



Arman ASGHARPOOR  
Tehran, Iran | +98 919 609 7597  
A.Asgharpoor@ut.ac.ir  
[github](#) | [linkedin](#)  
[researchgate](#) | [website](#)

## RESEARCH INTEREST

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- DEEP SPACE EXPLORATION AND SPACE MISSION DESIGN
- SPACECRAFT DESIGN
- ASTROPHYSICS AND ASTRODYNAMICS
- SENSOR FUSION

## EDUCATION

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<b>UNIVERSITY OF TEHRAN</b> M.Sc. SPACE ENGINEERING   GPA = 4/4 • Ranked 1st Universities in Iran based on <a href="#">UsNews</a>	2019-2021(exp)
<b>ACADEMIC CENTER FOR EDUCATION, CULTURE AND RESEARCH (ACECR)</b> HEALTHCARE-MBA   GPA = 4/4	2019-2020
<b>AVIATION INDUSTRY TRAINING CENTER (AITC)</b> B. ENG. AVIONICS TECHNOLOGY ENGINEERING   GPA 3.8/4	2016-2019
<b>CIVIL AVIATION TECHNOLOGY COLLEGE (CATC)</b> A.E.T. AIRCRAFT AVIONICS	2013-2016

## SELECTED COURSES

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<b>UNIVERSITY OF TEHRAN</b> ADVANCED ORBIT MECHANICS   3.57/4 SPACECRAFT SYSTEM DESIGN   3.3/4
<b>ACADEMIC CENTER FOR EDUCATION, CULTURE AND RESEARCH (ACECR)</b> PROJECT MANAGEMENT   3.96/4 HUMAN RESOURCE MANAGEMENT   3.84/4 PROBLEM SOLVING   3.68/4
<b>AVIATION INDUSTRY TRAINING CENTER (AITC)</b> SAFETY MANAGEMENT SYSTEM   3.9/4 RELIABILITY IN AVIATION INDUSTRY   3.7/4
<b>CIVIL AVIATION TECHNOLOGY COLLEGE (CATC)</b> AIRCRAFT COMPUTER   4/4

## TEACHING EXPERIENCE

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<b>AVIATION INDUSTRY TRAINING CENTER (AITC)</b> INTERN AS ANDROID DEVELOPER INTERNSHIP INSTRUCTOR, B.ENG. AVIONICS TECHNOLOGY   2020 INTERNSHIP INSTRUCTOR, B.ENG. AIRCRAFT MAINTENANCE   2019-2020 INTERNSHIP INSTRUCTOR, A.E.T AVIONICS   2018-2020 INTERNSHIP INSTRUCTOR, A.E.T AIRCRAFT MAINTENANCE   2018-2020 LAB INSTRUCTOR, ELECTRONIC 1   2019-2020 LAB INSTRUCTOR, ELECTRONIC 2   2019-2020 LAB INSTRUCTOR, ELECTRONIC 3   2019-2020 LAB INSTRUCTOR, ELECTRONIC CIRCUITS 1   2019-2020 LAB INSTRUCTOR, ELECTRONIC CIRCUITS 2   2019-2020 LAB INSTRUCTOR, MICROPROCESSORS   2019-2020 LAB INSTRUCTOR, AIRCRAFT INSTRUMENTS   2019-2020	2018-2020
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## RESEARCH EXPERIENCE

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### THESIS CONSULTANT | AVIATION INDUSTRY TRAINING CENTER

2018-2020

- DESIGN AND IMPLEMENTATION OF A 3 AXIS CNC MACHINE
- DESIGN AND IMPLEMENTATION OF A CNC HOT WIRE
- DESIGN AND IMPLEMENTATION OF PULSE CIRCUITS TRAINING BOARD
- DESIGN, SIMULATE AND BUILD AN AIRCRAFT FIRE EXTINGUISHING SYSTEMS
- DESIGN AND IMPLEMENTATION OF RETRACTABLE LANDING GEAR

### FORMER OF FUZZY LOGIC LAB INTEREST GROUP

2020

- UNIVERSAL SCIENTIFIC EDUCATION AND RESEARCH NETWORK (USERN)

### AIRCRAFT DESIGN | SHARIF UNIVERSITY OF TECHNOLOGY (SUT)

2020

- SHADX TEAM LEADER
  - AIAA Aircraft Design Competition

### REFeree OF RESEARCH COUNCIL

2019-Present

- STUDENT'S SCIENTIFIC RESEARCH CENTER (SSRC)

