

# Alberto Dionigi

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## Curriculum Vitae

### Education

- November 2020 - Present **PhD in Information Engineering**, *The University of Perugia*, Department of Electrical and Information Engineering, Perugia, Italy.  
Currently a student.
- July 2020 **Professional Qualification as Information Engineer**, *The University of Perugia*, Department of Electrical and Information Engineering, Perugia, Italy.  
Mark: 60/60.
- October 2017 - June 2020 **Masters Degree in Computer and Robotics Engineering**, *The University of Perugia*, Department of Electrical and Information Engineering, Perugia, Italy.  
Mark: 110/110 *cum laude*.
- October 2014 - February 2018 **Bachelor Degree in Computer and Electronic Engineering**, *The University of Perugia*, Department of Electrical and Information Engineering, Perugia, Italy.  
Mark: 110/110 *cum laude*.

### Experience

- January 2023 - Present **Visiting Scholar**, NYU TANDON SCHOOL OF ENGINEERING, New York, USA.  
  - Type of employment: Visiting Scholar.
  - Main activities and responsibilities: Research activities on the intersection of robotics and reinforcement learning for autonomous navigation of vision-based aerial robots.
- November 2020 - Present **Research Assistant**, DEPARTMENT OF ENGINEERING, Perugia, Italy.  
  - Type of employment: Research Assistant.
  - Main activities and responsibilities: Research activities on Robotics, Computer Vision and Machine Learning. Support in teaching activities.
- September 2020 - November 2020 **Research fellow**, DEPARTMENT OF ENGINEERING, Perugia, Italy.  
  - Type of employment: Research fellow in the project: APPLICATIONS OF MACHINE LEARNING TECHNIQUES TO PRECISION AGRICULTURE.
  - Main activities and responsibilities: Research activities on Robotics, Computer Vision and Machine Learning for agricultural applications.
- June 2020 - Present **Co-Founder at RedLynx Robotics s.r.l.**, RED LYNX ROBOTICS S.R.L., Via Mario Donati Guerrieri 16, 06132, Perugia, Italy.  
  - Type of employment: Co-Founder.
  - Main activities and responsibilities: Management and supervision of Machine Learning projects. Development of algorithms for mobile robots.
- February 2018 - Present **Co-Supervisor of Bachelor's Degree Thesis**, DEPARTMENT OF ENGINEERING, Perugia, Italy.  
  - Type of employment: Co-Supervisor.
  - Main activities and responsibilities: Support and supervision of thesis activities.

## Reviewer for Conferences and Journals

November 2020 - Present **Reviewer for the following conferences**, IEEE INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION (ICRA), IEEE INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS (IROS).

**Reviewer for the following journals**, IEEE ROBOTICS AND AUTOMATION LETTERS, IEEE TRANSACTIONS ON ROBOTICS, ELSEVIER MEASUREMENT.

## Awards

5 August 2022 **Virtual Challenge on Multi-Robot Inspection and Monitoring**, CZECH TECHNICAL UNIVERSITY (CTU), Prague, Czech Republic.

28 September 2020 **Pegaso 2000 award for the best theses in computer engineering**, PEGASO 2000 S.R.L., Perugia, Italy.

## Affiliations

February 2022 - Present **IEEE Robotics and Automation Society Membership**, *Graduate Student Member*.

## Journal Publications

2023 **ARD-VO: Agricultural Robot Dataset of Vineyards and Olive groves**, *Francesco Crocetti, Enrico Bellocchio, Alberto Dionigi, Simone Felicioni, Gabriele Costante, Mario Luca Fravolini, Paolo Valigi*, Journal of Field Robotics (JFR), 2023.

2023 **A benchmark analysis of data-driven and geometric approaches for robot ego-motion estimation**, *Marco Legittimo, Simone Felicioni, Fabio Bagni, Andrea Tagliavini, Alberto Dionigi, Francesco Gatti, Micaela Verucchi, Gabriele Costante, Marko Bertogna*, Journal of Field Robotics (JFR), 2023.

2023 **A Convex Programming Approach to Multipoint Optimal Motion Planning for Unicycle Robots**, *Mirko Leomanni, Giuseppe Mollica, Alberto Dionigi, Paolo Valigi, Gabriele Costante*, IEEE Control Systems Letters (L-CSS), 2023.

2023 **Integrating Sparse Learning-Based Feature Detectors into Simultaneous Localization and Mapping — A Benchmark Study**, *Giuseppe Mollica, Marco Legittimo, Alberto Dionigi, Gabriele Costante, Paolo Valigi*, Sensors (MDPI), 2023.

2022 **E-VAT: an Asymmetric End-to-End Approach to Visual Active Exploration and Tracking.**, *Alberto Dionigi, Alessandro Devo, Leonardo Guiducci and Gabriele Costante*, IEEE Robotics and Automation Letters (RA-L), International Conference on Robotics and Automation (ICRA), 2022.

2021 **Enhancing continuous control of mobile robots for end-to-end visual active tracking.**, *Alessandro Devo, Alberto Dionigi, and Gabriele Costante*, Robotics and Autonomous Systems (RAS), 2021.

## Summer School

01-05 August 2022 **IEEE RAS Summer School on Multi-Robot Systems**, CZECH TECHNICAL UNIVERSITY (CTU), Prague, Czech Republic.

## Computer Skills

Intermediate ANDROID, MACOS, TENSORFLOW

Advanced PYTHON, JAVA, C++, ROBOT OPERATING SYSTEM (ROS), PYTORCH, MATLAB, JAVASCRIPT, HTML5, CSS, SERVLET JAVA, MYSQL, L<sup>A</sup>T<sub>E</sub>X, LINUX, MICROSOFT WINDOWS, OFFICE SUITE

## Languages

Italian **Mothertongue**

English **Intermediate**

French **Basic**

*Fluent in speaking. Good in listening, reading and writing*

*Basic words and phrases only*