Prof. Dr. Adnan Al-Smadi

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Faculty of Information Technology / Computer Science

Academic Rank: Professor

Membership:

1	**Member of the Board of Trustees,** Al Al-Bayt University, Jordan (2013 -2015)
2	**Member of the Board of Trustees,** Jerash Private University, Jordan (2013 – 2017)
3	**Member of Recognition of non-Jordanian Universities & Certificates' Equivalency,**" Ministry of Higher Education and Scientific Research (2009 -2015)
4	**Member of the Board of Prince Faisal Center for Information Technology**, Amman (2013 - 2015)
5	**Senior Member of IEEE** (Institute of Electrical & Electronic Engineering), USA
6	**Member of NAIT** (National Association of Industrial Technology), USA
7	**Jordanian Alumni Society** for Graduate of **U.S.A**. Universities and Institutes.
8	**Eta Kappa Nu** (**HKN**) International Honor Society, USA
9	**Golden Key National Honor Society,** USA
10	**Who's Who in Engineering Academia**
11	**Marquis Who's Who in Science and Engineering**
12	**IEEE Signal Processing Society.**

Qualifications:

1	**Ph.D**. (Honors) *Electrical and Computer Engineering*, Vanderbilt University, USA, August 1995
2	**Master of Engineering** (Honors) *Electrical Engineering*, Tennessee State University, USA, May 1990.
3	**Bachelor of Science** (Honors), *Electrical & Computer Engineering,* Tennessee State University, USA May 1987.

Teaching Experience:

#	From	To	Job description
1	29-9-2024	Now	**Professor** Department of Computer Science Faculty of Information Technology **Zarqa University,** Jordan
2	2-9-2010	28-92024	**Professor** Department of Electronics Engineering Hijjawi Faculty for Engineering Technology **Yarmouk University**, Jordan
3	2-9-2006	1-9-2010	*Professor and Dean* College for Information Technology. Department of Computer Science **Al Al-Bayt University**, Jordan.
2	17-6-2002	1-9-2006	**Associate Professor** Department of Electronics Engineering Hijjawi Faculty for Engineering Technology **Yarmouk University**, Jordan
4	1-9-1997	17-6-2002	**Assistant Professor** Department of Electronics Engineering Hijjawi Faculty for Engineering Technology **Yarmouk University**, Jordan
	1-8-1995	1-8-1997	*Assistant Professor* Department of Aeronautical &Industrial Technology. College of Engineering and Technology **Tennessee State University,** Nashville, TN, USA
	1-9-1995	1-8-1997	*Adjunct Professor* Department of Electrical and Computer Engineering. College of Engineering and Technology **Vanderbilt University**, Nashville, TN, USA
	1-8-1992	1-8-1995	*Instructor* Department of Aeronautical &Industrial Technology. College of Engineering and Technology **Tennessee State University,** Nashville, TN, USA
	1-8-1991	1-8-1992	*Instructor* Department of Mathematics **Fisk University**, Nashville, TN, USA
	1-8-1989	1-8-1991	*Instructor* Department of Mathematics **Tennessee State University,** Nashville, TN, USA

Publications:

