Samer Alabed

Associate Professor in Electrical and Computer Engineering.

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→ Personal Details

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Nationality	German and Jordanian.
Birthday	18.08.1981

→ Education

2008 – 201

Ph.D. degree (Dr.Ing) in Electrical Engineering and Information Technology with great honor ("magna cum laude"), Darmstadt University of Technology, Darmstadt- City of Science, Germany. (GPA: Sehr Gut).

2003 – 2005

M.Sc degree in Electrical and Computer Engineering with highest honors, University of Jordan, Jordan. (GPA: 3.88/4).

1999 - 2003

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

→ Work Experience

2019 – Present

Associate Professor, American University of the Middle East, Kuwait.

- Teach/prepare/propose undergraduate courses in all areas of electrical and computer engineering.
- Supervise undergraduate projects in many fields of electrical and computer engineering
- Served as an ABET coordinator for EE department.
- Served as a coordinator of the curriculum development committee.
- Served as a coordinator of the lab committee.
- Served as a coordinator of the research committee.
- Served as a member in the exam committee.
- Served as a coordinator for many EE courses
- Served as a coordinator of the graduation project committee.
- Served as a coordinator for academic activities.
- Served as a member in many clubs such as robotic club, nanotechnology club, space club... etc

2015 – 2019 **Assistant Professor, American University of the Middle East, Kuwait.**

- Teach/prepare/propose undergraduate courses in all areas of electrical and computer engineering.
- Supervise undergraduate projects in the fields of electrical and computer engineering
- Served as an ABET coordinator for EE department.
- Served as a coordinator of the curriculum development committee.
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- Served as a coordinator for academic activities.
- Served as a member in many clubs such as robotic club, nanotechnology club, Space club... etc

2008 – 2015 **Assistant Professor, Postdoctoral Researcher, Teaching Assistant, Research Assistant, Darmstadt University of Technology (TU-Darmstadt), Darmstadt, Germany.**

- Lecturer and project supervisor of graduate courses in the fields of electrical and computer engineering.
- Teaching and supervising PhD, MSc, and BSc students.
- Developing & proposing advanced and novel projects in the fields of DSP, wireless communication systems, communication networks, security, IOT, and machine learning (ML) under projects supported by the ***LOEWE Priority Program Cocoon***, ***the European Research Council (ERC)***, ***German Research Foundation (DFG)***, ***German Academic Exchange Service (DAAD).***
- Developing advanced physical layer digital and statistical signal processing codes, prototypes, and algorithms using machine learning with floating and fixed-point implementations to be used in future IOT and wireless communication systems. The work was with the company called mimoOn GmbH, Duisburg (http://www.mimoon.de) and for research purposes.

2006-2008 **Teaching Assistant, Research Assistant, Wadi Al-Sir international college (UNRWA, United Nations), Amman, Jordan.**

- Lecturer and project supervisor of undergraduate courses in the fields of electrical and computer engineering.
- Developing & proposing advanced and new algorithms in the fields of digital and statistical signal processing.

2003-2007 **Teaching Assistant, Research Assistant, University of Jordan, Amman, Jordan.**

- Teaching and supervising electrical, electronic, computer, and communication engineering labs and courses.
- Developing & proposing advanced and new algorithms in the fields of digital and statistical signal processing.

→ Technical Expertise

- **ABET Coordinator for EE department**

I was responsible for the ABET committee in electrical engineering department where I participated in preparing and reviewing the whole material required for ABET accreditation such as meeting minutes for assessment committee and focus group committee, all criterial, student outcome assessment matrix, assessment instruments and performance indicators, course syllabi, evaluation and continuous improvements, course mapping, as well as collecting the assessments and preparing and reviewing the Instructor Grading Sheets .. etc. 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**

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, syllabi, guidance plans, course folders, course projects, course material, … etc. Moreover, I have prepared so many courses in ECE from scratch such as innovation 1,2, differential equations, linear circuit 1,2, signals and systems, analog communications, digital communications 1,2, digital signal processing 1, 2, cryptography and IOT systems.

- **Coordinator of the Lab Committee**

I was responsible for all labs in electrical engineering department where I participated in preparing some 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

- **Member of the Exam Committee**

I served as a member for the exam committee where I participated in preparing exam schedules and makeup exams.

- **Coordinator for many EE courses**

I served in all previous semesters as a coordinator for at least one EE course.

- **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 digital communication and 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.

