

In the Name of God

Syedmohammadhadi Sadati

Birth Date: 8-June-1987

Birth Place: Shiraz – Iran

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Marital Status: Single

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www.youtube.com/user/smhadisad/videos

✓ Education

Sharif University of Technology, Tehran, Iran 2010-2012

M.Sc. Student in Applied Design, School of Mechanical Engineering

GPA: 16.72/20 \approx (3.4/4)

Thesis Subject: **“Modeling, Design and Simulation of Falling and Landing Process in a Robotic Cat”**

Supervisor: **Prof. Ali Meghdari**

Major Courses: Robotic Kinematics and Dynamics (A), Dynamic Systems Modeling (A – Top Mark), Advanced Dynamic (B), Advanced Analytical Dynamic (B), Control Systems Design (A), Nonlinear Control (A), Advanced Control (C)

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran 2005-2010

B.Sc. Student in Mechanical Engineering

GPA: 15.58/20 \approx (3.2/4)

Thesis Subject: **“Design and Build of a Passive Walking Biped”**

Supervisors: **Dr. Mahyar Naraghi & Dr. A. R. Ohadi Hamedani**

Major Courses: Machine Design I & II (A – Top Mark & B), C Computer Programming (A), Mechatronics (A), Automatic Control (B), Central Heating and Ventilation Systems (A), Steam Power Plants (B), Engineering Design Methods (B), Internal Combustion Engines (C), Vehicle Body and Chaises Design (C), Hydraulics and Pneumatics (C), Machining Technology (Free Attendance)

Shahid Dastgheyb High School, Shiraz, Iran 2005

National Organization for Development of Exceptional Talents (NODET)

High School Mathematic Diploma

GPA: 18.86/20 \approx (3.77/4)

✓ Research Fields and Interests

Applied Mechanics: Complex Multi-Field Systems Modeling and Design, Bond Graph

Analytical Dynamics: Multi-Physics Modeling, Flat Dynamics, Impact Dynamics, Chaos, Motion Planning

Robotics: Mechatronic and Electronics Systems Design and Manufacture

Control: Nonlinear, Adaptive, Optimal, Robust, Neural Network, Real-time, Fractional

Biomechanics: Bio-Robotics, Bio-Instruments, Multi-Scale Analysis

Nano & Multi-scale Engineering: MEMS, Molecular Dynamics (Especially in Biomechanics' Field)

Aerospace: Aerospace Vehicle Dynamics, Control and Design, UAV, Propulsion Control

New Areas of Science (which I know few about): Computer Vision, Fluid Mechanics, Energy, Optimization

✓ Honors and Awards

Rank 25th among 203 participants, Petroleum Engineering – Exploitation Group nationwide Ph.D. entrance exam, Tehran, Iran 2013

Rank 14th among over 2,000 participants, Mechanical Engineering – Dynamics, Control & Vibration Group nationwide Ph.D. entrance exam, invited to interview for tuition free Ph.D. study at four of the most prestigious universities in Iran including Sharif U.T. waived to continue my study abroad, Tehran, Iran 2012

Rank 17th among over 10,000 participants, Mechanical Engineering Group nationwide M.Sc. entrance exam, Awarded tuition free M.Sc. study at Sharif U.T., Tehran, Iran 2010

Nomination for Distinguished University BSc Thesis, Amirkabir U.T. 2010

Real Rescue Robocup 2009 & 2010 participation in Singapore & Austria respectively, **rank** 2009-10

- 4th in “Best Manipulator Design” League of 2009, Pasargard Robotic Team
- Real Rescue Robotic Competitions’** Participation, Iran Open 2009 and 2010 and Khwarizmi 2008-10
2008, **rank 4th** in Iran Open 2009 main league, Pasargard Robotic Team, Iran
- Rank 697th** among over 300,000 participants, Math Group nationwide university entrance exam, 2005
Awarded tuition free B.Sc. study at Amirkabir U.T., Tehran, Iran
- Rank 2nd** in Khwarizmi International Award (KIA) 2005 semi-final (Fars province), Shiraz, Iran 2005
- National Physics Olympiad** semi-final Qualification, Shiraz, Iran 2004
- NODET** (National Organization for Development of Exceptional Talents) mid and high 1998 & 2001
school Qualification, the most prestigious schools in Iran, Shiraz, Iran

✓ Publications

*** Download all publications’ first page in a single PDF file from here. ***

Published:

- A. Meghdari, S.M.Hadi Sadati; “**Semi-Flat Falling Cat: Quaternion Path Planning and Control, a Model Based Neural Network Approach to Adaptive Extended Kalman Filter**”; The 37th ASME Mechanisms & Robotics Conference (MR), At the [ASME 2013 International Design Engineering Technical Conferences](#); Portland, Oregon, USA; August 4-7, 2013 (*In English – Accepted, under print*) 2013
- S.M.Hadi Sadati, M. Borgheinejad, H. Fooladi, M. Naraghi, A. R. Ohadi; “**Optimum Design, Build and Experiment of a Passive Walking Biped: Effects of Structural Parameters on Efficiency, Stability and Robustness on Uneven Trains**”; 2012 International Conference on Mechatronics and Computational Mechanics, [ICMCM 2012](#); Dubai, UAE; December 20-21, 2012; Joint with [Applied Mechanics and Materials Journal](#), Trans Tech publications, Switzerland; Vol. 307; pp 107-111; DOI: 10.4028/www.scientific.net/AMM.307.107; ISSN: 1660-9336; 2013 (*ISI journal - In English*) 2012
- S.M.Hadi Sadati, M. Naraghi, A. R. Ohadi Hamedani; “**Optimum Design, Build and Experiment of a Passive Walking Biped: Effects of Structural Parameters on Efficiency, Stability and Robustness on Uneven Trains**”; [Tarbiat Modares Journal of Mechanical Engineering](#); vol. 12, No. 6, pp. 52-68; Tehran, Iran; 2012 (*Research and scientific journal (ISI equivalent in Iran) - in Persian*) 2012
- R. Sharifi, H. Ghariblou, S.M.Hadi Sadati; “**Dynamical Modeling and Optimization of Movement for a Cable Driven Base Robotic Arm Manipulator in an Environment with Obstacles**”; The International Conference on Mechanical Engineering and Advanced Technology ([ICMEAT 2012](#)); Isfahan, Iran; [ICMEAT 2012](#); 2012 (*In Persian*) 2012
- S.M.Hadi Sadati, M. Naraghi, A. R. Ohadi Hamedani; “**Analysis and Optimization of a passive Walking Biped**”; 19th Annual Conference on Mechanical Engineering in Iran, [ISME 2011](#); Birjand, Iran; ISME2011-5216; 2011 (*in Persian*) 2011
- S.M.Hadi Sadati, A. R. Ohadi Hamedani, M. Naraghi; “**Design and Build of a Biped Passive Walker: Investigating the Effects of Structural Parameters on Performance, Efficiency and Gait Stability**”; 19th Annual Conference on Mechanical Engineering in Iran, [ISME 2011](#); Birjand, Iran; ISME2011-5217; 2011 (*in Persian*) 2011
- S.M.Hadi Sadati, Members of Pasargad Real Rescue Robotic Team; “**Team Description Paper for Robocup 2010**”, [RoboCup World Competition 2010 Singapore](#); Singapore; 2010 (*in English*) 2010
- S.M.Hadi Sadati, Members of Pasargad Real Rescue Robotic Team; “**Team Description Paper for Iran Open 2010**”, The International Robotic Festival in Iran, [Iran Open 2010](#); Tehran, Iran; 2010 (*in Persian*) 2010
- S.M.Hadi Sadati, Members of Pasargad Real Rescue Robotic Team; “**Team Description Paper for Robocup 2009**”, [RoboCup World Competition 2009 Graz](#); Austria; 2009 (*in English*) 2009
- S.M.Hadi Sadati, Members of Pasargad Real Rescue Robotic Team; “**Team Description Paper for Iran Open 2009**”, The International Robotic Festival in Iran, [Iran Open 2009](#); Qazvin, Iran; 2009 (*in Persian*) 2009
- S.M.Hadi Sadati, Members of Pasargad Real Rescue Robotic Team; “**Team Description Paper for Khwarizmi National Robotic Festival 2008**”, [The First Khwarizmi National Robotic Festival in Iran](#); Tehran, Iran; 2008 (*in Persian*) 2008

Submitted:

- A. Meghdari, S.M.Hadi Sadati; “**Cat Landing on Rigid and Flexible Surfaces: Semi-Flat Multi Impact Modeling and Path Planning in Presence of Constraints**”; The 2013 World Congress on Advances in Nano, Biomechanics, and Robotics Research ([ANBR13](#)) in 2013

cooperation with Techno-Press journals, COEX, Seoul, Korea; 23-26 August 2013 (*Abstract is accepted. in preparation of full paper - In English*)

In Preparation:

- A. Meghdari, S.M.Hadi Sadati; “**Application of Numerical Dynamic Inversion (Semi-Flatness) in Three Different Path Planning Problems in Robotics: Falling Process of a Cat, Branch Grasping of an Acrobat, and Flight Planning for an Insect Robot**”; *Bioinspiration and Biomimetics Journal*, IOP Science Publication, ISSN 1748-3182; 2013 (*ISI journal - In English*) 2013
- S.M.Hadi Sadati, M. Ghasimi, M. A. Abbaspour; “**Analysis, Modeling, and Optimization of Tooth Modification in High Speed Helical Gears**”; Journal Paper; 2013 (*In English*) 2013
- H. Zohoor, E. Mohammadi, S.M.Hadi Sadati; “**Design and Prototype Development of a Light 3 DOF Exoskeleton Elbow and Wrist Assistive Arm Robot**”; Conference Paper; 2013 (*In English*) 2013
- S.M. Hadi Sadati, G.R. Vosoughi; “**An Extended Kalman Filter Observer-Based Nonlinear Control Approach for Temperature Control of a Class of Continuous Stirred Tank Reactor**”; Conference Paper; 2013 (*In English*) 2013

✓ **Inventions** _____

Submitted:

- S.M.Hadi Sadati, P. Mansournia; “**Dual Copter with Multi-Body Relative Movements Steering System**”; Tehran, Iran (*Submitted, under evaluation*) 2013
- S.M.Hadi Sadati, P. Mansournia; “**Compact Intelligent Gripper with Similar Application in Rescue Robots and Laparoscopic Surgery**”; Tehran, Iran (*Submitted, under evaluation*) 2013

✓ **Projects and Researches** _____

Private Projects:

- Design and Build of a Rescue Robot with a 7 DOF Arm Manipulator for Netherlands World Robocup 2013**; Engineering design using SolidWorks; The Head of Design and Manufacturing Team; Chadormalou Mineral Company, Tehran, Iran (*current*) 2013
- Passive Biped Walker**; Analytical and Experimental Investigation on Passive Walking Performance on Uneven and Stepped Surfaces; Prof. Naraghi; Mechanical Dept., Amir Kabir U.T.; Tehran, Iran (*Current*) 2012-13
- Design and Build of Simple Mechatronic Systems Advisory**, (Path Follower, Stair Climber, Quadra Copter, Electrical Bicycle, Hovercraft, Submarine, Intelligent Doll,...); Teacher of Mechanical Research Class in Different High Schools, Working with CodeVision and Proteus, and C programming,...; Tehran, Iran 2012-13
- Chassis Design of an Electric Motorcycle**; Motorcycle dynamics analysis and chassis design using dynamical modeling and software analysis (ANSYS analysis and shape optimization); 4th National Competition in Automobile Design, Sharif Motors Team, Prof. Asghari; Mechanical Department of Sharif U.T., Tehran, Iran 2012-13
- Lead and Profile Modifications in High Speed Helical Gears Based on MAAG, SHELL and AGMA Standards**; Numerical modeling using MATLAB and simulation using KissSoft, Ansys CFX and multi-physics; Engineering Science and Technology Center of Mangan Co., Mr. Ghasimi; Tehran, Iran 2011
- Analysis, Modeling and Optimization of End Effector Path of a 3D – 9DOF Roof Suspended Cable Robotic Manipulator**; Research Advisor and Executer; Islamic Azad University, Science and Research Branch; Tehran, Iran 2011
- Design and Build of a 5m Height 3DOF Camera Elevator**; Designer and Manufacturing Advisor; Material and Mineral Science Department of Amirkabir University of Technology; Tehran, Iran 2010-11
- Analysis and Optimization of Type “A” Off-Shore Crane Boom Based on API and DIN Standards**; Analytical design using MATLAB, Ansys structural analysis and optimization; Engineering Science and Technology Center of Mangan Co., Mr. Abbaspour; Tehran, Iran 2010-11
- Design of a 5DOF Robotic Manipulator**; Designer and Manufacturing Advisor; Mechanical Engineering Department of Tarbiat Dabir University, Tehran, Iran 2010
- Design, Optimization and Build of Tow 5DOF Robotic Manipulators as a Part of ASAME 2 Rescue Robot**; Head of Design and Manufacturing Team; ASAME Robotic Club, Dr. Razfar; Mechanical Department of Amirkabir U.T.; Tehran, Iran 2009-10

