

Mohammad Moradi

EDUCATION AND TRAINING

Space and Astronautical Engineering (Master's Degree)

Sapienza University of Rome [09/2020 – 07/2024]

City: Rome | **Country:** Italy | **Website:** www.uniroma1.it

Aircraft Mechanical Engineering (Bachelor's Degree)

Aviation Industry Training Center of Tehran [09/2018 – 07/2020]

City: Tehran | **Country:** Iran | **Website:** www.aitc.ir

Aircraft Maintenance (Associate Degree)

Civil Aviation Technology College [09/2012 – 08/2015]

City: Tehran | **Country:** Iran | **Website:** www.catc.ac.ir

RECOMMENDATIONS

Name: Giovanni Paolo Romano

Full Professor at the Faculty of Mechanical and Aerospace Engineering, Sapienza University of Rome

Master's Thesis on Microfluidic Analysis of Flow Motion for Enhancing Heat Transfer and Experimental Aerodynamics
Course with Professor Giovanni Paolo Romano

Name: Fulvio Stella

Full Professor at the Faculty of Mechanical and Aerospace Engineering, Sapienza University of Rome

Compressible Flows Course with Professor Fulvio Stella

PROJECTS

In-flight Connectivity Project

Conducted a research-based project on the aerodynamic dome atop the aircraft during an internship, focusing on reviewing existing studies and industry practices related to airflow effects on in-flight connectivity systems and their integration with aircraft structures

Bachelor's Thesis

Construction of a simulator of the Airbus A320 Hydraulic System for Training Purposes

Space Robotics First Project

Completed manipulator and orbit design project

Space Robotics Second Project

Contributed to advancing NASA's VIPER rover capabilities for Lunar exploration through path planning and localization strategies

Aviation Regulations and Safety Management Project

Conducted a CAST (Causal Analysis based on Systems Theory) for an aviation incident

Experimental Aerodynamics Project

Completed an Experimental Aerodynamics Course project involving the collection, analysis, and presentation of fluid dynamics data

Spacecraft Design Project

Contributed to the "Algae-Based Life Support for Space Missions" research, focusing on data analysis and sustainable resource generation for space habitats, part of a spacecraft design course emphasizing payload integration and material optimization

Participated in the Micro Algae Growth in Cubesats

Engaged in a 200-day algae cultivation experiment crucial for sustainable space habitat development. My role included payload design, ensuring the integration of lightweight, compatible components such as pneumatic systems (pumps, check valves, pressure regulators) essential for creating viable living conditions in space.

Completed multiple projects within the Space Geodesy course:

- Analyzed flood effects using Sentinel 1 radar data for remote sensing
 - Utilized QGIS for vector layer manipulation, georeferencing via the Lazio Region's Geoportal, and analyzing Mount Etna's DEM for terrain representation
 - Conducted radar interferometry on Mount Etna pre/post-earthquake using Sentinel data to assess seismic impact.
- This diverse range of projects honed skills in remote sensing, GIS analysis, and seismic impact assessment within geodesy

Regulatory Compliance Projects

Participated in in-depth studies and practical applications of aviation regulations, notably Part 21, focusing on the certification and airworthiness of aircraft systems. Engaged in creating audit questions as an integral part of the compliance verification process, enhancing understanding of regulatory frameworks and their implementation in aviation

Safety and Quality Assessments

Involved in projects that assessed and improved safety management and quality assurance processes within aviation maintenance settings. Developed skills in identifying compliance gaps and formulating strategic improvements, preparing for real-world applications in aerospace engineering and maintenance oversight

Wing and Fuselage Workshop

Fabricated an aluminum sheet for installation on an aircraft body, gaining proficiency in essential techniques such as riveting, drilling, and cutting

Piston Engine Workshop

Performed disassembly and assembly tasks on a piston engine during the practical phase to develop a deeper understanding of internal combustion engines and their components

Jet Engine Workshop

Conducted comprehensive disassembly and reassembly of the JT8D jet engine, including tasks such as exhaust, rear fan duct, LPT, and HPT module removals, followed by combustion chamber case and chamber removal, and reinstallation following the same process

Propeller Workshop

Engaged in detailed assembly, maintenance, and troubleshooting of aircraft propellers, focusing on components such as blade attachment and pitch adjustment, hub assembly, and operational testing, as part of B1 license training

Machinery Workshop

Fabricated a bolt, nut, and a ball peen hammer head, gaining hands-on experience in metalworking and precision tools

Model Aircraft Projects

- **Contributed to Workshops on Model Aircraft Fabrication:** Carried out hands-on workshops focused on the design and assembly of model aircraft, techniques for constructing lightweight airframes using specialized wood and enhancing the aerodynamics and assembly.
- **Production and Quality Control:** Participated in procurement and integration of key components, such as control systems and electric motors. Ensured high standards of quality and operational efficiency through rigorous testing and optimization in collaboration with a dedicated team.
- **Commercial Management and Strategic Improvement:** Engaged in the final product assembly and sales processes, utilizing customer feedback and detailed performance data to drive continuous improvements. Developed and implemented strategies that significantly enhanced product quality and customer satisfaction, demonstrating a profound capability in product lifecycle management.

WORK EXPERIENCE

Internship

[03/2015 – 06/2015]

City: Tehran | **Country:** Iran

Aircraft General Familiarisation Practical Training.

Internship

[03/2019 – 06/2019]

City: Tehran | **Country:** Iran

In-flight Connectivity Familiarisation.

Internship

[03/2020 – 05/2020]

City: Tehran | **Country:** Iran

Aircraft General Familiarisation Practical Training.

DIGITAL SKILLS

Microsoft Office / Python / Matlab / Latex

LICENSES

B1-EASA Part 66 Licence (Airframe and Powerplant License) Obtained from the Civil Aviation Organisation (CAO) - IRAN

LANGUAGE SKILLS

Mother tongue(s): Persian

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

LANGUAGE TEST SCORES

TOEFL iBT

Test taken in September, 2022, score: 111

Academic IELTS

Test taken in November, 2019, score: 7.5

GRE

Verbal: 149, Quant: 154