

# Morteza Amiri

## Curriculum Vitae

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### *EDUCATION*

- Sep. 2009- Aug. 2012:

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

M.Sc., Chemical Engineering.

Thesis: "Modelling, Simulation and Control of semi fuel cells (SFCs)".

Advisor: Dr. S. Mahmoud Reza Pishvaei.

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- Sep. 2005-Sep. 2009:

#### **Ferdowsi University of Mashhad, Mashhad, Iran.**

B.Sc., Chemical Engineering.

Thesis: "Experimental Investigation of Nanofluid Heat Transfer effect through Square Cross Sectional pipe under Uniform Wall Heat Flux Boundary Conditions".

Advisor(s): Dr. Saeid Zeinali Haris & Dr. S. Hossain Noie Bagheban.

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### *AWARDS & HONORS*

- Receiving an award for scientific researches & activities at FAPCO, 2014.
- Ranked 13th among about 10,000 participants in nationwide university entrance exam for Gas Transport and processing graduate study, 2009.
- Ranked 15th among about 20,000 participants in nationwide university entrance exam for Chemical Engineering graduate study, 2009.

- Ranked 19th (Considering Total GPA), among about 10,000 participants in nationwide university entrance exam for Gas Transport and processing graduate study, 2009.
- Ranked 24th (Considering Total GPA), among about 20,000 participants in nationwide university entrance exam for Chemical Engineering graduate study, 2009.
- Ranked top 1% among about 400,000 participants in nationwide university entrance exam, 2005.

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### *RESEARCH INTERESTS*

- Process design.
- Process control.
- Chemical Processes modeling and simulation.
- Fuel cells.
- Nonlinear dynamics.
- Electrochemistry process.

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### *SELECTED GRADUATE COURSES*

- Advanced control, Control lab.
  - Optimization.
  - Adaptive control.
  - Neural Network & Genetic algorithm.
  - Nonlinear control .
  - Modern control.
  - Electrochemistry fundamentals.
  - Fuel cells technology.
  - Advanced mathematics.
  - Process design.
  - CFD.
  - Advanced kinetic.
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## ***RESEARCH EXPERIENCES***

### **JOURNAL:**

- Process simulation and assessment of Double Absorption System in a Metallurgical Sulphuric Acid Plant. (Under Peer-Review).
  - Modeling and simulation of Semi fuel cells. (Under Preparation).
  - Identification of Metallurgical Sulphuric Acid Plants Production line Bottlenecks. (Under Peer-Review).
  - Industrial Production of Activated Carbon from Pistachio Shells and Skins. (Under Peer-Review).
  - Simulation Gas cleaning and dedusting equipment in metallurgical sulfuric acid plants. (Under preparation).
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### **CONFERENCE:**

- 9th International Conference on Recent Innovations in Engineering and Technology (ICRIET), Berlin-Germany, August 26, 2015.
  - International Conference on Research in Engineering, Science and Technology, Istanbul-Turkey, July 21, 2015.
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### **RELEVANT:**

- Fall 2012:  
New design and made of "Aluminum-Hydrogen peroxide semi fuel cell", (Ready for getting USA patent).

- Spring 2010:  
Prof Bozorgmehri: simulation of STYRENE unit with fuzzy set and neural networks.
- Fall 2009:  
Prof Bozorgmehri: Simulation and control of a 2DoF spring-mass-damper system by Neural Networks.
- Summer 2009:  
Prof Zeinali Haris: Optimization procedures of maintenance and cleaning Resin.
- Fall 2008:  
Prof Mahdavian: process of PET production and economical factors applied to the Project (economic analysis and feasibility).
- Spring 2007:  
Research on Fuel Cells (Primary Energy Source for Chem-E-Car).

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## *INDUSTRIAL EXPERIENCES*

- 2012-Ongoing:  
**Fan Avaran Parsian Company (FAP co.), Tehran, Iran.**
  - Project Engineer of Kerman new Sulfuric Acid Plants.
  - Engineering Manager of Sarcheshmeh Sulfuric Acid Plant Renovation & development project.
  - Senior Process Engineer of Sarcheshmeh Sulfuric Acid Plant Renovation & development. .

