

Hossam Mohamed Kasem

CONTACT INFORMATION

Electronic and Electrical communication Dept.
Department of Electrical Engineering
Faculty of Engineering at Tanta University
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Work Experience

Computer Science and Software Engineering, Shenzhen University, China.
September 2017 - Present

Postdoctoral Fellow

Higher Technological Institute , Egypt.

Feb. 2016 - Sep. 2017

Part time Assistance Professor

Faculty of Engineering, Tanta University, Egypt.

Sep. 2015 - Present

Assistance Professor

Egypt-Japan University for Science and Technology, Egypt. June 2015 - Sep. 2015

Research Assistant

Kyushu University, Japan.

Sep. 2014 - June 2015

Ph.D Researcher

Egypt-Japan University for Science and Technology, Egypt. Sep. 2012 - Sep. 2014

Research Assistant

Faculty of Engineering, Tanta University, Egypt.

March, 2005 - Sep. 2012

Teaching Assistant

Preparing and delivering lab experiments and tutorials.

Discussing and grading homework assignments.

Research Interests

Machine Learning .

Machine Learning application in Digital Multimedia analysis .

Deep Learning .

Deep Learning applicatoion fro image Super resolution .

Deep Learning applicatoion for Medical imaging image .

Applications of Signal Processing in Wireless communications..

RESEARCH EXPERIENCE

Compressed Sensing applications in multimedia analysis..

Audio and Multimedia compression.

Applications of compressed sensing in wireless sensor network.

Machine Learning .

Machine Learning application in Digital Multimedia analysis .

Deep Learning .

Deep Learning applicatoion fro image Super resolution .

Deep Learning applicatoion for Medical imaging image .

Analysis of Orthogonal Frequency Division Multiplexing transmitter and receiver.

VHDL implementation of of Orthosgonal Frequency Division Multiplexing s and receiver.

Digital signal processing.

Introduction of several new image encryption algorithms.

Using the Compressed sensing Technique in Multimedia and Wireless applications.

PUBLICATIONS

0.1 Journal Papers

Amr H. Hussien, **Hossam Kasem**, Mohamed A. Ezzat , “Efficient spectrum sensing technique base on energy detector compressive sensing and de-noising techniques,” *International Journal of Engineering and Technology*, Vol. 46 (2017) No. 1 pp. 1-8.

Ibrahim Al-Nahhal, Ahmed Emran1, **Hossam Kasem**, Adel B. Abd El-Rahman, Osamu Muta, Hiroshi Furukawa, “Flexible fractional K-best sphere decoding for uncoded MIMO channels,” *IEICE Communications Express*, Vol. 4 (2015) No. 1 pp. 20-25.

0.2 Conference Papers

Hossam M. Kasem, Kwok-Wai Hung and Jianmin Jiang, “Image Super-Resolution Using Spatial Transform Network ” *International Conference on Pattern Recognition, ICPR, 2018*.

Hossam M. Kasem, Mohamed Al-Nahhal, Tawfik Ismail and Mohamed E. Nasr, “FSO-SIMO System with SIM-DPSK over Log-normal Atmospheric Turbulence and Misalignment ” *19th International Conference on Transparent Optical Networks (ICTON 2017)*.

Hossam M. Kasem, Osamu Muta, Maha Elsabrouty and Hiroshi Frukawa, "Performance of Perceptual 1-Bit Compressed Sensing for Audio signal Compression " *International Symposium on computer and communicationss,ISCC 2015*.

Hossam M. Kasem, Osamu Muta, Maha Elsabrouty and Hiroshi Frukawa, "Quantized Perceptual Compressed Sensing for Audio signal Compression, " *Data Compression Conference,DCC 2015*.

Hossam M.Kasem,Maha El-Sabrouty, "The performance of One-bit Compressed Sensing with Perceptual Compressed Sensing for Audio Compression," *Third International Japan-Egypt Conference on Electronics, Communications and Computers,2015*.