Design, Optimization and Build of Tow Rescue Robots, ASAME 1 and ASAME 2;	2006-10
Engineering design using SolidWorks and GearTrax and manufacture; Founder, a Member and Later The Head of Design and Manufacturing Team; ASAME Robotic Club, Dr. Razfar; Mechanical Department of Amirkabir U.T., Tehran, Iran	
Design and Build of a 12DOF Humanoid Robot Pre Model;	2008
Team Leader; ASAME Robotic Club; Mechanical Department of Amirkabir U.T., Tehran, Iran	
University Course Projects:	
Modeling, Design, Simulation, Identification and Control of Falling and Landing Process in a Robotic Cat;	2011-12
Quaternion semi-flat modeling, geometry method controllability analysis, adaptive and perturbing numerical simulation, single shooting direct optimum path planning, model based Neural Network adaptive control and extended Kalman filter observation using MATLAB and MAPLE, SolidWorks modeling and ADAMS simulation; "M.Sc. Thesis", Prof. A. Meghdari; Mechanical Dep. of Sharif U.T., Tehran, Iran	
An Extended Kalman Filter Observer-Based Nonlinear Control Approach for Temperature Control of a Class of Continuous Stirred Tank Reactor;	2012
Lyapunov stability prove of nonlinear observer and control with an error compensation term; Nonlinear Control, Prof. Vosoughi; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
Phase Space Reduction (Averaging) of a Hamiltonian System having Fast and Slow Angles using Perturbation Theory and Lie Group Method Transformations;	2011
Implementing Lie transformation method using MAPLE; "Advanced Analytical Dynamics", Prof. Jalali; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
Car Passenger Vibration Model Identification using Neural network;	2011
Dynamic modeling and identification using MATLAB; "Dynamic Systems", Prof. Durali; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
2-Link Pendulum Real-Time Dynamic Modeling and Simulation Using Bond Graph;	2011
Real-time dynamic modeling and simulation using Bond graph method and MATLAB; "Dynamic Systems", Prof. Durali; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
50 Tons Hydraulic Elevator Analysis and Modeling Using Bond Graph ;	2011
Dynamic modeling and simulation of full hydraulic system using Bond graph method and MATLAB and 20-Sim software; "Dynamic Systems", Prof. Durali; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
A Spinning Ride Modeling, Analysis and Design;	2011
Dynamic and kinematic analysis and simulation using MATLAB, SolidWorks and ANSYS; "Advanced Dynamics", Prof. Meghdari; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
Modeling and Control of a KATANA Robot using WEBOTS;	2010
"Robotic Kinematic and Dynamic lab", Prof. Meghdari; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
Controlling an Electro Pneumatic System Using PLC;	2010
Programming PLC Using Ladder Language in Fatek FBs; "Control Systems' Design", Prof. Durali, MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
GUI Software to Model Up to 3-Link Manipulator Dynamics;	2010
MATLAB GUI and numerical simulation; "Robotic Kinematic and Dynamic", Prof. Meghdari; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
Presenting New Research on Exoskeletons;	2010
"Robotic Kinematic and Dynamic", Prof. Meghdari; MSc in Mech. Eng., Sharif U.T., Tehran, Iran	
Optimum Design, Build and Experiment of a Passive Walking Biped: Effects of Structural Parameters on Efficiency, Stability and Robustness on Uneven Trains;	2009-10
Dynamic modeling (TMT method), optimization (Genetic algorithm), design and simulation (MATLAB & ADAMS); "B.Sc. Thesis", Dr. M. Naraghi, Dr. A. R. Ohadi H.; Mech. Dep. of Amirkabir U.T.; Tehran, Iran	
Modeling an Internal Combustion Engine using MATLAB;	2009
"Internal Combustion Engine", Eng. Mirsalim; BSc in Mech. Eng., Amirkabir U.T., Tehran, Iran	
A Villa heating and ventilation system Design and Simulation;	2008
Building ventilation and heating analysis and simulation using Career Hap software; "Air Conditioning Systems", Prof. Abbasi; BSc in Mech. Eng., Amirkabir U.T., Tehran, Iran	
Analysis of a Common Steam Power Plant with Heat Exchangers;	2008
Thermodynamic analysis using EES software; "Power Plant Engineering", Prof. Saffar A.; BSc in Mech. Eng., Amirkabir U.T., Tehran, Iran	
Analysis and Design of a Vacuum Press and a Crank Shaft Press;	2006-8
Engineering design and	

simulation using SolidWorks, CosmosWork (SoldSimulation) and SolidMotion; “Design of Machine Elements I & II”, Dr. Rezaeian; BSc in Mech. Eng., Amirkabir U.T., Tehran, Iran