- **Member of the quality assurance (QA) committee**

  I served a member 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**

→ 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 electrical, electronic, digital & wireless communication, computer and control engineering as well as digital signal, speech and image processing— 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 19 years, I have been teaching almost all courses and tutorials in electrical engineering and information technology for bachelor and master students such as

- **Computer Engineering and Information Technology:**

Digital Systems (Theory and Lab), Computer Networks, Introduction to Cryptography, Cryptography and Information Security, Wireless Communication Networks, Wireless Network Security, Internet of Things lab, machine learning, Microprocessors (Theory and Lab), Computer Networks (Theory and Lab), Assembly Language (Theory and Lab), programming Languages such as C/C++-Language (Theory and Lab), Quick and Turbo Basic, Algorithms, Matlab, and Computer Maintenance, Linear Algebra, Calculus I, II, III, Probability and Random Variables, Image and Speech Processing, CCNA, WLAN, A+, IT Essential, Python, and Matlab.

- **Electrical and Communication Engineering:**

Signals and systems, digital signal processing 1, 2, analog communication systems, digital communications 1,2, advanced wireless communication systems, information theory and entropy, source and channel coding, mobile communications, optical fiber communications, digital speech processing, probability and random variables, advanced algorithms for smart antenna systems and IOT systems, project seminar in smart antennas and microwave communications, introduction to cryptography, data communication networks, stochastic and random processes, linear and nonlinear optimization with applications, convex optimization, filter design, electronic communications circuits, electromagnetic 1,2, satellite communications, advanced topics in security and IOT systems.

- **Electronic Engineering:**

Electronic devices (Electronics 1), Electronic Amplifiers (Electronics 2) (Theory and Lab), Electrical Circuit Analysis 1 and 2 (Theory and Lab), Electrical Measurements (Theory and Lab), Digital Electronics, and Communication Electronics.

- **Control Engineering:**

Linear Systems and Linear Algebra, Analog Control Systems, Modern and Digital Control Systems.

- **Supervision:**

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

→ Research Expertise

During the past years, I possess a very strong research profile during the past years where I am publishing three to four journal papers yearly in very prestigious international journals with Q1/Q2 rank based on the following impact factors: JCR/ Scimago/Scopus. I am an IEEE senior member and the head of the research committee as well as the head of one research group, i.e., the communication systems group. I have obtained several awards 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)***, ***German Academic Exchange Service (DAAD)***. Moreover, I organized and was

invited to many conferences and workshops. Please find a list of my published papers below. The main idea of my research is to develop advanced algorithms, codes, and prototypes in the following fields:

- Wireless communication systems and networks
- Applied Cryptography and Network Security for future wireless communication systems
- Machine learning for future wireless communication systems
- Statistical and digital signal processing
- Audio, speech, and image signal processing
- Distributed communication systems
- Smart and IOT systems
- Biomedical signal processing and health care systems
- Optimization methods.
- Wireless sensor networks

→ Languages

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

→ Technical Proficiency

Programming Languages and Software	Matlab/ Simulink, C-language, Basic language, C++ language, Assembly Language, Mathmatica, 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	Windows Operating Systems (DOS, Windows 9X, 2000, Millennium, XP, Vista, 7, 8, 10), and Linux.
Office	Microsoft Office, Open Office, LaTex.
Drawing	Xfig, Dia, Inkscape, Matlab, and AutoCAD.
Web page design	HTML, Front Page and ASP.net.

→ Skills and Certificates

- Ability to work with international teams and with diverse expertise
- Experience and background in teaching graduate and undergraduate students
- Experience and background in preparing and developing graduate and undergraduate curriculums and continuously improving the learning process.
- Experience in accreditation especially ABET accreditation.
- Ability to apply theoretical and mathematical knowledge to scientific and engineering challenges.
- I have advanced ICDL certificates in (Microsoft Word, Microsoft Excel, and Microsoft PowerPoint).
- Very strong skills and experience in programming, testing, and simulating complex scientific

software, algorithms, and codes using different programming languages and software like Matlab/Simulink, C /C++, Assembly, Q-Basic, MathCAD, Maple, Mathmatica, Python, Labview, workbench, MultiSIM … etc.

