

Curriculum Vitae

Name: Sa'ed A. Musmar
Date of Birth: January the 8th 1977
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Academic Background

2003-2006: Ph.D, Metals and Materials Engineering/Metallurgical engineering, McGill University, Canada

1999-2001: MSc., Mechanical Engineering, University of Jordan, Jordan.

1994-1999 B.Eng., Thermal Science, Mechanical Engineering, Mu'tah University, Jordan.

Ph.D. Thesis Title: In-Situ Thermal Analysis Probe.

Current Position:-

Sep. 2015 - Now: Chairman of Industrial Engineering Department, University of Jordan

Sep. 2013 - 2015: Assistant Professor , Industrial Engineering Department, University of Jordan, Amman, Jordan

Previous Position:-

Sep. 2011 – Aug. 2013 Assistant Professor , Mechanical and industrial Department, Majmaah University, Al-Majmaah, Saudi Arabia.

Feb. 2007 - Sep. 2011 Assistant Professor , Mechanical Engineering department and lecturing for Systems Engineering Department, Mutah University, Karak, Jordan

June 2011 - Sep. 2011 Visiting researcher, Braunschweig university, Germany

June 2010 - Sep. 2010 Visiting Professor , McGill University, Montreal, Canada

Sep. 2003 - Sep. 2006 Research Assistant, Faculty of Engineering, McGill University, Montreal, Canada.

Sep. 2000 – Sep. 2001. Research Assistant, Faculty of Engineering, University of Jordan, Amman, Jordan

April the 1st 1999- Sep. the 2nd 1999 Mechanical Engineer, Machine shop engineer Odeh Al Naber Transportation Company, Amman, Jordan.

Courses that I have Instructed

Statistics I

Probability and statistics for engineers, Dynamics, System dynamics and control
Industrial Systems analysis and Design, Manufacturing process and Product Design
Industrial Project Management, Material Science, Manufacturing Process I (Metal Forming), Manufacturing Process II (Metal Cutting), Composite Materials and Ceramics, Composite Materials and Powder Technology, Polymers Engineering, Biomaterials Engineering, Thermal Sciences (Fluid mechanics I and Thermodynamics I), and Heat and Mass Transfer

September 2004-December 2005 Teaching Assistant, McGill University, Canada

Conducting tutorials for the following courses

Heat, Mass, and Fluid Flow, and Advanced Process Engineering

Committees Membership

Head of higher education committee at industrial engineering department
Faculty Council for two years

Publications:

1. Nasri J. Rabadi, Sa'ed A. Mismar “Enhancing Solar Energy Collection by using curved flow technology coupled with flow in porous media: an experimental study”. *Solar Energy*, 75, 2003, pp. 261-268.
2. Sa'ed A. Musmar, Frank Mucciardi, “In-situ Thermal Analysis Technology for Aluminum Foundry Alloys”, 43rd Annual Conference of Metallurgists of CIM, Light Metals and Metal Matrix Composites, Hamilton, 2004.
3. Sa'ed A. Musmar, Frank Mucciardi, John GruzleskiI, Fawzi H Samuel “Nouvelle sonde d'analyse thermique utilisable avec les alliages d'aluminium”, *Fonderie*,

Fondeur d'aujourd'hui, 277, p 13-26, Editions techniques des industries de la fonderie, 2008

4. Sa'ed A. Musmar, Frank Mucciardi, F.H.Samuel, J.Gruzleski "New Heat Pipe Technology for In-situ Thermal Analysis of Aluminum Alloys", Quebec, 2004. Mémoire de la recherche, Journée des étudiants du REGAL, Les Presses de l'aluminium, Chicoutimi, p. 45, 2005.
5. Sa'ed A. Musmar, Frank Mucciardi, "In-Situ Thermal Analysis Probe", Light Metals, 2006, Annual Conference of Metallurgists of CIM, Montreal, Canada, 2006.
6. Sa'ed A. Musmar, Frank Mucciardi, F.H.Samuel, J.Gruzleski "Investigation of Iron and Copper Intermetallics in 356 Aluminum Alloy and in Al-7%Si Binary Alloy by an In-Situ Thermal Analysis Probe", 110th Metal Casting Congress, American Foundry Society (AFS), Columbus, Ohio, on April 18-21, 2006.
7. Sa'ed A. Musmar, Frank Mucciardi, F.H.Samuel, J. Gruzleski "A Novel In-Situ Thermal Analysis Technique for Aluminum Alloys: 356, 319, Al-xSi, Al-Si-Cu-xMg, and 6063 - Experimental Study", American Foundry Society (AFS), Texas, Texas, May, 2007.
8. Sa'ed A. Musmar, Ammar Alrousan "Effect of HHO gas on combustion emissions in gasoline engines". Fuel, 90, 2011, PP. 3066-3070.
9. Iskander Tlili, Sa'ed A. Musmar, "Thermodynamics evaluation of a second order simulation for Yoke Ross Stirling Engine", Energy Conversion and Management, Volume 68, April 2013, pp.149-160.
10. Sa'ed A. Musmar, and Tawfeeq Al-Kanhal, "Design optimization of thermal heat engines", International Journal of Heat and Technology, Vol.32, 2014.
11. Sa'ed A Musmar, AT Al-Halhouli, Iskander Tlili, and S Büttgenbach "Performance Analysis of a New Water Based Micro-Cooling System", Experimental Heat Transfer, DOI:10.1080/08916152.2015.1024353, 2015
12. Sa'ed A. Musmar, Iskander Tlili, "Numerical investigation of working fluid effect on Stirling engine performance", Int. J. of Thermal & Environmental Engineering, Volume 10, No.1 2015, 31-36
13. A. Alrousan, S Alkheder, SA Musmar Urban Traffic Pollution Reduction for Sedan Cars Using Petrol Engines by Hydro-oxide Gas Inclusion, Journal of the Air & Waste ..., 2015 - Taylor & Francis

Ongoing Research:

Thermal analysis and fluidity analysis of aluminum alloys

Effect of microstructure on cylinder wear

Welding effect on microstructure

HHO fuel cell

Improving thermal efficiency of industrial plants

Stirling engines modeling, simulation, and optimization

Silicon Chips Micro-cooling system

Funded Projects:

- [1] Micro-cooling system Funded by DFG, 2011
- [2] Fluidity enhancing of molten aluminum Funded by Engineering and Applied Sciences Research Center at Majmaah University (KSA), 2012
- [3] Improving thermal efficiency of industrial plants via conversion of waste heat into electricity, 91,800 JD, Funded By SRF (Jordan), 2015

Licenses/Certifications

WHMIS (Workplace Hazardous Materials Information System) training

Advanced Techniques in Microscopy for Materials Characterization

Modules: SEM1, X-Ray Analysis, Advanced Probe, Image Analysis and EBSD

National Committees:

Iron and Steel Committee (Jordan Standards and Metrology Organization (JSMO))

References:-

Prof. Frank Mucciardi, Department of Mining, Metals and Materials Engineering, McGill University, Montreal, Canada.