



Samer Alabed

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PERSONAL INFORMATION

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Nationality German and Jordanian

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Web Pages [@GJU](#) [@MyPage](#) [@Scopus](#) [@Linkedin](#) [@facebook](#) [@Google](#)

EDUCATION

2008 – 2012 Ph.D. degree (Dr. Ing) in Electrical Engineering and Information Technology / Digital Signal Processing with great honor "magna cum laude", Darmstadt University of Technology, Darmstadt-City of Science, Germany.

2003 – 2005 M.Sc degree in Electrical Engineering / Digital Signal Processing with highest honors (GPA: 3.88/4), University of Jordan, Jordan.

1999 - 2003 B.Sc degree in Electrical and Computer Engineering with (GPA: 3.50/4), Hashemite University, Jordan.

ACADEMIC APPOINTMENTS

2023-present **Professor of Electrical, Computer & Biomedical Engineering at the German Jordanian University**

2023-2026 **Director of Accreditation and Quality Assurance Center**

2023-2025 **Director of E-Learning and Academic Performance Improvement Center**

At the German Jordanian University (GJU), I have provided strategic leadership and played a key role in advancing institutional quality, accreditation, excellence, rankings, integrity, sustainability, and strategic development. My major contributions include:

- **Quality Assurance & ISO Accreditation:** Led the university's quality assurance initiatives, resulting in the successful achievement of ISO 9001 and ISO 21001 certification in August 2024 and the establishment of a comprehensive university-wide quality assurance management system.
- **Academic Accreditation:** Led and supported major local and international accreditation initiatives, including implementation of the National Qualifications Framework (NQF) and German Accreditation at GJU. I also led accreditation activities that contributed to the achievement of ABET accreditation at the American University of the Middle East (AUM).
- **University Rankings:** Led and coordinated institutional activities related to major international rankings, including QS, Times Higher Education (THE), SCImago, UI GreenMetric, and THE Impact

Rankings. These efforts contributed to a substantial improvement in GJU's QS World University Ranking, from 1200-1400 to 780-790.

- **Institutional Excellence:** Provided leadership in university excellence initiatives, contributing to GJU achieving the Seal of Excellence for Public Universities and second place in the King Abdullah II Award for Excellence during 2023-2026.
- **Integrity & Anti-Corruption:** Led the university's Integrity and Anti-Corruption Committee, contributing to GJU achieving second place nationally in the Excellence in Integrity and Anti-Corruption category during 2023-2026.
- **Entrepreneurship & Sustainability:** Played a leading role in advancing university entrepreneurship and sustainability initiatives, contributing to GJU receiving first place in the Arab World for "Outstanding Contribution to Entrepreneurship" by Times Higher Education.
- **Strategic Planning & Risk Management:** Contributed extensively to the development and implementation of the university's strategic and operational plans, institutional action plans, risk management frameworks, and academic program quality improvement plans.
- **Institutional Alignment:** Ensured alignment among faculties, academic departments, and administrative units with the university's vision, mission, strategic objectives, and institutional priorities.
- **Academic Program Development:** Led and supported the continuous improvement and revision of academic programs and study plans to ensure alignment with national and international accreditation standards and evolving higher education requirements.
- **Quality Culture:** Promoted and strengthened a culture of quality and continuous improvement among academic and administrative staff through institutional initiatives, assessment processes, training, and professional development.
- **Self-Evaluation & Institutional Assessment:** Coordinated and supported faculty and institutional self-evaluation processes, identifying strengths, weaknesses, risks, and opportunities for improvement and translating findings into actionable improvement plans.
- **Accreditation & Ranking Infrastructure:** Established and maintained institutional databases and information systems required for accreditation, quality assurance, benchmarking, and international university rankings.
- **Continuous Improvement:** Developed quality standards, policies, procedures, monitoring mechanisms, and improvement plans to support the continuous assessment and enhancement of academic and administrative performance.
- **Training & Capacity Building:** Organized and delivered training and professional development activities for academic and administrative staff throughout the academic year, particularly in quality assurance, accreditation, assessment, and institutional effectiveness.
- **Compliance & Monitoring:** Monitored compliance with national and international quality standards and ensured the implementation of recommendations resulting from planning, evaluation, accreditation, and institutional assessment processes.
- **E-Learning & Academic Development:** Supported the continuous development of e-learning, academic performance improvement, innovation, intellectual growth, and sustainable institutional development.
- **Risk & Public Safety:** Served as Chair of the University Public Safety and Risk Management Committee, contributing to institutional risk identification, mitigation, preparedness, and compliance.

- **University Governance:** Served as a member and/or chair of numerous university-level committees, contributing to institutional governance, strategic decision-making, academic development, quality assurance, integrity, risk management, and continuous improvement.

2022-2023 Associate Professor, Department Chair of Biomedical Engineering at the Germany Jordanian University, Jordan.

2022-2023 Associate Professor, Exchange Coordinator of Biomedical Engineering at the Germany Jordanian University, Jordan.