### THREE DEGREES OF FREEDOM TESTBED FOR CUBESAT | UNIVERSITY OF TEHRAN (UT)

2019

- ATTITUDE DYNAMICS, DETERMINATION, AND CONTROL
  - Using LabView to control and monitor the satellite attitude parameter

### DESIGN AFFORDABLE 3-AXIS CNC CO2 LASER CUTTING MACHINE

2019-2020

- CAD Design using: Inventor and SolidWorks

### DESIGN AND IMPLICATION OF REMOTE SENSING-COMMUNICATIONS CANSAT

2019-2020

- UNIVERSITY OF TEHRAN (UT)
  - CAD Design using: Inventor and SolidWorks
  - Design and Implication of Network Communication using Arduino and ZigBee Module for TT&C
  - Use Raspberry Pi for Computer Vision and Pattern Detection
  - INS-GPS Integration for Navigation Parameter Estimation
  - Sensor Fusion for Estimating Environmental Parameters

### DESIGN AND FABRICATION OF 3-AXIS CNC MILLING MACHINE

2019-2020

- CAD DESIGN USING INVENTOR AND SOLIDWORKS
- USE ARDUINO AND RAMPS TO CONTROL THE CNC MACHINE
- USE MACH3, POWERMILL, EDGE CAM, SOLIDWORKS AND GRBL AS MACHINE CONTROL AND CAM SOFTWARE

### DESIGN AND IMPLICATION OF SCIENTIFIC-EXPLORATION CANSAT

2019-2020

- UNIVERSITY OF TEHRAN (UT)
  - CAD DESIGN USING: INVENTOR AND SOLIDWORKS
  - DESIGN AND IMPLICATION OF NETWORK COMMUNICATION USE ARDUINO AND ZIGBEE MODULE FOR TT&C
  - INS/GPS INTEGRATION FOR NAVIGATION PARAMETER ESTIMATION
  - SENSOR FUSION FOR ESTIMATING ENVIRONMENTAL PARAMETERS

### DESIGN MICRO MILLING MACHINE FOR PROTOTYPING MICROFLUIDIC DEVICES

2019-2020

- DESIGN AND SIMULATION OF MECHANICAL STRUCTURE USING SOLIDWORKS, ANSYS AND INVENTOR
- DESIGN AND SIMULATION OF CONTROL CIRCUIT

### RESEARCH ASSISTANCE

2018-2020

- AVIATION INDUSTRY TRAINING CENTER (AITC)

### DESIGN AND FABRICATION OF AVIONICS SIMULATION SYSTEM

2018-2019

- CIRCUIT DESIGN USING: ALTUM DESIGNER, PROTEUS AND SOLIDWORKS ELECTRICAL

### WIRELESS POWER TRANSMISSION (WPT) FOR MEDICAL PURPOSE

2018-2019

- IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY
  - Circuit Design Using Altium Designer
  - Circuit Analysis and Simulation Using ADS, Ansys and CST
  - Electromagnetic Analysis and Simulation Using COMSOL, ANSYS and CST

## LAB EXPERIENCES

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SPACE LAB   UNIVERSITY OF TEHRAN	2019-Present
FUZZY LOGIC LAB   UNIVERSITY OF TEHRAN	2020-Present
AVIONICS LAB   AVIATION INDUSTRY TRAINING CENTER	2018-2020
ELECTRONICS LAB   AVIATION INDUSTRY TRAINING CENTER	2018-2020
AIRCRAFT INSTRUMENT   CIVIL AVIATION AND TECHNOLOGY	2014-2016

## INTERNSHIPS

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<b>IRANAIR</b> <ul style="list-style-type: none"><li>• AVIONICS INTERNSHIP</li></ul>	2018
<b>CIVIL AVIATION TECHNOLOGY COLLEGE</b> <ul style="list-style-type: none"><li>• AVIONICS INTERNSHIP</li></ul>	2016
<b>AVIATION INDUSTRY TRAINING CENTER</b> <ul style="list-style-type: none"><li>• AVIONICS INTERNSHIP I</li><li>• AVIONICS INTERNSHIP II</li></ul>	2018

