

Federico Curianò

WORK EXPERIENCE

- December 2019 – November 2020** **Research Fellowship**
“Electro-Optical Characterization of Space Debris”
DIAEE – Department of Astronautical, Electrical and Energetic Engineering
Sapienza, University of Rome (Italy)
- October 2018 – In Progress** **Design and Infrastructure Responsible**
“SURGE – GEO Surveillance Observatory”
CAI – Sapienza Agreement
Duca degli Abruzzi shelter – Gran Sasso, Assergi (Italy)
- September 2018 – In Progress** **DIMA laboratory collaboration scholarship**
“Dispiegamento e test network sorveglianza spaziale Sapeinza”
Laboratory: Space Systems Laboratory, DIMA
Sapienza, University of Rome (Italy)
- March 2017 – In Progress** **Lecturer and Trainer**
“International Master in Space Mission Design and Management”
Course: Introduction to CATIA V5 Software
Sapienza, University of Rome (Italy)
- December 2017 - July 2018** **DIMA laboratory collaboration scholarship**
“Space debris optical observation campaigns support”
Laboratory: Space Systems Laboratory, DIMA
Sapienza, University of Rome (Italy)
- May 2017 – August 2017** **DIMA laboratory collaboration scholarship**
“Preliminary Design Review of IKUNS nanosatellite”
Laboratory: Space Systems Laboratory, DIMA
Sapienza, University of Rome (Italy)
- December 2016 – March 2017** **DIMA collaboration scholarship**
Project: IKUNS (Italian – Kenyan University Nano-Satellite)
Sapienza, University of Rome (Italy)
- 7 – 17 December 2017** **Space debris observing campaign**
ASI SANTA RITA Control Platform, Malindi, Kenya: Space debris observing campaign and observatory construction – EQUO – Off Shore
- 7 – 17 December 2016** **Space debris observing campaign**
ASI SANTA RITA Control Platform, Malindi, Kenya: Space debris observing campaign – EQUO – On Ground
- 9 – 19 March 2016** **Space debris observing campaign**
ASI SAN MARCO Launch Platform, Malindi, Kenya: Space debris observing campaign – EQUO – On Ground
- November 2014 – In Progress** **Manufacturing Responsible – S5Lab (Sapienza Space Systems and Space Surveillance Laboratory)**
Area of Work: Cubesat structures and mechanisms, Test Interfaces and Observatories Infrastructures
- November 2010 – In Progress** **Trainer and Demonstrator – CASIO Ltd**
Area of Work: Marketing and Customer Service – CASIO Digital Camera and CASIO Digital Piano

EDUCATION AND TRAINING

- 14th March 2019** **Master Degree in Space and Astronautical Engineering (Curriculum: Space Remote**

Sensing)

Thesis Title: *“Remote Sensing for Ecological Crisis Monitoring through Bio-indicators”*

Trainee in Italian Space Agency - ASI, Earth Observation Unit, Rome, Italy

July 2017 – In Progress

Fly Your Satellite! Track B – LEDSAT CubeSat

Fly Your Satellite! programme - realised under ESA support

December 2015 – March 2016

BEXUS cycle 09 – STRATONAV Experiment

BEXUS programme - realised under a bilateral Agency Agreement between DLR and SNSBS, with the ESA support (rexusbexus.net)

23 – 27 May 2016

ESA space qualified soldering course

ESA – ESTEC, Noordwijk, The Netherland

20th May 2015

Bachelor Degree in Aerospace Engineering

Thesis Title: *“3U URSA MAIOR CubeSat Vibrating test and Mechanical Mock-Up Model”*

Sapienza, University of Rome (Italy)

15 – 30 March 2014

“Space Debris and Surveillance” course

Sapienza, University of Rome (Italy), Aerospace engineering

20 – 25 March 2013

“Non-metallic materials for High temperatures Aerospace applications” course

Sapienza, University of Rome (Italy), Aerospace engineering

24th July 2010

Graduation in Second Level College of Experimental Science (PNI)

