



# Shahin Asgari

## Curriculum Vitae

Research Assistant at **EMTRL**,  
Amirkabir University of Technology (Tehran  
Polytechnic), Tehran 15916, Iran.

**Phone:** +98-918-337-8515

**Email:** [asgari\\_shahin@aut.ac.ir](mailto:asgari_shahin@aut.ac.ir)

**Birth:** August 6, 1987

**Web :** <http://emtrl.aut.ac.ir/>

## EDUCATION

---

- Summer School**      **International Summer School on Electrical Machines**, Niroy Research Institute, Tehran, Iran. **September-2017**  
**Lecturers:**
- *Prof. Roberto Perini*
  - *Prof. Sadegh Vaez-Zadeh*
  - *Dr. Maher Al-badri*
  - *Dr. S. Morteza Taghavi*
- MSc. Degree**      **Electrical Engineering**, Electrical Engineering Dep., Amirkabir University of Technology (Tehran Polytechnic), Tehran 15916, Iran, **GPA: 17.6/20. 2012-2015**  
**Thesis title:** Design and Prototyping a High-Torque-Density Double-Stator Permanent-Magnet Brushless Machine with Minimum Cogging Torque.  
**Supervisor:** Prof. Mojtaba. Mirsalim
- B.Sc.**      **Electrical Engineering**, Energy Dep., Kermanshah University of Technology, Kermanshah, Iran, **GPA: 15.01/20, 2007-2011**  
**Thesis title:** Research on Control Systems with Three Degrees of Freedom (Design and Prototyping of a laboratory Model )  
**Supervisor:** Dr. A. Dudman

## HONORS & AWARDS

---

- 2017**      Getting to the **Final stage** in the Iranian High Efficiency Electromotor Competition, Sharif University of Technology, Tehran, Iran.
- 2016**      **3<sup>rd</sup> level** patent certificate from the Khavaran Inventors National Festival (Awarded by National Organization for Exceptional Talents" of Iran).
- 2015**      Recognized as "**Exceptional Talent**" by "National Organization for Exceptional Talents" of Iran.
- 2012**      Entrance to Amirkabir University of Technology for M.Sc. degree as **Honor Student**. (without Nationwide University Entrance Exam)

- 2010** **1<sup>st</sup> Place**, Humanoid Robot League, **12<sup>th</sup> Khwarizmi Youth Award** (KYA) & International **AUTCUP 2010 Robotics Competitions**, Tehran, Iran. (Awarded by Minister of Higher Education & Chancellor of Amirkabir University)
- 2010** **1<sup>st</sup> Place**, Chem-E-Car League, **12<sup>th</sup> Khwarizmi Youth Award** (KYA) & International **AUTCUP 2010 Robotics Competitions**, Tehran, Iran. (Awarded by Minister of Higher Education & Chancellor of Amirkabir University)
- 2010** **1<sup>st</sup> Place**, Technical Challenge, International **AUTCUP 2010 Robotics Competitions**, Tehran, Iran. (Awarded by Chancellor of Amirkabir University)
- 2010** Awarded by Chancellor of Kermanshah University of Technology for effective cooperation in **2<sup>nd</sup> National Conference on Energy, Fuel & Environment**.
- 2009** Awarded by Chancellor of Kermanshah University of Technology for Active & Effective attendance in **Research Week Exhibition**.

## PUBLICATIONS

---

### Journal Papers

**S. Asgari** and M. Mirsalim, "A Novel Dual-Stator Radial-Flux Machine with Diametrically Magnetized Cylindrical Permanent Magnets," in *IEEE Transactions on Industrial Electronics*, vol. 66, no. 5, pp. 3605-3614, May 2019.

**S. Asgari**, R. Yazdanpanah and M. Mirsalim, "A Dual- Stator Machine with Diametrically Magnetized PM: Analytical Air-gap Flux Calculation, Efficiency Optimization and Comparison with Conventional Dual-Stator Machines," in *IET Electric Power Applications*, [under review](#).

