

Dr. Amer M. Magableh



CONTACT INFORMATION: Associate Professor
Department of Electrical Engineering
Acting Dean of Engineering
A/Assistant to Chancellor for IT Affairs
Fahad Bin Sultan University
Tabuk, KSA

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Sabbatical Leave from
Associate Professor at the Electrical Engineering Department,
Jordan University of Science and Technology, Irbid, Jordan

RESEARCH INTERESTS: Digital communication, wireless communication theory, transmission protocols, diversity techniques, cooperative communication systems, and encryption algorithms.

EDUCATION:

2006-2010 Ph.D. in Electrical Engineering (Wireless Communications)
University of Mississippi, Oxford, MS.
Dissertation Title “*Emerging Models for Wireless Communication systems Over Fading Channels: New Techniques, Optimization and Performance Evaluation*”.

2002-2004 Master of Science in Electrical Engineering (Wireless Communications)
Jordan University of Science and Technology, Irbid.
Thesis title “*Performance & Spectral Analysis of Chaos Shift Keying Communication Systems*”,
September 2002 - June 2004.

1998-2002 Bachelor of Science in Electrical Engineering (Electronics and Communications)
Jordan University of Science and Technology, Irbid.
Senior Level Graduation Project “*Performance Evaluation of Overshooting Step response for Single Input Single Output (SISO) with Application of Phase Locked Loop in QPSK Detection*”,
September 1998 - June 2002.

WORK**EXPERIENCE:****FAHAD BIN SULTAN UNIVERSITY, TABUK, KSA****SEPTEMBER 2016 – NOW****A/ASSISTANT TO THE CHANCELLOR FOR IT AFFAIRS**

- Setting up the mission, strategies, and policies in accordance with the standard IT policies and procedures
- Responsible for all IT affairs for the University, such as upgrading the Website, ERP system, E-workflows... etc.

MAY 2017 – NOW**ACTING DEAN OF ENGINEERING, MAY**

- Setting up the mission, strategies, and policies for the college of Engineering
- Responsible for the main workflow of the college
- Acting dean during the establishing the programs of the Master in Science for the Civil Engineering and the Electrical Engineering and responsible for filing all the required documents for the Ministry of Education and the Accreditation Committee

COURSES TAUGHT**SEPTEMBER 2016 – NOW****FACULTY MEMBER AT THE EE DEPARTMENT**

- ELEE 220: Digital Logic Design
- ELEE 240: Electronics I
- ELEE 340: Electronics II
- ELEE 350: Signals and Systems
- ELEE 470: Communication Systems
- ELEE 471: Wireless Communications
- ELEE 490: Final Year Project II
- MBA 510: Management Information Systems
- EMBA 555: Information and Communication Technologies

JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY**SEPTEMBER-2011 – AUGUST 2016****DIRECTOR OF THE COMPUTER & INFORMATION CENTER (CIC)**

- Setting up the mission, strategies, and policies of the IT infrastructure for JUST.
- Supervising the implementation of various IT services.
- Member of the administrative development committee since 2011.
- Member of JUST newsletter committee since its first issue, November, 2013.
- Member of the University Curricula Committee, 2011-2015.

- Member of the University Course Schedule Committee, 2011-2015.
- Member of the University Highest Discipline Committee, since 2014.
- Member of Technical Administrative Committee (TAC) for Jordanian Universities Networks (JUNet) since 2011.
- Head of the Advising Technical Committee for the Center of Excellence for Public Libraries, 2012-2014
- Supervising the design and implementation of different websites and portals for JUST.

ACHIEVEMENTS

- Supervising several projects at the CIC center, such as
 - Server virtualization project “Hyper-V Based Virtual Infrastructure solution”, cost of the project USD 65,000.
 - Upgrading Network Hardware, “Upgrade, Develop, Maintain, and Install JUST wired and wireless Networks and Security Solutions”, cost of the project USD 240,000.
 - Replacing the Private Branch Exchange for the telephone network at JUST, “Upgrade, Develop and Maintain JUST Electronic PBX”, cost of the project USD 150,000.
 - Sun Database servers, “Rebuild Oracle Servers Infrastructure” cost of the project, USD 70,000.
 - Surveillance System, cost of the project USD 125,000
 - E-Promotion for faculty members for the academic promotions that is a time-efficient with a reduction in the paper work by more than 60%.
 - Establishing an Online Exam center that includes more than 400 PCs.
- Implementing a National Database for researchers in Jordan public and private universities and research centers under the supervision of the Higher Council for Science and Technologies in Jordan.
- Implementing a National Database for Scientific and Research Equipment, Materials, and Software Licenses for Public Universities in Jordan.

