

Staff Member C.V.

1. Personal Information

Name: Hussein Hamed Mahmoud Ghouz

Position: Associate Professor

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Birth date: 07 / 21 / 1959

Nationality: Egyptian

Marital status: Married



2. Education

2.1. PhD Ph. D in the field of: Electrical engineering
Awarded by: Arizona State University (in Dec. 1996)
On:
Analysis and Design of Via and Flip-Chip Interconnects

2.2. M. Sc.
Master of Science degree: Electrical engineering
Awarded by: Military Technical College (in February 1991)
On:
Clutter suppression using Adaptive Array Signal Processing

2.3. B. Sc.
Bachelor of Science degree: Electrical engineering
Awarded by: Military Technical College (in July 1983)
Specialization: Radar
Graduation Grade (accumulated): Excellent (Distinction and Honors
The highest grade)

3. Work Experience

3.1. Positions Occupied

1. I was an Assistance Lecturer in the Electronic Warfare department, Military Technical College, Cairo, Egypt, from 1983 to 1992.
2. I was an Assistance Lecturer and research associate in the department of Electrical Engineering, Arizona State University, USA, from 1992 to 1996.
3. I was an Assistance Professor in radar and guidance department, Military Technical College, Cairo, Egypt, from 1996 to 2002.
4. From 2002 up December 2009, I was an Assistance Professor in the department of Electrical Engineering, Modern Academy for Engineering and technology, Cairo, Egypt.
5. From January 2010 up till now, I am currently associate professor in the department of Electronics and communication Engineering, Arab Academy for Science and Technology and Maritime Transport, Cairo, Egypt.

3.2. Major Teaching Experience

a) Undergraduate Courses

Communication Track

- Signal and Systems Analysis
- Communication Principles
- Analog and Digital Filters

Microwave and Antennas Track

- Electromagnetic Field Theory
- Wave Propagation and Antennas
- Microwave Engineering

Electric and Logic Circuits Track

- Fundamentals of Electric Circuits
- Electric Circuit Analysis
- Logic Design

Programming and software Track

- Introduction to computer systems
- Programming Languages (C++)
- MATLAB Package

b) Postgraduate Courses

- Digital Signal Processing
- Antennas and Radio Waves Propagation
- Advanced Electromagnetic Theory
- Computational Electromagnetic Software (CST Microwave Package)

4. Postgraduate Activities

a) Supervisor of the Following Master of Science Thesis's:

1. Adaptive Space-Time Processing for Interference Suppression in Phased Array Radar Systems, M.T.C., Cairo, Egypt, Feb., 2000.
2. Interference Excision Technique in Frequency Hopping Spread Spectrum Communication, Faculty of Engineering, Cairo University, Cairo, Egypt, July, 2009
3. Modified Kalman Filter Tracker Based on Hidden Markov Model, AAST, Cairo, Egypt, Sept., 2013
4. Proposed PAPR Reduction Techniques in Long Term Evolution System, AAST, Cairo, Egypt, June, 2013
5. Analysis and Fabrication of MIMO Antenna, AAST, Cairo, Egypt, Aug., 2013
6. Performance Analysis and Evaluation of Ultra-Wide Band Wireless Computer Network, AAST, Cairo, Egypt, Jan., 2014
7. Design, Analysis, and Implementation of Planar antennas for Wireless Communication System, AAST, Cairo, Egypt, Jan, 2014
8. Design, Analysis, and Implementation of Planar Filtennas for Wireless Communication System, AAST, Cairo, Egypt, (Current Research) 2012
9. Design, Analysis, and Implementation of Multiport Antennas for Wireless Communication System, AAST, Cairo, Egypt, (Current Research), 2012
10. Channel Estimation Technique for Long Term Evolution, AAST, Cairo, Egypt, (Current Research), 2012
11. Design, Analysis and Implementation of Compact UWB Antenna for Local Network Applications, AAST, Cairo, Egypt, (Current Research), 2012
12. On-Board Dual Band Planar Satellite Antenna, AAST, Cairo, Egypt, (Current Research), 2013
13. Design and implementation of microstrip antenna using Frequency Selective Surface, AAST, Cairo, Egypt, (Current Research), 2013
14. Design and Implementation of Microstrip Antenna for Millimeter Wave Applications, AAST, Cairo, Egypt, (Current Research), 2014
15. Design and Implementation of Microstrip Antenna for Millimeter Wave Applications, AAST, Cairo, Egypt, (Current Research), 2014
16. IPTV Source Coding: Quality of Service Analysis and Enhancement, AAST, Cairo, Egypt, (Current Research), 2014

