Ahmad A. Mohammad (Tawayha)
Associate Professor, EE Department
Princess Sumaya University College of Technology
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Amman, Jordan

PROFESSIONAL INTEREST 'One Sabbatical year'

Research and teaching at the university level, in the areas control systems, computer engineering. In particular, Multimedia, Digital watermarking, Time-delay estimation, Model order reduction, robust control, and Optimal control.

EDUCATION

Sept., 1992	Ph.D. in Electrical Engineering/Control System
	The University of Akron
	Thesis Title: Modeling Issues and Lyapunov
	Equations in Dynamic Control Systems
	Advisor: J. A. De Abreu
May 1987	M.SC. in Electrical Engineering/Computer
	The University of Akron
June 1986	B.S.C. in Electrical Engineering
	Ain Shams University

COURSE WORK

Adaptive Control	Microprocessor Interfacing
Distributed Parameters	Computer Circuits
Control System Theory	Advanced Microcomputer Systems
Model Order Reduction	Software Engineering
Optimal Control I&II	Computer Algorithms I&II
Nonlinear Systems	Functional Analysis
System Simulations	Advanced Eng. Math I&II
Robust Control	Calculus of Variations
Advanced Linear Systems	Adv. Electromagnetic Fields

COURSES Taught

Digital Control	Automatic Control
Communication Electronics	Circuits I
Assembly Language	FORTRAN 77
Microprocessors Systems Design	Industrial Electronics

ACADEMIC EXPERIENCE

Sept 2000-now Associate Professor since 2013, Princess Sumaya University
During this period I:

1) Taught:

Automatic Control	Industrial electronics I,II	Microprocessors systems
Assembly Language	Communication Electronics	Circuits I

2) Served as President Assistant for Accreditation and Quality Assurance for two years
3) Chair of graduate studies committee in electrical engineering department
4) Supervised several final year projects
5) Supervised a Master student and participated in several examination committees

Oct. 1993-Sept. 2000   Assistant Professor, Applied Science University, EE Dept., Amman, Jordan
During this period I:

1) Held the position of Acting dean of Engineering since Oct. 19997 until Oct. 1999
2) Held the position of Dept. Head for the academic year 1996/1997
3) Taught the Following Courses:

FORTRAN 77	Electromagnetic Fields I&II
Data Structures	Automatic Control Systems
Digital Control	Microprocessors Systems Design

4) Have supervised and prepared both Microprocessors systems and automatic control systems labs from the stage of preparing tenders all the way to preparing experiments and manuals.
5) Have participated in almost all Dept. committees. In particular, I had a very positive input to the plan of study.
6) Supervised several final year projects

PUBLICATIONS

Journal Papers

1. Mohammad Ahmad A. (2021) A Low Distortion Reversible Data Hiding Technique Based on Prediction Difference Expansion. JJEE 7(2): 130–146. doi: 10.5455/jjee.204-1601584525
2. Fadi R. Shahroury, A.A. Mohammad, 'Design of a passive CMOS implantable continuous monitoring biosensors transponder front-end', Microelectronics Journal (2019), doi: https://doi.org/10.1016/j.mejo.2019.06.005. (Thomson ISI Indexed)
3. Fares S. El-Faouri, Mustafa Walid Alzahlan, Majd Ghazi Batarseh, Ahmad Mohammad, Muhy Eddin Za'ter, 'Modeling of a Microgrid's Power Generation Cost Function in Real-Time Operation for a Highly Fluctuating Load', Simulation Modelling Practice Theory, Volume 94, July 2019, Pages 118-133. (ISI Indexed)
4. Ahmad A. Mohammad, Ali Al-Haj, and Mahmoud E. Farfoura, 'An improved capacity data hiding technique based on image interpolation,' Multimedia Tools and Applications, Springer (doi: 10.1007/s11042-018-6465-8). (Thomson ISI Indexed)

5. Ali Al-Haj, Ahmad Mohammad and Alaa' Amer, 'Crypto-Watermarking of Transmitted Medical Images' J Digital Imaging, Springer (doi:10.1007/s10278-016-9901-1)). (Thomson ISI Indexed)

6. A Al-Haj, Mahmoud E. Farfoura and Ahmad Mohammad, 'Transform-based watermarking of 3D depth-image-based-rendering images,' Measurement, vol. 95, pp.405-417, Jan 2017.). (Thomson ISI Indexed)

7. Samir Shaltaf and A. A. Mohammad, 'A Hybrid Neural Network and Maximum Likelihood Based Estimation of Chirp Signal Parameters,' IAJIT, vol. 10, no.4, July 2013.). (Thomson ISI Indexed)

8. Ahmad A. Mohammad, 'A new digital image watermarking scheme based on Schur decomposition', Journal of Multimedia tools and applications, Springer, vol. 59, no. 3,pp. 851-883, 2012. (DOI 10.1007/s11042-011-0772-7)

9. Ahmad A. Mohammad, Ali Al-Haj and Samir Shaltaf, 'An Improved SVD-Based Watermarking scheme for protecting rightful ownership,' Signal Processing, vol. 88, no.9, 2158– 2180, 2008. doi:10.1016/j.sigpro.2008.02.015.