SEPTEMBER, 2010-SEMPTEMBER, 2011

ASSISTANT DEAN OF ENGINEERING, JUST

- Responsible for students’ affairs including: courses equivalency, student’s transfer.

- Responsible for the website of the Faculty of Engineering.
- Responsible for the annual progress report for the Faculty of Engineering.

FEBRUARY, 2010-PRESENT

FACULTY MEMBER, JUST

ASSOCIATE PROFESSOR, MAY-2015-PRESENT

ASSISTANT PROFESSOR, FEB, 2010-MAY, 2015

- Taught several courses for undergraduate level.
- Supervising different senior level graduation projects.
- Taught several courses for post-graduate level.
- Supervising several master thesis.

THE UNIVERSITY OF MISSISSIPPI,

JANUARY-2006- JANUARY-2010

- Graduate Instructor for “Introduction to Telecommunications” TC 201, a course provided by the EE department at the University of Mississippi.
- Teaching and Research Assistant at EE department, The University of Mississippi.
- Participating in a research group concerning Wireless Communication and Networking Systems (WCNS).

DURING THE PHD. STUDY, I WORKED AT ALCATEL-LUCENT, USA

RF OPTIMIZATION: AUG 2007- AUG 2008

- Jr. RF Engineer at Philadelphia and Minnesota Market, optimization activities: Neighbor relations, tilt recommendations, drive test setup using Agilent technologies and drive routes planning.
- Dual Optimization of UMTS 850 MHz and UMTS 1900 MHz networks.
- Post processing and analysis of drive data.
- Detailed troubleshooting of all drops, failed set-ups and IRAT failures.
- Creation and implementation of neighbor addition and deletion scripts.
- Optimization of Ec/Io and RSCP IRAT thresholds.
- Investigation of unusual network behavior and faults; suspected, identified and verified GSM interference in UMTS band, including field work with spectrum

analyzer. Also extensive troubleshooting of FTP failure issues, and investigating and optimizing of the sites related parameters.

- Troubleshooting RF problems using LDAT3G and ACTIX.

COURSES TAUGHT

JOURDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

FEB-2010 – SEP-2016

- Digital Data Transmission (Master level course)
- Random Process (Master level course)
- Seminar in Wireless Communication (Master level course)
- Advanced Wireless Communication (Master level course)
- Random Signal Analysis
- Electronics I
- Electronics II
- Communication Systems
- Circuit Analysis
- Special Topics in Wireless Communication
- Digital Electronics lab
- Electronics lab

THE UNIVERSITY OF MISSISSIPPI, MS, USA, 2006-2009

- Introduction to Telecommunication – Instructor
- Electrical Circuit Lab – Teaching Assistant
- Digital Communication – Teaching Assistant

THE HASHEMITE UNIVERSIYT (HU), JORDAN, 2004-2006

- Signals and Systems
- Engineering Circuit Analysis
- Digital Design
- Electronics I
- Electronics II
- Semiconductor Materials
- Digital Design and Microprocessor lab.

- Electronics lab.

SUPERVISING SEVERAL MASTER THESIS AT JUST

Main Advisor

- Performance Analysis of Amplify-and-Forward Cooperative Communication System Over Multipath Fading Channel, Nemah Jaafreh, December, 2011
- Performance of Amplify and Forward Cooperative Communication System over Alpha-Mu Fading Channel Using Finite-Mixture Method, Tala Badayneh, December, 2012
- Performance Analysis of Multihop Wireless communication Systems Over κ - μ and η - μ Fading Channels using Generalized Gaussian-Finite-Mixture technique, Shafea abd Elbari, 2014

