

# **Ahmad Al-Muhtady**

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## **Education:**

- **PhD in Mechanical Engineering**, University of Michigan in Ann Arbor. (Expected graduation date is April 2013) [**GPA 8.1/9.0** ]  
Thesis Topic: Degradation-Based Swapping Optimization Policy for Fleet-Level Management. Research Group: Center for Intelligent Maintenance Systems  
<http://www.imscenter.net/Members>. Current status: PhD candidate (Dissertation proposal exam passed in May 2011)
- **MSE in Mechanical Engineering**, University of Michigan in Ann Arbor. (June 2009) [**GPA 8.0/9.0** ]  
Thesis Topic: HVAC (Heating, Ventilation and Air-Conditioning) Equipment Partial Loading and Prognostics. Research Group: Center for Intelligent Maintenance Systems
- **BSE in Mechanical Engineering**, (June,2006). [**GPA 3.71 (rank: 1 (top student of class 2006)** ],University of Jordan, Amman, Jordan
  - ✓ Graduation project: Experimental Investigation of Natural Convection from Helicoidally Coiled Tubes as Part of HVAC Applications (Funded by the university, Graded A)

## **Experience:**

- **University of Michigan/ (January 2009-April 2009 and September 2010-December 2010) /Position: Graduate Student Instructor for Mechanical Vibrations Course(Graduate Level) and Dynamics and Vibrations Course( Undergraduate level)**
- **University of Michigan/ (January 2008-present time) /Position: Research Assistant of the S.M. Wu Manufacturing Research Center and part of the IMS (Intelligent Maintenance System) Research Center Team.**  
Research Topic for the Master's thesis: HVAC (Heating, Ventilation and Air-Conditioning) Equipment Prognostics; an implementation of the current reliability models in the HVAC equipment.
- **German Jordanian University / (April 2007 – December 2007) /Position: Research and Teaching Assistant.**  
Research: Investigation of the Current Maintenance Engineering Implementation among Jordan's Industries
- **Petra Engineering Industries CO. / Research and Development (R&D) dept. ( August 2006 – April 2007) /Position: R&D Engineer Responsibilities:**

- Testing engineer [Conducting experimentations and simulations in the thermal laboratory for both Petra (new designs) and Third Party Tests air conditioning products. All tests follow ARI (Air-conditioning and Refrigeration Institute) standards and certified UL (Underwriters Lab.) and ITS (Intertek Lab.).
- Development: improve performance of current products.
- Research: seeking new innovations in air conditioning.  
Research conducted under the jurisdiction of Petra Engineering Ind. Co:
  - Liquid Refrigerant Pump Innovation
  - Coil performance prediction software development
  - Replacing refrigerant R22 with R410A
- Business (contacting new suppliers).

### Undergraduate Employment Experience:

- **Collection Firm for Computers:** Amman, Jordan. Summer of '03. Position: Computer maintenance technician.

### **\*\*\*List of Subjects I taught:**

- ME541 Mechanical Vibrations (University of Michigan)
- Heat Transfer (German Jordanian University)
- Physics101 Lab. (German Jordanian University)

### Skills & Training Programs/Courses:

- **Training Programs/Courses:**
  - ✓ Training Internship in **Germany:** Eight weeks Undergraduate Training program for mechanical engineering in Freiberg, Germany at the institute of Thermodynamics in "**Technische Universitat Bergakademie Freiberg**" (The position of a member of the Thermodynamic team investigating numerical simulations for heat exchangers). (July,2005)
- **Computer skills:**
  - ✓ Computer Aided Design (*AutoCAD*<sup>®</sup>)
  - ✓ CarSim<sup>®</sup>
  - ✓ MATLAB<sup>®</sup>, Simulink<sup>®</sup> and Maple<sup>®</sup>
- **Languages:**
  - ✓ **Arabic:** (Mother Tongue)
  - ✓ **English:** Excellent writing and speaking

### Honors and Scholarships:

- ***Scholarship to pursue graduate studies in any university in the world (currently at the university of Michigan in Ann Arbor)*** provided by the German Jordanian University, school of technological sciences, the maintenance engineering dept. (2007)
- **Rank 1 with excellent GPA assessment** among more than 60 students in the ***Mechanical Engineering Dept. in the University of Jordan*** (2006 class) with early graduation (4 years instead of 5).
- ***Training-ship in Freiberg, Germany*** at the institute of Thermodynamics in Technische Universitat Bergakademie Freiberg provided by DAAD and IAESTE (International Association for the Exchange of Students and Technical

Experience) for eight weeks (2005) - the position of a member of the thermodynamics team investigating numerical simulations for Heat exchangers

- ***Army Forces Royal Scholarship*** during Undergraduate study (Mechanical Engineering) , included tuition and basic salary (2002-2006)
- ***High School Scholarship*** from two schools