- Technical Expert in establishment 9.2 MWp solar power park.
  - Process Engineer of Nitric Acid plant.
  - Process Engineer of Heavy Crude Oil Refinery (35000 barrels/day).
  - Technical Expert in Establishment fluidized bed reactor for Hafnium Dioxide Reduction.
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- 2009-2012:

### **Hezar Sanat Copper Consulting Company (HS co.), Tehran, Iran.**

- Project Manager of locate appropriate place to establish DAP fertilizer Plant, Kerman, Iran.
  - Process Engineer of Designing Heap leaching and SX Process, Taleghan, Iran.
  - Project Planning of Sarcheshmeh Converter Off-Gas Handling System, Kerman, Iran. The Converter Off-Gas handling project is put forward to reduce the environmental effect of existing system. Foreign partner was Outotec Company.
  - Technical Expert in establishment of Rafsanjan Pars Activated Carbon Factory. Rafsanjan Pars Activated Carbon is first factory in the world that uses pistachio shells and skins to produce activated carbon and briquette charcoal. Rafsanjan, Iran.
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- Summer 2009:

### **Toos Power Plant, Mashhad, Iran.**

- Novitiate at Training Unit.
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## *TEACHING EXPERIENCES*

- 2015-Ongoing:

**KISH Language Institute, Tehran, Iran.**  
Teaching English Language.

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- 2009-2012:

**Fan Avaran Parsian Company (FAP co.), Tehran, Iran.**  
Teaching CHEMCAD, Aspen Plus, and Aspen HYSYS software to employees.

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- 2009-2012:

**Hezar Sanat Copper Consulting Company (HS co.), Tehran, Iran.**  
Teaching Aspen Plus and Aspen HYSYS software to employees.

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## *LANGUAGE PROFICIENCY*

- English:
    - Academic IELTS score: 6.5 (Reading: 7, Speaking: 6, Listening: 6, Writing: 6).
    - Revised GRE score: Verbal: 143, Quantitative: 165, AW: 2.5.
  - Persian: Native.
  - Arabic: Familiar.
  - Turkish: Familiar.
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## *SKILLS*

### **SPECIAL:**

- Mathematical Programming: MATLAB (Simulink, Fuzzy-Neural-Control, GAToolboxes), Mathematica, Fortran, C, C++.
  - Chemical Engineering Software: Aspen HYSIS, Aspen Plus, CHEMCAD.
  - CFD Software: Comsol, ANSYS FLUENT, ICEM, GAMBIT.
  - Mechanical Design Software: AutoCAD.
  - Other Engineering Software: Stpe7, WINCC.
  - PLC configuration and programming (LOGO, SIMENS 200, 300).
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### **GENERAL:**

- Proficiency in Microsoft Office package: MS Word, MS Power Point, MS Excel, Office project and ...
  - Proficiency in Microsoft Windows XP, Vista, Seven and Eight.
  - Familiar with accounting.
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## *CERTIFICATES & WORKSHOPS*

- OxfordCert® Universal Academy certificate of training for attending International Conference of research in Engineering, Science and Technology.
- Fundamentals of Simulation and Optimization of Chemical Processes by Aspen Plus, 14th National Iranian Congress on Chemical Engineering (IChEC 14), Sharif University of Technology(SUT), Tehran, Iran, 2012.

- Emotional Quotient (EQ), on-the-job training course at FAPCO.
  - Communication Skills, on-the-job training course at FAPCO.
  - PLC systems- Familiarity and Configuration, on-the-job training course at FAPCO.
  - Acquire certificate in Industrial power engineering from Iran Technical and Vocational Training Organization (TVTO).
  - Acquire certificate in Building electrical engineering from Iran Technical and Vocational Training Organization (TVTO).
  - Two certificates in Accounting from Iran Technical and Vocational Training Organization (TVTO).
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### *PROFESSIONAL AFFILIATIONS*

- 2012-Ongoing:
  - ASME Student Membership.
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### *REFERENCES*

- **Dr. S. Mahmoud Reza Pishvaei,**  
Full Professor,  
Chemical & Petroleum Engineering  
Department,  
Sharif University of Technology, Tehran,  
Iran.  
Email: [pishvaei@sharif.edu](mailto:pishvaei@sharif.edu)
  - **Dr. S. Abbas Mousavi,**  
Assistant Professor,  
Chemical & Petroleum Engineering  
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- **Dr. S. Hossain Noie Bagheban,**  
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Department of Chemical Engineering,  
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- **Eng. Mehdi Naderi,**  
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Hezar Sanat Copper Consulting  
Company, Tehran, Iran.  
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- **Dr. Mahdi Pourafshari  
Chenar,**  
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- **Dr. Mohammad Naderi,**  
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