Co-advisor

- Performance Evaluation for Code Division Multiple Access with Space Frequency Block Code Downlink Transmission over Multipath Weibull Fading Channel Model, Salsabeel Theiabat, April 2011
- Performance Analysis of Relay-based Cooperative Diversity over Multipath Fading Channels with Interference, Rami Muhaisen, July 2012
- Selection Diversity Technique and Their Performance over the α - μ Fading Channels, Ahmed Al-Hubaishi, December 2012
- Performance of chaotic signals in Cooperative Communication Systems Over Multipath Fading Channels, Mais Khasawneh, June 2013

MEMBERSHIP AND PROFESSIONAL ACTIVITIES

- Member of the IEEE since 2002
- Reviewer for several international journals including IEEE Communications Letters, IEEE Transactions on Vehicular Technology and EURASIP Journal on Wireless Communications and Networking, Computer and Electrical Engineering, Wireless Communications and Mobile Computing, Transactions on Emerging Telecommunications Technologies.
- Reviewer for several international conferences

FUNDED PROJECTS

- Campus tube funded by KAFD, 2014, USD 7,000
- Database for researchers USD 7,000
- Database for equipment for SRFD USD 15,000

WORKSHOPS

- Testing and Evaluation, April, 2010
- Modern University Instructional Method, July, 2010
- Development of Curriculum & Study Plans According to ABET, March 2014

SKILLS:

- | | | |
|------------------------|------------|---------------|
| • ACTIX | • AGILAENT | • MATHEMATICA |
| • LDAT 3G GSM/
UMTS | • TEMS | • SIMULINK |
| • MAPINFO | • C++ | • MAPLE |
| • LATEX | • MATLAB | |

PUBLICATIONS: Books:

Amer M. Magableh and Mustafa Matalgah, *Emerging Diversity Techniques and Their Performance in Fading Channels*, (ISBN 978-3-8484-9752-2), LAP LAMBERT Academic Publishing, 2012

Patent

“Secure Wireless Communication Transceiver,” Mustafa M. Matalgah and Amer M. Magableh, Provisional Patent Application No. 61/320,245 Filing Date: April 1, 2010; US and International Patent Application No. PCT/US11/30952 Filing Date: April 1, 2011.

JOURNALS

- **Amer M. Magableh**, T Aldalgamouni, S Mater, O Badarneh “Ergodic Capacity and SNR Analysis for Dual Hop Amplify and forward Cooperative communication systems Over α - η - μ Channels, *IEEE Transactions on Vehicular Technology*, vo. 67, No. 12, pp. 12384-12388, December 2018,
- **Amer M. Magableh**, Osamah Badarneh, Ansari, and Taimour Dalgamouni, “Error Analysis of TAS/MRC in Rayleigh Fading Channel with Non-Gaussian Noise”. *Journal of the Franklin Institute*, vol. 355, no. 1), pp. 6877-6888, Sep. 2018.

