Curriculum Vita
Dr. ADEL MOHAMED

Bio

I, **Adel M.A. Mohamed**, received my B.Sc and M.Sc degrees in Metallurgical Engineering from Suez Canal University (Egypt). In April 2008, obtained my Ph.D degree from University of Quebec at Chicoutimi (Canada). From May 2008-Jan 2011, did his post-doctorate at the same university. Currently, I work as assistance professor at the same university. I am co-supervisor for one PhD student and two master students. My research focuses on advanced technology of light metals for automotive applications and nanotechnology. I have published about 40 research articles in various international journals and conferences.

Personal data

Name and Initials: Mohamed, A.M.A.
First name: Adel

E-mail: adel.mohamed25@yahoo.com,
adel.mohamed@qu.edu.qa

Current Position

Assistant professor, University of Quebec, Chicoutimi, Canada, Jan 2011- present
Postdoctoral fellow, University of Quebec, Chicoutimi, Canada, May 2008- Dec 2011

Research Interest

Advanced Technology of Nono-Composite and Polymer Materials. Advanced Technology of Light Metals for Automotive Applications

Languages

English: Full Command
French: Intermediate Level
Arabic: Native language

Education

September 2004- April 2008: Ph.D. in Engineering at University of Quebec, Chicoutimi, Canada Degree

Title of the thesis "**Effect of Additives on the Microstructure and Mechanical Properties of Aluminum-Silicon Alloy**"

September 2001- May 2003: M.Sc. in Engineering at Faculty of Petroleum and Mining Engineering, Suez Canal University, Suez City, Egypt,
Title of the thesis "**The production of Piezoelectric Materials**"

September 1993- May 1998: B.Sc. in Metallurgical and Materials Engineering at Faculty of Petroleum and Mining Engineering, Suez Canal University, Suez City, Egypt
Grade: Very good with honor degree, first class.
Graduation Project:
Cathodic Protection of Petroleum Pipelines

Teaching Interest

1-Thermo-mechanical treatments of ferrous and nonferrous materials
2- Physical Metallurgy
3-Mechanical Metallurgy
4- Alloys Design
5- Material Science and Engineering
6- Corrosion and Corrosion Control
7- Ceramic Materials
8- Composite Materials

Equipment Experiences

Scanning Electron Microscope (SEM), Optical Microscope (OM), Atomic Force Microscopy (AFM), Fourier Transform Infrared Spectroscopy (FTIR), Spin and Spray Coatings Devices, Mechanical Test Machines (MTS, Hardness, and Impact), and Contact Angle Device.

Publications
Books

1- **A.M.A. Mohamed**, Samir Ibrahim, and Rashad Ramadan **"Piezoelectric Ceramic Materials"**, LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany, 2011, p.109
2- **A.M.A. Mohamed**, F.H. Samuel "**Performance of Aluminum-Silicon Cast Alloys**", LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany, 2010, p.196.

Chapters

1- **A.M.A. Mohamed,** F.H. Samuel, A.M.A. Al-Ahmari, **"Influence of Bismuth and Tin on the Performance of Al-Si Cast Alloys",** 2nd Chapter in Bismuth: Characteristics, Production and Applications, Nova Science Publishers, Inc, May 2012.

2- **A.M.A. Mohamed,** F.H. Samuel, **"A Review on the Heat Treatment of Al-Si-Cu/Mg casting alloys"**, 8th Chapter in Heat Treatment, InTech Science Publishers, Inc, 2012, ISBN 979-953-307-1033-5.

International Journals

1- **A.M.A. Mohamed**, M. Farzaneh, and R. Jafari, "**Optimization of Superhydrophobic Characteristics of PVDF-ZnO Composite Coatings Using Taguchi Approach"**, prepared for submission to Polymer, 2012.

2- **A.M.A. Mohamed,** M. Farzaneh, and R. Jafari, **"Stability and Durability of Superhydrophobic PVDF-ZnO Composite Coatings"**, prepared for submission to Polymer, 2012.

3- **A.M.A. Mohamed,** M. Farzaneh, and G. Momen, **"Superhydrophobicity of RTV Silicone Rubber Coatings"**, prepared for submission to Applied Science Surface, 2012

5- **A.M.A. Mohamed**, F.H. Samuel, Saleh Al kahtani, "**Influence of Mg and Solution Heat Treatment on the Occurrence of Incipient Melting in Al-Si-Cu-Mg Cast Alloys**", Journal of Materials Science and Engineering A, A543, 2012, pp. 22-34.

6- Kh. Ragab, **A.M.A. Mohamed**, A.M. Samuel, A.M.A. Al-Ahmari, and F.H. Samuel **"Effect of Rapid Heating on the Quality Assessment of 356 and 319 Aluminum Cast Alloys Using Fluidized Bed",** International Journal of Cast Metals Research, 2012, Accepted.