At the German Jordanian University, I have directly involved in the following:

- [Preparing a new study plan](#). During 2022-2023, the study plan of biomedical engineering is totally modified where the prepared study plan is approved by the department council, study-plan committee, school council, and deans' council.
- [Establishing two tracks in biomedical engineering for the first time](#). The first track in the field of biomedical electronics and signal processing and the second one in the field of bionic and biomechanical engineering. The established tracks are approved by the department council, study-plan committee, school council, and deans' council.
- Establishing a dual study program in biomedical engineering for the first time. The established program is approved by the department council, study-plan committee, school council, and deans' council.
- Preparing a [nursing study plan](#) for the first time after cooperation with tens of professors from local and international universities. The study plan of nursing is prepared and approved by the study-plan committee, deans' council, and the Jordan higher education accreditation commission.
- [Establishing a nursing department and nursing school](#) at the GJU for the first time which is approved by the Jordan higher education accreditation commission.
- [Signing tens of MoUs](#) with national and international organizations and universities for research, employment and teaching purposes.
- Serving as quality assurance liaison officer for the school of applied sciences.
- Faculty recruitment and development, faculty evaluation, program development, program review, student advisement, departmental budgeting and budget control, class schedule planning, and general supervision of the teaching, research, and service and related scholarly activities of the department.
- Teaching, preparing, and modifying courses as well as supervise graduation projects
- Serving as a head for several committees at the college level such as curriculum development committee, quality assurance committee, and GP committee.

- Serving as a head for several committees at the department level such as study-plan committee, research committee and curriculum development committee.
- Serving as a member for several committees at the university level such as curriculum and program development committee and quality assurance committee.
- Serving as a member for school council.
- Serving as a member for several school and department committee.
- Serving as an exchange coordinator for biomedical engineering students studying in Germany.

2019 – 2022

Associate Professor of Electrical Engineering / Signal Processing Track, American University of the Middle East, Kuwait.

2015 – 2019

Assistant Professor of Electrical Engineering / Signal Processing Track, American University of the Middle East, Kuwait.

At the American University of the Middle East (from 2015-2022), I have directly involved in:

- Teaching /preparing/proposing graduate and undergraduate courses in electrical engineering / Signal processing track.
- Supervising undergraduate projects in all fields of electrical engineering (EE) / signal processing
- Serving as an ABET coordinator for EE department.
- Serving as a coordinator of the research committee.
- Serving as a coordinator for curriculum development committee.
- Serving as a coordinator for lab committee.
- Serving as a coordinator for many EE courses
- Serving as a coordinator for graduation project committee.
- Serving as a member in the exam committee.
- Serving as a coordinator for academic activities.
- Serving as a member in many clubs such as robotic, nanotechnology, space... etc.

2008 – 2015

Postdoctoral Researcher, Teaching Assistant, Research Assistant, Darmstadt University of Technology (TU-Darmstadt), Darmstadt, Germany.

At the Darmstadt University of Technology (from 2008-2015), I have directly involved in:

- Lecturer and project supervisor of graduate courses in several fields related to digital signal processing such as speech, audio, and image processing, smart antennas, smart IOT health care systems using wireless sensor networks and other related fields.
- Teaching and supervising PhD, MSc, and BSc students in the fields of signal processing and other related fields.
- Developing & proposing advanced and novel digital signal processing algorithms under projects supported by the *LOEWE Priority Program, Cocoon, the European Research Council (ERC), German Research Foundation (DFG), the German Academic Exchange Service (DAAD), State of Hesse, TU-Darmstadt, European Union (EU) and many other Foundations, companies and institutes.*
- Developing advanced digital and statistical signal processing codes, prototypes, and algorithms to be used in several systems and application. The work was with the company called mimoOn GmbH, Duisburg and for commercial purposes.
- Developing advanced signal processing algorithms under a project supported by TU-Darmstadt and Fraunhofer Institute.

- Many researches with graduate students and research assistants in areas related to signal processing including speech, audio, & image processing, smart antennas, smart IOT health care systems using wireless sensor networks, and other related fields.
- Supervising several PhD students, tens of master theses, and hundreds of Bachelor projects.

2003-2008

Teaching Assistant, Research Assistant, Lecturer, University of Jordan, Amman, Jordan.

- Teaching and supervising electrical and computer engineering labs and courses.
- Developing & proposing advanced and new algorithms in the fields of biomedical signal processing.

2006-2008

Lecturer, Wadi Al-Sir international college (UNRWA, United Nations), Amman, Jordan.

- Lecturer and project supervisor of undergraduate courses in the fields of electrical and

TEACHING EXPERIENCE

My objective as a teacher is to motivate my students to develop their own learning interests and critical thinking, establishing a learner- centered environment in the classroom. In particular, teaching a wide range of courses for bachelor and master students - from first year to advanced courses in almost all fields related to signal processing, wireless communications as well as electrical engineering and information technology- during my graduate career at several universities has made me aware of the needs and interests of a culturally diverse student body. In the last 20 years, I have designed and taught the following courses, Labs, and tutorials for both undergraduate and graduate levels in signal processing, wireless communications as well as electrical engineering and information technology:

