

Resume

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Current Position:

Professor
Department of Electrical Engineering-
University of Jordan.
Senior Member of IEEE (2004).

Education:

1996-1999 Ph.D. Electrical Engineering. University of Bremen- Germany.
1988-1991 M.Sc. Electrical Engineering. Oklahoma State University- USA
1982-1987 B.Sc. Electrical Engineering. Yarmouk University- Jordan

Areas of Interest:

Array Processing and Smart Antennas for Mobile Communications. Digital Signal and Image Processing. Neural Networks and Fuzzy Systems. Evolutionary Optimization Techniques. Artificial Intelligence and Machine Learning.

Experience:

2015-present: Professor- Department of Electrical Engineering- University of Jordan.
2012-2015: Dean-School of Computer and IT- German-Jordanian University.
2008-2012: Chairman - Department of Electrical Engineering- University of Jordan.
2007-2008: Sabbatical year at Princess Sumaya University for Technology-Jordan.
2006-2007: Associate Prof.- Department of Electrical Engineering- University of Jordan
1999-2006: Assistant Prof. -Department of Electrical Engineering- University of Jordan.
Summer, 2002,
2004 and 2006 : Visiting Researcher–University of Bremen, Germany.

2003-2004 : Chairman of EE Department- University of Jordan.
1996-1999 : Research assistant, Department of Automation Technology- University of Bremen.

10/1995-4/1996: Visiting Researcher–Technical University of Munich (TUM), Germany
4/1995-9/1995: German language intensive course, Goethe-Institute Bremen- Germany
1993-1995 : Lecturer, Department of Electrical Engineering- University of Jordan
1988-1991 : Teaching and research assistant, Department of Electrical and Computer Engineering, Oklahoma State University- USA

Awards:

German Academic Exchange Service (DAAD) scholarship holder 1995-1999
Hisham Hijjawi Award for Engineering Sciences 2007.

Short Courses:

Advanced Process Control at SABIC Training Center, Al-Jubail, Saudia Arabia.
(6-10/6/2009) and (12-18/11/2009).

Committees:

- 1) Member of the scientific research committee, University of Jordan.
- 2) Member of Editorial Board, Jordan Journal of Electrical Engineering (JEE).
- 3) Member of the Advisory Board, Jordanian Journal of Computers & Information Technology (JJCIT).
- 4) Member of the graduate studies council, Princess Sumaya University for Technology.
- 5) Team leader of a committee for updating the existing Master Program of Communication, EE Dept., The University of Jordan.
- 6) Team leader of a committee for creating a new master program on Smart System Technologies at the EE Dept., The University of Jordan

Publications:**Refereed Book Chapters**

- [1] D.I. Abu-Al-Nadi, M.J. Mismar, and T.H. Ismail, " Genetically Evolved Phase-Aggregation Technique for Linear Arrays Control," *PIER* 43, pp: 287-304,2003.
- [2] J.S.Rahhal, D.I.Abu-Al-Nadi, and M. Hawa," Evolutionary Computation in Coded Communications: An Implementation of Viterbi Algorithm" In *Evolutionary Computation*, edited by Wellington Pinheiro dos Santos, In-Teh, pp: 139-152, 2009.

Refereed Journals

- [1] D. Abu-Fara, I. Rawabdeh, and D. Abu-Al-Nadi, " Neural Network Control for Cavity Pressure during Filling and Packing Stages of the Thermoplastics Injection Molding Process," *J. of Injection Molding Technology*, vol. 5, no.2, pp. 105-119,
- [2] T.H. Ismail, D.I. Abu-Al-Nadi, and M.J. Mismar, " Phase-Only Control of Antenna Pattern Synthesis of Linear Arrays Using Levenberg-Marquardt Algorithm", *Electromagnetics*, 24(7) pp: 555-564, 2004.
- [3] D.I. Abu-Al-Nadi, D.I. Abu-Fara, I.Rawabdeh, and R.J. Crawford," Control of Rotational Molding Using Adaptive Fuzzy Systems", *Advances in Polymer Technology*, vol. 24, no. 4, pp: 266-277, 2005.
- [4] D.I. Abu-Al-Nadi, T.H. Ismail, and M.J.Mismar," Interference Suppression by Element position Control of Phased Arrays Using LM Algorithm" *Int. J. of Electronics and Communications (AEÜ)*. Vol. 60, no. 2, pp. 151-158, 2006