✓ **Self-Study** _____

- Numerical Recipes in C++: The Art of Computing (3rd Ed.)**; Cambridge Press (*Current*) 2013
Bifurcation in Complex and Bio-Mechanical Systems; Course Material Represented by Prof. Golpaygani; Bioengineering Department, Amir Kabir U.T.; Tehran, Iran (*Current*) 2013
Electronics Principles; “Electronics Principles” Book, Vol. 1, by Prof. Mir Eshghi (*Current*) 2012-13

✓ **Working Experiences** _____

- Private Projects and Teachings**; Mentioned in their specific sections, above and below. 2010-13
Mangan Industrial Group, A Well-known Iranian Private Company in Industrial Machinery Design and Manufacturing; Working on “Analysis and Optimization of Type “A” Off-Shore Crane Boom, 2010-11” and “Lead and Profile Modification in High Speed Helical Gears, 2011.”; Engineer at Science and Technology Center; Tehran, Iran 2010-12
ASAME Robotic Club, Mechanical Department of Amirkabir U.T.; Working on “Real Rescue Robots and Robotic Manipulators”; Head and a Member of Design and Manufacturing Section; Tehran, Iran 2006-10

✓ **Teaching Experiences** _____

- Robotic and C Programming:**
 - “Robotic Mechanics Workshop: An Intermediate Course”; 16 Hours (2 Days) Workshop; Sama Mechatronics and robotics research Institute, Islamic Azad University; Shiraz, Iran 2013
 - “Mechanical Research Class Supervisor”; Allame Helli High School (NODET), 1st & 2nd Grade Students; Tehran, Iran 2012-13
 - “Teaching C Programming and Its Application in Robot Programming Using Webots Software,” 36 Hours; Allame Tabatabaie Mid School, 2nd Grade Students; Tehran, Iran 2012-13
 - “Teaching Robotics,” 53 Hours; Salam Yasin High School, 1st Grade Students; Tehran, Iran 2012
SolidWorks Software, “Tutor of an Intermediate Course for a Group of University Students”; 8 Hours; Amirkabir U.T., Tehran, Iran 2010

✓ **Executive Activities** _____

- Main Member of Iran Red Crescent Young Group in Sharif U.T.**, Head of Educational Section; Sharif U.T., Tehran, Iran 2010
Member of Technical and Executive Committee of Humanoid Robot League, Amir Kabir U.T. 2nd International Robotic Competitions and 3rd Khwarizmi National Robotic Competitions; Tehran, Iran 2010
Main Member of Student Organization Group in 6th International Conference on Mechanical Engineering in Iran, ISME 2007; Amirkabir U.T., Tehran, Iran 2007
Head of Student Guild Council, Mechanical Dep. of Amirkabir U.T.; Tehran, Iran 2006

✓ **Training Certifications:** _____

- Scientific Publishing**, Springer International Publisher; One-day Workshop; Sharif U.T., Tehran, Iran 2011
DOE (Design of Experiments), TUV INTERCERT International Certification; One day Workshop, 20 Hours; Sharif U.T., Tehran, Iran 2011
Basic Rescue and Relief Operations (First Aids), Young Group of Red Crescent Organization; 30 Hours; Sharif U.T. Tehran, Iran 2011
Modern Dimensional Tolerances, Iranian Mechanical Manufacturing Engineering Organization; One day Workshop, 10 Hours; Amirkabir U.T., Tehran, Iran 2010
Solid Works Software, Advanced Modeling and Design; 30 Hours; Amirkabir U.T., Tehran, Iran 2005

✓ **Scientific and Engineering Skills** _____

- Advance and Analytical Dynamic and Path Planning**: Using Lagrange, Hamilton, TMT, Geometry, Lie Group Transformations Perturbation, Advanced Adaptive and Perturbing Numerical methods in modeling, simulation and path planning problems (*Good*)
Complex Multi-Physic System Modeling: Using Bond Graph, Signal Flow and Box Graph Methods (*Good*)

Applied Design, Mechatronics, Robotics: Analysis, Modeling, Simulation, Optimization, Design, Control and Manufacturing of Small Machines, Mechatronic Systems and Robots (*Professional*)

Optimization: Based on Genetic and NLP Methods with MATLAB Toolbox Specially in Dynamic and Robotic Systems, Multi Parametric Design and Optimization in Path Planning and Mechanical Parts and Structure Design (*Good*)