Signals and systems with its Lab	Medical signal processing 1 and 2
Medical Telemetry	Digital electronics
Digital signal processing with its Lab	Communication System I and 2 with their Labs
Biomedical electronics	Wireless Communication Systems
Antenna signal processing	Speech and Image Processing
Electrical Circuit 1 with its lab	Electrical Circuit 2 with its lab
Electronics 1 with its lab	Electronics 2 with its lab
Probability and Statistics	Digital systems and its Lab
Differential Equations	Applied Mathematics for Engineers
Filter Design	Numerical Methods for Engineers
MIMO systems	Microprocessor and Embedded Systems with its Lab
Optics	Modern Control systems
Electromagnetics 1-2	Biomedical Sensors and Transducers
Digital Control systems	Data Security for Health Information Systems
Linear Algebra	Graduation Project 1 and 2
Digital Electronics	Bioinformatics
Machine Learning for Signal Processing	Microcontrollers
Cryptography	Electrical Machines
Engineering Economy	Advanced DSP Algorithms for Smart Antenna Systems
Instrumentations 1 and 2	Optical communications
Radar systems	Assembly Language (Theory and Lab)
Project Seminar in smart IOT systems	C Language (Theory and Lab)
C++ Language (Theory and Lab)	Quick and Turbo Basic (Theory and Lab)
MATLAB	Introduction to security
Smart Health care systems	MATLAB and Simulink for Signal Processing

Note that I have served as a director of the e-learning and academic performance improvement center from 2023 to 2025 where I was responsible for improving the academic performance for the whole university where at the German Jordanian University, I have directly involved in the following:

- Commitment to support continuous e-learning and fostering intellectual growth and sustainable development.
- Quality of the programs.
- Conducting training courses
- Developing E-learning through videos
- Checking all online, blended and face-to-face courses to be fit with the local accreditation.
- Doing everything needed to improve the academic performance

INDUSTRIAL EXPERIENCE

Regarding Industrial expertise, I have worked and cooperated with several industrial companies such as MIMOON, Fraunhofer, Siemens, Intel, and several universities and organizations during my Ph.D and postdoctoral studies as follows:

- Developing advanced digital and statistical signal processing codes, prototypes, and algorithms to be used in wireless communication systems and application. The work was with the company called MimoOn GmbH, Duisburg (<http://www.mimoon.de>) and for commercial purposes.
- Secured approximately USD 50,000 in competitive research funding from the Scientific Research and Innovation Support Fund (SRISF), Jordan, under Research Grant/Contract No. SE-MPH/4/2024, for research in biomedical engineering, biomedical signal processing, and physiological signal analysis. The grant supports the development of advanced research capabilities and biomedical instrumentation, as well as research activities involving the acquisition, processing, analysis, and compression of physiological signals, including ECG, EEG, EMG, and PCG.
- secured a [funding of approximately \\$21,000 from Aeon Medical Supplies LLC](#) to design an IoT-based medical device.
- Seed Research Grant with an amount of 42000\$ from GJU in 2023.
- Several researches with graduate students and research assistants in areas related to signal processing including speech, audio, & image processing, smart antennas, smart IOT health care systems using wireless sensor networks, and other related fields.
- Developing advanced signal processing algorithms to be used in the medical hearing aids under projects supported by AUM.

RESEARCH HIGHLIGHTS

- I was classified during the years from 2019 to 2021 among the top 2% of the influential scientists in the field of digital signal processing in the world in the study (classification) conducted by scientists from the prestigious Stanford University and is known in the academic community as the "**Stanford classification**". The report is based on several factors, the most important of which are the strength of international scientific publishing, the number of scientific citations for research, and participation in reviewing and editing scientific research in reputable journals. The third report was published in October 19, 2021 as shown in the following link: <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/2>
- I was classified among the best researchers according to the AD Scientific Index since it was established in 2021 by Prof. Dr. Murat ALPER as shown in the following link: <https://www.adscientificindex.com/scientist/samer-alabed/453930>.
- I am an IEEE senior member and served as the head of the research committee as well as the head of one research group, i.e., the Signal Processing group. I have obtained several awards and funds from IEE, IEEE, DAAD, DFG, ERC such as the best paper award from IEEE WSA. My researches have been supported by several grants

and funds from EU and German companies and research organization such as **LOEWE Priority Program Cocoon, the European Research Council (ERC), German Research Foundation (DFG), the German Academic Exchange Service (DAAD), State of Hesse, TU-Darmstadt, and European Union (EU), and other Foundations.** Moreover, I organized and was invited to so many conferences and workshops. Now I reached to 50 papers published in prestigious International Q1/Q2 Scopus-indexed Journals & conference.

Research interests:

- Medical signal processing
- Internet of Things (IoT) and Internet of Medical Things (IoMT),
- Artificial Intelligence (AI), Machine learning (ML), Neural Network (NN), and Deep learning (DL).
- Wireless sensors and relay networks
- Digital Signal processing including RF/speech/audio/image signal processing
- Signal Processing for wireless communication systems.
- Multi-antenna signal processing
- Mathematics, optimization methods, and software development.