### Conference Papers

N. Saed, **S. Asgari** and M. Mirsalim, "Zigzag leakage flux modeling in permanent magnet machines with cylindrical magnets," [2018 9th Annual Power Electronics, Drives Systems and Technologies Conference \(PEDSTC\)](#), Tehran, 2018, pp. 95-98.

S. Mohammadi, H. A. Talebi, M. A. Soleimani, M. Mirsalim, **S. Asgari**, 'A Soccer Playing Humanoid Robot: Design, Algorithm and Prototype', accepted in [The 2nd International Conference on Robotics and Mechatronics \(ICRoM 2014\)](#), Tehran, Iran (indexed by IEEE Explore).

## PATENTS

---

### US Patent

Asgari, Shahin, and Seyed Mojtaba Aghamirsalim. "Apparatus and method for cogging torque reduction with rotor embedded cylindroid permanent magnets." [U.S. Patent Application No. 15/645,973](#) (2018 Published).

**IRI** Asgari, Shahin, and Seyed Mojtaba Aghamirsalim. "A High-Torque-Density Double-Stator Permanent-Magnet Brushless Machine with Minimum Cogging Torque for use in Air conditioner, washing machines and electric vehicles". [Iranian patent](#), 2015.

## RESEARCH EXPERIENCE

---

- 2015- present** Research Assistant, at Electrical Machines & Transformer Research Laboratory ([EMTRL](#)). Electrical Eng. Dep, [Amirkabir University of Technology](#), Tehran. [\[Link\]](#)
- 2010- 2012** Effective Participation in the project "*Generation of Electric Power Using fixed bicycles*", Energy Dep, [Kermanshah University of Technology](#).
- 2017-2018** Experimental Project: **Design and Prototyping of High Torque Density Dual-Stator PM Machine** at Electrical Machines & Transformer Research Laboratory ([EMTRL](#)), Electrical Eng. Dep., [Amirkabir University of Technology](#), Tehran. [\[Link\]](#)
- 2016-2017** Experimental Project: **Thermal analysis of a Dual- Stator Machine with Diametrically Magnetized PM and Comparison with Conventional Dual-Stator Machines** at Electrical Machines & Transformer Research Laboratory ([EMTRL](#)), Electrical Eng. Dep., [Amirkabir University of Technology](#), Tehran. [\[Link\]](#)
- 2015-2016** Experimental Project: **Analytical Air-gap Flux Calculation, Efficiency Optimization of a Dual- Stator Machine with Diametrically Magnetized PM** at Electrical Machines & Transformer Research Laboratory ([EMTRL](#)), Electrical Eng. Dep., [Amirkabir University of Technology](#), Tehran. [\[Link\]](#)

## TEACHING EXPERIENCE

---

- Spring & Fall 2015** ❖ **Teaching Assistant**, the course "Electric Machinery I", Electrical Engineering Dep., [Amirkabir University of Technology](#).

## INSTITUTIONAL EXPERIENCE

---

- 2016- present** ❖ Student Member, IEEE.
- 2014-2016** ❖ Member of the Referee Committee on Chem-E-Car Competition, Iranian Chemical Engineering Society, Tehran, Iran.

## *FIELDS OF INTERESTS*

---

- ❖ **PM Machine:** Design, Optimization, Modelling, Research on new structure & Simulation.
- ❖ **Electrical Vehicle's Motor,** Renewable Energies, Power electronics and Robotics.

## *SKILLS*

---

- ❖ Design and prototype of **PM machine** (advanced)
- ❖ Ansys Maxwell (advanced)
- ❖ Ansys Mechanical "thermal Analysis"(intermediate)
- ❖ Microsoft Office (intermediate)
- ❖ Altium Designer(Basic)
- ❖ SolidWorks(intermediate)

## *LANGUAGES*

---

- ❖ **Persian**(native)
- ❖ **English**(intermediate)

## *REFERENCES*

---

Available on request.