

# Mohamed G. Mahmoud

## Mohamed G. Mahmoud

Assistant lecturer, Production and Material Engineering Group, Mechanical Design and production Department , Faculty of Engineering ,Cairo University ,Giza ,Egypt

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### **Education:**

#### **2008-2013**

MSc in Mechanical Design and Production Engineering, Cairo University, Egypt.

Thesis title:

“Effect of Nano-Reinforcement on Properties of Cast Magnesium Alloy AZ91”

Advisors: Late Prof.Yehia Shash, Prof.Iman El-Mahallawi and Prof. Ragaie Rashad

#### **2001-2007**

BSc in Mechanical Design and Production Engineering, Cairo University, Egypt.

Grade: Very good with honors Degree **80.24%** (9<sup>th</sup> of 80 graduates)

Graduated Project: Excellent (98.5%)

### **Work Experience:**

#### **Assistant Lecturer**

July-2013-Present

*Cairo University, Faculty of Engineering*

- Main Class TA for Fundamental of Manufacturing Engineering for juniors
- Leading laboratory sessions for Fundamental of Manufacturing for juniors
- Leading lab miniproject for Fundamental of Manufacturing for juniors
- Grader for Fundamental of Manufacturing for juniors
- Teaching Assistant Production Technologies II (Metal Cutting, Metal forming, and Welding) for Seniors
- Teaching Assistant for CNC Machining and Programing for Seniors

#### **Visiting Researcher**

Spt.2011-Feb.2012

*RWTH Aachen University, Germany*

- Prepared samples for different characterization techniques.
- Used argon ions technique to section and prepare some samples
- Utilized different characterization technique (SEM, EPMA, and TEM)
- Examined flat, fractured, worn, and corroded surfaces for Magnesium alloy
- Hands-on experiences the preparations of samples using mechanical polishing
- Hands-on experiences the Optical microscopic characterization

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## Teaching Assistant

Aug.2008-July 2013

*Cairo University, Faculty of Engineering*

- Teaching assistant for Fundamental of Manufacturing Engineering for junior freshmen's
- Teaching assistant for welding Technologies for seniors
- Teaching assistant for CNC Machining and Programming for seniors
- Lead laboratory sessions for Metal Forming Technologies laboratory for seniors

## Undergraduate Research Assistant

June 2007-Sep. 2007

*Cairo University, Faculty of Engineering*

- Funded Agency: El Nasr Casting Company
- Manufacturing: Faculty of Engineering Workshops, Giza, Egypt
- Design and Production of Horizontal Centrifugal Casting Machine
  - The machine produced pipe with dimension Outer diameter: 100mm; Thickness: various thickness( for 30-40 mm) ; Length: 400mm.After the casting process the pipe will be machined to produce bushes which can be used in pumps and other applications

## Undergraduate Traineeship

July .2005 –July. 2005 (one month)

*Misr Cement Company (Kena, Egypt)*

Been training in the following sections

- Crusher plant
- Cement Mill plant
- Water-purification plant
- Control Station plant

## Undergraduate Traineeship

Aug.2004 –Aug. 2004(one month)

*Integrated industrials & Sugar Company (Quos, Kena, Egypt)*

Been training in the following sections

- Mechanical workshops
- Central workshops
- Steam boilers

## **Fields of Interest:**

- Synthesis and characterization of nanostructured engineering materials for energy applications.
- Integrated Computational Material Engineering (ICME).
- Materials Processing and Characterization.

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## **Scholarships:**

Funded Agency: STDF (Egypt) and DAAD (Germany)      Sept.2010 - Sept.2012

- Project Title:

"Manufacturing and Characterization of Nano- dispersed Al and Mg Alloys for High Strength, Low weight, and Energy saving Applications"

- Manufacturing: Faculty of Engineering, Cairo University, Giza, Egypt
- Characterization: Central Facility for Electron Microscopy, RWTH University, Aachen, Egypt.

## **Computer Skills:**

- Professional experience in Microsoft (Win 7, MS office (Excel, Power Point ,word)
- Excellent Programing Skills with Matlab (GUI , MFILE, Simulink)
- Excellent Experience with AutoCAD
- Good Experience with ABAQUS
- Working with Unigraphics NX Since 2006

## **Conferences:**

- Workshop on Application of Advanced Materials in Industry; June days 15-16 2013 German University in Cairo, Cairo, Egypt.

## **Publications:**

- **Mahmoud, M. G.**, El-Mahallawi, I. S., Rashad, R. M. "Effect of Nano-Reinforcement on Properties of Cast Mg-Al Alloy AZ91", TMS 143<sup>rd</sup> Annual Meeting & Exhibition, San Diego, California, USA, Feb 2014.
- **Mahmoud, M. G.**, El-Mahallawi, I. S., Rashad, R. M. "Effect of Nano-Reinforcement on Properties of Cast Mg-Al Alloy AZ91", Magnesium Technology 2014,471-476

## **List of References:**

- Prof. Dr. Joachim Mayer: Professor of Microstructural Analysis and Head of RWTH Aachen University's Central Facility for Electron Microscopy.  
Email: [Mayer@gfe.rwth-aachen.de](mailto:Mayer@gfe.rwth-aachen.de)
- Prof .Dr. Iman S. El Mahallawi: Professor of Metallurgical Engineering, Faculty of Engineering, Cairo University.  
Email: [ielmahallawi@bue.edu.eg](mailto:ielmahallawi@bue.edu.eg)
- Prof. Dr. Abdalla S. Wifi: Professor of Metal Forming, Faculty of Engineering, Cairo University.  
Email: [aswifi@yahoo.com](mailto:aswifi@yahoo.com)

**End of Resume**