ESTABLISHMENT OF LABS

During the period from 2015 to 2022, I have served as a head of the lab committee to

- Establish, improve & maintain EE Labs
- Prepare and modify lab manuals and lab forms
- Follow up the problems, issues, modifications and suggestions available in the improvement forms
- Follow up required software, items and components available in the inventory forms
- Prepare and follow up requisition forms

Therefore, at the American university of the middle east, I established the following labs:

Micro Electrical Circuits lab	Micro Electronics Design Lab
Mixed Signal & Data Processing Lab	Optics lab
Electronics Lab	Digital Signal Processing Lab
Communication Systems Lab	IoT Lab
Electric Power and Machines Lab	

CURRICULUM DEVELOPMENT

I have established the following colleges, Departments, and tracks during the last 10 years:

B.Sc. in Biomedical Engineering / Instrumentation Engineering Track	B.Sc. in Biomedical Engineering / Bionic and biomechanical Engineering Track
B.Sc. in Biomedical Engineering / Smart healthcare systems Track	B.Sc. in Biomedical Engineering / Dual study program
B.Sc. in Electrical Engineering / Signal Processing Track	B.Sc. in Electrical Engineering / Biomedical Engineering Track
B.Sc. in Electrical Engineering / Telecommunication Track	M.Sc. in Electrical Engineering and Information Technology
B.Sc. in Nursing	College of Nursing

ACCREDITATION ACHIEVEMENT

I have served as head of the accreditation and quality assurance department. I participated in preparing and reviewing the whole material required for the accreditation and quality assurance and leading the effort to pursue and maintain Local and international accreditation including

- The development of assessment plans, conducting robust and innovative research, departmental structuring, plan implementations
- Coordinating the logistics of accreditations
- Supervising all assessment committees and focus group committees
- Preparing student outcome assessment matrix, assessment instruments and performance indicators, course syllabi, evaluation & continuous improvements, course mapping, and instructor grading sheets
- Leading the GJU team to get the National Qualification Framework for biomedical engineering.

Note that I have received ***Appreciation Certificate*** from the American University of the Middle East due to my hard work and dedication efforts for my contributions. After coordinating the ABET accreditation for the department of electrical engineering and information technology, we achieved, for the first time, a 6-year full accreditation for the department. I am currently working as a head of accreditation and quality assurance center at the German Jordanian University leading the effort to pursue and maintain Local and international accreditations.

I have also received ***Appreciation Certificate*** in 2023 from the president of the German Jordanian University (GJU) due to my hard work and dedication efforts in establishing the school of nursing at GJU.

ACADEMIC ADMINISTRATIVE APPOINTMENTS

Director of Accreditation and Quality assurance Center, German Jordanian University, Jordan

- See the responsibilities in [page 1](#).

Director of E-Learning and Academic Performance Improvement Center, German Jordanian University, Jordan

- See the responsibilities in [page 1](#).

Head of Biomedical Engineering Department, German Jordanian University, Jordan

- See the responsibilities in [page 2](#).

Exchange Coordinator for the German year, German Jordanian University, Jordan

- See the responsibilities in [page 2](#).

ABET Coordinator for EE department, American University of the Middle East, Kuwait.

Main responsibilities and achievements:

- Oversaw the ABET accreditation for the department of electrical engineering.
- Achieved a 6-year full accreditation for the department.

Note that I have received ***Appreciation Certificate*** from AUM due to my hard work and dedication efforts for my contribution at AUM.

Coordinator of the Curriculum Development Committee

Since I am the head of the signal processing track at the EE department, I was responsible for curriculum development committee in electrical engineering department where I participated in preparing, proposing, improving, and reviewing the EE curriculum, EE tracks (especially the signal processing tracks), syllabi, guidance plans, course folders, course projects, course material, as well as proposing new EE tracks such as Biomedical signal processing, machine learning, and IOT. Moreover, I have prepared all courses in the signal processing track from scratch.

Coordinator of the Lab Committee

I was responsible for all labs in electrical engineering department where I participated in establishing EE labs from scratch as well as continuously improving, and reviewing their curriculum, equipment, lab manuals and materials, software, syllabi, guidance plans, course folders, course projects, ... etc.

Coordinator for Signal Processing Track (SPT)

From 2015 to 2022, I am the coordinator of the signal-processing track. I have served as a coordinator for all course related to SPT including signals and systems, digital signal processing with its applications, communication system I & 2 with their Labs, control & feedback systems, electrical circuit 1 with its lab, electrical circuit 2 with its lab, electronics 1 & 2, digital electronics, electromagnetics 1 & 2, probability and statistics and many others.

Coordinator of the research committee

I served as a coordinator for the research committee in order to improve the research output of the EE department and improve the overall rank of the university.

Coordinator of the graduation project committee

I served as a coordinator for the graduation project (GP) committee where I participated in proposing graduation projects, preparing GP folders, GP abstracts, GP activities, ... etc.

Coordinator for academic activities

I served as a coordinator for academic activities where I participated in proposing and running academic activities during the academic semesters.

Coordinator for several focus groups

I served as a coordinator for several focus groups such as the signal processing focus group and electronics and circuits focus group in order to

- Check the issues, concerns, and problems in EE courses and labs and solve them.
- Improve the EE tracks
- Continuously improve the course scheduling, course folders, course material, and course projects
- Prepare and improve graduate and undergraduate curriculums
- Continuously improve the learning process.

Head of the quality assurance (QA) committee

I served a head of the quality assurance committee in order continuously improve the whole learning process as well as improve the rank of the whole university.

Serviced as a member in many clubs such as robotic club, nanotechnology club, space club ... etc.

Supervision:

Supervising several PhD students, more than 40 Master Theses and hundreds of Bachelor projects.

