

Seyed Mohammad Sajadi

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EDUCATION

- **Master of Science, Mechanical Engineering**, University of Houston, Texas, Houston. Graduation Fall 2016. **GPA: 4.0/4**
- **Bachelor of Science, Mechanical Engineering**, University of Tehran, Tehran, Iran, 2011. Last two years **GPA: 3.28/4**

RESEARCH INTERESTS

- Heat transport in Micro-Nano Structure
- Thermal Transport Phenomena
- Fluid Mechanics
- Heat transfer
- Bio Engineering
- Bio Mechanic
- Micro and Nano engineering

SKILLS

- **Mathematical Computation:** MATLAB
- **Mechanical Engineering:** Gambit and Fluent, Ansys, Comsol
- **CAD:** SolidWorks.
- **General Software:** LabVIEW, Microsoft Office (Word, Excel, PowerPoint).
- **Mechanical and Manufacturing Skills:** Electric arc welding, Working with machine shop equipment, Prototyping with plaster and body manufacturing with fiber glass.

PUBLICATION

Journal

- **Seyed Mohammad Sajadi**, Nazanin Farokhnia, Peyman Irajizad, Munib Hasnain, and Hadi Ghasemi, "Flexible Artificially Networked Structure for Ambient/High Pressure Solar Steam Generation", **J. Mater. Chem. A**, **2016,4, 4700-4705**, (2016)
- Nazanin Farokhnia, Peyman Irajizad, **Seyed Mohammad Sajadi** and Hadi Ghasemi, "Rational micro-nano structuring for thin film evaporation", **J. Phys. Chem. C**, **2016, 120 (16)**, pp 8742–8750, (2016)
- Peyman Irajizad, Munib Hasnain, Nazanin Farokhnia, **Seyed Mohammad Sajadi**, and Hadi Ghasemi, "Magnetic extreme icephobic surfaces", **Nature Communications**, **10.1038/ncomms13395**, (2016)
- **Seyed Mohammad Sajadi**, Jose Ordonez-Miranda, James M. Hill, Younes Ezzahri, Karl Joulain, Jeremie Drevillon, and Hadi Ghasemi, "Invariant of Heat Conduction in One-Dimensional System", **Under review in Physical review Letters**, (2016)
- Nazanin Farokhnia, **Seyed Mohammad Sajadi**, Peyman Irajizad, and Hadi Ghasemi, "Decoupled Hierarchical Structures for Suppression of Leidenfrost Phenomenon", **Accepted in Longmuir** , (2017)
- Varun Kashyap, Abdullah Al-Bayati, **Seyed Mohammad Sajadi**, Peyman Irajizad, and Hadi Ghasemi, "Flexible Anti-Clogging Carbon Blanket for Scalable Solar Desalination by Heat Localization", **Under review in Advanced Functional Materials**, (2017)

Conference

- "Decoupled Hierarchical Structures for Suppression of Leidenfrost Phenomenon" **Seyed Mohammad Sajadi**, Nazanin Farokhnia, Peyman Irajizad, and Hadi Ghasemi, **ASME IMECE** (2016), Presented, Phoenix, AZ, USA.
- "Magnetic extreme icephobic surfaces" Peyman Irajizad, Munib Hasnain, Nazanin Farokhnia, **Seyed Mohammad Sajadi**, and Hadi Ghasemi, **ASME IMECE** (2016), Presented, Phoenix, AZ, USA.
- "Flexible integrated structure for low/high pressure solar steam generation" **Seyed Mohammad Sajadi**, Nazanin Farokhnia, Peyman Irajizad, and Hadi Ghasemi, **ASME HT/FE/ICNMM** (2016), Presented, Washington DC, USA.

- “Integrated Flexible Structure for Solar Steam Generation”, **Seyed Mohammad Sajadi**, Nazanin Farokhnia, Peyman Irajizad and Hadi Ghasemi, **IEEE ITherm (2016)**, Accepted, Las Vegas, USA.
- “Rational micro/Nano structuring for thin-film evaporation”, Nazanin Farokhnia, Peyman Irajizad, **Seyed Mohammad Sajadi** and Hadi Ghasemi **ASME HT/FE/ICNMM (2016)**, Presented, Washington DC, USA.

SUBMITTED PATENT

- **Seyed Mohammad Sajadi**, Nazanin Farokhnia, Peyman Irajizad and Hadi Ghasemi “Dual Scale Surface for suppression of Leidenfrost”

