

Address: [REDACTED]

Phone: [REDACTED]

Email: [REDACTED]

[REDACTED]

Birthdate: 26/02/1993 Age: 26 Nationality: Italian

PROFILE

Aerospace Engineer with academic studies focusing on spacecraft attitude and orbit determination and control systems, automatic flight controls, spacecraft mission design, rocket propulsion systems, quadcopter design and control.

Aspiring to become a R&D engineer working on exciting and innovative projects within aerospace industry.

Languages: **English (Advanced)**, French (beginner), Italian (native)

EDUCATION

September 2016- March 2019 Bologna University (Forlì Campus)

International Master's Degree in Aerospace Engineering. (106/110)

- Acquired skills to produce physical models to analyse spacecraft requirements, performances and environmental issues.
- In deep knowledge of Attitude Determination and Control Algorithms.
- Design and implementation in Matlab/Simulink of Adaptive Fault Tolerant Control Systems for space applications within the Automatic Control System course's project

Final year thesis: (March 2018 - March 2019)

"Unknown Input Observer based Quadrotor Fault Detection and Isolation using Kinematic Model":

Curricular Internship (April 2018- November 2018)

"SWAMP project: design and control of Quadcopter for precision agriculture purpose. Data analysis of multispectral camera images".

Sep 2012- March 2016 Bologna University (Forlì Campus)

Bachelor's Degree in Aerospace Engineering. (100/110)

- Acquired fundamental knowledge in space environment, orbital dynamics, electronics and automatic control theory.

Final year thesis:

“Development and testing of sensors for air quality monitoring”

Academic internship period (September 2016-March 2016)

“Study and Design of multirotor systems ”

PUBBLICATIONS

- **“Drone based Automatic Surveys for Precision Farming”** by Paolo Castaldi, Massimiliano Menghini, Camilla Stanghellini, Giulia Villani, Attilio Toscano, Paola Zanetti and Tullio Salmon Cinotti, University of Bologna and Consorzio di Bonifica Emilia Centrale, in: 23rd FRUCT conference, (atti di: FRUCT 23rd, Bologna, 14/11/2018-16/11/2018)[Poster]
- **“Diagnosability of GNSS/IMU System without Hardware Redundancy”** by Paolo Castaldi, Nicola Mimmo, Massimiliano Menghini, in: 6th IEEE Workshop on Metrology for Aerospace (MetroAerospace Torino ,Italia (atti di: MetroAeroSpace, Torino, 19/06/2019-21/06/2019)

PROFESSIONAL EXPERIENCE

- **SWAMP Project Collaborator** (1 June 2019 – 31 August 2019 Bologna University)
Title of the position: *“Programming and execution of autonomous flights by means of drone for the acquisition and processing of multi-spectral images of agriculture cultures”*
Assignment’s Objects:
 - Acquisition of multi-spectral aerial images of the project SWAMP’s Pilots using an autonomous guided multirotor;
 - Post-processing of images with a software to determine indices: LAI, NDVI, NDRE;
 - Implementation of the above indices into the mathematical model of the field to obtain an estimation of the Water Need;
- **SUSHI-DROP Research Fellow** (1 August 2019 – Present, Bologna University)
Title of the position: *“Development of Underwater Unmanned Vehicle”*
Assignment’s Objects:
 - Determination of the specification of Drone Operations;
 - Determination of the specifications and cooperation in the development of the drone Subsystems: frame, guidance and control systems (avionics), propulsion system configuration;
 - Development of guidance and control algorithms for trajectory tracking during autonomous missions;
 - Identification of sensors for monitoring the marine ecosystem;
 - *Development of a UUV simulator environment based on the Fossen model;*
 - *Follow a training course at CNR for use and maintenance of the UUV;*

DIGITAL COMPETENCE

- Matlab/Simulink
- Linux based operating systems
- Pix4Dmapper
- Solidworks
- Labview
- QGrounControl
- C, C+
- Office pack
- Adobe pack (Photoshop, Lightroom, Premiere)

SOFT SKILLS

- Team work
- Creativity
- Management
- Interpersonal skills

PERSONAL INTERESTS

- I've been practicing **stargazing** since I was 10 years old.
- Playing basketball since I was 5 years old.
- Interested in Multiplayer Online Role Playing Games and in First Person Shooter Games.
- Scientific-fiction and fantasy tv series and movies.
- Interested in Aerial photography

Date 20/08/2019

Signature

A handwritten signature in black ink, appearing to be 'M. J. ...', written in a cursive style.