Adel B. Abd El-Rahman, Ibrahim Al-Nahhal, Ahmed Emran, **Hossam Kasem** , "Fractional K-best Sphere Decoding Algorithm Over Rayleigh Fading MIMO Channels," *Second International Japan-Egypt Conference on Electronics, Communications and Computers,2014*.

Hossam M.Kasem,Maha El-Sabrouty, "A Comparative Study of Audio Compression Based on Compressed Sensing and Sparse Fast Fourier Transform (SFFT): Performance and Challenges," *International Symposium on Signal Processing and Information Technology IEEE ISSPIT 2013*

Hossam M Kasem, Mohamed E Nasr, Amr H Hussein, "A High Fidelity OFDM Image Communication System with Chaotic Maps," *International Proceedings of Computer Science Information Technology (ICIIP 2012)*.

Amr M Riad, Amr H Hussein, **Hossam M Kasem**, Atef Abou El-Azm, "A New Efficient Image Encryption Technique Based on Arnold and Idea Algorithms," *International Conference on Image and Information Processing (ICIIP 2012)*.

Hossam M Kasem, Mohamed E Nasr, Elsayed A Sallam, FE Abd El-Samie, "Efficient Transmission of 1D and 2D Chaotic Map Encrypted Images with Orthogonal Frequency Division Multiplexing," *Tenth International Symposium on Signal Processing and Information Technology (ISSPIT), 2010*.

Hossam M. Kasem, Osamu Muta, Maha Elsabrouty and Hiroshi Frukawa, "The Effect of One-bit Compressed Sensing on Audio Compression for Digital Communication Systems, " *RCS, IEICE Technical Report,2015* .

Hossam M. Kasem, Osamu Muta, Maha Elsabrouty and Hiroshi Frukawa, "Performance of 1-bit Compressed Sensing for Audio Compression under AWGN Channel, " *RCS, IEICE Technical Report,2015*.

Hossam M. Kasem, Osamu Muta, Maha Elsabrouty and Hiroshi Frukawa, "Cyclostationary Detection for Spectrum Sensing using Feature-Based Compressive Sensing, " *RCS, IEICE Technical Report,2015*.

PROFESSIONAL ACTIVITIES

0.3 Referee for:

IEEE Japan-Egypt Conference on Electronics, Communications and Computers (ECC-JEC).

IEICE Transactions on Communications.

The International Conference on Advanced Technologies for Communications (ATC) .

0.4 Member of:

The committee of updating the postgraduate bylaw for the Faculty of Engineering, Tanta University.).

The committee of Quality assurance, Tanta University..

IEEE signal processing society .

Honors and Awards

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Best paper awarded in JEC-EEC 2013 conference.

Awarded an excellence scholarship for graduate studies at Egypt-Japan University of Science and Technology, Fall 2012.

Distinction award with the degree of honor for graduation from the department of Electronics and s communications Engineering, Tanta University, July 2004.

Student volunteer grant at NRCS conference 2008s.

Academic qualifications:

Egypt-Japan University for Science and Technology, Alexandria, Egypt.

Electronics and Electrical Communication Engineering

*I received My Ph.D Degree from Electronics and Electrical Communication Dept. gypt-Japan University for Science and Technology, Alexandria, Egypt. **Sep. 2012 - Sep. 2015***

Graduatsed Date: Sep. 2015

Graduate Courses: Linear Algebra, Digital Signal Processing, Data and Wireless communications, and Convex Optimization .

Coursework GPA: 3.68/4.0.

Supervisor: Prof.Maha Elsabrouty.

Thesis title: **Applications of Compressed Sensing for Multimedia and Wireless Communications.**

Tanta University, Tanta, Egypt.

*Electronics and Electrical Communication I received My Master from Electronics and Electrical communication and Engineering Dept., Faculty of Engineering, Tanta University. **Sep. 2008 - April.2012***

Graduate Courses: VHDL implementation for Orthogonal Frequency Division multiplexing.