## PUBLICATIONS

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<b>FORMATION CONTROL UTILIZING RECEDING HORIZON ITERATIVE LEARNING CONTROL</b> <ul style="list-style-type: none"><li>• AUTOMATICA (JOURNAL OF IFAC)</li></ul>	Under Review
<b>NEURAL NETWORK BASED ESTIMATION: A REVIEW</b> <ul style="list-style-type: none"><li>• INFORMATION FUSION</li></ul>	in prep

## SKILLS

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<b>PROGRAMMING LANGUAGES</b>	<b>Experienced:</b> MATLAB   Arduino <b>Familiar:</b> Python   C++   LabView   ROS   Simulink   LaTeX
<b>FRAMEWORKS &amp; LIBRARIES</b>	<b>Familiar:</b> Jupyter   Matplotlib   Numpy   Pandas   Scikit-learn   Keras   PyTorch   Tensorflow
<b>CAD-CAM</b>	CATIA   SolidWorks   Inventor   Proteus   Altium Designer   AutoCAD
<b>CAE</b>	CST   ADS   ANSYS Workbench   ANSYS Electrical   Abaqus   COMSOL   HFSS
<b>SOFT SKILLS</b>	<ul style="list-style-type: none"><li>• Time Management, Punctuality, Extremely Coordinated and Goal-Directed</li><li>• Project Management, Teamwork, Team Management and Conflict Resolution</li><li>• Multi-Tasking, Multi-Tasking, Flexibility and Adaptation</li><li>• Problem Solving</li></ul>

## CERTIFICATES

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<b>NIGHTSKY INSTITUTE</b> <ul style="list-style-type: none"><li>• ASTRONOMY I</li><li>• ASTRONOMY II</li></ul>	
<b>UNIVERSITY OF TORONTO</b> <ul style="list-style-type: none"><li>• STATE ESTIMATION AND LOCALIZATION FOR SELF-DRIVING CARS</li></ul>	Coursera
<b>IRANAIR</b> <ul style="list-style-type: none"><li>• AVIONICS INTERNSHIP TRAINING</li></ul>	
<b>ÉCOLE POLYTECHNIQUE</b> <ul style="list-style-type: none"><li>• HOW TO WRITE AND PUBLISH A SCIENTIFIC PAPER</li></ul>	Coursera
<b>NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS</b> <ul style="list-style-type: none"><li>• BRIDGING THE GAP TO LEADERSHIP: CONNECTING THE SKILLS YOU HAVE WITH THE SKILLS YOU NEED</li></ul>	
<b>MATHWORKS</b> <ul style="list-style-type: none"><li>• MATLAB ONRAMP</li></ul>	
<b>IRAN MARTIAL ARTS FEDERATION</b> <ul style="list-style-type: none"><li>• 3<sup>rd</sup> GRADE COACHING</li></ul>	

## MEMBERSHIP

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**MEMBER OF RESEARCH COUNCIL** | Student's Scientific Research Center (SSRC)  
**MEMBER** | International Association of Engineers (IAENG)  
**MENTOR** | Space Generation Advisory Council (SGAC)  
**GRADUATE STUDENT MEMBERSHIP** | American Physical Society (APS)  
**STUDENT AFFILIATE** | Royal Aeronautical Society (RAeS)  
**STUDENT MEMBER** | Space & Satellite Professionals International (SSPI)  
**STUDENT MEMBER** | Institute of Mathematical Statistics  
**E-STUDENT** | Royal Statistical Society  
**MEMBER** | Art in Medical Education - Educational Development Center (EDC) - TUMS  
**MEMBER** | Fuzzy Logic Lab USERN Interest Group  
**MEMBER OF R&D TEAM** | USERN

## WORK EXPERIENCE

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<b>MANAGER</b> <ul style="list-style-type: none"><li>• ARMAN IMEN PASSARGAD, TEHRAN, IRAN</li></ul>	2013-Present
<b>INSTRUCTOR</b> <ul style="list-style-type: none"><li>• AVIATION INDUSTRY TRAINING CENTER, TEHRAN, IRAN</li></ul>	2018-Present
<b>EMPLOYEE</b> <ul style="list-style-type: none"><li>• TUCAN MAHAM FAN, TEHRAN, IRAN</li></ul>	2019-2020
<b>MARTIAL ARTS INSTRUCTOR</b> <ul style="list-style-type: none"><li>• IRAN MARTIAL ARTS FEDERATION, TEHRAN, IRAN</li></ul>	2015-Present
<b>ACCOUNTANT</b> <ul style="list-style-type: none"><li>• CHOPIN RESTAURANT, TEHRAN, IRAN</li></ul>	2013-2017
<b>ACCOUNTANT</b> <ul style="list-style-type: none"><li>• AGAH TARAZ ARGHAM, TEHRAN, IRAN</li></ul>	2011