Year	Publisher	Title	#
Vol. 14, **2024**	*Results in Control and Optimization, Elsevier*	Artificial Control of Energy Management Pv System	.1
Vol. 2024, no. 1, **2024.**	*Przeglad Elektrotechniczny*	Considerations for Energy saving and Street Lighting lamps replacement in Jordanian Roads	.2
Vol. 42, July **2023**.	*Circuits, Systems & Signal Processing* (*CSSP*)	Estimation of ARMA Model Order Using Artificial Neural Networks	.3
Vol.15, **2021**	*International Journal of Circuits, Systems and Signal Processing*	A New Technique for ARMA-System Identification Based on QR-Decomposition of Third Order Cumulants Matrix	.4
Vol. 33, no. 1, **2021.**	*Jurnal Kejuruteraan* (*Journal of Engineering*)	Intelligent Street Lighting Energy-Saving System Based on Climate Conditions and vehicle's Movements	.5
Vol. 39, no. 11, **2020**	*Circuits, Systems & Signal Processing* (*CSSP*)	Model Order Reduction with True Dominant Poles Preservation via Particles Swarm Optimization	.6
Vol. 42, no. 13,**2020**.	*Transactions of the Institute of Measurement and Control*	A Robust Method for the Identification of Non-Gaussian Autoregressive Systems in Colored Gaussian Noise	.7
Vol. 41, no. 10, **2019**.	*Transactions of the Institute of Measurement and Control*	Firefly Artificial Intelligence Technique for Model Order Reduction with Substructure Preservation	.8
Vol. 6, No. 4, **2018**	*Journal of Instrumentation and Control Engineering*	Diagnostic Analysis of the Power Consumption for Real Time Conditions of the Aluminum Extrusion Process	.9
Vol. 12, No.11, **2018**.	*Modern Applied Science*	Hn PERP: Hop by Hop-Power-Efficient Routing Protocol over Underwater Wireless Sensor Networks	.10
Vol. 12, No. 10**2018**	*International Journal of Mathematics and Computers in Simulation*	ARMA Model Parameter Estimation of Non-Gaussian Processes Using QR Factorization	.11
Vol. 1,No. 12, 2016	*International Journal of Control Systems and Robotics*	Dominant-Dynamics-Based Reduced Order Modeling Using Genetic Algorithm	.12

Vol.7, No.3, May 2015	*The International Journal of Computer Networks & Communications*	A novel Algorithm for TCP Timeout Calculation over Wireless Ad Hoc Networks	**13.**
Vol. 2, No.4, December 2014	*Journal of Engineering Research and Technology*	Singular Value Decomposition-Based ARMA Model Parameter Estimation of Non-Gaussian Processes	**14.**
Vol. 34, pp. 594-603, July 2012	*Transactions of the Institute of Measurement and Control*	A robust and efficient genetic algorithm for solving a chemical reactor problem: theory, application, and convergence analysis	**15.**
Vol. 40, no. 4, April 2012	*International Journal of Circuit Theory and Applications*	Robust Model Order Reduction Technique for MIMO Systems via ANN-LMI-Based State Residualization	**16.**
Vol. 18, March 2012.	*Mathematical and Computer Modelling of Dynamical Systems*	ARMA model order and parameter estimation using genetic algorithms	**17.**
Vol. 20, no. 7, November 2011	*Journal of Circuits, Systems, and Computers*	Multi-Time-Scale Systems Model Order Reduction via genetic algorithms with Eigenvalue Preservation	**18.**
Vol. 35, no. 9, September 2011	*Applied Mathematical Modelling*	Artificial neural network for discrete model order reduction with substructure preservation	**19.**
Vol. 32, no. 4, July 2011	*Optimal Control, Applications and Methods*	A Novel Continuous Genetic Algorithm for the Solution of Optimal Control Problems	**20.**
Vol.17, no. 2, April 2011	*Mathematical and Computer Modelling of Dynamical Systems*	Genetic algorithm approach with frequency selectivity for model order reduction of MIMO systems	**21.**
Vol. 88, 2010.	*Communications in Computer and Information Science, Springer*	Artificial Neural Network-Based Algorithm for ARMA Model Order Estimation	**22.**
Vol. 3, no.1, January 2010	*Recent Patents on Computer Science*	A Robust ARX and ARMA Model Order Estimation via Pivot-Neighbors Comparisons	**23.**
Vol. 35, no. 4, 2009.	*Systems Science*	ARMA Model Order Estimation of Non-Gaussian Process Using the Determinant of Sub-Matrices of a Third Order Cumulants Covariance Matrix	**24.**
Vol. 38, no. 1, January 2009	*International Journal of General Systems*	Automatic Identification of ARMA Processes	**25.**
Vol. 4, no. 3, 2009	*The Ubiquitous Computing and Communication Journal*	Detecting Metamorphic Viruses by using Arbitrary Length of Control Flow Graphs and Nodes Alignment	**26.**

