

# Hossein Khodavirdi

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Undergraduate mechanical engineer completing the final year of a bachelor's degree in Iran University of Science and Technology. Passionate about science, with strong technical, and interpersonal skills for working in a team and successfully completing a project.

## Education

### Academic Qualifications.....

- **Iran University of Science and Technology** **Tehran, Iran**  
*school of Mechanical Engineering,* *Sep. 2014–Present*  
**GPA: (3.41/4) – (16.44 / 20) (Current GPA)**  
**Thesis topic:** Acoustic Handling of Spherical Active Carriers .  
Iran University of Science and Technology is one of the best universities of Iran based on international rankings such as US news, QS, and Times Higher Education.
- **Rahyar Educational Complex** **Tehran, Iran**  
*High School Diploma,* *Sep. 2010–Jun. 2014*  
**GPA:19.79 / 20**

### Notable selected courses.....

- *Engineering Mathematics (4/4) (1st mark of the class)*
- *Ordinary Differential Equation (4/4) (3rd mark of class)*
- *Mechanical Vibrations (4/4) (1st mark of the class)*
- *Computer Programming (4/4)*
- *Dynamics of Discrete Systems (4/4) (2nd mark of the class)*
- *Calculus 1 (4/4)*
- *Mechanics of Material II (4/4) (1st mark of class)*
- *Dynamics of Machinery ( 4/4)*
- *Mechanical Vibration (4/4) (3rd mark of class)*
- *General physics 1 (4/4)*

### Publications.....

- *Rajabi M, Khodavirdi H., "Acoustic Radiation Torque on a Spherical Active Carrier" (In Preparation), (Can be approved by the supervisor: majid\_rajabi@iust.ac.ir)*
- *Rajabi M, Khodavirdi H., "Self-Rotary of an Active spherical Carrier" (In Preparation), (Can be approved by the supervisor: majid\_rajabi@iust.ac.ir)*

## Experiences

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### Teaching Experiences.....

- **Teaching Assistant:** “Mechanical Vibrations” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Roohollah Talebi Tooti Iran University of Science and Technology, Tehran, Iran(**Sept 2017 – January 2018**)
- **Teaching Assistant:** “Mechanical Vibrations” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Majid Rajabi, Iran University of Science and Technology, Tehran, Iran(Feb – May2017)
- **Teaching Assistant:** “General Physics 1” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Babamoradi, Iran University of Science and Technology, Tehran, Iran(Feb – May2016)
- **Teaching Assistant:** “Mechanical Vibrations” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Majid Rajabi, Iran University of Science and Technology, Tehran, Iran(Feb – Jun 2018)
- **Teaching Assistant:** “Mechanical Vibrations” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Roohollah Talebi Tooti , Iran University of Science and Technology, Tehran, Iran(Sep2018 – January 2019-Will be)
- **Teaching Assistant:** “Dynamics” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Davood Younesian , Iran University of Science and Technology, Tehran, Iran(Sep2018 – January 2019-Will be)
- **Teaching Assistant:** “Dynamics” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Davood Younesian , Iran University of Science and Technology, Tehran, Iran(Feb – May2016)
- **Teaching Assistant:** “Condition Monitoring” for **M.Sc. students** (Responsible for tutorial, marking , had weekly office hours and laboratory supervisor), Prof. Majid Rajabi, Iran University of Science and Technology, Tehran, Iran(Feb2018 – Jun 2018)
- **Teaching Assistant:** “Machine Component Design II” for **B.Sc. students** (Responsible for tutorial, marking and had weekly office hours), Prof. Roohollah Talebi Tooti Iran University of Science and Technology, Tehran, Iran(Feb – Jun 2018)

### Work Experiences.....

- **Arman Behine Pardazesh** **Tehran, Iran**  
*Job internship, Vibration analysis,* *Summer 2016*
- **School counselor** **Tehran, Iran**  
*Rahyar Educational Complex,* *Summer 2014- present*

## Skills

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### Computer.....

