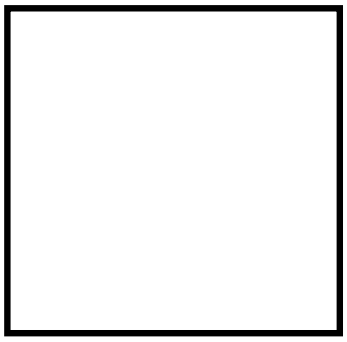
Umberto De Filippis

Aerospace Engineer-Space Systems



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PROJECTS

- ***MSc Degree in Astronautical and Space Engineering***

  Simulation of geodesy measurements with an orbiter around Callisto using Radio-Science. The nominal orbit has been selected after a trade off, taking into account scientific observations requirements, orbit stability and propellant consumption. The setup has been implemented in MONTE and MATLAB.

- ***Mission Design Project***

  As a responsablle of the trajectory planning I worked in a team to develop a premilinary mission design with the aim to establish a reliable and efficient communication service connecting Mars and Earth by a satellite network. Thanks to this project I developed team working skills and to be within the delivery dates.

- ***AOCS Design***

  Designing of a PDI control law to let spacecraft maintaing the nadir pointing under the action of Solar Radiation Pressure and Gravity Gradient. Becouse of the complexity of this project and of the short time available, I developed the ability to work under pressure.

TECHNICAL FIELDS MANAGED

- *Orbit Mechanics*
- *Orbit Determination*
- *TLC and Navigation*
- *System Engineering*
- *Space Propulsion*

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- *Concurrent Engineering*
- *Orbit Mechanics*
- *Power/Mass budget*
- *Space Propulsion*
- *PDR / CDR production*

- *Attitude determination*
- *Control Systems*
- *Power budget*

EDUCATION

- ***Phd student in Astrophysics***
  INAF, Rome (IT)
- ***MSc Degree in Astronautical and Space Engineering***
  Space Mission
  Università La Sapienza, Rome (IT)
  Time frame: Nov. 2018 – Oct. 2020
  Mark: 110/110
- ***Bachelor Degree in Aerospace Engineering***

SOFT SKILLS

People-related

- Team Motivation
- Emotianal Intelligence
- Patience and mentoring

Task-related

- Proactive attitude
- Process Improvement
- Enterpreneurship

SOFTWARE SKILLS

•	Matlab	*Advanced*	•	MONTE for OD	*Advanced*
•	STK	*Advanced*	•	SolidEdge	*Good*
•	Python	*Advanced*	•	FreeFlyer	*Good*
•	M. Office	*Advanced*	•	IDM-CIC	*Good*

INTERESTS

- Research
- Innovation
- Communication
- Environment

CERTIFICATIONS

- STK Master Certification
- Excellence path for the MSc degree

PASSIONS & HOBBIES

- Winter sports, Football
- Music, Arts, Cooking
- Science divulgation and teaching
- Astrophotography

Driving license B

LANGUAGES

•	**Italian**	\	**Native**
•	**English**	**Written**	**Fluent**
		Spoken	**Fluent**