



Abdelhay Ali

Curriculum Vitae

Personal Information

Job Title **Assistant Professor, Department of Electrical Engineering, Assiut University, Egypt**
Nationality **Egyptian**
Date of birth **18/3/1991**
Sex **Male**
Address **Electrical Engineering Department, Assiut University, Assuit, Egypt**
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Education

- 2017–2020 **Ph.D. in Electronics and Communications Engineering**, *Egypt-Japan University of Science and Technology (E-JUST)*, Alexandria, Egypt.
Thesis Title: Design and Implementation of a Low Power Human Body Communication Transceiver.
CGPA : 3.95 out of 4.0
Courses: Sensor and DSP Systems Design, VLSI Design: System Approach, Complex Digital Systems Design, Numerical Electromagnetic, Seminars on Advanced Topics in Electronics I, and Seminars on Advanced Topics in Electronics II.
- Dec.2018–
Sep.2019 **Visiting researcher in Kyushu University, Fukuoka, Japan.**
- 2012–2016 **M.Sc. in Electrical Engineering**, *Assiut University*, Assiut, Egypt.
Dissertation: Modeling of Wireless Sensor Networks with Maximum Lifetime and Minimum Energy Consumption.
Courses: Computational methods and programming, Digital communication and digital signal processing, Electronic circuits, Wireless communication, Power line communication.

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2007–2012 **B.Sc. in Electrical Engineering**, Assiut University, Assiut, Egypt.
Honors: Very Good with honors and top of 2012 class.
Graduation Project: Spectrum Sensing and Jamming Systems Using USRP

Experience

- 2020–Present **Assistant Professor**, *Electrical Engineering Department, Faculty of Engineering, Assiut University.*
Teach the following courses:
- Electronic Devices II
 - Electronics 3
 - Microprocessors
 - Computer Programming
 - Interfacing
 - Digital VLSI Design (RTL to GDS)
 - Hardware for Deep Learning
 - Machine Learning
 - Wireless Communications
- 2017–2018 **Assistant Lecture**, *School of Electronics, Communication and Computer Engineering, Egypt Japan University of Science and Technology - EJUST.*
- Teach exercises and LAB sessions to undergraduate students.
- 2016–2017 **Assistant Lecture**, *Electrical Engineering Department, Faculty of Engineering, Assiut University.*
- Teach exercises and LAB sessions to undergraduate students.
 - Grading exams and co-supervise graduation projects.
- 2012–2016 **Teaching Assistant**, *Electrical Engineering Department, Faculty of Engineering, Assiut University.*
- Prepared materials for lectures and laboratory sessions.
 - Graded laboratory reports, projects, and exams.
 - Organized the timetables of lectures and laboratories, and management of final exams.
 - Assisted in installation of electronics and computer laboratories.
 - Delivered sessions for the following courses: Digital signal processing, Electronic circuits, Wireless communication, Microprocessor, Speech signal processing, Information theory, Programming with C++ and Java, Programming with Matlab, Electronic laboratory, Interfacing circuits with PC, Microwave circuits, Introduction to computers.
 - Mentored undergraduate student at final projects.
 - Helped in preparation for laboratory material, sessions scheduling, and maintaining the course web page.

Publications

- J1 **Abdelhay Ali**, Mohammed Sharaf Sayed, Sabah Mohamed Ahmed, Ahmed Shalaby, Deep Learning-Based Human Body Communication Baseband Transceiver for WBAN IEEE 802.15.6, *Engineering Applications of Artificial Intelligence* (2022) (IF=6.212)
- J2 **Abdelhay Ali**, Koji Inoue, Ahmed Shalaby, Mohammed Sharaf Sayed, Sabah Mohamed Ahmed, Efficient Autoencoder-Based Human Body Communication Transceiver for WBAN, *IEEE Access* (2019): 117196-117205 (IF=4.098)