- Osamah S Badarneh, Saud Althunibat, Raed Mesleh, **Amer M Magableh**, “ A unified performance analysis of decode-and-forward dual-hop relaying-based wireless energy harvesting with space modulation”, *Transactions on Emerging Telecommunications Technologies*, vol. 29, no. 7, July 2018.
- **Amer M. Magableh** and Neamah Jaafreh, Exact Expressions for the Bit Error Rate and Channel Capacity of a Dual-hop Cooperative Communication Systems Over Nakagami-m Fading Channels. *Journal of Franklin Institute*, vol. 355, no. 1, pp., 565-573, January, 2018.
- Aldalgamouni, Taimour; **Magableh, Amer M**; Badarneh, Osamah S;"Outage probability analysis of multi-hop relayed wireless networks over $\alpha-\mu$ fading channels", *Telecommunication Systems*, doi:10.1007/s11235-017-0295-2, March 2017.
- Aldalgamouni, Taimour; **Magableh, Amer**; Mater, Sharaf; Badarneh, Osamah S.: "Capacity Analysis of $\alpha-\eta-\mu$ Channels Over Different Adaptive Transmission Protocols", *IET Communications*, 2017, DOI: 10.1049/iet-com.2016.1189.
- **Amer M. Magableh** and M. M. Matalgah, “Improved-throughput opportunistic transmission protocol for cooperative communication systems with a preferable-link switching combining,” *International Journal of Electronics*, vol. 102, no. 9, 2015
- **Amer M. Magableh** and M. M. Matalgah, “Closed-Form Expressions for the Average Channel Capacity of the $\alpha-\mu$ Fading Model Under Different Adaptive Transmission Protocols,” *Wireless Communications and Mobile Computing*, pp. 192-201 , vol. 15, no. 1, 2015
- **Amer M. Magableh**, Taimour Aldalgamouni, and Neamah Jafareh “Capacity Analysis of Dual-Hop Wireless Communication Systems over alpha-mu Fading Channels”, *Computers & Electrical Engineering*, vol. 40, no. 2, Pages 399-406, February, 2014.
- **Amer M. Magableh**, Taimour Aldalgamouni, and Neamah Jafareh, “Performance of Dual-Hop Wireless Communication Systems over the $\alpha-\mu$ Fading Channels” *International Journal of Electronics*, Taylor and Francis, TETN, pp. 808-819, vol 101, no. 6, 2014.
- **Amer M. Magableh**, Redha M. Radaydeh, and Mohamad-Slim Alouini,” On the performance of shared access control strategy for femtocells”, *Transactions on Emerging Telecommunications*, vol. 24, no. 2, pp. 244-256, March 2013
- Taimour Aldalgamouni, **Amer M. Magableh**, and Ahmad Hubaishi, “Performance of Selected Diversity Techniques Over $\alpha-\mu$ Fading Channels”, *WSEAS Transactions on Communications*, no. 2, vol. 12, pp. 41-51, February 2013.

- **Amer M. Magableh** and M. M. Matalgah, "Accurate Closed-Form Approximations for the BER of Multi-Branch Amplify-and-Forward Cooperative Systems with MRC in Rayleigh Fading Channels'," *WSEAS Transactions on Communications*, Issue 7, Volume 12, July 2013.
- Taimour Aldalgamouni, **Amer M. Magableh**, and Salsabeel Al-Theiabat, "Performance of Downlink CDMA-SFBC Over Weibull Fading Channels," *Journal of Communications*, no. 4, vol. 7, pp. 321-328, April, 2012.
- **Amer M. Magableh** and M. M. Matalgah, "Error Probability Performance and Ergodic Capacity of L-Branch Switched and Examine Combining (SEC) in Weibull Fading Channels," *IET on Communications*, vol. 5, no. 9, pp. 1173-1181, 2011.
- **Amer M. Magableh** and M. M. Matalgah, "Moment Generating Function of the Generalized alpha-mu Distribution with Applications," *IEEE Communication letters*, vol. 13, no. 6, pp. 411-413, 2009

CONFERENCES

- Rami Mohaisen, Mamoun F. Al-Mistarihi, **Amer M. Magableh**, and Ashraf H. Sharaqa, "Outage Probability Analysis in Relay-Based DF Cooperative Diversity Systems with Relay & Destination Interferers," *Proc. 38th Jubilee International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2015*, Opatija, Croatia, May 25-29, 2015.
- **Amer M. Magableh**, Mamoun F. Al-Mistarihi, Rami Mohaisen, and Ashraf H. Sharaqa, "BER Analysis in Relay-Based DF Cooperative Diversity Systems with Relay & Destination Interferers," *Proc. 38th Jubilee International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2015*, Opatija, Croatia, May 25-29, 2015.
- Mamoun F. Al-Mistarihi, **Amer M. Magableh**, and Maiss M. Al-Khasawneh, "Closed Form Expression of Outage Probability in DCSK Cooperative Communication Systems over Nakagami-m Fading Channels," *Proc. 38th Jubilee International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2015*, Opatija, Croatia, May 25-29, 2015.
- **Amer M. Magableh**, Mamoun Mistarihi, and Mais Khasawneh, 'Performance evaluation of bit error probability in DCSK cooperative communication systems over Nakagami-m fading channels', *Multi-Conference on Systems, Signals & Devices (SSD), 2014 11th International*, DOI: 10.1109/SSD.2014.6808776, 2014, PP. 1-4
- Mamoun Mistarihi, **Amer M. Magableh**, and Rami Mohaisen, 'Closed-form expression for outage probability in relay-based cooperative diversity systems over multipath fading channels with interference', *Multi-Conference on Systems, Signals &*