7- **A.M.A. Mohamed**, F.H. Samuel, and Saleh Al kahtani, **"Assessment of the effect of Mg addition on the solidification behavior of Al-Si-Cu cast alloy"**, AFS Transaction, 2012, Accepted

8- G.H. Garza, E. Samuel, **A.M.A. Mohamed**, A.M. Samuel, and F.H. Samuel, "**Effects of Alloying Elements and Cutting Tool Materials on the Machinability of Al-Si Cast Alloys**", AFS Transaction, 2012, Accepted.

9- **A.M.A. Mohamed**, A.M. Samuel, A.M.A. Al-Ahmari, and F.H. Samuel **"Effects of Rare Earths on the As-Cast Microstructure of an Al-Si-Mg Alloy"**, AFS Transaction, 2012, Accepted.

10- **A.M.A. Mohamed**, Saleh Al kahtani,**"High Temperature Performance of Al-Si-Mg alloys for automotive Applications",** Materials, 2012, In process.

11- O. Elsebaie, **A.M.A. Mohamed**, A.M. Samuel, and F.H. Samuel, "**The role of Alloying Additives and Aging Treatment on the Impact behavior of 319 Cast Alloy",** Materials and Design, 2011, 32, pp. 3205-3220.

12- Z. Ma, E. Samuel, **A.M.A. Mohamed,** A.M. Samuel, F.H. Samuel, H.W. Doty, **"Influence of Aging Treatments and Alloying Additives on the Hardness of Al-11Si-2.5Cu-Mg Alloys"** Materials and Design, 2010, 31, pp. 3791-3803.

13- F.J. Tavitas-Medrano, **A.M.A. Mohamed**, J.E. Gruzleski, F.H. Samuel, H.W. Doty, "**Precipitation Hardening in 319-Type Cast Aluminum Alloys"**, Journal of Materials Science, 2010, vol. 45, pp. 641-651.

14- Z. Ma, E. Samuel, **A.M.A. Mohamed**, A.M. Samuel, F.H. Samuel, H.W. Doty, **"Parameters Controlling the Microstructure of Al-11Si-2.5Cu-Mg Alloys"** Materials and Design, 2010, 31, pp. 902-912.

15- L. Liu, **A.M.A. Mohamed**, A.M. Samuel, F.H. Samuel, H.W. Doty, S. Valtierra, "**Precipitation of β-Al5FeSi Phase Platelets in Al-Si Based Casting Alloys"**, Metallurgical and Materials Transactions A, 2009, vol. 40A, pp. 2457-2469.

16- **A.M.A Mohamed**, A.M. Samuel, F.H. Samuel, H.W. Doty, "**Influence of Additives on the Microstructure and Tensile Properties of Near-Eutectic Al-10.8%Si Alloys**", Materials and Design, 2009, vol. 30(10), pp. 3943-3957.

17- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, and H.W. Doty, "**Influence of Additives on the Impact Properties of Al-10.8%Si Near-Eutectic Al-Si Alloys**", Materials and Design, 2009, vol. 30(10), pp. 4218-4229.

18- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, and H.W. Doty, "**Effect of Individual and Combined Additions of Pb, Bi, and Sn on the Microstructure and Mechanical Properties of Al-10.8%Si Eutectic Alloy**", Metallurgical and Materials Transactions A, January 2009, vol. 40, pp. 240-254.

19- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, H.W. Doty, and S. Valtierra, "**Influence of Tin Addition on the Microstructure and Mechanical Properties of Al-Si-Cu-Mg and Al-Si-Mg Casting Alloys**", Metallurgical and Materials Transactions A, March 2008, vol. 39, pp. 490-501.

20- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, H.W. Doty, and S. Valtierra, "**Precipitation of Tin in Cast 319 and 356 Aluminum Alloys**", AFS Transactions, 2007, vol. 115, pp. 105-119.

21- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, H.W. Doty, and S. Valtierra, "**Application of Experimental Design to Study and Control Properties and Behavior of Cast Al-10.8%Si Eutectic Alloy**", International Journal of Cast Metals Research, 2007, vol. 20 (5), pp. 246-253.

22- **A.M.A. Mohamed** and M. Farzaneh, "**An experimental study on the tensile properties of atmospheric ice**", Cold Regions Science and Technology, 2011, vol. 68, pp. 91–98

23- **A.M.A. Mohamed,** S.A. Ibrahim, M.S. Ahmed, R.M. Ramadan, **"Reactive Calcination Derived PZT Ceramics"**, Journal of Electroceramics, July 2005, vol. 14, No.3, pp 273-281.