*V*ol. 26, no. 5, October 2007	*Circuits, Systems & Signal Processing* (*CSSP), Springer*	A Least-Squares-Based Algorithm for Identification of Non-Gaussian ARMA Models	.27
Vol. 23, no. 3, September 2007	*Engineering with Computers Journal*	Space Partitioning in Engineering Design Via Metamodel Acceptance Score Distribution	.28
Vol. 2, no.3, July 2007	*Journal of Active and Passive Electronic Devices*	Response Enhancement of a Singularly Perturbed System Based on Eigenvalue Assignment	.29
Vol. 3, no. 1, January 2007	*International Journal of Signal Processing*	Signal Reconstruction Using Cepstrum of Higher Order Statistics	.30
*V*ol. 51, no. 1, January 2006	*Journal of Physics in Medicine and Biology*	Extraction of Fetal ECG by Combination of SVD and Neuro-Fuzzy Inference System	.31
Vol. 36, no. 15, December 2005	*International Journal of Systems Science*	The Estimation of the Order of an ARMA Process Using Third Order Statistics	.32
vol. 10, December 2005	*International Journal of Computer Science*	Test for Gaussianity of a Stationary Time Series	.33
Vol. 24, no. 6November 2005**.**	*Circuits, Systems & Signal Processing* (*CSSP), Springer*	ARMA Model Order Determination Using Edge Detection: A New Perspective	.34
Vol. 6, no. 3, November 2005.	*International Journal of Engineering Simulation*	ARMA Model Order Estimation for Colored Gaussian Noise Based on the Eigenvalues of the Covariance Matrix	.35
*V*ol. 33, no. 3, May 2005.	*International Journal of Circuit Theory and Applications*	An Efficient Approach for Computing Non-Gaussian ARMA Model Coefficients Using Pisarenko's Method	.36
Vol. 85, no. 3, March 2005.	*Signal Processing*	Cumulant-Based Order Selection of Non-Gaussian Autoregressive Moving Average Models: The Corner Method	.37
Vol. 35, no. 5, October 2004	*International Journal of Mathematical Education in Science and Technology*	On the Spectrum of Periodic Signals	.38
Vol. 33, no. 6, July 2004	*International Journal of General Systems*	ARMA Model Order Estimation Using Third Order Computations	.39
Vol. 86, no. 4, July 2004	*Electrical Engineering*	High-Quality Low-Complexity Wavelet-Based Compression Algorithm for Audio Signals	.40

Vol. 5, no. 1, March 2004.	*International Journal of Engineering Simulation*	A New Order Determination Technique Based on the Determination of Singularity of Principal Sub-Matrices	.41
Vol. 16, no. 10, December 2003	*International Journal of Communication Systems*	Study of the Reliability of a Binary Symmetric Channel under Non-Gaussian Disturbances	.42
Vol. 31, no. 6, November 2003	*International Journal of Circuit Theory and Applications*	Cumulant Based Approach to FIR System Identification	.43
Vol. 32, no. 5, September 2003	*International Journal of General Systems*	Cumulant-Based Inverse Filters for Blind Deconvolution	.44
Vol. 25, no. 5, September 2001	*Journal of Medical Engineering and Technology*	Fitting ARMA Models to Linear Non-Gaussian Processes Using Higher Order Statistics	.45
Vol. 29, no. 5, August 2001	*International Journal of Circuit Theory and Applications*	A New Coefficient Estimation Method for Autoregressive Systems Using Cumulants	.46
Vol. 28, no. 4, August 2000	*International Journal of Circuit Theory and Applications*	A Robust Recursive Technique for Pole-Zero System Model Order Estimation	.47
Vol. 38, no. 4, November 1995	*IEEE Transactions on Education*	Simplifying and Extending a Useful Class of Signals and Impulse Responses	.48

Year	Title	Organizing Institution	Conference	#
December 10-12, **2024**	Intelligent Farm Irrigation and Safety System	Zarqa University, Jordan	25th *International Arab Conference on Information Technology* (*ACIT*)	1.
May 2-5, **2024**	Vehicle Autonomous Driving System	International Society for Research in Education and Science	*4rd International Conference on Basic Sciences, Engineering and Technology*	2.
April 27 - 30, **2023**	A Navigation Tool for Visually Impaired and Blind People	International Society for Research in Education and Science	*3rd International Conference on Basic Sciences, Engineering and Technology*	3.