- Conducted several projects in wireless communication security.
- Served as an organizer for several conferences
- Knowledge in almost all wireless communication and broadcasting technologies.
- Knowledge in applied cryptography and security.
- Knowledge in machine learning.
- Large knowledge in digital signal, image, audio, speech and data processing.
- Knowledge in IOT systems and smart antennas.
- Knowledge in wire and wireless communication networks and their protocols with the following certificates
  - CCNA Academy Certificate for Instructors,
  - Certificate in Interconnecting Cisco Networking Devices (CCNA),
  - Certificate in Global System for Mobile (GSM),
  - Certificate in Orientation for Cisco Academy,
  - Certificate in the Fundamentals of Wireless LANs.
- Knowledge in web development (HTML, FrontPage).
- Knowledge and experience in electrical and electronic circuit analysis and design and the use of the electrical and electronic components.
- Knowledge and experience of computer hardware.
- Ability to manage, monitor, and supervise people, to work independently, and to be a good team player. I am resourceful, fast learner, flexible, organized, willing to learn new technologies, have good interpersonal skills and associate well with different cultures.
- Strong academic and research record.

→ Awards

- Appreciation certificate from AUM due to my hard work and dedication efforts for my contributions at AUM.
- Achievement certificate from supervising the best graduation project in AUM.
- Best paper award for our paper entitled as "Optimal General-rank transmit beamforming technique for multicasting service in modern wireless networks using STTC "published in the 19th International IEEE/ITG Workshop on Smart Antennas (WSA 2015), Ilmenau, Germany, March 2015.
- Doctoral Research Scholarship from 2008 to 2010, DAAD (German Academic Exchange Service), Darmstadt, Germany.
- 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***".

→ Grants Received and Research Projects

- I received the following grants and scholarships during the last 14 years
  - Doctoral Research Scholarship, from 2008 to 2019, ***DAAD (German Academic Exchange Service)***, Darmstadt, Germany.

- Scholarship from the Darmstadt University of Technology to continue my PhD studies in the electrical and computer engineering program under a grant from ***German Research Foundation (DFG)*** during the period from 2009 to 2010.
- Fund from ***German Research Foundation (DFG)*** to continue my Ph.D. studies in the electrical and computer engineering program during the period from 2010 to 2011.
- Fund from the ***State of Hesse*** to continue my Ph.D. studies in the electrical and computer engineering program during the period from 2011 to 2012 under research support program called LOEWE- "Landes-Offensive zur Entwicklung Wissenschaftlich-ökonomischer Exzellenz".
- 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 2012 to 2013 under grant called Cognitive Radio Oriented Wireless Networks (CROWN) from ***European Union (EU).***
- Post-doctoral scholarship in the Darmstadt University of Technology, Germany, during the period from 2013 to 2015 under grant from ***German Research Foundation (DFG).***
- University of Jordan Graduate Assistantship from 2003 to 2005, Amman, Jordan.
- Doctoral Scholarship form several universities in Jordan (not used).
- My PhD and research studies 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.
    - ***German Academic Exchange Service (DAAD)***
    - ***European Union (EU) Project*** under Grant called Cognitive Radio Oriented Wireless Networks (***CROWN***) in the fields of wireless communication systems.

→ (Selected) Supervised Master Theses and GPs

- Secure Wireless Communication System
- Secure satellite emergency notification system
- Secure emergency communication system
- Encrypted communication system
- Secure satellite communication system
- Secure emergency notification system
- Encrypted mobile phone system
- Efficient techniques for multi-user two-way relay networks.
- Computationally efficient VBLAST decoding technique in modern multi-antenna systems.
- Efficient cooperative diversity techniques in two- and multi-way wireless relay networks.
- 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.
- Relay selection techniques for modern two way-relay networks.

→ Scientific Tutorial & Invitations

- Served as an organized for several international conferences such as CAMUS workshop which is conducted four times in four universities (TU-Munich (2011), TU-Darmstadt (2012), TU-Illmenau, and TU-Berlin) during four years [2011-2014].
- Served as an organizer for IEEE SAM 2008 which is conducted in TU-Datmstadt.
- 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) Technical Reviewer

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).