Conferences & Presentations

24- **A.M.A. Mohamed**, S.A. Ibrahim, M.S. Ahmed, R.M. Ramadan, "**Sol-Gel Dervied PZT Ceramics**" The Eighth International Conference of Petroleum, Mining and Metallurgical Eng., March, 2003 pp. 43-53.

25- **A.M.A. Mohamed**, S.A. Ibrahim, M.S. Ahmed, R.M. Ramadan, "**Modified Sol-Gel Dervied PZT Ceramics**" Smart Sensors Actuators, and MEMS, Junay-Chih Chiao, Vijayk. Varadan (Eds), Proceeding of SPIE, vol. 5166, 2003, pp. 65-73.

26- **A.M.A. Mohamed**, F.H. Samuel, and Saleh Al kahtani, **"Thermal Analysis and Impact Toughness of Modified and Grain-Refined Al-7Si-Mg Cast Alloy",** symposium Aluminum Alloys: Fabrication, Characterization and Applications, TMS, March, 2012, **Accepted**.

27- **A.M.A. Mohamed**, F.H. Samuel, and Saleh Al kahtani, **"Assessment of the effect of Mg addition on the solidification behavior of Al-Si-Cu cast alloy"**, Metalcasting Congress, April 17-20, 2012, Columbus, OH.

28- G.H. Garza, E. Samuel, **A.M.A. Mohamed**, A.M. Samuel, and F.H. Samuel, "**Effects of Alloying Elements and Cutting Tool Materials on the Machinability of Al-Si Cast Alloys**", Metalcasting Congress, April 17-20, 2012, Columbus, OH.

29- G.H. Garza, **A.M.A. Mohamed**, E. Samuel, A.M. Samuel, and F.H. Samuel, "Evaluation of Data-Processing of Drilling Forces And Moments on Aluminum-Silicon Casting Alloys", 41st International Conference on Computers & Industrial Engineering (CIE 41), California, USA during the period October 23-26, 2011.

30- **A.M.A. Mohamed**, A.M. Samuel, A.M.A. Al-Ahmari, and F.H. Samuel **"Effects of Rare Earths on the As-Cast Microstructure of an Al-Si-Mg Alloy"**, 115th Metalcasting Congress, Schaumburg, IL, USA, April 2011, **Best Presentation**.

31- M.F. Ibrahim, E. Samuel, **A.M.A. Mohamed**, A.M. Samuel, A.M.A. Al-Ahmari, and F.H. Samuel "**Mechanical Properties of Al-Si-Cu-Mg Cast Alloys: Effects of Tramp Elements**", 115th Metalcasting Congress, Schaumburg, IL, USA, April 2011.

32- **A.M.A. Mohamed**, M. Fortier, X.-G. Chen "**Effect of Zr on primary intermetallic formation and grain refinement of 7003 alloy**", COM 2010, 49th Annual Conference of Metallurgists, held in conjunction with Lead-Zinc 2010 being held October 3-6, 2010 at the Hyatt Regency Hotel, Vancouver, BC, pp. 13-21.

33- **A.M.A. Mohamed** & M. Farzaneh, "**An Experimental Evaluation of the Tensile Strength Properties of Atmospheric Ice**"11e Colloque annual de la CIGELE/INGIVRE, Université du Québec à Chicoutimi, June 2009.

34- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, H.W. Doty, and S. Valtierra, "**Influence of Additives on the Microstructure and Hardness of Al-10.8%Si Near-Eutectic Cast Alloy**", Conference of ARABCAST, Sharm El sheikh, November 2008.

35- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, H.W. Doty, and S. Valtierra, " **Effect of Fe, Mn, Cu and Mg Additions on the Microstructure of Al-10.8 wt% Si Near-Eutectic Alloy**", Proc. Int. Symp. On 'Aluminium: from Raw Materials to Applications', G. Dufour, F. Paray, J. Tessier (Eds), Conference of Metallurgists (CIM), Montreal, Quebec, October 2006, pp. 167-183.

36- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, H.W. Doty, and S. Valtierra, "**Effect of Fe, Mn, Cu and Mg Additions on the Mechanical Properties of Al-10.8 wt% Si Near-Eutectic Alloy**", Proc. 18th Canadian Materials Science Conference (CMSC), Montreal, Quebec, June 2006, Session 10. Aluminum II, Paper 10.3.

37- **A.M.A. Mohamed**, F.H. Samuel, A.M. Samuel, H.W. Doty, and S. Valtierra, "**Precipitation of Tin in Cast 319 and 356 Aluminum Alloys**", 111th Metalcasting Congress, Houston, Texas, USA, May 2007.

