# Zolfa Anvari

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**Location:** Tehran, Iran.

## Research Interests

- Parallel robots
- Forward and Inverse Kinematics and Dynamics analysis
- Collision-free workspace determination
- Path-planning in the presence of moving and accelerated obstacles
- Mechanical Design and optimization
- Application Screw theory in robotics
- Algebraic geometry and its applications in robotic

## Experience

**Researcher at Taarlab** (Human and Robot Interaction Lab.), University of Tehran    2016 − Now
[Ranking]

**Field:** Mechanic of Parallel Robots.

**Laboratory's Professor:** Dr. Mehdi Tale Masouleh

## Education

**B.Sc. in Robotic Engineering**    2011 − 2016
Hamedan University of Technology, Hamedan, Iran
**GPA:** 15.24/20
**Final Thesis: Motion planning for moving-plate of parallel robots**
**Advisor:** Dr. Payam Varshovi-Jaghargh - Score: 20/20

## Publications

- **Anvari, Z.**, Ataei, P., & Masouleh, M. T. (2018). The collision-free workspace of the tripteron parallel robot based on a geometrical approach. In *Computational Kinematics* (pp. 357-364). Springer, Cham. [Link]
- Ataei, P., **Anvari, Z.**, & Masouleh, M. T. (2017, October). Kinetostatic Performance and Collision-free Workspace Analysis of a 3-DOF Delta Parallel Robot. In *2017 5th RSI International Conference on Robotics and Mechatronics (ICRoM)* (pp. 576-581). IEEE. [Link]

- **Anvari, Z.**, Varshovi-Jaghargh, P., & Tale Masouleh, M. (2017). The mechanical interference-free workspace of the planar parallel robots using geometric approach. *Modares Mechanical Engineering, 17*(4), 101-110. [Link]
- **Anvari, Z.**, Ataei, P., & Masouleh, M. T. (2019). Collision-free workspace and kinetostatic performances of a 4-DOF delta parallel robot. *Journal of the Brazilian Society of Mechanical Sciences and Engineering, 41*(2), 99. [Link]

## Academic projects

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|---|---|
| **Design an Inverse Dynamic controller for a 2R planar robot** (course: robot control) | Winter 2016 |
| **Design a Force Controller for robot's actuator** (course: robot control) | Winter 2016 |
| **Design gears, shafts, and bearings in a gearbox** (course: machine design) | Summer 2016 |
| **Modeling, analysis, and control DC motors** (course: modern control) | Summer 2015 |
| **Kinematics, Dynamics, and Motion control of PRP serial robot** (course: robotics) | Summer 2015 |
| **Design a pick and place mechanism**(course: mechanism design) | Spring 2014 |

## Computer Skills

MATLAB, Maple

Python, C, C++, LATEX

Adams, SolidWorks, AutoCAD.

## Language

Persian: Native

English: Fluent

## References

**Prof. Mehdi Tale Masouleh,** Associate Professor, School of Electrical and Computer Eng., University of Tehran, Tehran, Iran.

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**Dr. Payam Varshovi-Jaghargh,** Assistant Professor, Mechanical Department, Hamedan University of Technology, Hamedan, Iran.

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