→ Journal Papers

- **S. Alabed,** Advanced Information Security for Wireless Communication System, submitted to International Journal of Electrical and Computer Engineering, ***Mar. 2022***. Citation Impact: JCR: (2.407) - 2-year Impact Factor, JCR: (1.923) - 5-year Impact Factor, 0.942 - Source Normalized Impact per Paper (SNIP), 0.301 - SCImago Journal Rank (SJR).
- ***S. Alabed***, I. Maaz, and M. Al-Rabayah, "Improved Bi-directional Three-phase Single-Relay Selection Technique for Cooperative Wireless Communications", Computer, Material, & Continua, ***Feb. 2022***. [Q1 based on JCR, SciMago, Scopus, Impact Factor > 4].
- B. Neji, ***S. Alabed***, N. Ferko, and T. Beyrouthy, Enhanced Balloon Based Cube Sat Network for Secure Communication, to be submitted to MDPI sensors, ***Mar. 2022***. [Q2 based on JCR, SciMago, Scopus, Impact Factor > 3.5]
- W. Aly, H. Kanj, N. Mostafa, and ***S. Alabed***, Feedback ARMA Models versus Bayesian Models towards Securing OpenFlow Controllers for SDNs, accepted with changes, MDPI networks, ***Mar. 2022.***
- ***S. Alabed***, A. Zreikat and M. Al-Abed, A Computationally Efficient Non-coherent Technique for Wireless Relay Networks, Indonesian Journal of Electrical Engineering and Computer Science, to be available in ***May 2022***. Citation Impact: JCR: (2.407) - 2-year Impact Factor, JCR: (1.923) - 5-year Impact Factor, 0.942 - Source Normalized Impact per Paper (SNIP), 0.301 - SCImago Journal Rank (SJR).
- A. Zreikat and ***S. Alabed***, Performance Modelling and Analysis of LTE/Wi-Fi Coexistence, accepted with changes, MDPI electronics, ***Apr. 2022***. [IF: 2.397 and Q2 based on JCR, SciMago, Scopus, Impact Factor > 4].
- ***S. Alabed***, N. Mostafa, W. Aly and A. Alsaraira, A Low Complexity Distributed Differential Scheme Based on Orthogonal Space Time Block Coding for Decode-and-Forward Wireless Relay Networks, accepted with changes, International Journal 0f Electrical and Computer Engineering, ***Mar. 2022***. Citation Impact: JCR: (2.407) - 2-year Impact Factor, JCR: (1.923) - 5-year Impact Factor, 0.942 - Source Normalized Impact per Paper (SNIP), 0.301 - SCImago Journal Rank (SJR).
- ***S. Alabed***, I. Maaz, and M. Al-Rabayah, "Improved Bi-directional Double-Relay Selection Technique for Cooperative Wireless Communications", Computer, Material, & Continua, ***March 2021***. [Q1 based on JCR, SciMago, Scopus, Impact Factor > 4].

- ***S. Alabed***, I. Maaz, and M. Al-Rabayah, Distributed Differential Beamforming and Power Allocation for Cooperative Communication Networks, International Journal 0f Electrical and Computer Engineering, ***Dec. 2020***. Citation Impact: JCR: (2.407) - 2-year Impact Factor, JCR: (1.923) - 5-year Impact Factor, 0.942 - Source Normalized Impact per Paper (SNIP), 0.301 - SCImago Journal Rank (SJR).
- I. Maaz and ***S. Alabed***, Efficient Time Reversal Strategy for MISO-OFDM Systems, Indonesian Journal of Electrical Engineering and Computer Science, ***Oct. 2020***. Citation Impact: JCR: (2.407) - 2-year Impact Factor, JCR: (1.923) - 5-year Impact Factor, 0.942 - Source Normalized Impact per Paper (SNIP), 0.301 - SCImago Journal Rank (SJR).

- I. Maaz and ***S. Alabed***, Impact of antenna position on performances in relay-assisted wireless network, Indonesian Journal of Electrical Engineering and Computer Science, ***Oct. 2020***. Citation Impact: JCR: (2.407) - 2-year Impact Factor, JCR: (1.923) - 5-year Impact Factor, 0.942 - Source Normalized Impact per Paper (SNIP), 0.301 - SCImago Journal Rank (SJR).

- ***S. Alabed***, "Performance Analysis of Differential Beamforming in Decentralized Networks, IEEE Canada, ***Dec. 2020***. [Q1/2 based on JCR, SciMago, Scopus].

- ***S. Alabed***, Ibrahim Mahariq, and Taha Beyrouthy, A Novel Beamforming Relay Selection Technique for Cooperative Communication Networks, Computer, Material, & Continua, ***March 2021***. [Q1 based on JCR, SciMago, Scopus, Impact Factor > 4].

