual Imagery.
Role: Supervior
Student(s): Amal Ramzi Al-saqqaf
Completion date: Aug. 2020

[6] Project title: A Surface Electromyography-based System for Estimating the Angles of the Metacarpophalangeal Joints of the Hand.
Role: Supervior
Student(s): Ruaa' Alqaisi
Completion date: Dec. 2020

PROFESSIONAL SERVICES

Journal and Conference Reviewing

[1] Referee, Journal of Pattern Recognition, Elsevier, 2015 – Present.

[2] Referee, Journal of Medical Systems, Springer, 2016 – Present.

[3] Referee, Journal of Neural Computing and Applications, Springer, 2017 – Present.

[4] Referee, IEEE International Conference on Robotics and Automation, 2008 – 2013.

[5] Referee, IEEE International Conference On Intelligent Robots and Systems, 2008 – 2013.

[6] Referee, IETE Journal of Research, Taylor and Francis, 2017 – Present.

[7] Member of the technical program committee, The 1^{st} International Workshop on Pattern Recognition, Tokyo, Japan, 2016.

[8] Referee, IEEE Access Journal, 2017 – Present.

[9] Neuroscience Letters, Elsevier, 2017 – Present.

[10] IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019 – Present.

[11] IEEE Systems Journal, 2019 – Present.

[12] IEEE Transactions on Cognitive and Developmental Systems, 2020 – Present.

Conference Organization

[1] Member of the organizing committee, The 10^{th} National Technology Parade (NTP 2017), Amman, Jordan, 2017.

Administrative Services at German Jordanian University

[1] Member of the University Council, German Jordanian University, 2016 – 2019.

[2] Member of the Graduate studies Council, German Jordanian University, 2016 – 2017.

[3] Member of the School Council, School of Electrical Engineering and Information Technology, German Jordanian University, 2014 – Present.

[4] Memeber of the Computer Engineering Department Council, School of Electrical Engineering and Information Technology, German Jordanian University, 2013 – Present.

[5] Member of the Scientific Research and Graduate Studies Committee, School of Electrical Engineering and Information Technology, German Jordanian University, 2016 – Present.

[6] Member of the central purchasing and tenders committee, German Jordanian University, Oct. 2019 – Present.

[7] Head of the central purchasing and tenders committee, German Jordanian University, Jun. 2020 – Present.

TECHNICAL SKILLS

Operating Systems: Linux, UNIX, and Microsoft Windows.

Programming Languages and Packages: C, C++, C#, MATLAB, Python, Open Source Computer Vision Library (OpenCV), EEGLab Toolbox, Higher-Order Spectral Analysis (HOSA) Toolbox, Time-Frequency Signal Analysis and Processing (TFSA) Toolbox, MotionMonitor Motion Capture Software, Nexus Motion Capture Software, LaTeX.

Professional Certificates: Cisco Certified Network Associate (CCNA), 2007.

Languages: Arabic(native), English(fluent), French(fair).

REFERENCES

[1] **C. S. George Lee, Professor**
Purdue University
School of Electrical and Computer Engineering
465 Northwestern Ave.
West Lafayette, Indiana 47907-2035
Tel: +1 765 49-41384
Fax: +1 (765) 494-6951
E-mail: csglee@purdue.edu

[2] **Mohammad Abu Khater, Professor**
Purdue University
School of Electrical and Computer Engineering
465 Northwestern Ave.
West Lafayette, Indiana 47907-2035
Tel: +1 765 33-77121
E-mail: mabukhat@purdue.edu