

# SHOOKA MAHBOUBI, Ph.D., E.I.T.

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## CURRENT POSITION

**System Specialist, Engineering Design Group**  
Corrosion Service Company Limited, Markham, ON.

**2018 - Present**

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## LEADERSHIP EXPERIENCES

**Section Chair** **Sep 2016 – Jun 2017**  
NACE International - The Worldwide Corrosion Authority - Southern Ontario Student Section (SOSS)

**President, McMaster Materials Technical Society (CIM, ASM and AIST)** **Jun 2017– Apr 2018**  
McMaster University Student Chapter

**Executive Committee Member** **Jun 2016 – Jul 2017**  
Canadian Center for Electron Microscopy (CCEM), McMaster University

**Coordinator** **Jun 2014 – Apr 2018**  
Center for Automotive Materials and Corrosion (CAMC), McMaster University

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## EDUCATION

**Ph.D., Materials Science and Engineering** **2018**  
McMaster University, Hamilton, ON.  
Supervisors: Dr. J.R. Kish, Dr. G.A. Botton

**Master of Applied Science, Materials Science and Engineering** **2014**  
McMaster University, Hamilton, ON.  
Supervisors: Dr. J.R. Kish, Dr. G.A. Botton

**Bachelor of Metallurgy and Materials Engineering** **2012**  
University of Tehran, Tehran, Iran.  
Supervisor: Dr. A. Ataie

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## PREVIOUS PROFESSIONAL EXPERIENCES

**Sessional Faculty** **Jun 2015 – Aug 2018**  
McMaster University, Department of Materials Science and Engineering

**Research Assistant** **Sep 2011 – Sep 2012**  
University of Tehran, Tehran, Iran  
Research Title: The Effect of ZrB<sub>2</sub> Particles in Aluminum Matrix Composites, Supervisor: Dr. M. Emany

**Intern** **Sep 2011 – Sep 2012**  
Saipa Automotive Malleable Co., Karaj, Tehran, Iran

## **TECHNICAL ASSISTANCE PROJECTS**

1. High-Temperature Coatings Performance of Candidate Alloys for Steam Environment
  2. Analysis of Coatings Adherence and Atomic Structure on the Pipeline Steels (yr. 2017 Work Requested by Shawcor)
  3. Effect of N<sub>2</sub> Saturated, H<sub>2</sub> and O<sub>2</sub> Saturated Gas Flow on the Microstructure of Alloy 800H Exposed in Supercritical Water (2016)
  4. Characterization of 310S, 304 SS, 800 H, P1, and 825 Alloys Exposed in Subcritical Water (yr. 2015)
  5. Mg, MgC, and Al-Mg Enriched Coatings Adherence on the Mg Alloys (yr. 2015)
  6. Arsenic Implanted AM60B Microstructure Behaviour (yr. 2015)
  7. Al Alloy 7050 Cast and Wrought Material Behaviour: Role of Inclusions (yr. 2015)
  8. Structure Characterization of Alloy 800H Tubes Exposed in Supercritical Water (yr. 2014, Work Requested by Trent University)
  9. Atomic Structure of Mg (0001), (11 $\bar{2}$ 0), and (10 $\bar{1}$ 0) single crystals exposed in water (yr. 2014)
  10. Adherence of Car Bumper Coatings in the Rolling and Transverse Directions (yr. 2014)
  11. Structural Analysis of MCrAlY Coatings (yr. 2014, Work Requested by Carleton University)
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## **COMPUTER SKILLS**

- Advanced in MSOffice, AutoCAD, Image Analyzer, JEMS, Digital Micrograph, Origin, Mathtype, Inkscape

## **TECHNICAL SKILLS**

- **Electron Microscopy Skills** – AUGER-JAMP 9500F, JEOL (Imaging, SEM- EDS analysis, AES analysis (spot analysis, depth profile and auger maps), FESEM- JEOL 7000F (Imaging and SEM- EDS analysis), TEM- Philips CM-12 (Imaging, TEM- EDS analysis, Selected Area Diffraction (SAD) ), TEM- JEOL 2010F (Electron Energy Loss Spectroscopy (EELS), Imaging, TEM- EDS analysis, SAD)
- **Engineering Systems Design** – Application of AutoCAD and construction sheets for system designs
- **Heat Treatment and Metallography** – Polishing, etching and microstructural analysis
- **Mechanical Testing** – Creep, tension, compression, Charpy
- **Fractography** – Failure analysis, fracture surface analysis
- **High Temperature Testing** – Design of oxidation apparatus, electrochemical testing

## **LANGUAGE SKILLS**

- Fluent in English
- Fluent in Persian
- Basic in French

## **AWARDS**

### **Conference of Metallurgists (COM 2017), Vancouver, BC, Canada**

- Best Student Poster Presentation Award (Second Place) **Aug 2017**
- MetSoc of CIM, Metallurgy and Materials Society, Travel Assistance Award **Aug 2017**

### **McMaster University, Hamilton, ON, Canada**

- Certificate of Achievement in Research Excellence **Sep 2017**
- Engineering Travel Assistance Award (won over 30 applications) **July 2017**
- David Alan Reid Kay Memorial Award **Apr 2017**
- Certificate of Achievement in Research Excellence **Sep 2016**
- International Graduate Excellence Award **Jun 2016**
- Dante Cosma Graduate Memorial Award **Apr 2016**
- Certificate of Achievement in Research Excellence **Sep 2015**
- International Graduate Excellence Award **Jun 2015**
- Dante Cosma Graduate Memorial Award **Apr 2015**
- International Graduate Excellence Award **Oct 2013**

### **NACE International - The Worldwide Corrosion Authority**

- Canada Graduate Student Excellence Award **Apr 2018**
- International Foundation Graduate Student Book Award **Mar 2017**
- Best Student Poster Presentation Award (Second Place), Northern Area Eastern Conference **Nov 2016**
- Best Student Poster Presentation Award (Second Place) Corrosion 2016 Conference **Mar 2016**
- Travel Student Award, NACE Internationals Corrosion 2016 Conference **Mar 2016**
- Best Student Poster Presentation Award (First Place), NACE Northern Area Eastern Conference **Oct 2015**

### **Canadian Materials Science Conference (CMSC)**

- Best Student Paper Presentation Award (Third Place), CMSC 2015 **June 2015**
- Travel Student Award **Aug 2015**

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## **HONORS**

1. Invited keynote speaker, July 26<sup>th</sup>, 2019, NACE Southern Ontario Student Section (SOSS) 9<sup>th</sup> annual symposium, Western University, London, Ontario.
2. Invited speaker, January 11<sup>th</sup>, 2017, Kubota Canada Ltd.
3. August 2017, Interviewed by the McMaster university graduate students association  
<https://www.eng.mcmaster.ca/spotlight/graduate-students/shooka-mahboubi>  
<https://www.youtube.com/watch?v=flxngQCQ3o0>
4. July 19-20, 2017, Chair of the NACE Southern Ontario Student Section (SOSS) 7<sup>th</sup> annual symposium, McMaster Automotive Resource Center (MARC), Hamilton, Ontario: Responsibilities included organizing the symposium, finding sponsors for the symposium (received over 4500\$ from industry), judging the students presentations, etc.
5. May 2017, Judge of the 2016-2017 Committee of selecting recipients for award winners of 2017 GSA and Yates summer travel award. selected by the Faculty of Engineering at McMaster University, Hamilton, Ontario
6. April 2017, Interviewed by MetSoc of CIM: <https://www.linkedin.com/pulse/grad-student-shooka-mahboubi-loves-being-part-metsoc-of-cim>