ANDREA CARBONE
SPACE AND ASTRONAUTICAL ENGINEER

Education and Training

09/2019 - TODAY **Special MSc – School of Aerospace Engineering**
Sapienza University of Rome, Italy

10/2015 - 01/2019 **MSc - Space and Astronautics Engineering - (110/110 with honours (4.0 GPA))**
Sapienza University of Rome, Italy

10/2011 - 11/2015 **BSc - Aerospace Engineering**
Sapienza University of Rome, Italy

09/2006 - 07/2011 **Classic High School Diploma**
Torquato Tasso Public High School, Rome, Italy

Work exsperience

03/2020 – 08/2020 **Junior Researcher Scholarship at ARCALab Space Automation and Robotics laboratory, School of Aerospace Engineering, "La Sapienza University of Rome"** inside the project SPOT "Star sensor Image on-board Processing for Orbiting objects deTection", stipulated with the Italian Space Agency; The research consist in coding the on-board unit software of the SPOT for the detection of objects with stellar sensors.

10/2019 - 12/2019 **Stages at ARCALab Space Automation and Robotics laboratory, School of Aerospace Engineering, "La Sapienza University of Rome"** at Automation, Robotics and Control for Aerospace – ARCA. Implementation of a real time GNC for proximity manoeuvres and hazard avoidance using the robot simulator MONSTER.

03/2019 - 03/2020 **Collaboration with the Italian Air Force (Mario De Bernardi Military Airport)**, in a project for the characterization of optical and radar sensors; system bias study from the comparison between the reference orbit and the orbit obtained from the measurements.

02/2017 - 05/2017 **Actively involved in the Pre-phase A of the LED-SAT project** during course of "Spacecraft Design" (in "La Sapienza" University of Rome). LED-based small SATellite is an 1U CubeSat equipped with LEDs (Light Emitting Diodes) and retro reflectors for optical tracking with ground-based telescopes and laser ranging observatories. In particular my work was focused on the design of the power subsystem and on the evaluation of the power budget. Then LEDSAT was selected by ESA's "Fly Your Satellite!" Program.

Rome, 26th January 2020

Additional Skills

Technical

- MATLAB and SIMULINK: Excellent knowledge, largely used during my studies
- ARDUINO: Good knowledge, used for my personal interest
- PROCESSING: Good knowledge, used whit Arduino for plot graphics
- STK and ODTK: Good knowledge, largely used during my collaboration with Aeronautics
- FORTRAN, C++, ADINA: Basic knowledge
- OFFICE (Word, Excell, Power Point), LaTex

Professional   Methodical in designing and managing projects; Excellent implementation of algorithms in order to analyze, model and obtain data; Optimal time management skills; Great teamwork organization and cross-cultural sensitivity skills; Proactive, committed, stress resistant and flexible; Dynamic working attitude; Wide ability to efficiently multi-task; Clearly presenting and explaining designs, ideas and plans; Creative and logical approach in designing and resolving development problems.

Publication   Carbone A., Cinelli M., Circi C., Ortore E., *Observing Mercury by a quasi-propellantless mission* Celestial Mechanics and Dynamic Astronomy (pp. 1-14 2020) Volume 132 Article 8. https://doi.org/10.1007/s10569-020-9950-0

Language   Italian: Native Speaker   English: Level B2, advanced user (University Exam)

Other   Piano, free climbing, rafting;   Driving license: A1, B.

References available on request

Rome, 26th November 2020