b) Supervisor of the Following Ph.D. Thesis's:

1. Generalized Adaptive Space-Time Side-lobe Canceller in Electronic Scan Radar Systems, M.T.C., Cairo, Egypt, July, 2001
2. Interference Suppression Technique of Filtering in Electronic Scan Phased Array Radar Systems, M.T.C., Cairo, Egypt, Oct., 2003

5. English Languish

Excellent and Fluent

6. Research Interest and Experience:

- Design and Analysis of Compact Planar Antennas
- Adaptive Signal Processing Techniques in Communication Systems
- Electromagnetic Computational Techniques
- Modeling and Analysis of Electronic and RF Packages
- Smart Antenna Design and Analysis for Interference Mitigation

7. Publications

7.1 Ph. D Publications

- [1] Hussein H. Ghouz and E. B. El-Sharawy," Finite Time-Domain Analysis of Flip-Chip Interconnects with Staggered Bumps", IEEE Trans. on Microwave Theory and Techniques, volume 44, No. 6, pp. 961-963, June 1996.
- [2] Hussein H. Ghouz and E. B. El-Sharawy, "An Accurate Circuit Model of Flip-Chip Interconnects", Proceeding on IEEE MTT-S International Microwave Symposium, volume 3, pp. 1827-1830, June 1996.
- [3] Hussein H. Ghouz and E. B. El-Sharawy, "An Accurate Circuit Model of Flip-Chip Interconnects", IEEE Trans. on Microwave Theory and Techniques, volume 44, No. 12, pp. 2543-2553, Dec. 1996.
- [4] Hussein H. Ghouz," Analysis and Modeling of Resonance Effects in Monolithic Microwave Integrated Circuit Package", Proceeding of the First International Conference on Electrical Engineering ICEENG98, Military Technical College, Cairo, Egypt, 24-26 March 1998.
- [5] Hussein H. M. Ghouz and E. B. El-Sharawy," Analysis and modeling of microstrip-to-coplanar flip chip package interconnects", International Journal of RF and Microwave computer-Aided Engineering, volume 11, issue 4, July 2001.
- [6] Hussein H. M. Ghouz and E. B. El-Sharawy," Analysis and characterization of package resonances", International Journal of RF and Microwave computer-Aided Engineering, volume 15, issue 1, Jan. 2005.

7.2 Single-Author Journals

- [7] Hussein H. Ghouz, "Finite-Difference Time-Domain Analysis and Design of High Frequency Interconnects in MMIC Circuit Packages", *Ain Shams Journal of Electrical Engineering*, ASJEE, Vol. 2, pp. 53-65, December. 2009.
- [8] Hussein H. M. Ghouz, "New Compact Microstrip Patch Filtenna Structures with Partitioned Ground for 3G/4G Applications", *International Journal of Engineering and Technology*, IJET-IJENS Vol.12, Issue No. 05, pp.113-117, October, 2012
- [9] Hussein Hamed Mahmoud Ghouz, "New Two Port Microstrip Patch Antenna Structures", *International Refereed Journal of Engineering and Science*, Vol. 3, Issue 2, Feb., pp.87-93, 2014
- [10] Hussein Hamed Mahmoud Ghouz and Mohammed H, Ghouz, "Novel Microstrip Filter Structures Using Reconfigurable Defective Digital Ground Plane", *International Journal of Advanced Engineering Applications*, Vol.7, Iss.1, pp.67-72 (2014)