## ACADEMIC PROJECTS

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<b>QUANTUM COMPUTER (SEMINAR)</b> <ul style="list-style-type: none"><li>• QUANTUM COMPUTATION ALGORITHM</li><li>• QUANTUM COMPUTERS IMPLICATION METHODS</li></ul>	2020
<b>CONCEPTUAL DESIGN AND MISSION ANALYSIS OF FIRESAT</b> <ul style="list-style-type: none"><li>• USING ECSS DOCUMENTS</li><li>• CAD DESIGN, LAYOUT OPTIMIZATION, AND THERMODYNAMIC ANALYSIS</li><li>• UNIVERSITY OF TEHRAN</li></ul>	2020
<b>DETERMINE SATELLITE'S POSITION, VELOCITY, AND ORBIT (IN 3D)</b> <ul style="list-style-type: none"><li>• USE INITIAL VECTOR (<math>R_0</math> &amp; <math>V_0</math>) AS INPUT IN MATLAB</li><li>• UNIVERSITY OF TEHRAN</li></ul>	2020
<b>MODELING AND SIMULATION OF AEROSPACE VEHICLE DYNAMICS 5 DoF SIMULATION</b> <ul style="list-style-type: none"><li>• USING CADAC++</li><li>• UNIVERSITY OF TEHRAN</li></ul>	2020
<b>DESIGN, ANALYSIS, AND BUILD RC AIRPLANE</b> <ul style="list-style-type: none"><li>• CAD DESIGN: SOLIDWORKS, CATIA, AND INVENTOR</li><li>• CAE ANALYSIS: ANSYS, XFLR5</li><li>• CIVIL AVIATION TECHNOLOGY COLLEGE</li></ul>	2015
<b>ULTRA-SONIC DISTANCE MEASURING</b> <ul style="list-style-type: none"><li>• CIVIL AVIATION TECHNOLOGY COLLEGE</li></ul>	2014
<b>VLF RADIO TELESCOPE</b> <ul style="list-style-type: none"><li>• CIVIL AVIATION TECHNOLOGY COLLEGE</li></ul>	2013