Systems Identification: Using Neural Network with MATLAB Toolbox (*Good*)

Observation and Control: Classical and Modern Control Methods such as PID, Nonlinear, Adaptive, Robust and Neural Network and Lyapunov Analysis in Robotic and Industrial Systems. (*Good*)

Industrial Control System: Electro-Pneumatics and Electro Hydraulics system design and analysis and PLC Programming Using Ladder Language (*Good*)

Engineering Standards: in Design Specially "DIN18800 Pt. 1, 2, 3: Structural Steel Design against Buckling", "API: Off-Shore Cranes" and "AGMA 6011 and 109.16: Tooth Modification in High Speed Helical Gears." (*Good*)

Electronic Circuits: Analysis, Design and Build of Simple Electronic Circuits and Programming Microcontrollers Using Proteus and CodeVision Software (*Intermediate*)

DOE: Design and Analysis of Scientific and Engineering Experiments (DOE) (*Intermediate*)

Air Conditioning Analysis: Design and Analysis of Central Heating and Ventilation Systems (*Elementary*)

Steam Power Plant Analysis: Analysis of Steam Power Generation Plants (*Intermediate*)

Internal Combustion Engine: Familiar with Advanced Features in Diesel and Gas Fuel Internal Combustion Engines (*Intermediate*)

Teaching: Courses in Undergraduate and Graduate, Robotics, Programming, Engineering Software (*Good*)

Machine Shop: Using Mechanical Machines for Manufacturing (*Intermediate*)

✓ **Software Skills**

Mechanical Engineering Software:

SolidWorks, Simulation, Motion: Modeling, Simulation, Analysis and Optimization (*Professional*)

Ansys Workbench: Modeling, Static and Transient Structural and Thermal, Modal, Linear Buckling, Rigid Dynamic, Goal Optimization (*Professional*), CFX, Compound Systems (*Intermediate*)

MSC.ADAMS: Adams View, Modeling and Analysis (*Intermediate*)

Webots: Modeling, Programming, Control and Analysis of Robotic Systems (*Intermediate*)

WorkingModel: Modeling and Analysis (*Intermediate*)

KissSoft, Kissys: Gearbox, Cylindrical Gear and Shaft Design, Analysis, and Modification (*Intermediate*)

GearTrax: Gear, Shaft and Bearing Calculation and Design (*Intermediate*)

MIT-Calc: Engineering Analysis and Design (*Intermediate*)

20-Sim: Bond Graph Modeling and Analysis (*Intermediate*)

Autocad: Drawing (*Intermediate*)

Catia: Modeling (*Elementary*)

Fatek FBS PLC: Programming PLC Using Ladder Language (*Elementary*)

Career Hap: Heating and Cooling Load Calculations (*Elementary*)

EES: Thermodynamic Analysis (*Elementary*)

Mathematical Programs:

MATLAB: Programming, Solving ODE Equations, Parametric Calculation, Optimization Using Genetic Algorithm, Direct Search and Trajectory Optimization, Optimization Toolbox, GUI, Neural Network, Creating Basic and Conceptual Animations (*Professional*), Simulink, 3D Animation (*Intermediate*)

Maple: Parametric Calculation (*Good*)

Electrical Engineering Software:

Proteus: Analysis and Design of Electronic Circuits (*Elementary*)

CodeVision: Programming Microcontrollers (*Elementary*)

Programming Languages:

MATLAB: (*Professional*)

C, C++: (*Good*)

General Software:

EndNote & Mendeley: (*Professional*)

Microsoft Office: Word, Excel, Power Point (*Professional*)

Adobe Photoshop: (*Intermediate*)

General Computer Skill: (*Professional*)

✓ **Language Skills** _____

Persian: Native

English: TOEFL IBT Overall Grade: 101/120 (High) – October 2011

Reading (26-High), Listening (28-High), Speaking (23-Fair), Writing (24-Good),

GRE General: November 2011

Verbal - 140/170 (13%), Quantitative 168/170 (96%), Analytical 3/6 (11%)

Arabic: Reading and Listening (*Intermediate*), Writing and Speaking (*Elementary*)

Deutsch: (*Elementary*)

✓ **Hobbies** _____

Sport: Swimming, Rock and Mountain Climbing, Volleyball, Soccer

Art: Playing Guitar, Sketching

Entertainment: PC Games, Reading, Movies & Series, Music

Private Study: Foreign Languages (Deutsch, Arabic, English), Historical and Social Study

✓ **References** _____

Academic:

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