7.3 Co-Authors Journals

- [11] Islam E. Kotb, Reda S. Ghoname, Hussein H. Ghouz and Hani H. Kaldass, "Compact MIMO Antenna for 4G Transceiver Application", *Journal of Applied Sciences Research*, JASR-8(7), pp.3193-3198, July, 2012
- [12] Safa Hussein, Hussein H. M. Ghouz and Aliaa Youssif, "Performance Analysis and Evaluation of TH-PPM and TH-BPSK under Dynamic Channel Environment", *International Journal of Future Computer and Communication*, Vol. 1, No. 4, pp. 352-355, December 2012
- [13] Maha Gaber Ahmed Mahmoud, Hussein H. M. Ghouz, and Nelly M. Hussein, "Novel PAPR Reduction Technique Base on Conventional Partial Transmit Sequence (PTS)", *International Journal of Engineering & Technology IJET-IJENS* Vol. 12 Issue No. 06, pp.77-81, December, 2012
- [14] Hussein H. M. Ghouz, Mohamed Sayed Ali and Ahmed Raafat Fouad, "A Novel Compact Ultra-wideband Monopole Microstrip Filtenna", *Journal of Applied Science*, 10(10), 1181-1190, 2013
- [15] Maha Gaber Ahmed Mahmoud and Hussein H. M. Ghouz, "A Novel OFDM PAPR Reduction Scheme Based on Selected Mapping", *Journal of Applied Science*, 14(1), 26-32, 2014
- [16] Safa Hussein, Hussein H. M. Ghouz and Aliaa Youssif, "Performance Analysis and Evaluation of UWB Wireless Computer Network for Multi-Users and Dynamic Channel Environment", *Journal of Applied Science*, 13(24), 5723-5728, 2013
- [17] Hany Mohamed El-Ansary, Ashraf Mamdouh Aziz, Gamal Mabrouk and Hussein Ghouz, "A Novel Channel Estimation Technique for Complexity Reduction of Least Minimum Mean Square Error", *American Journal of Applied Science*, 10(10), 1181-1190, 2013
- [18] Essam Eldein M. Khater and Hussein Hamed Mahmoud Ghouz, "Novel Compact UWB MIMO patch antenna for 3G/4G Wireless Communication

Applications”, International Journal of Engineering Research & Technology Vol. 2 Issue 10, 1925-1928, October, 2013

- [19] Reham Hamdy Zaghoul and Hussein H. M. Ghouz, “Novel Compact Microstrip Filtenna Structures”, International Refereed Journal of Engineering and Science, Vol. 3, Issue 2, Feb., pp.14-114, 2014
- [20] Mohamed A. Abdelaal and Hussein H. M. Ghouz, “New Compact Circular Ring Microstrip Patch Antennas”, PIER-C, Vol. 46, 135-143, 2014