10. Ahmad A. Mohammad, 'A NEW OPTIMAL ROOT LOCUS TECHNIQUE FOR LQR Design,' Journal of Control and Intelligent Systems, vol. 35, no.1, pp. 15-23, 2007. DOI: 10.2316/Journal.201.2007.1.201-1583.

11. Ali Alhaj, Ahmad Mohammad, 'Digital Audio Watermarking Based on the Discrete Wavelets Transform and Singular Value decomposition,' Europian Journal of Scientific Research, vol. 39, No.1, pp. 6– 21, 2010

12. Samir J. Shaltaf and Ahmad A. Mohammad, 'Neural Networks Based Time-Delay Estimation using DCT Coefficients,' American Journal of Applied Sciences, vol. 6, no.4, 703-708, 2009.

13. Ali Al-Hhaj, Ahmad Mohammad, and Lama Bata, 'DWT–based Audio Watermarking,' IAJIT, vol. 8, no.3, July 2011.

Conference Papers

1. Mustafa Walid Alzahlan, Fares S. El-Faouri, Majd Ghazi Batarseh, Ahmad Mohammad and Muhy Eddin Za'ter, 'Particle Swarm Optimization of a Microgrid's Cost Function Involving Distributed Generation and Highly Fluctuating Load', 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT) , pp. 319- 324, Amman, Jordan , April 9-11, 2009. DOI:10.1109/JEEIT.2019.8717494 IEEE Explore

2. Ali Al-Haj, Lama Bata, and Ahmad Mohammad, 'Audio Watermarking Using Wavelets,' First International Conference on Networked Digital Technologies, pp. 398 - 403, Ostrava, Czech Republic , July 28-31, 2009.DOI: 10.1109/NDT.2009.5272146 IEEE Explore

3. Ali Al-Haj, Lama Bata, and Ahmad Mohammad, 'Audio Watermarking Using Wavelets,' First International Conference on Networked Digital Technologies, pp. 398 - 403, Ostrava, Czech Republic , July 28-31, 2009.DOI: 10.1109/NDT.2009.5272146 IEEE Explore

4. Ali Al-Haj, Christina Twal, and Ahmad Mohammad, 'Hybrid DWT-SVD Audio Watermarking,' Fifth International Conference on Digital Information Management, pp. 525 - 529, Thunder bay, ON, Canada, July 5-8,2010. (DOI10.1109/ICDIM.2010.5664651) IEEE Explore

5. J.A. De Abreu-García, A. Mohammad, and T.T. Hartley, "On the Simulation of the Space Shuttle Main Engine," Proceedings of the 16th Annual Conference on Industrial Electronics, Control, and Instrumentation (IECON'90), Vol. 1, p. 188-192, Pacific Grove, CA, November 27-30, 1990. **Digital Object Identifier:** 10.1109/IECON.1990.149135

6. A. Mohammad and J.A. De Abreu-García, "A Transformation Approach for Model Order Reduction of Nonlinear Systems," Proceedings of the 16th International Conference on Industrial Electronics, Control and Instrumentation (IECON'90), Vol. 1, p. 3803-83, Pacific Grove, CA, November 27-30, 1990. **Digital Object Identifier:** 10.1109/IECON.1990.149170

7. A. Mohammad, J.A. De Abreu-García, and T.T. Hartley, "On the Use of the Lyapunov Equations in Continuization and Discretization of Linear Systems," Proceedings of the IEEE American Control Conference, Vol. 2, p. 1121, Chicago, IL, June 24-26, 1992.

Book Chapters

1. Ali Al-Haj, Ahmad Mohammad,Samir El-Saud, Tuqa Manasrah and Lama Rajab, "A Unified Approach Towards Multimedia Watermarking," Book Title: ***Advanced Techniques in Multimedia Watermarking: Image, Video and Audio Applications***. Published by: IGI global, To appear in April 2010.

2. A. Mohammad and J.A. De Abreu-García, "Continuous-Time and Discrete-Time Lyapunov Equations: Review and New Directions," International Series on Advances in Control and Dynamic Systems, Vol. 74, pp. 253-307, Academic Press Inc., 1996, (Invited book chapter for Special Theme Volumes on "Digital Design & Control systems Techniques and Applications.") [doi:10.1016/S0090-5267(96)80067-3](doi:10.1016/S0090-5267(96)80067-3)

REFERENCES

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