- Editor, Scientific Reports, Nature (Responsible for handling peer review and editorial decisions)
- Senior Member, IEEE (Institute of Electrical and Electronics Engineers)
- Member, IEEE Signal Processing Society, IEEE Young Professionals, and IEEE Communications Society Membership.
- Member, JEA (Jordan Engineers Association)
- DAAD alumni
- Member of Reach4Health organization affiliated with the Sustainability Center at Columbia University in the United States, focusing on refugees in Turkey, Jordan, Syria, Lebanon, and Palestine - <https://reach-health.com/about>
- Member of the Accreditation and Quality Assurance Commission for the Higher Education Institutions to accredit the Engineering programs within the national qualification framework for all universities in the Hashemite Kingdom of Jordan.
- GJU Innovation Ambassador
- Quality Evaluator from the Accreditation and Quality Assurance Commission for the Higher Education Institutions

LANGUAGES

Arabic	Native language
English	Fluent (speaking, reading, and writing)
German	(B2 level) from Goethe Institute / Mannheim - Germany

TECHNICAL PROFICIENCY

Programming Languages Software	Matlab/ Simulink, C-language, Basic language, C++ language, Assembly Language, Mathematica, Maple, MathCAD, Workbench, Multi-SIM, Python, Arduino, and Labview.
Microcontrollers and FPGAs	Arduino, Raspberry Pi, PIC microcontroller, SDR, RTL-SDR, Hack RF, USRP (NI product).
Platforms Office	Windows Operating Systems (DOS, Windows 9X, 2000, Millennium, XP, Vista, 7, 8, 10), and Linux.
Drawing	Microsoft Office, Open Office, LaTeX.
Web Design	Xfig, Dia, Inkscape, Matlab, and AutoCAD. HTML, Front Page and ASP.net.

PROFESSIONAL CERTIFICATES

- Certified Strategic Leader and Planner – Strategic Leadership and Planning.
- Quality Assurance Evaluator Certification – Higher Education Quality Assurance and Institutional Evaluation.
- Online and Blended Learning Educator Certification – Online, Hybrid, and Blended Learning.
- Certified Innovation Ambassador for GJU – Global Innovation Management Institute (GIMI).
- ISO 31000: Risk Management in Quality Systems – Royal Scientific Society, Jordan.
- ISO 9001 Internal Auditor Certification – Quality Management Systems.
- CCNA Academy Instructor Certification – Cisco Networking Academy.
- Cisco Certified Network Associate (CCNA) – Interconnecting Cisco Networking Devices.
- Global System for Mobile Communications (GSM) – Professional Certification.
- Cisco Academy Orientation Certificate – Cisco Networking Academy.
- Fundamentals of Wireless LANs – Wireless Networking Technologies.
- Fundamentals of Web Development – HTML, Microsoft FrontPage, and ASP.NET.
- Advanced International Computer Driving Licence (ICDL) – Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.
- Higher Education Teaching/Professional Qualification Certificate – Certification to work in higher education institutions in Jordan.
- Additional National and International Professional Certifications and Training in higher education, quality assurance, leadership, information technology, and professional development.

AWARDS

- Appreciation Certificate (2025) - Awarded by the President of the German Jordanian University (GJU) in recognition of significant contributions to achieving the Seal of Excellence for Public Universities and second place in the King Abdullah II Award for Excellence among Jordanian universities.
- Appreciation Certificate (2023) - Awarded by the president of the German Jordanian University (GJU) due to my hard work and dedication efforts in establishing the school of nursing at GJU.
- Appreciation certificate from AUM due to my hard work and dedication efforts for my contributions in teaching /services / researches at AUM.
- Appreciation certificate from AUM due to my hard work and dedication efforts for my contributions in teaching /services / researches at AUM.
- Achievement certificate from supervising the best graduation project in biomedical signal processing AUM.
- Best paper award for our paper published in the 19th International IEEE/ITG Workshop on Smart Antennas (WSA 2015), Ilmenau, Germany, March 2015.
- Full doctoral research scholarship starting from 2008, DAAD (German Academic Exchange Service),

- Darmstadt, Germany.
- Full doctoral scholarship from several universities in Jordan.
- University of Jordan graduate assistantship from 2003 to 2005, Amman, Jordan.
- The best student award in my BSc and MSc study.
- The second place in IEEE competition in 2003 and granted an award due to the graduation project entitled as "**Sinusoidal Speech Source Coding**".
- The third place in IEEE/IEE competition in 2004 and granted an award due to the project entitled as "**Techniques in Speech Source Coding**".