PROFESSIONAL EXPERIENCE

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------|
| Research Assistant –NanoTherm Group | University of Houston | 2015-Present |
| <ul style="list-style-type: none"> • Development of dual-scale surfaces for suppression Leidenfrost phenomena (see publication section)- Submitted as a patent • Development of magnetic icephobic surface (see publication section)- Submitted as a patent • Development of a flexible artificially networked material structure highly efficient for ambient and high-pressure steam generation (see publication section) • Design, develop and manufacture of different accurate setups for various experiments • Involvement in AFM (Atomic force microscopic) and LabVIEW software | | |
| Mechanical Engineer- Taha Production and Support Industrial Company | Tehran- Iran | 2013-2014 |
| <ul style="list-style-type: none"> • Preparation and development of Auto parts’ technical documents specially Power Steering System (CP, FMEA, OPC, FPC, OPS). • Modeling and drawing of Power Steering system parts with SolidWorks • Audit drawings, test plans, manufacture procedures and production line of suppliers. | | |
| Quality Control Engineer- Falat Energy Company | Bandar-Abbas port- Iran | 2013 |
| <ul style="list-style-type: none"> • Confirmation of the imported raw material • Inspection and controls of welding process (pipes and reservoirs) • Audit drawings and welding procedures of suppliers | | |
| Machine Shop Supervisor- Valafan | Tehran- Iran | 2012 |
| <ul style="list-style-type: none"> • Quality control of molding and casting design and developed machining procedure • Design, development and manufacture of fixture and gages • Lathe and milling machine production. | | |
| Project Manager- Design and Manufacturing of a Two-Passenger Electric Car | University of Tehran | 2008-2009 |
| <ul style="list-style-type: none"> • Team management- planning (conceptual design, detail design, and production) • Sponsor Negotiation • Design different parts with SolidWorks. • Manufacture electrical differential, power transition, chassis and body with variety methods like electric arc welding, Working with machine shop equipment, prototyping with plaster and body manufacturing with fiber glass. | | |

SELECTED ACADEMIC PROJECTS

- “Increasing Leidenfrost point with Dual-Scale Structure”, University of Houston, Texas, Adviser: Dr. Hadi Ghasemi “
- “Design and make Flexible Artificially Networked Structure for Ambient/High Pressure Solar Steam Generation”, University of Houston, Texas, Adviser: Dr. Hadi Ghasemi (2015)
- “Design of Experiments and the Optimization of an Electronic Enclosure” University of Houston, Texas, 2016
- “CFD Analysis of Electronic Enclosure with STAR-CCM+”, University of Houston, Texas, Adviser: Dr. Moratta, 2016
- “FEA of Threaded Pipe Connector with ANSYS”, University of Houston, Texas, Adviser: Dr. Moratta, 2016
- “Mixed Formulation for Darcy Equation”, University of Houston, Texas, Adviser: Dr. B.Knakshatrala. 2015
- “A Solver for Steady-State Diffusion Equation”, University of Houston, Texas, Adviser: Dr. B.Knakshatrala. 2015

- “A Solver for Linear Elasticity Equation”, University of Houston, Texas, Adviser: Dr. B.Knakshatrala. 2015
- “Optimal Design of Meat Refrigerating System”, University of Tehran, Tehran, Adviser: Dr. Sharifi. 2010
- **Thesis:** Investigation of Optimal Design of a 3D Heating Operation Furnace (19.5/20), Spring 2011
- “Using Finite-Elements Method to Generate Arbitrary (triangular-rectangular) Grids for stress and strain Analysis of a Thin Sheet through MATLAB Software”, University of Tehran, Tehran, Adviser: Dr. A. Daneshmehr. 2010
- “Optimization of Dynamic and Control System Using Genetic Algorithm Method”, University of Tehran, Tehran, Adviser: Dr. M. Shariat Panahi. 2009
- “Optimization of Structural Components of Truss in order to Reach Minimum Weight Using Genetic Algorithm Method”, University of Tehran, Tehran, Adviser: Dr. M. Shariat Panahi. 2009
- “Finding the Optimal path of a Robot Using Complex Method”, University of Tehran, Tehran, Adviser: Dr. M. Shariat Panahi. 2009
- “Design of a gearbox structure for an electrical engine”, University of Tehran, Tehran, Adviser: Dr. A. Daneshmehr, 2008
- “Calculating Stress And strain Analysis of Crane Hook by finite Elements Method”, University of Tehran, Tehran, Adviser: Dr. A. Daneshmehr 2008.

RELEVANT COURSES

GRADUATE COURSES

- Mechanics of Porous Media
- Finite Element Method
- Methods of Applied Mathematics I
- Optimization of Mechanical Systems
- Mechanic and Physics of the cell

UNDERGRADUATE COURSES

- Fluid Mechanics
- Thermodynamics
- Heat transfer
- Strength of Material
- Dynamics
- Numerical Computation

EDUCATIONAL HONORS and AWARDS

- Dean’s scholarship, University of Houston (2015, 2016)
- Awarded full scholarship for undergraduate program, University of Tehran, (2006-2011)
- Top 10 in conceptual design of green vehicles in national competition in Iran. This competition was held among more than 96 teams, (2009)
- Top 5 in detail design of green vehicles in national competition in Iran, (2009)
- Ranked 1st (99 / 100) in NDT welding inspection (penetration test) workshop, (2012)

REFERENCE

Dr. Hadi Ghasemi

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 Mechanical Engineering Department
 Bill D. Cook Assistant Professor
 Email: hghasemi@uh.edu

Dr. Yashashree Kulkarni

University of Houston
 Mechanical Engineering Department
 Associate Professor of Mechanical Engineering
 Email: ykulkarni@uh.edu

Dr. Kalyana Babu Nakshatrala

University of Houston
 Civil Engineering and Environmental Department
 Assistant Professor UH Department of Civil and Environmental Engineering
 Email: knakshatrala@uh.edu