- [5] M.J. Mismar, T. H. Ismail, and D. I. Abu-Al-Nadi, "Analytical Array Polynomial Method for Linear Antenna Arrays with Phase-Only Control", *Int. J. of Electronics and Communications (AEÜ)*, vol. 61, no.7 pp.485-492, 2007.
- [6] R.T. Al-Zubi, and D.I. Abu-AL-Nadi, "Automated Personal Identification System Based on Human Iris Analysis", *Pattern Analysis and Applications*, vol.10, no.2, pp. 147-164, 2007.
- [7] D.I. Abu-Al-Nadi, and J.S. Rahhal, "A Modified Genetic Algorithm for Training Adaptive Fuzzy Systems" *AutoSoft-Intelligent Automation and Soft Computing*, 14(4), pp. 445-460, 2008
- [8] J.S. Rahhal, and D.I. Abu-Al-Nadi, "A General Configuration Antenna Array for Multi-User System with Genetic and Ant Colony Optimization" *Electromagnetics*, 27(7), pp. 413-426, 2007.
- [9] M.A.Taha, D.I. Abu-Al-Nadi, and T.H. Ismail, "Maximum likelihood estimation of the double-directional parameters in the Multiple-input-multiple-output communication system using the particle swarm optimization", *Electromagnetics*, 28(6), pp. 401-410, 2008.
- [10] J.S. Rahhal, and D.I. Abu-Al-nadi, "Pre-Coding for MIMO Systems in Frequency-Selective Fading Channels," *Wireless Pers. Commun.* 55(4) pp 591-605, 2010,
- [12] Othman M. K. Alsmadi, Zaer S. Abo-Hammour, Adnan M. Al-Smadi, Dia I. Abu-Al-Nadi, "Genetic Algorithm Approach with Frequency Selectivity for Model Order Reduction of MIMO Systems", *Mathematical and Computer Modelling of Dynamical Systems*, 17(2): pp 163-181, 2011.
- [13] D.I. Abu-Al-Nadi, T.H. Ismail, H. Al-Tous, and M.J. Mismar, "Design of Linear Phased Array for Interference Suppression Using Array Polynomial Method and Particle Swarm Optimization", *Wireless Pers. Commun.*, vol 63, no.2, pp.505-513, 2012.
- [14] Mohammed Hawa, Jamal S. Rahhal and Dia I. Abu-AL-Nadi, "File size model for shared content over the BitTorrent Peer-to Peer network", *Peer-to-Peer Netw. Appl.* Vol. 5, no. 3 pp. 279-291, 2012.
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- [16] O.M.K Asmadi, Z.S. Abo-hammour, D. I. Abu-Al-Nadi, S. Saraireh, "Soft Computing Techniques for Reduced Order Modelling: Review and Applications", *Intelligent Automation and Soft Computing*, 22(1) 125-142, 2016.
- [17] M Hawa, D. I. Abu-Al-Nadi, O.M.K Asmadi, and I.F. Jafar. "On Using Spectrum History to manage Opportunistic Access in Cognitive Radio Networks", *IEEE Access* 4, 5293-5308, 2016.
- [18] Mohammed A. HajAhmad; Mohammed Hawa; Laith Shamlawi; Sahban Alnaser; Yazan Alsmadi, and **Dia Abualnadi**, "Cognitive Radio_based Backup Protection Scheme for Smart Grid Applications," *IEEE Access*, vol.8, pp. 71866-71879, 2020.
- [19] Hasan Farahneh and Dia Abualnadi, "An Outdoor Multipath Channel Model for Vehicular Visible Light Communication System", Accepted in *Jordan Journal of Electrical Engineering*.

