

Aref Banaee

Curriculum Vitae

Tehran, Iran

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in arefbanaee

DOB: Feb. 24th, 1997



Education

- 2015–Present **B.Sc. in Mechanical Engineering, University of Tehran**, Tehran, Iran.
- 2019 **B.Sc.'s Thesis:** *Buckling, Torsion and Fatigue Analysis in Tumoral Components of the Distal Femoral Tumor Prosthesis with Oval Sections*
Thesis Adviser: Dr. Morad Karimpour
Thesis Grade: 95/100
- 2011–2015 **High School in Mathematics and Physics, National Organization for Development of Exceptional Talents (NODET).**

Research Interest

- Orthopaedic Biomechanics
- Finite Element Analysis
- Orthopaedic Implant Design and Analysis
- Joint Replacement
- Fracture Fixation Implants

Experience

Research Assistance

- 2017–Present **Prosthesis Design and Analysis, Rehabilitation Engineering and Sports Medicine Equipment Lab., School of Mechanical Engineering**, University of Tehran.
- Research Adviser: Dr. Morad Karimpour
- Major Focus:
- Lower Limb Injuries and Orthopedic Surgery
 - Knee Joint Motion and Ligaments Forces
 - Tumoral Component Design
 - Tumoral Component Analysis
 - Geometrically Calculation of ACL Tear Moment

2018–2019 **Process Optimization in Manufacturing**, *School of Mechanical Engineering*, University of Tehran.

Research Adviser: Dr. Ali Parvizi

Major Focus:

- Cold Forward and Backward Tube Extrusion
- Finite Element Method
- Slab Method

Internship

Summer 2018 **Alumiran Ind. Co.**, Tehran, Iran.

Designing Porthole Extrusion Dies

Summer 2017 **JAHAN NOOR Lighting Ind. Co.**, Tehran, Iran.

Designing and Modeling the Lighting Products

Voluntary

2016–2018 **SAME (Scientific Association of Mechanical Engineering)**

University of Tehran

One of the Seven Members of SAME

Publication

2019 "An Investigation into Optimum Curved Die and Plug Profiles in Both Cold Forward and Backward Tube Extrusion"

Aref Banaee, Nima Dabiri Farahani, Ali Parvizi

Submitted to Journal of Materials Processing Technology

Honors & Awards

2015 **Ranked 23** among 40000 in university entrance exam in Mathematics and Physics field.

2015 **Ranked 52** among 30000 in university entrance exam in English language field.

2015 Awarded as **Selected Student** by National Organization of Educational Testing.

2014 Participate in National Physics Olympiad and get ranked in the first level during high school.

2013 **Ranked 5th** in National Student Astronomical Observation competition.

2011 Participate in National Mathematics Olympiad and get ranked in the first level during high school.

Workshop, Seminar and Contest

- 2017 Participate in the National "Messier Marathon" Astronomical Observation Competition, Nojum magazine.
- 2012, 2014, 2016 Participate in the 3rd, the 4th and the 5th TWAN international project workshops on Astronomy Photography, Zanjan, Iran.
- 2013 Participate in International "What If" student competition, NASA.
- 2011, 2013 Participate in the 3rd and the 4th Sharif National student contests, Sharif university of Technology.
- 2012 Participate in the National Astronomy Seminar, Shahid Hasheminejad High School (NODET), Mashhad, Iran.

Skills & Abilities

Natural Language Persian (Native), English (Fluent)

CAD Solidworks, CATIA, AutoCAD

FEM Analysis Abaqus, ANSYS

Biomechanical Modeling OpenSim, Materialise Mimics

Programming Language Matlab, Python

Documentation Microsoft Office, L^AT_EX

Other Cura, Adobe Photoshop, Adobe Illustrator

References

Morad Karimpour	Assistant Professor, University of Tehran	m.karimpour@t.ac.ir
Mahmoud Mousavi Mashhadi	Professor, University of Tehran	mmosavi@ut.ac.ir
Mansour Nikkhah Bahrami	Professor, University of Tehran	mbahrami@ut.ac.ir