RESEARCH GRANTS

I received the following grants and scholarships during the last 14 years

- Obtaining financial support of 35390 Jordanian Dinars (JOD) for scientific research from [The Scientific Research and Innovation Support Fund](#) in the Hashemite Kingdom of Jordan in 2024 to 2026.
- Financial support in 2024 from Ion Company: A memorandum of understanding was signed with them, obtaining financial support of 15000 JOD for scientific research to manufacture a medical device.
- Seed Research Grant with an amount of 42000\$ from GJU in 2023.
- Obtaining a medical device as a donation from Arab Medical Laboratories Company worth 15,000 Jordanian Dinars.
- Preapproval for two funds from the Scientific Research Support Fund in the Hashemite Kingdom of Jordan by more than 150,000\$.
- Full doctoral research scholarship in 2008-2010, **DAAD (German Academic Exchange Service)**, Darmstadt, Germany.
- Research Grant during 2010 to continue my PhD studies in the electrical engineering and information technology program at the Darmstadt university of technology from the **State of Hesse**.
- Research Grant in 2011 to continue my PhD studies in the electrical engineering and information technology program at the Darmstadt university of technology from **German Research Foundation (DFG)**.
- Research Grant in 2012 to continue my PhD studies in the electrical engineering and information technology program at the Darmstadt university of technology from **European Research Council (ERC)**.
- Post-doctoral scholarship in Darmstadt University of Technology, Germany, during the period from 2012 to 2013 under grant from **European Research Council (ERC)**.
- Post-doctoral scholarship in the Darmstadt University of Technology, Germany, during the period from 2013 to 2014 under grant called Cognitive Radio Oriented Wireless Networks (CROWN) from **European Union (EU)**.
- Post-doctoral scholarship from the Darmstadt University of Technology, Germany, during the period from 2014 to 2015.
- University of Jordan Graduate Assistantship from 2003 to 2005, Amman, Jordan.
- Doctoral Scholarship form several universities in Jordan (not used).
- Several Research Grants and Funds from the American University of the Middle East in Kuwait as I was a leader of a research group during 2015 to 2022.
- My PhD and research studies during 2008 to 2015 were supported by several grands such as
 - The Priority Program which was established officially on 1 January 2011 and is funded with an amount of 4.5 million euro for 3 years by the **State of Hesse**. The grant was secured within the frame of the third round of the research support program **LOEWE- "Landes-Offensive zur Entwicklung Wissenschaftlich-ökonomischer Exzellenz"**.
 - The **European Research Council (ERC)** under Advanced Investigator Grant program
 - **German Research Foundation (DFG)** under Grant GE 1881/4-1.
 - Full scholarship from **German Academic Exchange Service (DAAD)**
 - **European Union (EU) Project** under Grant called Cognitive Radio Oriented Wireless Networks (**CROWN**).

(SELECTED) SUPERVISED MASTER THESES AND GPs

Note that there is no master program in my department at both GJU and AUM, however, I supervised many master theses as follows:

- Advanced Multi-Antenna Techniques for Multi-User Two Way Wireless Relay Networks
- Efficient techniques for multi-user two-way relay networks
- Computationally efficient VBLAST decoding technique in modern multi-antenna systems
- Advanced multi-antenna techniques for multicast and broadcast services in modern cellular networks
- Implementation of differential multi-antenna technique on a software defined radio platform
- Differential beamforming techniques for two-way relay networks using M-QAM and M-PSK constellations
- Advance Relay Selection Techniques for Two Way Relay Cellular Networks

I supervised tens of projects as follows:

- Smart Health Care System
- Medical Emergency notification system
- Smart IOT health care systems
- Detection of Diseases Based On Sound Signals
- Design and Implementation of Smart Wheelchair using Internet of Things
- Secure Medical Emergency Notification System
- Advanced Wearable Health Monitoring System
- Wireless sensor platform to measure heart rate and temperature
- Smart Computer Controlled Electric Wheelchair for Biomedical Applications
- Zigbee based Wearable Remote Healthcare Monitoring System for Elderly People
- Secure Medical Emergency Communication System
- LORA based Wearable Remote Healthcare Monitoring System for Elderly People
- Kids' Lives Matter: Monitoring Kids Temperature
- Accident Warning System
- Secure Medical Satellite Communication System
- Smart Wireless Safety System for Oil Refinery Facilities
- IOT health monitoring system
- An Internet of Things Healthcare Device
- ROBOAIDQ8 - Robot Aid

INSTITUTIONAL SERVICE ACTIVITIES

- Served as a [Director of Accreditation and Quality assurance Center](#)
- Served as a Director of E-Learning and Academic Performance Improvement Center
- Served as a Head of Biomedical Engineering Department at GJU, Jordan.
- Served as an exchange coordinator for the German year at GJU.
- Served as an organizer and track chair for several international conferences such as CAMUS workshop which is conducted four times in four universities (TU-Munich (2011), TU-Darmstadt (2012), TU-Ilmenau, and TU-Berlin) during four years [2011-2014].
- Served as an organizer for IEEE SAM 2008 which is conducted in TU-Darmstadt.
- Served as an organizer and track chair for the 22nd REM 2024.
- Served as an organizer at the third international conference on biomedical engineering at the Damascus University - Damascus – Syria, between 28-30 April 2024.

- Served as an organizer for all CoCoon Conferences from 2011 to 2015, Darmstadt, Germany.
- IEEE/ISWCS, August, 2013, Ilmenau, Germany
- IEEE/ITG Workshop, 2013, Darmstadt, Germany.
- EUSIPCO, 2013, Morocco.
- Several IEEE conferences such as ICASSP, ISWCS, CAMSAP, SAM ... etc.

(SELECTED) EDITORIAL BOARD MEMBER & REVIEWER

Editor in Scientific Reports, Nature (Responsible for handling peer review and editorial decisions).

