

Curriculum Vitae

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Personal Data

Name: Mohamed Adel Abdelhakem Amen
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Research Interests

- Additive manufacturing
- Hot air and laser polishing
- advanced Manufacturing process
- Fused deposition modeling technology
- Selective laser sintering

Education

- Jul. 2010- Oct 2017 • **M.Sc.** in Mechanical design and production Engineering, **Assiut University**, Egypt
- Thesis: “Enhancing the surface roughness of fused deposition modeling products by hot air jet”
 - degree is Excellent
- Jul. 2004- Jul. 2009 • **B.Sc.** in Mechanical design and production Engineering, **Assiut University**, Egypt.
- Thesis: design and manufacture of aluminum foam production line.
 - degree (Cumulative Average) is 84.74/100 - very good with honor’s degree.

Research experience

- Post graduate researcher (Mc.S- Oct. 2017)
 - Developed a novel hot air (up to 350 °C) polishing method optimized for plastic additive manufacturing products.
 - Conversant with smoothening method of plastic-based additive manufacturing products.
 - Experienced with Fused deposition technology and its use, machine, research problem and quit experienced with selective laser sintering technology.
 - Developed an analytical heat transfer model for the developed polishing process.

Publications

Patent:

Mohamed Adel, Osama Abdelaal, "Polishing by using hot air to fused deposition modeling parts", **under revision to Egyptian Patent Office** – Dec. 2016, Egypt.

Journal paper:

[1] **M. Adel**, O. Abdelaal, A. Gad, A. B. Nasr, and A. Khalil, "Polishing of fused deposition modeling products by hot air jet: Evaluation of surface roughness," **J. Mater. Process. Technol.**, vol. 251, May 2017, pp. 73–82, 2017.

[2] **M. Adel**, Osama, Abdelrasoul, Abu Bakr, Aboel Makaram "ENHANCING THE SURFACE ROUGHNESS OF FUSED DEPOSITION MODELING PRODUCTS", **Journal of Engineering Sciences**, Vol. 37, No. 4, PP.925-942, Assiut University, July 2017.

Conference paper:

M. Adel, Osama, Abdelrasoul, Abu Bakr, Aboel Makaram, "A Model Of New Polishing Process to Fused Deposition Modeling Parts", proceeding of 1st ICCEEE, May 2017, Alexandria-Egypt .

Funding obtained

- I awarded a fund to my research in Mc.S degree with details:

Funding agency	Grant type	Funding amount	Year	Role	Funding duration
Science and Technology Development Fund; STDF	research support-grant ID #12612	L.E. 100,00 (US\$ 14,000)	2014	Co-PI	3 years

Awards and Academic Achievements

- The 3rd ranked team award** to our team (4 person) with 10,000 LE (US\$ 2000) in "Abu Robocon - Egypt" competition (for robots design) which held between different Egypt universities in 2009.
- Special judgment-committee award** to our team in "Abu Robocon - Egypt" competition in 2008.
- Academic excellence awards** in the form of financial award of 100 EGP for the academic years 2005/2006 and 2006/2008. This award is given to students with DISTINCTION overall grade.

Teaching experience

Tutor and Marker in Assuit University; students scale from 10 to 70 in the following courses:

- Engineering drawing
- Machine Drawing and Construction
- Machine design 1,2
- Metrology
- Metal forming
- Machine tool design
- Stress analysis
- Design and production Laboratories 1,2
- Production engineering
- Modeling of Dynamics Control Systems
- Die design
- Design of industrial furnace

Industrial and training experience

• Undergraduate

Date	Place	Experience	duration
1 st year – 2006	• Egypt aluminum	Forming, Cutting, extrusion, and production lines	15 day
	• Mechanical and electrical system of Pumps in Elwady ELgedeed.	Internal combustion engine.	30 day
2 nd year – 2007	• Mechanical and electrical system of Pumps in Elwady ELgedeed.	Pumps and its installations.	15 day
	• competition of Abu Robocon 2006	Design, manufacturing, electronics, robotics, embedded system, and Process control.	60 day
3 rd year – 2008	• South Egypt mills	testing the hardness and balance of new rolls.	6 days
	• competition of Abu Robocon 2007	Design, manufacturing, electronics, robotics, embedded system, and process control.	60 day
	• Company of Osman Ahmed Osman	Hydraulic system maintenance of loaders	5 days
4 th year – 2009	• Attendance of constructing a production line of glass cups (1 ton) in Elwady ELgedeed.	Design and construction of an industrial furnace.	25 day
	• Abu Robocon 2008 competition	Design, manufacturing, electronics, robotics, embedded system, and process control.	60 day

• Graduate

- 2009-2010 • Design, build, and marketing of an industrial burner controller optimized for natural gas furnace application.
- Starts of lunching MIS company and ITTU office in the university.

Software skills

Engineering

- Solidworks
- Catia (quit)
- Anysis (quit)
- Fortrain
- Microcontroller programming (microchip, Atmel)
- Cura- 3D printing
- Multisim
- Eagle – PCB board
- Mach3- CNC
- PLC programming (LG, Siemens)

General

- MS word
- MS powerpoint
- MS Visio
- MS Excel (quit)
- Camtasia studio

Languages

Arabic: Mothertongue
English: Very good

Reference

1- **Ibrahim Mohamed Hassab Allah**

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2- **Abu Bakr Ali Muhammad Nasr**

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3- **Wael Mahmoud Khairuddin**

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4- **Othman Hassan Othman**

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