

Curriculum vitae

PERSONAL INFORMATION Ehab Aly Mohamed Hamed

📍 Electronics and Communications Section, Electrical Engineering Department, Faculty of Engineering, Assiut University, 71516 Assiut, Egypt.

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RESEARCH INTERESTS Circuit Design, VLSI, VHDL, Bio-electronics, Embedded systems, Game Design.

WORK EXPERIENCE

11/2014–Present

Teaching Assistant

Electrical Engineering Department, Faculty of Engineering, Assiut University
71516 Assiut (Egypt)
http://www.aun.edu.eg/membercv.php?M_ID=5467

Teaching and helping the students to understand the lessons from the lecturers, do my research and supervisor of the team in Assiut Robotics laboratory, the largest student activity at Assiut University.

Courses:

- Basic Electronics
- Electric Circuits
- Electronic Devices
- CMOS Circuit Design
- Digital Circuit Design
- VHDL & FPGA

EDUCATION AND TRAINING

09/2014–09/2018

M. Sc. B. Sc of Electrical Engineering (Electronics & Communications) EMG Signal Sensing and Regeneration for Skeletal Muscles Rehabilitation

Electrical Engineering Department, Faculty of Engineering, Assiut University, Assiut (Egypt).

Courses:

- Computational Methods
- Electronic Circuits.
- Digital Signal Processing.
- Biomedical Signals.
- Design of Analog CMOS ICs

Abstract: The thesis introduces a technique for helping peripheral nerve injured persons by sensing the Electromyogram (EMG) signal from the healthy limb then pre-processing, and simultaneously transferring it to the other limb to stimulate the corresponding muscles. A front-end optimized specifically to acquire the EMG signal is designed using 130 nm and 350 nm technologies.

05/2018–07/2018

Three months research assistantship in SJTU, China

Bio-Circuits and Systems Lab (BiCASL), School of Microelectronics, Shanghai Jiao Tong University (SJTU), Shanghai, China.

During this period, I designed:

- A system for controlling a robotics' hand using the Electromyogram (EMG) signal from the forearm and bicep muscles.
- A low power programmable gain integrated front-end for electromyogram (EMG) signal sensing using 350 nm CMOS technology.

09/2009–07/2014

B. Sc of Electrical Engineering (Electronics & Communications)

Electrical Engineering Department, Faculty of Engineering, Assiut University, Assiut.
Grade: **89.42% (Distinction with honor - The First of his Class)**

B.Sc. Graduation Project:

Distance measurement using laser source based on digital signal controller.

Grade: **100% (Distinction)**

Abstract: This project presents a method of measuring a distance using an optical signal. The distance measurement is based on the time of the flight (TOF) method via a correlation technique. A method of stretching the time scale is used to decrease the operating frequency.

Curriculum vitae

04/2017-05/2017 **Mentor Graphics Training Course**

Mentor Graphics IC Nanometre design flow.
Mentor Graphics PCB design flow.

07/2016-08/2016 **Internship (summer training) in Turner Projacs, Kuwait.**

Training for two months in one of the largest projects in Kuwait (College of Science and Faculty Club Project - Sabah Al-Salem University City- Kuwait).

06/2013-08/2013 **Internship (summer training) in Kharafi National K.S.c (Closed), Kuwait.**

Project (1307) "Operation & Maintenance of Sulaibiya Waste Water Treatment & Reclamation Plant, Kuwait.

10/2012 **Human Development in Leadership Development Institute in Helwan, Egypt.**

07/2012 **Internship (summer training) in Telecom Egypt, Egypt**

PERSONAL SKILLS

English **IELTS band score 6.5**

Listening	Reading	Writing	Speaking
6.5	7	6	6

Communication skills

- Teamwork.
- Making a good presentation to elaborate my idea and point of view.

Organisational/managerial skills

- Ability to institute creative improvements that allow for more efficient management of the workflow.
- Management and leadership skills.
- Possess superior organisational and managerial skills.
- Leadership, good communication skills, and problem-solving.
- Recognized for efficient and accurate management control methods.

Job-related skills

- Difficult problem-solving.
- The ability to explain problems in a simple way.
- Having excellent research potential and an ability to actively contribute to the research projects goals.
- Extensive knowledge of spreadsheets and database tools.
- Ability to prioritize own work in response to deadlines.

Technical skills

- Electronic circuits (physics, analysis, design).
- Programming FPGA using (VHDL).
- Embedded systems "Microcontroller and Digital Signal Controller (DSC)."
- Networks.
- VLSI (Very Large-Scale Integration), Using Virtuoso Cadence, Mentor Graphics' Pyxis and H-spice.
- Signal processing and communications.
- Programmable Logic Controllers (PLC)

Computer skills

- Good command of Microsoft Office™ 365 tools (Word™, Excel™ PowerPoint™ and Access™).
- Skilled in using simulation and design programs (MULTISIM, PROTEUS, EAGLE).
- Programming skills (MATLAB, C++, C#, Java, JavaScript, Visual Basic).
- Game engines (Unity3D and Gdevelop).
- Internet Skills.
- ICDL certified.

ADDITIONAL INFORMATION

Publications

- 1- Mohamed Atef, Ehab A. Hamed and Abdu-Allah Mahfouz. "D4. Implementation of optical distance measurement using correlation-based and time stretching technique on digital signal controller". Radio Science Conference (NRSC), 32nd National, 24 Mar 2015, (pp. 347-354). IEEE.
- 2- Ehab A. Hamed, Mohamed Atef, Mohamed Abbas, and R. R. Ghariieb. "Transferring electromyogram signal between limbs". Electronics, Communications and Computers (JEC-ECC), 4th International Japan-Egypt Conference, 31 May. 2016, (pp. 123-126). IEEE.
- 3- Ehab A. Hamed, Mohamed Atef and Mohamed Abbas. "An ultralow-power high-gain biopotential amplifier for electromyogram signal recording." Electronics, Communications and Computers (JAC-ECC), Japan-Africa Conference, 18 Dec. 2017, (pp. 33-36). IEEE.
- 4- Ehab A. Hamed, Mohamed Atef and Mohamed Abbas. "A Low Power Programmable Gain Integrated Front-End for Electromyogram Signal Sensing" 25th International Conference Mixed Design of Integrated Circuits and Systems, 23 Jun. 2018, (pp. 103-108). IEEE.

References

- 1- Mohammed Abbas, Associate Professor, Electrical Engineering Department, College of Engineering, King Saud University, Riyadh, KSA. (m-abbas@aun.edu.eg, mohabbas@ksu.edu.sa).
- 2- Mohamed Atef, Associate Professor, Electrical Engineering Department, Faculty of Engineering, Assiut University, Assiut, Egypt. (moh_atef@aun.edu.eg).
- 3- Wang Guoxing, Associate Professor, School of Microelectronics, Shanghai Jiao Tong University, Shanghai, China. (guoxing@sjtu.edu.cn, wangguoxing@ic.sjtu.edu.cn).
- 4- Mostafa S Abdelrehim, Postdoctoral research associate, School of Engineering, Brown University, U.S. (mostafa_said@brown.edu).