Reviewer in IEEE Transactions on Signal Processing, IEEE Transactions on Wireless Communications, IEEE Transactions on Communications, IEEE Signal Processing Letters, IEEE wireless communication Letters, EURASIP Journal on Wireless Communications and Networking, EURASIP Journal on Advances in Signal Processing, International IEEE/ITG Workshop on Smart Antennas (WSA), International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP), IEEE Sensor Array and Multi-channel Signal Processing Workshop (SAM), Asilomar Conference on Signals, Systems, and Computers, European Signal Processing Conference (EUSIPCO), IEEE REM.

(SELECTED) COMMUNITY SERVICE ACTIVITIES

- Writing a part of the comprehensive exam for University Middle-Degree Diploma on the kingdom level
- Served as a member in REACH for Health organization to increase access to reliable health information for all young people - <https://reach-health.com/about>
- Participating in signing MOUs with German Universities (HS-Folda, FH-Bielefeld), German organizations (GIZ), and German Hospitals (Bielefeld Hospitals) to establish nursing school
- Establishing nursing school to provide the community with professional nurses.
- Conducting several lectures, meetings, and workshops in international and national universities, schools, companies, and organizations.

JOURNAL PAPERS

- **S. Alabed**, M. Al-Rabayah, O. M Bwaliez, S. Hasan, "Efficient ECG Signal Coding with Interpolation-Enhanced LPC for Telehealth and Wearable Devices", e-Prime—Nexus of Electrical, Electronic, and Intelligent Engineering, Elsevier, 2026.
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- A. Alsaraira, **S. Alabed**, and O. Saraereh, Remote Medical Care Monitoring System, International Journal of Electrical and Computer Engineering, **2025**. [JCR: 2.407, CiteScore: 3.2; Q2].
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- A. Alsaraira, K. Younes, **S. Alabed**, and O. Saraereh, Wireless Controlled Robotic Hand using an LED-LDR Sensor, Engineering, Technology & Applied Science Research, vol. 14, no. 5, **2024**.
- **S. Alabed**, M. Al-Rabayah, N. Mostafa, Z. AlArnaout, E. Hamad, I. Maaz, and Y. Kotb Differential Beamforming Using Rotman Lens for Wireless Sensor Networks, Elsevier ICT express, pp. 974-982, vol. 9, no. 5, **2023**. [Q1, IF: 4.8, CiteScore: 10.3, SNIP: 2.246].
- **S. Alabed**, A. Alsaraira, N. Mostafa, M. Al-Rabayah, A. Shdefat, C. Zaki, O. Saraereh, and Z. Al-Arnaout, Two-Way Differential Strategy for Wireless Sensor Networks, Bulletin of Electrical Engineering and Informatics, pp. 3499-3508, vol. 12, no. 6, **2023**. [Q2- CiteScore: 3.0, SNIP: 0.639, and SJR: 0.299].
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- A. Alsaraira, **S. Alabed**, E. Hamad and O. Saraereh, "An optimal framework for alzheimer's disease diagnosis," Intelligent Automation & Soft Computing, vol. 37, no.1, pp. 165–177, **2023**. [IF: 3.4, CiteScore: 2.4 – Q2].

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- **S. Alabed**, M. Al-Rabayah and W. H. Aly, A Beamforming Technique Using Rotman Lens Antenna for Wireless Relay Networks, *Computer, Material, & Continua*, pp. 5641–5653, vol. 73, no. 3, **Jully 2022**. [IF: 3.9, CiteScore: 4.9 - Q1]. <https://www.techscience.com/cmc/v73n3/49050/pdf>
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- W. Aly, H. Kanj, N. Mostafa, and **S. Alabed**, Toward securing OpenFlow controllers for SDNs using ARMA models, *WSEAS Transactions on Mathematics*, pp. 21–29, vol. 4, **April 2022**. [Cite Score: 0.9].
- **S. Alabed**, A computationally efficient detector for MIMO systems, the *International Journal of Electrical and Computer Engineering*, pp. 4138– vol. 9, vol. 9, no. 5, part II, **October 2019**. [JCR: 2.407, CiteScore: 3.2; Q2]. <http://www.iaescore.com/journals/index.php/IJECE/issue/view/536>
- I. Maaz and **S. Alabed**, Efficient time reversal strategy for MISO-OFDM systems, *Indonesian Journal of Electrical Engineering and Computer Science*, pp. 239–247, vol. 20, no. 1, **Oct. 2020**. [JCR: 2.407, CiteScore: 2.9, Q2].
- **S. Alabed**, Computationally efficient multi-antenna techniques for multi-user two-way wireless relay networks, *International Journal of Electrical and Computer Engineering*, pp. 1684–1691, vol. 8, no. 3, **June 2018**. <http://www.iaescore.com/journals/index.php/IJECE/article/view/8962>, [JCR: 2.407, CiteScore: 3.2; Q2].
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- **S. Alabed**, Performance Analysis of Two-Way DF Relay Selection Techniques, *ELSEVIER ICT Express, Special Issue on ICT Convergence in the Internet of Things (IoT)*, pp. 91–95, vol. 2, no. 3, **Sep. 2016**.

