

Amro Ibrahim

Ph.D. Student, University of Toronto
Mechanical & Industrial Engineering

Contact Information »

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Personal Information ▼

Name: Amro Abdelalim Shafik Mohamed Ibrahim
Nationality: Egyptian
Resident of: Benha
Birth date: 26 Feb. 1983
Gender: Male
Marital status: Married and have 3 children
Military status: Completed



June 2006

Education ▼

Institution: Benha High Institute of Technology (BHIT)
University: Benha University
Address: Benha, Kalyobiya, Egypt
Degree: **Bachelor of Science (B.Sc.)** June 2004
Department: Mechanical Engineering Technology (Production sections)
Grade: Excellent (87.67%) with honor degree (1st of the class)
Graduation Project: Three-axes Computerized Numerically Controlled (CNC) drilling machine

Postgraduate studies ▼

Institution: Benha High Institute of Technology (BHIT)
University: Benha University
M.Sc. Courses: Excellent June 2006
Degree: **Master of Science (M.Sc.)** in Mechanical Engineering Technology July 2010
Research Field: Automation and Mechatronics (Motion control)
Master Title: Enhancing the Dynamic Performance of Electrohydraulic Control Valves

Current Job ▼

Job: PhD student (Full-time) May 2013 till now
Institution: Mechanical & Industrial Engineering, University of Toronto
Details: Research on Robotics – Area of: Multi-robot Coordination
Office: MC#63
Lab: Autonomous Systems and Biomechatronics Lab (ASBLab)

Previous Job ▼

Job: Assistant Lecturer (Full-time) Mar. 2005 till now
Institution: Benha Faculty of Engineering, Benha University
(Formerly, Benha High Institute of Technology)

Teaching Experiences:

I have an experience in teaching or assisting in teaching the following subjects:

- System Dynamics
- Automatic Control
- Automation
- Hydraulic Power Systems
- Computer-Integrated Manufacturing (CIM)
- Computer-Aided Manufacturing (CAM)
- Mechanics of Machines
- Machine Design
- Advanced Manufacturing Processes
- Process Control
- Computer Applications
- Strength of Materials

Projects ▼

Introducing and Developing Mechatronics in Egypt

Nov. 2005 – May 2009

Working as a member in European funded project for development of B.Sc. studies in five collaborated universities in Egypt and Europe; BHIT (home institute), Faculty of Eng. (Ain Shams Uni., Egypt), Faculty of Eng. (Helwan Uni., Egypt), Royal Institute of Technology KTH (Stockholm, Sweden), and Johannes Kepler Uni. JKU (Linz, Austria).

- ☞ **Project number:** TEMPUS MEDA_JEP-32050-2004-MEKATRON
- ☞ **Project title:** Curricula Development for a new Mechatronics B.Sc. Major
- ☞ **Project fund:** 0.5 M€

Academic Experiences ▼

- **Institution:** Benha High Institute of Technology (BHIT)
- University:** Benha University
- Address:** Benha, Kalyobiya, Egypt
- Activities:**

- ☞ Working as a member in establishment of Mechatronics department and lab building under the umbrella of TEMPUS project. (Nov. 2005 – May 2009)
- ☞ Working in semester schedule for department's staff. (Oct. 2006 – Jun. 2009)
- ☞ Arranging tours to production fair in land of fairs, Cairo. (Nov. 2006 – Nov. 2010)
- ☞ Arranging the first technological activity for 2nd year mechanical engineering student for designing and competence in Robots building. (Oct. 2007)
- ☞ Administrating and planning yahoo groups for Mechanical engineering department students. (Oct. 2007 till now)
- ☞ Working in preparation of the new curriculum of the Mechanical engineering department (for Production and Mechatronics majors). (Summer 2007)
- ☞ The representative of Benha University in the 1st Robotics and Automation Contest for all Egyptian Universities. (Apr. 2008)
- ☞ Working in establishment and preparing the scientific experiments for the Dynamics and Vibration Lab in the Faculty of Engineering, Benha University. (Oct. 2008 – Jan. 2012)
- ☞ The leader of the schedule and the graduation project committees. (Oct. 2009 – Jan. 2012)
- ☞ Arranging 6 tours to Toshiba Co.- Benha Branch (Fall Semester 2010)
- ☞ Working as a member in a committee for inspection and reception of the instruments and machines funded by the University Grant. (Mar. 2010 – Jun. 2010)
- ☞ The founder and leader of the first science club in Benha University. (Jul. 2011 till now)
- ☞ Examiner and evaluator for scientific competitions and contests in Benha University. (Oct. 2011 – Sep. 2012)

- ☞ The supervisor of all labs related to the (Production Major - Mechanical Engineering Department) in Benha Faculty of Engineering. (July 2010 - April 2013)
- ☞ Working as a member in Egyptian Technical Colleges Project (ETCP) in three committees: (Oct. 2011 – Jan. 2013)
 - Committee 1: Establishment of a complete Mechatronics curriculum, lecture notes, laboratories experiments, equipment and devices for Egyptian Technical Colleges.
 - Committee 2: Evaluation of workshops' machines in Technical colleges and writing technical report regarding their status and the reasons of machines break down.
 - Committee 3: Preparation of technical specifications for complete furniture and tools required by Egyptian Technical Colleges in the budget of 2011/2012.