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- J3 **Abdelhay Ali**, Mohammed Abo-Zahhad and Mohammed Farrag, Modeling of Wireless Sensor Networks with Minimum Energy Consumption, the Springer Arabian Journal for Science and Engineering 42.7 (2017): 2631-2639 (IF=1.518)
- J4 **Abdelhay Ali**, Koji Inoue, Ahmed Shalaby, Mohammed Sharaf Sayed, Sabah Mohamed Ahmed, Deep Learning-Based Human Body communication Baseband Transceiver for WBAN IEEE 802.15.6, To be submitted to IEEE Transactions on Very Large Scale Integration (VLSI) Systems
- J5 **Abdelhay Ali**, Ahmed Shalaby, Mohammed Sharaf Sayed, Sabah Mohamed Ahmed , A Power Efficient Baseband HBC Transceiver for IEEE 802.15.6 WBAN, To be submitted to IET Circuits, Devices and Systems
- J6 Mohammed Abo-Zahhad, Mohammed Farrag and **Abdelhay Ali**, Optimization of Transmitted Power and Modulation Level for Minimizing Energy Consumption in Wireless Sensor Networks, Wireless Personal Communications: 1-16 (IF=.0.929)
- C1 **Abdelhay Ali**, Ahmed Shalaby, Mohammed Sharaf Sayed, Mohammed Abo-Zahhad , Low power HBC PHY baseband transceiver for IEEE 802.15.6 WBAN, IEEE 29th International Conference on Microelectronics (ICM), Beirut, 2017
- C2 Mohammed Abo-Zahhad, Mohammed Farrag and **Abdelhay Ali**, Modeling and Minimization of Energy Consumption in Wireless Sensor Networks, IEEE International Conference on Electronics, Circuits, and Systems, Cairo, Egypt, December, 2015 (Within 10 Best Papers)
- C3 Mohammed Abo-Zahhad, Mohammed Farrag, **Abdelhay Ali**, and Osama Amin , An Energy Consumption Model for Wireless Sensor Networks, IEEE 5th Annual International Conference on Energy Aware Computing Systems and Applications (ICEAC), pp. 1-4, Cairo, March, 2015
- C4 Mohammed Abo-Zahhad Mohammed Farrag, **Abdelhay Ali** and Osama Amin, Energy Consumption and Lifetime Analysis for Wireless Sensor Networks, IEEE National Radio Science Conference (NRSC 2015), pp. 268-276, Cairo, March, 2015
- C5 Mohammed Abo-Zahhad, Mohammed Farrag and **Abdelhay Ali**, Modeling and Optimization of Energy Consumption in Wireless Sensor Networks, 10th IEEE International Conference on Computer Engineering and Systems, Cairo, Egypt, December, 2015
- C6 Mohammed Abo-Zahhad, Sabah M Ahmed, Mohammed Farrag, Mohammed F. A. and **Abdelhay Ali**, Design and Implementation of Building Energy Monitoring and Management System based on Wireless Sensor Network, 10th IEEE International Conference on Computer Engineering and Systems, Cairo, Egypt, December, 2015
- J7 Mohammed Abo-Zahhad, Osama Amin, Mohammed Farrag and **Abdelhay Ali** , A Survey on Protocols, Platforms and Simulation Tools for Wireless Sensor Networks, International Journal of Energy, Information and Communications, vol. 5, no. 6, 2014
- J8 Mohammed Abo-Zahhad, Mohammed Farrag and **Abdelhay Ali** ,A Comparative Study of Energy Consumption Sources for Wireless Sensor Networks, International Journal of Grid and Distributed Computing, vol. 8, no. 3, pp. 65-76 2015

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- J9 Mohammed Abo-Zahhad, Osama Amin, Mohammed Farrag, and **Abdelhay Ali**, Survey on Energy Consumption Models in Wireless Sensor Networks, *Open Transactions on Wireless Sensor Network* , Scientific Online Publishing, vol. 1, pp. 71-87 , 2014
- C7 Mohammed Abo-Zahhad, Mohammed Farrag and **Abdelhay Ali**, A Fast Accurate Method for Calculating Symbol Error Probabilities for AWGN and Rayleigh Fading Channels, 33rd IEEE National Radio Science Conference (NRSC 2016), Aswan, Egypt, 2015

Scientific Activities

A Reviewer of

- IEEE Transactions on Circuits and Systems II: Express Briefs.
- IEEE Transactions on Very Large Scale Integration (VLSI) Systems
- IEEE Access
- International Journal of Communication Systems

Honors & Awards

- Citations h-index **8**
- 2015 IBM Award.
- 2012 Prof. Abdelkareem Elwrdany Award, Assiut University, Egypt.
- 2002,2003 Science Club Award, Egypt.

Internships & Training

- 2015 Training at IBM MEA University, Egypt.
- 2014 Effective Teaching, Assiut University, Assiut, Egypt.
- 2014 Teaching with Technology, Assiut University, Assiut, Egypt.
- 2013 Teacher Preparation Training, Assiut University, Assiut, Egypt.
- 2010 Training at Telecom Egypt, Egypt.
- 2009 Training at Network Information Center, Assiut University, Assiut, Egypt

Personal Skills

- Mother Language Arabic
- Other language English: Very Good (Scored: TOEFL iBT 92)
- Other Skills Excellent communication and interpersonal skills gained from variety of work and volunteer positions. Ability to plan, prioritize and organize duties and projects developed through academic work experience. Commitment to developing skill and growth obtained during M.Sc. and Ph.D programs. Team spirit, enthusiasm, and a “can-do” attitude to any challenge. Professionalism dedicated to provide meaningful contribution to the job

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Technical Skills

Programming Languages	Verilog, C/C++, Java, Python, C#, Matlab, ASP.net, Android.
ASIC Design	Cadence Genus synthesis solution, Cadence Innovus Implementation System (Encounter), Cadence Joules RTL Power Solution, RTL Synthesis Synopsys, and ModelSim/Questa .
Hardware	Xilinx FPGAs, Intel 8086 Microprocessor, Arduino, DSP C2000, PIC Microcontrollers, and PLC.
Operating Systems	MS-DOS, Microsoft Windows, Mac OS X, and Linux variants.
Design & Simulation	Proteus, Xilinx ISE, Matlab, Pspice,logicwork, IBM Worklight, OrCAD, Simulink, LabVIEW, and Multisim.
Applications	MS Office, L ^A T _E X, HTML, and other common packages for Windows.

References

Prof. Mohammed Sharaf Sayed.

Email: mohammed.sayed@ejust.edu.eg

Prof. Koji Inoue.

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Dr. Ahmed Shalaby.

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Dr. Osama Amin.

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