- ***S. Alabed***, I. Maaz and M. Al-Rabayah, "Improved two-way double-relay selection technique for cooperative wireless communications", vol. 2021, no. 57, EURASIP Journal on Wireless Communications and Networking, ***March 2021***. [Q2 based on JCR, SciMago, Scopus] https://doi.org/10.1186/s13638-020-01846-7

- ***S. Alabed***, Performance analysis of bi-directional relay selection strategy for wireless cooperative communications, EURASIP Journal on Wireless Communications and Networking, vol. 2019, no. 97, ***April 2019***. DOI: https://doi.org/10.1186/s13638-019-1417-1. Citation Impact: JCR: (2.407) - 2-year Impact Factor, JCR: (1.923) - 5-year Impact Factor, 0.942 - Source Normalized Impact per Paper (SNIP), 0.301 - SCImago Journal Rank (SJR).
https://jwcn-eurasipjournals.springeropen.com/articles/10.1186/s13638-019-1417-1

- ***S. Alabed***, "A Computationally Efficient Detector for MIMO Systems", the International Journal of Electrical and Computer Engineering, vol. 9, no. 5, part II, ***October 2019***. (CiteScore 2017: 1.22, SJR 2016: 0.280, SNIP 2016: 1.090, Q2 on Electrical & Electronics Engineering.). http://www.iaescore.com/journals/index.php/IJECE/issue/view/536

- ***S. Alabed***, Computationally Efficient Multi-Antenna Techniques for Multi-User Two-Way Wireless Relay Networks, the International Journal of Electrical and Computer Engineering, pp. 1684-1691, vol. 8, no. 3, ***June 2018***. (CiteScore 2017: 1.22, SJR 2016: 0.280, SNIP 2016: 1.090, Q2 on Electrical & Electronics Engineering.) http://www.iaescore.com/journals/index.php/IJECE/article/view/8962

- ***S. Alabed***, Performance Analysis of Differential Beamforming in Decentralized Networks, the International Journal of Electrical and Computer Engineering, pp. 1692-1700, vol. 8, no. 3, ***June 2018***. (CiteScore 2017: 1.22, SJR 2016: 0.280, SNIP 2016: 1.090, Q2 on Electrical & Electronics Engineering.) http://www.iaescore.com/journals/index.php/IJECE/article/view/8877

- ***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***. [Q1 based on JCR, SciMago, Scopus, Impact Factor > 4.3]. https://www.sciencedirect.com/science/article/pii/S2405959516300595

- ***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***. (Impact Factor = 2.418).

- ***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***. (Impact Factor = 2.418).

- ***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***. (Impact Factor = 1.745)

- 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***.

- ***S. Alabed*** and Eyad A. 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***, and M. Al-Rabayah, A Beamforming Technique Using Rotman Lens Antenna for Wireless Relay Networks, submitted to ELSEVIER ICT Express, ***Mar. 2022.*** [Q1 based on JCR, SciMago, Scopus, Impact Factor > 4.3].

- ***S. Alabed***, and M. Al-Rabayah, A Differential Beamforming Technique Using Rotman Lens Antenna for Wireless Relay Networks, submitted to Computer, Material, & Continua, ***Mar. 2022***. [Q1 based on JCR, SciMago, Scopus, Impact Factor > 4].

- ***S. Alabed*** and A, Youssef, Two-Way Non-Coherent Strategy for Wireless Relay Networks, to be submitted to Computer, Material, & Continua, ***Mar. 2022***. [Q1 based on JCR, SciMago, Scopus, Impact Factor > 4].

→ Conference Papers

- 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, Austrilia.

- 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.

- X. Wen, K.L. Law, ***S. Alabed***, and M. Pesavento, Rank-Two Beamforming for Single-Group Multicasting Networks Using OSTBC, Proc. of the 7th IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM), pp. 65-68, Jun. 2012.

- 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 (JIEEEC), vol. 1, pp. 1-8, March 2006.

- I. Mansour and ***S. Alabed***, A New Technique for Regular Pulse Predictive Coding of Speech at Low Bit Rates, 6th ICEENG, 27-29 May, 2008.

→ References

➢ **Prof. Dr. Ing. Marius Pesavento**

Position: Head of the Communication Systems Group, TU-Darmstadt

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➢ **Prof. Dr. Ing. Anja Klein**

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➢ **Prof. Dr. Ing. Abdelhak M. Zoubir**

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