- **Institution:** CAD/CAM/Robotics Center July 2003 - Sep. 2003
University: Middle East Technical University (METU)
Address: 06531 Ankara, Turkey
Activities: Attending “Student Mobility” program in CAD/CAM field, focused on:
 - CAD/CAM software (Pro/Engineer 2001)
 - CNC part programming
 - 5-axes CNC machining (Mazak & Deckel machines)
 - Rapid prototyping (laser sintering processes) (EOSINT P380)
 - CMM (Coordinate measuring machine) (DEA Brown & Sharpe 070707) (PC-DMIS software)
 - 3D laser digitizer system
 - Wire EDM or wire cutting (Sodick Mark)
 - Lectures on FEA, Robotics
 - Visiting CIM lab (FMS systems, PLC units...etc)

- **Institution:** Institute of machine design and hydraulic drive (IMH) with Linz center for competence of mechatronics (LCM) Sep. 2007
University: Johannes Kepler University (JKU Linz)
Address: 4040 Altenberg Strasse, Linz, Austria
Activities: Attending “Teaching of teachers (TOT)” program
 - Hydraulic and pneumatic system modeling, simulation and control
 - Hydraulic experimentation
 - Lectures on hydraulic system design principles and hydraulic system components, characteristics, performance, and construction.

- **Institution:** Faculty of engineering Aug. 2008
University: Ain Shams University
Address: Abdo Basha, Abbasia, Cairo, Egypt
Activities: Programming microcontrollers PIC16F877A

Working Experience ▼

[1] Working Period	Sep. 2004 – Nov. 2004
Working Mode	Part time
Name of Organization	CIS Egypt
Last Position held	Technical Support for CAD/CAM Systems
Major Responsibilities	- One of the training group

- [2] Working Period Mar. 2005 – Sep. 2010
 Working Mode Full-time
 Name of Organization High Institute of Technology, Benha University
 Last Position held Demonstrator
 Major Responsibilities
 - Attending Lectures
 - Applying tutorials and exercises in sections
 - Grading students' assignments and projects
 - Teaching in labs and experimental works
 - Performing administrative works in Mechanical Engineering Department
- [3] Working Period May 2005 – May 2006
 Working Mode Part time
 Name of Organization Engineering Consultation Center
 Last Position held Design and Development Engineer
 Major Responsibilities
 - Working as a member in a mechanical design group
 - Performing stress analysis (static & dynamic)
 - Drawing and modeling of mechanical parts
 - Applying FEA using computer software
 - Writing a technical report for summarizing the analysis and results
- [4] Working Period Sep. 2010 till now
 Working Mode Full-time
 Name of Organization Benha Faculty of Engineering, Benha University
 Last Position held Assistant Lecturer
 Major Responsibilities
 - Teaching Lectures with a Subject supervisor
 - Introducing tutorials
 - Participating in supervising students' sheets and projects
 - Teaching in labs and experimental works
 - Performing administrative works in Mechanical Engineering Department (leader of the semester schedule committee and the graduation projects committee and a general supervisor on Computer labs)

Configurations ▼

Ambition, curiosity, confidence, positive, truth and sociable.

Hobbies ▼

Reading, billiard, football, chatting, traveling, and drawing.

Languages ▼

Language	Level
Arabic	Fluent (mother tongue)
English	Good (IELTS Band 6.5*)

* IELTS summary: Listening (6.5), Reading (6.5), Writing (7), Speaking (6.5), Overall (6.5)

Skills ▼

Skill	Years Practiced
Word, Excel, PowerPoint	More than 10 years
AutoCAD (2D&3D)	More than 10 years
MATLAB (Simulink)	More than 5 years
Inventor	More than 5 years
Automation Studio	More than 3 years
Unigraphics “certified”	More than 3 years
CNC programming	More than 3 year
Working with hydraulic power components	More than 5 year
Pro/Engineer “certified”	Less than 1 year
Microcontroller PIC16F877A programming	Less than 1 year

Research Interests ▼

- Multi-robot coordination
- Mechatronics and autonomous systems
- Motion control of servo systems
- Design and developing robust, intelligent and nonlinear controllers
- Compensation for actuator nonlinearities
- Neurofuzzy networks for modeling & control

Publications ▼

[1] Magdy Abdelhameed, Ahmed Kassem, and Amro Shafik, “CMAC Neural Network: Modeling, Simulation and a Comparative Study of Learning Algorithms”, *Proceedings of 11th Middle Eastern Simulation Multiconference (EUROSIS MESM 2010)*, December 2010, pp. 67-74.

[2] Salah Haridy, Zhang Wu, and Amro Shafik, “An Educational Scheme for a CNC Drilling Machine”, *International Journal of Manufacturing, Materials, and Mechanical Engineering*, 2 (2), 2012, pp. 1-11.

[3] Amro Shafik, Magdy Abdelhameed, and Ahmed Kassem, “CMAC PV parameters variations and learning schemes – A study on electrohydraulic servo system”, *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, Accepted (in proof).

[4] Amro Shafik, Magdy Abdelhameed, and Ahmed Kassem, “CMAC Based Motion Control of Electrohydraulic Servo Systems”, *LAP LAMBERT Academic Publishing*, Germany, June 2013, 140 pages.

References ▼

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Ahmed M. Ellassal	Professor, Mechanical Eng., BHIT	elassal@etc.edu.eg
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