## EXECUTIVE ACTIVITIES

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<b>MEMBER OF 4<sup>th</sup> STUDENT EDUCATION DEVELOPMENT FESTIVAL</b>	2021
• EDUCATION DEVELOPMENT CENTER (EDC)   TUMS	
<b>MEMBER OF LAB TECHNIQUES SCHOOL EXECUTIVE TEAM</b>	2021
• UNIVERSAL SCIENTIFIC EDUCATION AND RESEARCH NETWORK (USERN)	
<b>MEMBER OF MTALK EXECUTIVE TEAM</b>	2021
• UNIVERSAL SCIENTIFIC EDUCATION AND RESEARCH NETWORK (USERN)	
<b>MEMBER OF ART IN MEDICAL EDUCATION WORKING GROUP</b>	2021
• EDUCATION DEVELOPMENT CENTER (EDC)   TUMS	
<b>THE CORE MEMBER OF PUBLICITY TEAM</b>	2020
• UNIVERSAL SCIENTIFIC EDUCATION AND RESEARCH NETWORK (USERN)	
<b>THE CORE MEMBER OF MEDIA TEAM</b>	2020
• UNIVERSAL SCIENTIFIC EDUCATION AND RESEARCH NETWORK (USERN)	
<b>THE CORE MEMBER OF GRAPHIC AND DESIGN TEAM</b>	2020
• UNIVERSAL SCIENTIFIC EDUCATION AND RESEARCH NETWORK (USERN)	
<b>THE CORE MEMBER OF IT TEAM</b>	2020
• UNIVERSAL SCIENTIFIC EDUCATION AND RESEARCH NETWORK (USERN)	
<b>FORMER OF CULTURAL SOCIETY KARA</b>	2019
• FACULTY OF NEW SCIENCES AND TECHNOLOGY   UNIVERSITY OF TEHRAN (UT)	
<b>ORGANIZER OF CLIMATE CHANGE CONFERENCES</b>	2019
• FACULTY OF NEW SCIENCES AND TECHNOLOGY   UNIVERSITY OF TEHRAN (UT)	
<b>THE 23<sup>rd</sup> CONFERENCE OF ANNUAL GENERAL MEETING</b>	2017
• STUDENT SCIENTIFIC RESEARCH CENTER, TEHRAN UNIVERSITY OF MEDICAL SCIENCES	
• NURSING AND MIDWIFERY SCHOOL, TEHRAN UNIVERSITY OF MEDICAL SCIENCE	
<b>WORLD ASTRONOMY WEEK</b>	2017
• NIGHTSKY INSTITUTE   MINA DOME, TEHRAN, IRAN	
<b>ORGANIZER OF WATERROCKET COMPETITION</b>	2015
• CIVIL AVIATION TECHNOLOGY COLLEGE	
<b>THE 21<sup>st</sup> CONFERENCE OF ANNUAL GENERAL MEETING</b>	2015
• STUDENT SCIENTIFIC RESEARCH CENTER, TEHRAN UNIVERSITY OF MEDICAL SCIENCES	
• NURSING AND MIDWIFERY SCHOOL, TEHRAN UNIVERSITY OF MEDICAL SCIENCE	
<b>THE 5<sup>th</sup> INTERNATIONAL AVIATION &amp; SPACE INDUSTRIES EXHIBITION OF IRAN</b>	2014
• CIVIL AVIATION TECHNOLOGY COLLEGE (CATC)	
<b>THE 20<sup>th</sup> CONFERENCE OF ANNUAL GENERAL MEETING</b>	2014
• STUDENT SCIENTIFIC RESEARCH CENTER, TEHRAN UNIVERSITY OF MEDICAL SCIENCES	
• NURSING AND MIDWIFERY SCHOOL, TEHRAN UNIVERSITY OF MEDICAL SCIENCE	
<b>THE 4<sup>th</sup> INTERNATIONAL AVIATION &amp; SPACE INDUSTRIES EXHIBITION OF IRAN</b>	2013
• CIVIL AVIATION TECHNOLOGY COLLEGE (CATC)	
<b>ROAD URBAN DEVELOPMENT &amp; THE RELATED INDUSTRIES EXHIBITION</b>	2013
• CIVIL AVIATION TECHNOLOGY COLLEGE (CATC)	
<b>THE 3<sup>rd</sup> INTERNATIONAL AVIATION &amp; SPACE INDUSTRIES EXHIBITION OF IRAN</b>	2012
• CIVIL AVIATION TECHNOLOGY COLLEGE (CATC)	

## VOLUNTEER WORK

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<b>THE 7<sup>th</sup> INTERNATIONAL FESTIVAL OF PAINTINGS FOR PEDIATRIC PATIENTS (IFPPP)</b>	2021
• HEALTH AND ART (HEART)   USERN	
<b>SPACE GENERATION ADVISORY COUNCIL</b>	2020-Present
• MENTOR	
<b>KAHRIZAK NURSING HOME FOR THE ELDERLY AND THE DISABLED</b>	2013-Present
• PEST CONTROL	

**SARAI EHSAN SOCIAL VICTIMS CENTER***2013-Present*

- PEST CONTROL

**VARDAVARD WELFARE***2013-Present*

- PEST CONTROL

**TEHRAN FOUNDATION FOR THE MENTALLY HANDICAPPED***2013-Present*

- PEST CONTROL

**KAMRANIYEH CHARITY FOUNDATION***2013-Present*

- PEST CONTROL

**AWARDS & HONORS**

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**APPRECIATED PRESENTER***2021*

- USERN MINIATURE TALK

**MARTIAL ARTS FEDERATION - NATIONAL COMPETITIONS**

- GOLD MEDALIST | 2019
- GOLD MEDALIST | 2018
- GOLD MEDALIST | 2012
- GOLD MEDALIST | 2011
- SILVER MEDALIST | 2015
- BRONZE MEDALIST | 2019
- BRONZE MEDALIST | 2016

**NEARU MARTIAL ARTS***2019*

- BLACK BELT DAN 2<sup>nd</sup>