Liceo Scientifico Tullio Levi Civita, Rome (Italy)

PROJECTS

- **“URSA MAIOR”:** University of Rome la Sapienza Micro Attitude In Orbit testing” is a 3U CubeSat fully designed, tested and developed at “Sapienza Space Systems and Space Surveillance Laboratory” for the QB50 Mission (<https://www.qb50.eu/>)
- **“EQUO”:** Equatorial University Italian Observatory is a project in cooperation between ASI and Sapienza Space Systems and Space Surveillance Laboratory (S5Lab). Its main purpose is to develop and start operations of an Equatorial Observatory at the Broglio Space Center in Malindi, Kenya, intended for observation of space debris
- **“HORUS cluster”:** “HORUS” is a CubeSat-based multi-angle and multi-spectral Earth Observation (EO) system designed and selected for the 4th Mission Idea Contest Workshop (<http://www.spacemic.net>). The nanosatellite cluster is designed to offer multiple-perspective and multi-spectral imagery by creating new views particularly well suited for global environmental monitoring with high revisit sampling
- **“STRATONAV”:** “STRATOspheric NAVigation” is an experiment selected for the BEXUS programme 2015/16 (BEXUS 22) aiming at testing the VOR (VHF Omnidirectional Range) navigation system and to evaluate its accuracy above its estimated Standard Service Page 3 Volume. This investigation could determine a possible operational range extension to stratospherical flights through an in-situ testing campaign (rexusbexus.net)
- **“LEDSAT”:** “LED-based small SATellite” is an experiment selected for the Fly Your Satellite! Programme managed by European Space Agency. LEDSAT is a 1U CubeSat in Low Earth Orbit (LEO) equipped with LEDs (Light Emitting Diodes) and retroreflectors for optical tracking with ground-based telescopes and laser ranging observatories. The LEDSAT mission willing to explore new and promising techniques conceived for gathering important information about the status of the in-orbit CubeSat.

AWARDS

22th June 2018

Best Poster Award – 5th IEEE International Workshop on Metrology for AeroSpace in Rome

“LEDSAT: a LED-based CubeSat for optical orbit determination methodologies improvement”

13th April 2018
Best Paper Award – 2ND Symposium on Space Educational Activities

"Lesson Learned from STRATONAV on BEXUS 22: Educational activities on stratospheric balloon experiment development"

10th July 2015
Student Award – UNISEC Pre-4th Mission Idea Contest

"HORUS Constellation – the Space Convoy "

PERSONAL SKILLS
Mother tongue(s) Italian language.

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	C1	C1

Computer skills

- Good command of Microsoft Office™ tools.
- Good command of “Matlab” and “C#” programming language.
- How to use:
 - i. STK (Systems/Satellite Tool Kit) by Agi.
 - ii. 3D CAD Design Software SOLIDWORKS.
 - iii. CATIA Core Tools, Computer Aided Three-Dimensional Interactive Application.
 - iv. SNAP Software, Sentinel 1,2,3 Toolbox.

Organisation/Managerial skills

- Organisation/Managerial skills gained through:
 - i. Experience as Team Leader, Project Manager and Manufacturing Responsible of STRATONAV Experiment, selected for BEXUS cycle 09.
 - ii. Experience as Infrastructure Responsible of EQUO project.
 - iii. Experience as Responsible in several University projects.
 - iv. Experience as event organizer.

Practical skills

- Practical skills gained through:
 - i. Experience as Manufacturing Responsible of STRATONAV Experiment, selected for BEXUS cycle 09.
 - ii. Experience as Infrastructures and Manufacturing Responsible of EQUO project.
 - iii. Experience as Manufacturing Responsible of S5Lab.
 - iv. Experience during the soldering course at ESTEC, Noordwijck, The Netherlands, in the framework of STRATONAV Experiment.
 - v. Experience as Structure Responsible and AIT activities of LEDSAT project.