7.4 Conferences

- [21] Hussein H. M. Ghouz, Salem I., Hanafy A., and Moufied A. D.,” Adaptive Space-Time Side lobe Canceller”, Proceeding of the second International Conference on Electrical Engineering ICEENG99, Military Technical College, Cairo, Egypt, 23-25 Nov. 1999, AW-7 pp. 146-147.
- [22] A. M. El-Bakli, M. H. Abd El-Azeem, and Hussein H. M. Ghouz,” Modeling and Analysis of Anisotropic and Non-linear Structures Using 3D-(SCN) TLM”, Proceeding of the second International Conference on Electrical Engineering ICEENG99, Military Technical College, Cairo, Egypt, 23-25 Nov. 1999, AW-3 pp. 114-118.
- [23] Hussein H. M. Ghouz, F. I. A. Elghany, and M. M. Qutb,” Adaptive Space-Time Processing for Interference Suppression in Phased Array Radar Systems (Part-I: Search Radar)”, Proceeding of the Seventeenth National Radio Science Conference, 17th NRSC’2000, Feb., 22-24, 2000, pp. B8-1 – B8-8.
- [24] Hussein H. M. Ghouz, F. I. A. Elghany, and M. M. Qutb,” Adaptive Space-Time Processing for Interference Suppression in Phased Array Radar Systems (Part-II: Tracking Radar)”, Proceeding of the Seventeenth National Radio Science Conference, 17th NRSC’2000, Feb., 22-24, 2000, pp. B9-1 – B9-7.
- [25] A. M. Allam, A. Mitkees, Hussein H. Ghouz, and O. Ali,” Time-Domain Analysis of Microstrip Line Using FDTD”, AL-AZHAR Engineering Sixth International Conference, pp. 293-302, Sept. 1-4, 2000.
- [26] Hussein H. M. Ghouz, Salem I., Hanafy A., and Moufied A. D.,” Two-Dimension Generalized Side lobe Canceller With Partial Adaptivity”, Proceeding of the Eighteenth National Radio Science Conference, 18th NRSC’2001, March, 27-29, 2001, B5 pp. 81-87.
- [27] Hussein H. M. Ghouz, Kamal S. M., Hanafy A., and Salem I. A.,” A Novel Adaptive Space-Time Technique of Filtering for Interference Suppression in Phased Array Airborne Radar Systems”, Proceeding of the 9th International Conference on Aerospace Science and Aviation Technology, ASA’2001, 8-10 May 2001.
- [28] Hussein H. M. Ghouz, Kamal S. M., Hanafy A., and Salem I. A.,” A Novel Adaptive Space-Time Technique of Filtering for Interference Suppression in

Phased Array Radar Systems”, Proceeding of the 3rd International Conference on Electrical Engineering ICEENG2002, Military Technical College, Cairo, Egypt, 14-16 May 2002.

- [29] Hussein H. M. Ghouz, Kamal S. M., Hanafy A., and Salem I. A.,” New Partial Adaptive Space-Time Technique of Filtering for interference Suppression in Phased Array Radar Systems, Proceeding of the 10th International Conference on Aerospace Science and Aviation Technology, ASA’2003, 13-15 May 2003.
- [30] Hussein H. M. Ghouz, ”Finite-Difference Time-Domain Analysis and Design of Transition Interconnects in Microstrip-to-Microstrip Package”, Proceeding of the 7th International Conference on Electrical Engineering ICEENG-7, Military Technical College, Cairo, Egypt, EE-135, 25-27 May, 2010.
- [31] Hussein H. M. Ghouz, ”Finite-Difference Time-Domain Analysis And Design of Coplanar-to-Microstrip Transition Interconnects”, Proceeding of the 7th International Conference on Electrical Engineering ICEENG-7, Military Technical College, Cairo, Egypt, EE-137, 25-27 May, 2010.
- [32] Mohammed Abd El-Aziz an Hussein H. M. Ghouz, “Novel Broadband and Dual-Band Patch Antennas”, IEEE International Symposium on Wireless Communication Systems, ISWCS-2012
- [33] Reham Hamdy Zaghoul and Hussein H. M. Ghouz, ”A new Compact Multi Resonance H-Patch Filtenna”, IEEE International Symposium on Antennas and Propagation, July 7-12, Hilton Orlando Lake Buena Vista, Florida, USA, 2013
- [34] Nawal A. Zaher, Ashraf M. Aziz, IEEE Senior Member, and Hussein H. Ghouz, “ A Data Association Approach for Multitarget Tracking Based on a Hidden Markov Model”, International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2013) held at Naha, Okinawa, Japan, 2013
- [35] Mohamed Ahmed Hassan Oweis and Hussein Hamed Mahmoud Ghouz, “A Novel Ku-Band Microstrip Antenna”, 2nd International Conference on Engineering and Technology, ICET 2014, Cairo, Egypt, 2014, (Accepted)