



# Andrea Curatolo

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**Address:** Via Baldassarre Carnaccini 12, 47121, Forlì, Italy (Work)

## WORK EXPERIENCE

01/12/2021 – 31/10/2022 Forlì, Italy

**GRADUATE RESEARCH FELLOW** DEPARTMENT OF INDUSTRIAL ENGINEERING, UNIVERSITY OF BOLOGNA

1. Development and experimental testing of an automatic balancing system for satellite simulators using mechanical and magnetic actuators
2. ASI funded BISS Mission analysis phase A study

09/2023 – 02/2024 Bologna, Italy

**UNIVERSITY OF BOLOGNA MATLAB STUDENT AMBASSADOR**

- organisation of workshop on MATLAB and Simulink features:
  - MATLAB Onramp
  - Numerical Analysis with MATLAB
- dissemination activities

## EDUCATION AND TRAINING

01/11/2022 – CURRENT Forlì, Italy

**PH.D. IN AEROSPACE SCIENCE AND TECHNOLOGY** University of Bologna

**Address** 47121, Forlì, Italy | **Website** <https://phd.unibo.it/dast/en>

18/09/2019 – 14/10/2021 Forlì, Italy

**MASTER'S DEGREE IN AEROSPACE ENGINEERING** Alma Mater Studiorum Univeristà di Bologna

**Address** 47121, Forlì, Italy | **Website** <https://corsi.unibo.it/2cycle/AerospaceEngineering> | **Final grade** 110 con lode |

**Level in EQF** EQF level 7 |

**Thesis** Development and experimental testing of nanosatellites attitude control using mixed magnetic/mechanical actuation

03/09/2016 – 17/09/2019 Rende, Italy

**BACHELOR'S DEGREE IN MECHANICAL ENGINEERING** Università della Calabria

**Address** 87036, Rende, Italy |

**Website** [https://www.unical.it/portale/strutture/dipartimenti\\_240/dimeg/didattica/cds/lim/](https://www.unical.it/portale/strutture/dipartimenti_240/dimeg/didattica/cds/lim/) | **Final grade** 109/110 |

**Level in EQF** EQF level 6 | **Thesis** Develop of a G.U.I. in support of the design of conical bevel gears

## LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	C1	C1	C1	C1

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

## ● PUBLICATIONS

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2023

### **[A distributed nanosatellite attitude testing laboratory for joint research activities](#)**

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A collaboration between the Microsatellite and Space Microsystem laboratory of the University of Bologna and the STAR laboratory of the Polytechnic University of Turin was established to develop a distributed laboratory for nanosatellite ADCS testing and development. The work done included the development of a new Air Bearing Table (ABT) in the Unibo laboratory, the development of a custom ADCS mock-up compliant with the 1U form factor in the Polito laboratory and a joint hardware integration and test campaign.

<https://dx.doi.org/10.21741/9781644902677-30>

2022

### **[Automatic Balancing for Satellite Simulators with Mixed Mechanical and Magnetic Actuation](#)**

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In this note, we present an automatic balancing technique which combines mechanical and magnetic actuation by the joint use of sliding masses and magnetorquers. Compared to an earlier implementation by the authors relying on shifting masses only, the novel approach is shown to reduce the in-plane unbalance by an additional 45% on average.

<https://doi.org/10.3390/aerospace9040223>

## ● DIGITAL SKILLS

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MATLAB/Simulink | SolidWorks | Excel | Arduino | C | Microsoft Project

## ● NETWORKS AND MEMBERSHIPS

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24/06/2021 – 24/06/2022

### **[President at EUROAVIA Forlì-Bologna APS](#)**

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## ● CONFERENCES AND SEMINARS

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09/07/2023 – 13/07/2023 Lausanne, Switzerland

### **[AEROSPACE EUROPE CONFERENCE Joint 10th EUCASS - 9th CEAS Conference](#)**

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Presented the work "The nanosatellite-class attitude control facility at ESA-ESTEC"

16/04/2023 – 19/04/2023 Bertinoro (FC), Italy

### **[AIDAA PhD Days 2023](#)**

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Presented the work with title "A distributed nanosatellite attitude testing laboratory for joint research activities"

20/04/2022 – 22/04/2022 Pisa, Italy

### **[2022 Pegasus Student Conference](#)**

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Selected for the VIII Pegasus Student Conference

Link <https://www.pegasus-europe.org/pegasus-student-conference/>

## ● **COMMUNICATION AND INTERPERSONAL SKILLS**

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### **EUROAVIA Training New Trainers**

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Successfully completed the Online Training Curriculum that included: training sessions in trainer' values, feedback, needs assessment, debriefing, learning design, training design, follow-up and evaluation, reflection groups and final training deliveries.  
November 2021.

## ● **COURSES AND WORKSHOPS**

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19/10/2021 – 21/10/2021

### **ESA Academy's Online ESEO In flight Experience Workshop 2**

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01/2019 – 07/2019

### **Unical Contamination Lab "UniCaLab"**

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Training course on entrepreneurial skills.

15/03/2023 – 15/03/2023

### **ECSS E 10 System Engineering training course**

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## ● **INTERNATIONAL COMPETITIONS**

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10/2021 – 11/2021

### **EUROAVIA ROTORTHON AT EUROPEAN ROTORS**

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First prize in the competition

**Link** <https://corsi.unibo.it/2cycle/AerospaceEngineering/notice-board/european-rotors-event-cologne>

02/2021 – 07/2021

### **Airbus Sloshing Rocket Workshop 2021**

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Team leader of the finalist team "Neptunus".

**Link** <https://sloshing.euroavia.eu/edition-2021/>