PUBLICATIONS

- Tommaso Cardona, Federico Curianò, Fabrizio Piergentili, Fabio Santoni, Marco Castronuovo; Scheduling Solution for Space Debris Observations, Advances in Astronautics Science and Technology, (), 1-12, DOI 10.1007/s42423-018-0015-3
- Arena, Lorenzo, Angeletti, Curianò, De Zanet, Gradini, Pellegrino; Thermal And Mechanical Design And Test Campaign Results Of A Single-Piece Structure For The Ursa Maior Nanosatellite, IAC-15,C2,1,8,x30546, IAC Jerusalem 2015.
- Prof. Piergentili, Fabrizio, Angeletti, Arena, Prof. Balucani, Cardona, Prof. Coppotelli, Curianò, De Zanet, Gaeta, Lamarca, Prof. Nasuti, Panicucci, Pellegrino, Prof. Santoni, et al. Design, Manufacturing And Test Of The Cubesat Ursa Maior, IAC-15,B4,2,7,x30886, IAC Jerusalem 2015.
- Prof. Fabio Santoni, Prof. Fabrizio Piergentili, Arena, Cardona, Scirè, Diprima, Pellegrino, Curianò, Grossi, Canu, Portelli, Spinetti; Equatorial Italian Observatory For Space Debris Monitoring At The Broglio Space Center, AIDAA 2015, Turin.
- Federico Curianò, Pellegrino, Arena, Cardona, Diprima, Scirè, Santoni, Piergentili, et al; Educational Activity of Sapienza Space

Systems and Space Surveillance Laboratory – S5lab, D321, 1st Symposium on Space Educational Activities – Padua 2015.
- Pellegrino, Alice, Dr. Mathieu, Agostini, Curianò, Prof. Fabio Santoni, Mascolo; An Innovative Multi-spectral and Multiangle based CubeSat for Earth Observation, IAC-16.D1.1.5.x34320, IAC Guadalajara 2016.
- Marzioli, Paolo, Curianò, Pellegrino, Cardona, Angeletti, Arena, Gianfermo, Valdatta, Frezza; Testing VOR performances in the stratosphere: the STRATONAV experiment, IAC-16.B2.2.7.x34462, IAC Guadalajara 2016.
- Cardona Tommaso, Curianò, Prof. Fabio Santoni, Dr. Castronuovo; Optimal Planning of Space Surveillance Network for Orbital Debris, IAC-17,A6,IP,15,x38273, IAC Adelaide 2017
- Gianfermo Andrea, Angeletti, Curianò, Frezza, Maioli, Masillo, Marzioli, Morfei, Pellegrino, Piergentili, Student CEF at Sapienza - University of Rome: Preliminary design of LEDSAT CubeSat, IAC-17,E1,IP,32,x41217, IAC Adelaide 2017
- Marzioli Paolo, Frezza, Curianò, Pellegrino, Angeletti, Gianfermo, Valdatta, Arena, Cardona, Piergentili, VHF Omnidirectional Range (VOR) reliability determination in stratosphere: STRATONAV Experiment, IAC-17,B2,3,3,x39174, IAC Adelaide 2017
- Prof. Fabio Santoni, Dr. Piergentili, Dr. Cardona, Curianò, Dr. Diprima, Hossein, Dr. Canu, Mariani, EQUO - Equatorial Italian Observatory At The Broglio Space Center For Space Debris Monitoring, IAC-17,A6,IP,10,x38808, IAC Adelaide 2017
- Marzioli Paolo, Pellegrino, Frezza, Curianò, Angeletti, Gianfermo, Piergentili, Santoni, Lessons learned from STRATONAV on BEXUS 22: Educational activities on stratospheric balloon experiment development, I.B.028, 2st Symposium on Space Educational Activities – Budapest 2018

“Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all’art. 13 del D. Lgs. 196/2003 e all’art. 13 del Regolamento UE 2016/679 relativo alla protezione delle persone fisiche con riguardo al trattamento dei dati personali.”

“In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.”