- Microsoft Office(Word, Excel, PowerPoint etc. )
- Matlab
- Catia
- SolidWorks
- Abaqus
- Programming in C++ & PYTHON

### Language.....

- **Persian**  
*native,*

- **English**  
*Fluent - IELTS Band Score: 7.5,*
- **Arabic**  
*familiar,*

2018

### Vibration Equipment.....

- Capable of working with:
  - Piezoelectric Accelerometer
  - Non-Contact Displacement Sensor
  - Reflective Tachometer
  - Vibration Analyzer
- Capable of creating:
  - Experimental setup for Balancing
  - Experimental setup for observing the effect of flexible and Rigid coupling
  - Experimental setup for observing the critical speeds of a flexible shaft in an unbalanced system

### Professional.....

- Signal Processing
- Fault Diagnosis in Bearings with Experimental setups
- Balancing
- Fault Diagnosis in Rotating Machinery
- Drawing Bode, Nyquist and Orbit Figures of a Rotating Shaft by using eddy Current Sensors
- Designing and building a Measurement Sys. For height in a Tank by using a Resistive Pressure sensor
- Finding Natural Frequencies of Structures and mode shapes

### Future Skills Planned.....

- GRE exam will be taken on October 29, 2018

## Honors and Awards

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| ○ <b>Iran University of Science and Technology</b><br><i>Rank 23rd among 115 Mechanical Engineering students,</i>   | <b>Tehran, Iran</b><br><i>Jun 2017</i> |
| ○ <b>Iran University of Science and Technology</b><br><i>School of Mechanical Engineering,</i><br>My overall GPA is approximately 2(out of 20) <b>points above</b> the average GPA of mechanical engineering students | <b>Tehran, Iran</b><br><i>Jul 2017</i> |
| ○ <b>Entrance Exam</b><br><i>Rank 537 in region and 912 in whole country,</i>   | <b>Tehran, Iran</b><br><i>Jul 2014</i> |
| ○ <b>Rahyar Educational Complex</b><br><i>Rank 3rd,</i>   | <b>Tehran, Iran</b><br><i>Jun 2014</i> |
| ○ <i>Exempt from Msc. University Entrance Exam as an Exceptional Talented Students,</i>   | <b>Tehran, Iran</b><br><i>Jun 2017</i> |

## Congress/workshop participation and presentation

### Academic Qualifications.....

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| ○ <b>Iran University of Science and Technology</b><br><b>1st Rotating Machineries Fault Diagnosis conference,</b><br>Executive committee member | <b>Tehran, Iran</b><br><i>Fall 2016</i> |
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- **Iran University of Science and Technology**  
**1st conference of solar panels (Installation & Maintenance),**  
Executive committee member  
**Tehran, Iran**  
*Summer 2016*
- **Voluntary participation in the Biennial**  
**International Conference on Experimental Solid Mechanics,**  
*X-mech-2016*  
**Tehran, Iran**  
*May.2017- Present*
- **Nedaye Omid Mo'oud,**  
Teaching Physics to Orphans  
**Tehran, Iran**  
*September 2017-present*
- **Imam Ali Society,**  
Teaching Physics to Orphans

## Fields of Interest

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- Acoustic Radiation Force
- Acoustic Radiation Torque
- Acoustic Steering
- Vibrations
- Drug Delivery
- Fault diagnosis
- Rotor Dynamics
- instrumentation

## References

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- **Dr. Majid Rajabi**, Assistant Professor at Iran University of Science and Technology  
Email: majid\_rajabi@iust.ac.ir  
Webpage: [http://webpages.iust.ac.ir/majid\\_rajabi](http://webpages.iust.ac.ir/majid_rajabi)
- **Dr. .S.Kazemirad**, Assistant professor at Iran University of Science and Technology  
Email: skazemirad@iust.ac.ir  
Webpage: <http://idea.iust.ac.ir/find.php?item=16.18170.52258.fa>
- **Dr. Roohollah Talebitooti**, Associate Professor at Iran University of Science and Technology  
Email: rtalebi@iust.ac.ir  
Webpage: [http://www.iust.ac.ir/page.php?slct\\_pg\\_id=13544&sid=16&slc\\_lang=en](http://www.iust.ac.ir/page.php?slct_pg_id=13544&sid=16&slc_lang=en)
- **Dr. Davood Younesian**, Full Professor at Iran University of Science and Technology  
Email: younesian@iust.ac.ir  
Webpage: <http://www.iust.ac.ir/find.php?item=18.2767.3004.en>