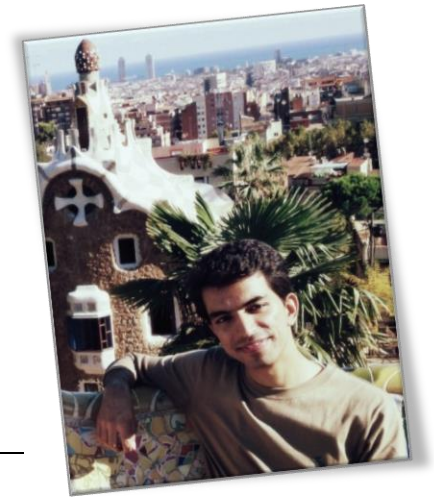# Ehsan HAJIESMAILI

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Date of birth July 3, 1989 **| Nationality** Iranian **| Civil status** Single

EDUCATION	Universitat Politecnica de Catalunya (UPC), Barcelona, Spain 2013-present ▪ Master of Science student in Computational Mechanics (Erasmus Mundus) Shahrood University of Technology, Shahrood, Iran 2007-2012 ▪ Bachelor of Science in Mechanical Engineering - specialty in Solid Mechanics (GPA: 16.50/20) ▪ Ranked in the top ten percent students of the class entering 2007
HONORS AND AWARDS	European Commission's Erasmus Mundus Scholarship, 48000 EUR, for MSc in Computational Mechanics, 2013-2015 Iran Nanotechnology Initiative Council (INIC) research grant award for the research on coiled carbon nanotubes, 2012 Ranked in the top ten percent students of the class entering 2007, faculty of mechanical engineering, Shahrood University of Technology Ranked 3rd in the provincial Experimental Physics Olympiad, 2006
PUBLICATIONS AND PATENTS	**PEER-REVIEWED JOURNAL PAPERS** ▪ S. H. Ghaderi and E. Hajiesmaili, Nonlinear analysis of coiled carbon nanotubes using the molecular dynamics finite element method. Materials Science and Engineering: A, 2013. 582: p. 225-234. ▪ S. H. Ghaderi and E. Hajiesmaili, Molecular structural mechanics applied to coiled carbon nanotubes. Computational Materials Science, 2012. 55: p. 344-349. ▪ E. Haji-Esmaili and S. H. Ghaderi, A closed-form expression for second-order recurrences. Acta Mathematica Universitatis Comenianae, 2011. 80(2): p. 259-261. **MANUSCRIPTS IN PREPARATION** ▪ S. H. Ghaderi and E. Hajiesmaili, Mechanical energy storage in coiled carbon nanotube springs, in preparation. **PEER-REVIEWED CONFERENCE PAPERS** ▪ S. H. Ghaderi and E. Hajiesmaili, Analysis of nonlinear mechanical response of coiled carbon nanotubes under axial loading using molecular mechanics finite element method. Proceeding of 21st Annual International Conference on Mechanical Engineering-ISME2013. 7-9 May, 2013. ▪ S. H. Ghaderi and E. Hajiesmaili, Investigation of the mechanical properties of armchair coiled carbon nanotubes using molecular structural mechanics approach. Proceeding of 20th Annual International Conference on Mechanical Engineering-ISME2012. 16-18 May, 2012. ▪ S. H. Ghaderi and E. Hajiesmaili, An algorithm for finding optimum distribution of the turbine blades considering the initial wheel unbalance. Proceeding of the 3rd Iran Rotate Conference, 02-03 January 2012. (in Persian)

- A. Solyemani-Aiouri, S. H. Ghaderi and E. Hajiesmaili, Design and fabrication of a volume measuring instrument using sound waves and eliminating the effect of temperature in volume measurement. Proceeding of the 1st International Conference on Acoustics and Vibration, 21-22 December, 2011. (in Persian)

- E. Haji-Esmaili, R. Zamani and A. Sarreshtehdari, Producing extremely smooth paraboloidal surface using solidification of liquid in rigid body rotation. Proceeding of the 11th Iranian Conference on Manufacturing Engineering, 19-21 October, 2010.

PATENTS
- R. Zamani, E. Haji-Esmaili and A. Sarreshtehdari, A device for producing paraboloidal surfaces, National Patent Number: 67699

WORK EXPERIENCE	Part Lastic Group, Mashhad, Khorasan Razavi, Iran. Internship Student, 07/2011 – 08/2011 - Designed and examined the plastic injection mold for a part of the shock absorption equipment of automotive engine - Experienced and skilled technician Mashhad Power Generation Management Co., Mashhad, Khorasan Razavi, Iran. Internship Student, 07/2010 – 08/2010 - Designed and developed a heuristic algorithm to specify optimum turbine blades arrangement - Awarded as one of the three top internship students of the summer 2010 Shahrood University of Technology, Shahrood, Iran. Teacher Assistant, 01/2009 – 06/2009 & 09/2009 – 01/2010 - Engineering dynamics teacher assistant for two semesters
PROFESSIONAL COMPUTER SKILLS	ADVANCED LEVEL - Finite element analysis: ABAQUS, ANSYS, SolidWorks Simulation - Numerical analysis: MATLAB - CAD: SolidWorks INTERMEDIATE LEVEL MasterCAM, LabVIEW, Fluent, EES, SAM, CATIA PROGRAMMING LANGUAGES C/C++, FORTRAN
TEST SCORES	TOEFL iBT November 20, 2011 - Reading 21 - Listening 24 - Speaking 20 - Writing 25 - Total 90 GRE Revised General Test November 19, 2011 - Verbal reasoning 147 (equivalent to 410 on the prior format) - Quantitative reasoning 164 (equivalent to 790 on the prior format) - Analytical reasoning 3.5
REFERENCE	Dr. Seyed Hadi GHADERI Assistant Professor Faculty of Mechanical Engineering Shahrood University of Technology Shahrood, Iran Email: s.h.ghaderi@gmail.com; s.h.ghaderi@shahroodut.ac.ir Mobile: +98 9102070460