

# Mona Karimi

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## SUMMARY OF QUALIFICATIONS

Research Interest: Thermal Engineering, Micro-Scale and Multiphase Flow and Heat Transfer, MEMS & NEMS, HVAC&R Systems and Thermal Management

Able to work independently or as part of a team

## EDUCATION & TRAINING

**Texas A&M University**, College Station, TX

M.S., Mechanical Engineering; GPR 4.00

Expected: May 2008

**Sharif University of Technology**, Tehran, Iran

B.S., Mechanical Engineering

September 2005

**Iranian Society of Mechanical Engineers**, training section, Tehran, Iran

• ASME Pressure Vessel Code Sec. VIII, Div 1&2

August 2004

• Introduction to TEMA Standards

August 2004

• Introduction to Welded Steel Tank for Oil Storage, API 650

August 2003

## RELEVANT COURSEWORK

Two-phase heat transfer & flow ♦ Applied solar energy ♦ Fundamental of CFD ♦ Thermal power plant analysis ♦ Energy management in commercial buildings ♦ Refrigeration systems design

## RESEARCH EXPERIENCE

- **B.S Thesis title:** “Analysis of the theory and performance of vortex (Ranque-Hilsch) tube, Feasibility of vortex tube in cooling cabin and cockpit crew of helicopter”
- Analyzed of an Active Open Loop Solar Collector System for Household Water Heating
- Investigated and studied the Micro Fuel Cells for portable power application
- Designed the Cold Store above 0°C using CoolPack software
- Investigated the Thermo-Electric Refrigeration Systems: effective parameters and application to cooling systems in submarines
- Rated the Dry Cooling Towers in order to raise the Plant efficiency
- Generated codes in C++ for CFD projects in FVM (finite volume Method) to model the convection heat transfer mode in an electronic enclosure and compared their functions with FLUENT software

## SKILLS

### Computer:

- Sufficient in working with **Programming Languages:** Turbo Pascal, Delphi, MATLAB, C++ (core)
- Sufficient in working with **CAD** application software: Solid Works, ACAD (2&3 D)
- Skilled at using engineering software such as:
  - **CAE:** FLUENT& Gambit, ANSYS
  - **Simulation and design:** PVElite Aspen B-JAC, TANK, HTFS (TASC, ACOL, FIHR), CARRIER, PLUS (Cutting Process)
  - **Process:** Aspen Plus
- Proficient in **MS Office** (MOS Certificate), **Computer Hardware Technology** (equivalent to A+ Certificate from Cavendish College, London)

**Language:**

- Persian (Farsi): Native
- English: Proficient (TOEFL =270/300)
- German: Proficient (ZD=2/3 “Sehr Gut”, Goethe Institute)
- Spanish: Basic

**WORK EXPERIENCE**

**Mazdak corp.**, R&D dept, Tehran, Iran October 2005-August 2006

*Thermal Engineer*

- Modeled and FEM analyzed heat transfer modes in outdoor electronic enclosures by using FLUENT and ANSYS software

**Sharif University of Technology**, Heat Transfer Lab Tehran, Iran Sept 2004-May2005

*Research Assistant*

- Studied on Vortex Refrigeration System, made a model of vortex tube for testing and analyzing its characteristic curve

**GARMA GOSTAR, Energy Engineering Co.**, Tehran, Iran May2003-August 2004

*Intern*

- Modeled and simulated heat exchangers, pressure vessels, tanks of petrochemical refineries according to pertinent Codes using engineering software, prepared the technical proposals, revised detail designed mechanical drawings and calculations in order to comply with standards

**TEACHING EXPERIENCE**

- Persian Language Instructor of Language Learning Institute, **Texas A&M University** Jan2007-present
- Teaching Assistant, Heat transfer Lab, Dept. of ME, **Sharif University**, Tehran, Iran June-Aug 2005
- Swimming Instructor & pool life guard, **Kowsar Athletic Complex**, Tehran, Iran June-Aug 2004&2005

**HONORS & AWARDS**

- Scholarship of Society of Iranian American Women for Education, Houston, TX March 2007
- Graduate Scholarship for non-resident tuition exemption, Texas A&M University, CS, TX April 2006
- Ranked 1<sup>st</sup> in team, Sharif University Women’s Swimming Team and 2<sup>nd</sup> individual, Annual National Colligate Athletic Championship, Isfahan, Iran July 2004
- Admitted to Physics and Math Olympiad first stage, Tehran, Iran September1999
- Admitted to NODET (Nationality Organization for Development of Exceptional Talents) entrance in guidance and high schools, Tehran, Iran September 1994, 1999

**PROFESSIONAL MEMBERSHIPS**

- ASME student member, 2003 – 2006.
- ISME (Iranian Society of Mechanical Engineers) student member, 2001-2005.
- Also member of ISME technical societies, 2004.
- ASHRAE student member, 2004-2006.