Coursework GPA: 3.74/4.0.

Thesis title: **VHDL implementation for Orthogonal Frequency Division multiplexing**

Supervisor: Prof .Mohammed E Nasr.

Faculty of Engineering, Tanta University, Tanta, Egypt

B.Sc., Electronics and Electrical Communication Dept

July 2004

Cumulative Grade:**Distinction with Honor**(Percentage : **83.57%**, Equivalent GPA:**3.71/4.0**).

Cumulatively ranked **the 2nd** in the Department of Electronics and Electrical Communication among 350 students.

**Teaching
Experience**

Advanced Microprocessor. Course, Faculty of Engineering, Higher Technological Institute. **2016.**

Microprocessor Interfacing . Course, Faculty of Engineering, Higher Technological Institute. **2016.**

Introduction to microprocessor. Course, Faculty of Engineering, Higher Technological Institute. **2016.**

Computer Security. Course, Faculty of Engineering, Tanta University. **2016.**

Computer network. Course, Faculty of Engineering, Tanta University. **2016.**

Computer and Network Security. Course, Faculty of Engineering, Tanta University. **2015.**

Digital signal Processing. Course, Faculty of Engineering, Tanta University. **2015.**

Eimage processing. Course, Faculty of Engineering, Tanta University. **2015.**

Network Security . Course, Faculty of Engineering, Tanta University. **2012.**

Communication laboratory. Course, Faculty of Engineering, Tanta University. **2011.**

Network Security . Course, Faculty of Engineering, Tanta University. **2011.**

Computer Technology . Course, Faculty of Engineering, Tanta University. **2005.**

Electrical and Electronic measurements. Course, Faculty of Engineering, Tanta University. **2010.**

Electrical and Electronic laboratory. Course, Faculty of Engineering, Tanta University. **2010.**

Signal Processing course. Course, Faculty of Engineering, Tanta University. **2009.**

Computer Technology . Course, Faculty of Engineering, Tanta University. **2008.**

	Modeling and Simulation . Course, Faculty of Engineering, Tanta University. 2008.
	Pattern Recognition and Digital Image Processing . Course, Faculty of Engineering, Tanta University. 2007.
	Computer and Network Security. Course, Faculty of Engineering, Tanta University. 2006.
	Digital Communications. Course, Faculty of Engineering, Tanta University. 2009.
	Computer Networks. Course, Faculty of Engineering, Tanta University. 2009.
	Compilers Course, Faculty of Engineering, Tanta University. 2008.
	Digital Electronics. Course, Faculty of Engineering, Tanta University. 2007.
	Digital Electronics. Course, Faculty of Engineering, Tanta University. 2006.
Computer Skills	Environments: Linux , Windows, Mac OS X. Programming: VHDL, C/C++, MatLab, Fortran, Assembly. Others: L ^A T _E X 2 _ε , Gnuplot, R.
Languages	Arabic: Mother tongue. English: Very good. French: Fair.
Standardized Tests	TOEFL iBT: 85. .
Professional Memberships	Student member of ACM. Student member of IEEE, IEEE Communication Society. Member of the Egyptian Engineering Syndicate.
Extracurricular Activities	Microsoft Student Partner in Tanta university during the academic year 2007/2008. Acted as a volunteer in organizing the NAtional Radio Science Conference (2008), Egypt. Enjoys reading novels and history, listening to music, intellectual games, and fishing. Participate in different international conferences <ul style="list-style-type: none"> • 12th IEEE International Symposium on Signal Processing and Information Technology, Greece. • IEEE Symposium on Computers and Communications, Cyprus. • IEEE Data Compression conference (DCC), 2014, USA. Member of different Technical program committee for international conferences and international journal . Member of the Quality assurance team at faculty of Engineering, Tanta University.