Devices (SSD), 2014 11th International, DOI: 10.1109/SSD.2014.6808777, 2014, PP. 1-5

- **Amer M. Magableh**, Mamoun Mistarihi, and Rami Mohaisen, “Closed-form Expression for Bit Error Rate in Relay-Based Cooperative Diversity Systems over Multipath Fading Channels with Interference”, *International Wireless Communications and Mobile Computing IWCMC’13*, July 1-5, 2013, in Cagliari, Sardinia, Italy
- **Amer M. Magableh** and Mustafa Matalgah, “Channel Capacity of the Generalized Alpha-Mu Multipath Fading Model Under Different Adaptive Transmission Protocols”, *International Wireless Communications and Mobile Computing IWCMC’12*, August, 2012
- **Amer M. Magableh**, Redha M. Radaydeh, and Mohamad-Slim Alouini, “Shared Access Protocol (SAP) in Femtocell Channel Resources for Cellular Coverage Enhancement”, Workshop on Heterogeneous and Small Cell Networks - *IEEE GLOBECOM 2012*.
- Taimour Dalgamouni, **Amer M. Magableh**, and salsabeel Theiabat, “Performance Evaluation for Code Division Multiple Access with Space-Frequency Block Code Downlink Transmission Over Multipath Weibull Fading Channel Model”, Workshop on Mobile Computing and Emerging Communication Networks - *IEEE GLOBECOM 2011*.
- **Amer M. Magableh** and M. M. Matalgah, “Channel Characteristics of the Generalized Alpha-Mu Multipath Fading Model”, *International Wireless Communications and Mobile Computing Conference (IWCMC 2011)*, Istanbul, turkey, July 4-8, 2011.
- M. M. Matalgah, W. Y. Zibideh and **Amer M. Magableh**, "Alleviating the Effect of the Strict Avalanche Criterion (SAC) of Symmetric-Key Encryption in Wireless Communication Channels," (invited paper) *Proceedings of the International Conference on Communications and Information Technology (ICCIT-2011)*, pp 138 - 141, 29-31 March 2011, Aqaba, Jordan.
- M. M. Matalgah and **Amer M. Magableh**, “Simple Encryption Algorithm with Improved Performance in Wireless Communications,” *Proceedings of the IEEE Radio and Wireless Week (RWW 2011)*, pp. 215-218, Phoenix, AZ, USA, 16-19 January, 2011.
- **Amer. M. Magableh** and M. M. Matalgah, “Closed-form expression for the BER performance in cooperative communication systems with MRC over Rayleigh fading channels,” *Proceedings of the 6th International Wireless Communications and Mobile Computing Conference (IWCMC 2010)*, Caen, France, June 28-July 02, 2010.
- **Amer M. Magableh** and M. M. Matalgah, “Relay-based cooperative transmission protocol with preferable-link switching combining scheme,” *Proceedings of the 6th International Wireless Communications and Mobile Computing Conference (IWCMC 2010)*, Caen, France, June 28-July 02, 2010.

- **Amer M. Magableh** and M. M. Matalgah, “Error Rate Performance for Coherent Modulation Techniques with Switched and Examine Diversity Combining over Weibull Fading Channels,” *Proceedings of the 2008 ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2008)*, pp. 824-829, Doha, Qatar, March 31 – April 3, 2008.
- **Amer M. Magableh** and M. M. Matalgah, “Capacity of SIMO over non-identically independent distributed Nakagami-m channels,” *Proceedings of the IEEE Sarnoff Symposium*, pp. 1-5, April, 30- May-2, 2007.

References

- Prof. Abdallah Malkawi, Acting Chancellor Acting Chancellor of Fahad Bin Sultan University, KSA, Tabuk, Professor in Civil Engineering, mhusein@fbsu.edu.sa
- Prof. Mousa Abu Orabi, Professor in Chemical Engineering, Jordan University of Science and Technology, mousa@just.edu.jo
- Prof. Mohammad Khasawneh, Professor in Electrical Engineering, mkha@just.edu.jo
- Prof. Khaled Mayyas, Professor in Electrical Engineering, mayyas@just.edu.jo