38- **A.M.A. Mohamed**, Saleh Al kahtani **"Tensile Properties of Al-Si alloys at Ambient and Elevated Temperatures",** COM 2012, 51th Annual Conference of Metallurgists, Spet. 30-Oct. 3, 2012, Niagara Falls, Canada, Accepted Abstract.

Reviewer

1-Romanian National Council for Research and Development **(Evaluators project proposals)**
2- Journal of Materials Science Research **(Associate Editor)**
3- Materials Characterization (Reviewer)
4- Acta Metallugica Sinica- English (Reviewer)
5- International Journal of Material science (Editor and Reviewer)
6- Journal of Electroceramics (Reviewer)
7- Recent Patents on Mechanical Engineering (Reviewer)

8- Advances in Materials Science and Engineering (Reviewer)

Activities

1- Workshop **"**Optimisation and Design of Aluminum as Construction and Industrial Material in Environments Typical for the Gulf-region" at Al Khor Hall, Doha, Qatar, presented **"Rare Earths Additions on the Performance of Al-Si Alloys"**, 26th March, 2012,.

2- Workshop **"**Advancing the Development of Vehicles with Reduced Oil Consumption" at Al Khor Hall, Doha, Qatar, paper presented **"Aluminum Activities at Qatar University"**, 3rd May, 2012,.

3- Presentation a seminar on the mechanical properties of a GM-developed aluminum-silicon casting alloy, General Motors facilities in Michigan, April 2005.

4- Poster "The Influence of Cu and Mg Additions on the Microstructure of Al-10.8%Si Near-Eutectic Alloy", REGAL, October 2006

5- Member of the Canadian Institute of Mining, Metallurgy and Petroleum starting from August 2006- Present.

Work Experience

September 1991- July 1993: Training in "The Egyptian company for the Production of Aluminum Alloys" Kena, Egypt.

July & August 1995: Summer training in "The Egyptian company for the Production of Aluminum Alloys" Kena, Egypt.

July & August 1996: Summer training in "The Egyptian company for the Production of Aluminum Alloys" Kena, Egypt.

July & August 1997: Summer training in "The Egyptian company for the Production of Iron and Steel" Helwan, Egypt.

September 1997-July 1998: The Project of the final study in the Faculty of Petroleum and Mining Engineering. The project was under the title of "**Cathodic Protection of Petroleum Pipelines**".

September 2001: Training course "**Preparing University Teacher**", Faculty of Education, Suez Canal University, Suez, Egypt.

February to April 2003: "**TOEFL Preparation Session with score 580**", Faculty of Education, Community Service Center, Suez Canal University, Suez City, Egypt.

September 1999-August 2004: Teaching Assistant at the Metallurgical and Materials Engineering Department, Faculty of Petroleum and Mining Engineering, Suez

Canal University. I was teaching "Powder Metallurgy, Corrosion, Production of Steel and Iron Making, Ceramic Materials, Alloys Design, and Material Science and Engineering" as a teaching assistant. Also I was the responsible for the Material Testing Lab.

September 2004-April 2008: Research assistant at University of Québec in Chicoutimi, Québec, Canada.

May 2008-Present: Post-doc. at University of Québec in Chicoutimi, Québec, Canada.

Computer Skills

- Programming using Matlab, and Statistica.
- Home Page design using HTML and Microsoft Front Page.
- Microsoft Office (Word, Excel, Power Point, Access, FrontPage, and Outlook)

Personal Interests

Outside pure academics, playing football, visiting other countries, making friendships with foreign people, and reading about the famous all over the world.

REFERENCES

1- F.H. Samuel, Professor and Chair Incumbent General Motors-NSERC-UQAC Industrial Research Chair on Advanced Technology of Light Metals for Automotive Application, Chicoutimi, Quebec, Canada, G7H 2B1, **fhsamuel@uqac.ca**

2- A.M.A Al-Ahmari, Professor of Industrial Engineering at King Saud University, Saudi Arabia, the Executive director of CEREM (Center of Excellence for Research in Engineering Materials) and Supervisor of Princess Fatimah Alnijris's Research Chair for Advanced Manufacturing, P. O. Box 800, Riyadh 11421, Saudi Arabia
Tel: +966 14676664. Fax: +966 14678657, **alahmari@ksu.edu.sa**

3- Herbert Doty, Senior Materials Engineer, GM Powertrain Materials Engineering, Metal Casting Technology, Inc., Milford, NH, USA.
Herb.doty@gm.com, **hdoty@mct-inc.com**

4- A.M. Samuel, **Professor** at University of Québec in Chicoutimi, Québec, Canada, G7H 2B1,**amsamuel@uqac.ca.**