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- **S. Alabed** and E. Ibrahim, A new sinusoidal speech coding technique with speech enhancement at low bit rate, International Journal of Electronics and Communication Engineering and Technology (IJECET), ISSN 0976 - 6464(Print), ISSN 0976 - 6472(Online), Volume 5, Issue 4, **Apr. 2014**, pp. 07-18. (Impact Factor > 2)
- **S. Alabed**, J. M. Paredes, and A. B. Gershman, A low complexity decoder for quasi-orthogonal space-time block codes, IEEE Transactions on Wireless Communications, vol. 10, no. 3, **March 2011**. (IF= 8.3, CiteScore: 15.7).
- **S. Alabed**, J. M. Paredes, and A. B. Gershman, A simple distributed space-time coded strategy for two-way relay channels, IEEE Transactions on Wireless Communications, pp. 1260-1265, vol. 11, no. 4, **April, 2012**. (IF= 8.3, CiteScore: 15.7).
- **S. Alabed**, M. Pesavento, and A. Klein, Non-coherent distributed space-time coding techniques for two-way wireless relay networks, EURASIP special issue on Sensor Array Processing, **Jan. 2013**. [SNIP: 1.03, JCR: 2.407, CiteScore: 7.6].
- I. Mansour and **S. Alabed**, A new architecture model for multi pulse linear predictive coder for low bit rate speech coder, Engineering Sciences, Dirasat Journal, vol. 33, no. 2, **October 2006**.

CONFERENCE PAPERS

I have served as an organizer and track chair for several International Workshops and Conferences from 2008 to 2024 such as IEEE SAM 2008, CAMUS workshop 2011-2014, CoCoon Conferences 2011-2015, IEEE/ITG 2013-2015, [IEEE REM 2024](#), [ICBME 2024](#). I have participated at the university level in several conferences such as [QS HIGHER ED SUMMIT: MIDDLE EAST 2024](#), [the Higher Education Summit: Middle East](#), February 27-29, 2024, and [the Higher Education Summit: Asia Pacific 2023](#), November 7-9, 2023, to promote innovation, creativity, sustainability, and excellence in education and learning. I have attended, participated in, and successfully completed numerous webinars on research and teaching as well. In addition, over the past two years, I have been invited to and have participated in numerous national and international conferences and workshops focused on improving academic research and education at the national level. This is a result of my role as the head of several committees for the Jordanian National Qualification Framework (JNQF), where I collaborate with other national qualification frameworks, including the Scottish Qualification Framework (SCQF). Moreover, several articles have been submitted to international conferences in 2024. The following are the conference papers I have fully published:

- A. Schad, **S. Alabed**, H. Degenhardt, and M. Pesavento, Bi-Directional Differential Beamforming for Multi-Antenna Relaying, the 40th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2015, 19th – 24th April 2015, Brisbane, Queensland, Australia.
- D. Taleb, **S. Alabed**, and M. Pesavento, Optimal General-Rank Transmit Beamforming Technique for Multicasting Service in Modern Wireless Networks Using STTC, Proceedings of the 19th International IEEE/ITG Workshop on Smart Antennas (WSA 2015), Ilmenau, Germany, March 2015.
- **S. Alabed**, M. Pesavento, and A. Klein, Distributed Differential Space-Time Coding for Two-Way Relay Networks Using Analog Network Coding, Proc. of the 21st European Signal Processing Conference (EUSIPCO'13), Marrakech, Morocco, Sep. 2013.

- **S. Alabed**, M. Pesavento, and A. Klein, Relay Selection Based Space-Time Coding for Two-Way Wireless Relay Networks Using Digital Network Coding, The Tenth International Symposium on Wireless Communication Systems (IEEE ISWCS 2013), Ilmenau, Germany, Aug. 2013.
- **S. Alabed**, M. Pesavento, and A. B. Gershman, Distributed Differential Space-Time Coding Techniques for Two-Way Wireless Relay Networks, Proceedings of the Fourth International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP'2011), pp. 221-224, San Juan, Puerto Rico, December 2011.
- **S. Alabed** and M. Pesavento, A Simple Distributed Differential Transmit Beamforming Technique for Two-Way Wireless Relay Networks, Proceedings of the 16th International IEEE/ITG Workshop on Smart Antennas (WSA 2012), pp. 243-247, Dresden, March 2012.
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- I. Mansour and **S. Alabed**, Using Sinusoidal Model to Implement Sinusoidal Speech Coder with Speech Enhancer, The 6th Jordanian International Electrical and Electronics Engineering Conference (JIEEE), vol. 1, pp. 1-8, March 2006.
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BOOK CHAPTERS

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- W. Aly, H. Kanj, N. Mostafa, **S. Alabed**, "Towards Improving Security of OpenFlow SDN Controllers Using Closed Loop Approaches". In: Le Nhu Ngoc Thanh, editor. Prime Archives in Electronics. Hyderabad, India: Vide Leaf. **2023**. <https://videleaf.com/wp-content/uploads/2023/02/Towards-Improving-Security-of-OpenFlow-SDN-Controllers-Using-Closed-Loop-Approaches.pdf>
- N. Mostafa, W. Aly, **S. Alabed**, Z. Al-Arnaout, "Replica Management System in Cloud, Edge and IoT Environments Using Data Clustering Technique". In: Le Nhu Ngoc Thanh, editor. Prime Archives in Electronics. Hyderabad, India: Vide Leaf. **2023**. <https://videleaf.com/wp-content/uploads/2022/12/Replica-Management-System-in-Cloud-Edge-and-IoT-Environments-Using-Data-Clustering-Technique.pdf>.