Refereed Conferences

- [1] D. Abu-Al-Nadi, and D. Popovic," Texture Analysis Using an Adaptive Neuro-Fuzzy Networks and Fractals", The 8th IEEE Int. Conf. On Fuzzy Systems, Seoul, Korea, Aug. 22-25, 1999.
- [2] D. Abu-Al-Nadi, and D. Popovic," Texture Identification Using Adaptive Neuro-Fuzzy Approach", The 14th World Congress of IFAC'99, Beijing, China, July 5-9, 1999.
- [3] M.J. Mismar, T.H. Ismail, and D. I. Abu-Al-Nadi, " Interference Suppression Using Phase-Only Controlled Linear Array with Element Failures" The 7th International Conference on Intelligent Engineering Systems, INES 2003, Asuit- Egypt, pp 713-716, March 4-6, 2003.
- [4] W. Shadeed, D. Abu-Al-Nadi, and M. Mismar, "Road Traffic Sign Detection in Colored Images",10th IEEE conference on Electronics, Circuits and systems, ICECS2003,Sharjah,UAE,pp:890-893,Dec.14-17, 2003.
- [5] M. Takruri, D. Abu-Al-Nadi, " Fractal Image Compression Using Competitive Neural Network in Frequency Domain",10th IEEE conference on Electronics, Circuits and systems, ICECS2003, Sharjah,UAE,pp:96-99,Dec.14-17, 2003.
- [6] D.I. Abu-Al-Nadi, " Training Feedforward Neural Networks with a Modified Genetic Algorithm", The 14th Int. Conf. On Computer Theory and Applications, ICCTA'2004, Alexandria, Egypt, Sept. 28-30, 2004.
- [7] J.S. Rahhal and D. I. Abu-Al-Nadi," Mobile Vehicle Location using Integrated GPS GSM Systems", EUROMEDIA'2007, Delft , The Netherlands, 127-130, April 25-27, 2007.
- [8] J.S. Rahhal, D.I. Abu-Al-Nadi, and M.F. Hawa," Viterbi Decoder Algorithm Using Quantum Computing" IEEE Congress on Evolutionary Computing CEC2007, Sigapore, pp:4094-4099, Sep.25-28, 2007.
- [9] M.J. Mismar, D.I. Abu-Al-Nadi, and T.H. Ismail, "Pattern Synthesis with Phase-Only Control Using Array Polynomial Technique" IEEE Conference on Signal Processing and Communications ICSPC07, Dubai, UAE, vols1-3, pp:444-447, 24-27 Nov. 2007.
- [10] D.I.Abu-Al-Nadi, T.H. Ismail, and M.J. Mismar "Synthesis of Linear Array and Null Steering with minimized Side-Lobe Level Using Particle Swarm Optimization" European Conference on Antenna and Propagation EuCAP2010. Barcelona Spain,12-16 April 2010.
- [11] D.I. Abu-Al-Nadi, Othman. M. Alsmadi, and Zaer Abo-Hamour, "Reduced Order Modeling of Linear MIMO Systems Using Particle Swarm Optimization" The Seventh International Conference on Automatic and Autonomous Systems (ICAS2011),pp 62-66, Venice/Mestre, Italy,2011.
- [12] Othman. M. Alsmadi, Zaer Abo-Hamour, D.I. Abu-Al-Nadi, and Alia Algsoon, " A Novel Genetic Algorithm Technique for Solving University Course Time Tabling Problems," 7th International Workshop on Systems, Signal Processing and their Applications (WOSSPA), Tipaza, Algeria, 9-11 May, 2011.
- [13] Mohammad, k. Khawaldeh and Dia I. Abu-Al-Nadi, " Design of Wideband Beamforming Using Particle Swarm Optimization",2012 IEEE 9th International Multi-Conference on Systems, Signals and Devices, Chemnitz, Germany, March 20-23, 2012.

- [14] M Taha, D abu al Nadi, “[Phase Control Array Synthesis Using Constrained Accelerated Particle Swarm Optimization](#)”, Proceedings of World Academy of Science and technology, lucerne,Switzerland 2013.
- [15] MA Taha, D abu alnadi,” [Threshold Adaptation in Spectrum Sensing For Cognitive Radio using Particle Swarm Optimization](#)”,Springer International Conference on Control, Engineering and Information Technology, CEIT'14,pp. 223-228, sousse, Tunisia (2014).
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- [17] Mohammad Taha, Dia I. Abu-Al-Nadi and Omar Musa Hasan, “Model Order Reduction Using Variable Dimension PSO”, 2015 International Conference on Control Theory and Its Application (CNTIA'2015), Malaysia.
- [18] DI Abu-Al-Nadi, MJ Mismar and TH Ismail, “An Eigen-Approach for Estimating the Direction-of –Arrival of Unknown Number of Signals”, the 18th International Conference on Electrical, Computer, Electronics and Communications Engineering, Sept. 15-16, Zurich Switzerland, 2016.
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- [23] Mohammad I. Al Saaideh ; Eyad A. Feilat ; Dia I. Abu-Al-Nadi ; Amer S. Al-Hinai, “Lightning Impulse Parameter Estimation Using Nonlinear Least Squares Algorithm”, 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), pp. 97-102, Amman, Jordan, 9-11 April 2019.
- [24] Mohammad I. Al Saaideh; Bayan B. Mazideh and Dia I. Abu-Al-Nadi,” Gery Wolf Optimizer for optimal Design of Digital IIR Filter,” 2019 10th International Conference on Information and Communication Systems (ICICS), pp. 256-261. Irbid Jordan, 11-13 June 2019
- [25] Jamal Rahhal and **Dia Abualnadi**, “IoT Based Predictive Maintenance Using LSTM RNN Estimator,” 2nd International Conference on Electrical, Communication, and Computer Engineering ICECCE2020, Istanbul Turkey, June 12-13 2020, Virtual Presentation.

[26] Hanadi Al-Salti, Dia Abualnadi, and Mohammad K. Abdelazeez,” Direction of Arrival for Uniform Circular Array Using Directional Antenna Elements,” Accepted at JEEIT 2021.

Languages:

Arabic (Native language), English, and German.

References:

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