March 29-31, **2022**	Vehicle Auto Parking System	Gazi University, Turkey	*9th IEEE International Conference on Electrical and Electronics Engineering*	**4.**
July 20-23, **2020**	Intelligent Automobile Collision Avoidance and Safety System," (*SSD*20)	Chemnitz University of Technology	*17th IEEE International Multi-Conference on Systems, Signals & Devices*	**5.**
March 21-24, **2019**	Street Lighting Energy-Saving System	Chemnitz University of Technology	*16th IEEE International Multi-Conference on Systems, Signals & Devices*	**6.**
October 6-8, **2018**	ARMA Model Parameter Estimation of Non-Gaussian Processes Using QR Factorization	Institute for NAtural Sciences & Engineering	*The 2018 International Conference on Circuits, Systems and Signal Processing*	**7.**
March 28-31, **2017**	Design of Reduced Order Models for Multi-Time-Scale Systems Via Firefly Optimization	Chemnitz University of Technology	*14th IEEE International Multi-Conference on Systems, Signals & Devices*	**8.**
April 15-17, **2016**	Model Order Reduction Using Genetic Algorithm	World Scientific and Engineering Academy and Society	*15th International Conference on Circuits, Systems, Electronics, Control & Signal Processing*	**9.**
December 8-11, **2013**	Intelligent Computational Technique with CGA Approach for Optimal Solutions		*IEEE International Conference on Electronics, Circuits, and Systems*	**10.**
March 4-6, **2013**	On the Yule Walker equations for the all-pole coefficients		*The Second International Conference on Digital Enterprise and Information Systems*	**11.**
August 26-29, **2012**	Artificial neural network for discrete model order reduction with frequency selectivity		*Proceedings of the 10th International FLINS Conference on Uncertainty Modeling in Knowledge Engineering and Decision Making*	**12.**
				13.

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Supervision of Theses:

year	University	Thesis Title	Student Name	#
PH.D. 2010	Amman Arab University for Graduate Studies	ARMA model orders and parameters estimation using evolutionary algorithms	Dr. Khaled Alqawasmi	.1
MS 2016	Yarmouk University	Design of Reduced Order Controller for Multi-Time-Scale Power Systems Via Firefly Optimization	Esraa Garaibeh	.2
MS 2016	Yarmouk University	Analysis of higher order modeling of inter area power system oscillation using eigenvalue method and model reduction via particle swarm optimization method	Mohammad Alma''aitah	.3
MS 2-15	Yarmouk University	Model and Controller Order Reduction of Singularly Perturbed Systems Using Genetic Algorithm	Mais Marji	.4
MS 2012	Yarmouk University	Energy saving with visually satisfactory street lighting in Jordanian Roads	Tariq Rjoub	.5
MS 2010	Al Al-Bayt University	Improvement of Iris Recognition System Using Fuzzy Segmentation and Neural Network	Kawthar Hawamdeh	.6
MS 2009	Al Al-Bayt University	Quality metrics for object-oriented software	Fedaa Sharedeh	.7
MS 2009	Al Al-Bayt University	Timeout adaptability for TCP retransmission over Ad hoc networks	Tariq Kraishan	.8
MS 2008	Al Al-Bayt University	Preventing software piracy using public key cryptography	Khaldoon Khawaldeh	.9
MS 2007	Yarmouk University	Autoregressive moving average modeling using continuous genetic algorithms	Maha Zaqoot	.10
MS 2005	Yarmouk University	Solution of optimal control problems using continuous genetic algorithms	Ali Al-Asasfeh	.11
MS 2005	Yarmouk University	Collision-free planning of robot manipulator using continuous genetic algorithms	Sufyan Bataineh	.12
MS 2005	Yarmouk University	On-line identification and analysis of the power consumption signal for aluminum extrusion process	Samer As'ad	.13

Personal Information

Name		
Place and Date of Birth		
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Marital Status		
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