Simone Felicioni

Personal details

Contacts

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Simone Felicioni

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Place and date of birth

Spoleto, Perugia (Italy)
03/06/1994

Nationality

Italian

Education

2024

Doctor of Philosophy in Industrial and Information Engineering
University of Perugia
Thesis: "Vision-based Robot Localization: from model-based and data-driven strategies to topological approaches"
Supervisor: Prof. Gabriele Costante

2020

Master's Degree in Computer Science and Robotics Engineering – Robotics curriculum
University of Perugia
Thesis: "Analysing social interactions through a wearable camera: a first-person point of view"
Supervisor: Prof. Gabriele Costante
Advisor: Dr. Mariella Dimiccoli
Final grade: 110/110 *cum laude*

2017

Bachelor's Degree in Computer Science and Electronics Engineering – Computer Science curriculum
University of Perugia
Thesis: "Implementation of a mobile robot and experiments on policies for autonomous driving based on Computer Vision algorithms"
Supervisor: Prof. Paolo Valigi

2013

High School Diploma
Scientific High School Alessandro Volta, Spoleto (PG)

Experience

February 2024 – current
Postdoctoral Research Fellow
University of Perugia, Italy
Research activities on Machine Learning and Computer Vision for Robotics. Support in teaching and co-supervision of thesis activities.

November 2022 – May 2023
Research Intern
Technology Innovation Institute, Abu Dhabi, United Arab Emirates
Internship in the Autonomous Robotics Research Center.

September 2020 – November 2020
Research Intern
Institut de Robòtica i Informàtica Industrial, Barcelona, Spain
Research activity funded by the "MdM Unit of Excellence" program.

October 2019 – February 2020
Erasmus+ Traineeship
Institut de Robòtica i Informàtica Industrial, Barcelona, Spain
Internship in the Perception and Manipulation Lab.

Language Skills

Italian (Mother tongue) ●●●●●

English (Advanced) ●●●●○

Spanish (Intermediate) ●●●○○

Certifications

2022
English exam (B2 level)
University of Perugia

2018
English exam (C1 level)
University of Perugia

2013
First Certificate in English (FCE)
University of Cambridge ESOL Examinations

Awards and Grants

2024
Research grant winner "Development of innovative model-based and data-driven solutions for modeling, control, supervision, and diagnostics of systems based on MEMS sensors and actuators"
University of Perugia

Research grant winner "Development, implementation and testing of AI methodologies for mixed reality systems for data visualization and analysis and interaction with robotics platforms through virtual environments"
University of Perugia

2020
Grant winner for the PhD in Industrial and Information Engineering
University of Perugia

Grant winner for post-degree research activity "Data-driven predictive models for agriculture applications"
University of Perugia

First place at the "Pegaso 2000" degree award for the best thesis in Computer Science Engineering and digital technologies
University of Perugia – Pegaso 2000, Corciano (PG), Italy

Grant winner for research activity "IRI-MdM International Internship Programme"
Institut de Robòtica i Informàtica Industrial, Barcelona, Spain

Reviewer Activities

Conferences
- IEEE International Conference on Robotics and Automation (ICRA)
- IEEE International Conference on Intelligent Robots and Systems (IROS)
- International Conference on Computer Vision Theory and Applications (VISAPP)
- ACM International Conference on Multimedia (ACMMM)

- IEEE International Conference on Automation Science and Engineering (CASE)

- IEEE Robotics and Automation Letters (RA-L)
- IEEE Transactions on Automation Science and Engineering (T-ASE)
- IEEE Access

- IEEE International Workshop on Metrology for Agriculture and Forestry (MetroAgriFor)

Affiliations

IEEE Robotics and Automation Society Membership
IEEE Young Professionals

Conferences, Summer schools, and Workshops

2025
IEEE International Conference on Automation Science and Engineering (CASE)
Los Angeles, California, USA

Automatica.it - Local Organizing Committee Member
Assisi, Italy

2024
IEEE International Conference on Automation Science and Engineering (CASE)
Bari, Italy

IEEE International Conference on Intelligent Robots and Systems (IROS)
Abu Dhabi, United Arab Emirates

2022
IEEE RAS Summer School on Multi-Robot Systems
Czech Technical University, Prague, Czech Republic

4th Italian Conference for Robotics and Intelligent Machines (I-RIM)
Rome, Italy

2021
20th International Conference on Advanced Robotics (ICAR)
Ljubljana, Slovenia

Projects

2024
Technologies for the efficient integration of the electric carrier in end uses (Project 1.7 – Activity line 2.21)
ENEA - University of Perugia
Refinement of vehicle planning and navigation software, road recognition, and interfacing with a navigation system.

Publications

2025

Enhanced sensor fault detection in bridge monitoring using Siamese-based encoder-decoder
Felicioni, S.; Castellini, L.; Tinti, L.; Giorgetti, F.; Fravolini, M. L.; 2025 IEEE 21st International Conference on Automation Science and Engineering (CASE)

Integrating robotics and immersive technologies for automated structural monitoring
Felicioni, S.; Castellani, M.; Costante, G., Montecchiani, F., Cavalagli, N., Venanzi, I.; submitted to 2025 XX Italian National Association of Earthquake Engineering Conference (ANIDIS)

Sensor Fault Detection in Bridge Monitoring Applications
Felicioni, S.; Castellini, L.; Tinti, L.; D'Antoni, F.; Fravolini, M. L.; submitted to 2025 Automatica.it

2024

Vision-based Topological Localization for MAVs
Felicioni, S.; Rizzo, B.; Tortorici, C.; Costante, G.; IEEE Robotics and Automation Letters (RA-L), 1158-1165

D-VAT: End-to-End Visual Active Tracking for Micro Aerial Vehicles
Dionigi, A.; Felicioni, S.; Leomanni, M.; Costante, G.; IEEE Robotics and Automation Letters (RA-L), 1-8

Integrating Occupancy Grid with Semantic Road Information for Autonomous Navigation in Urban Scenarios: A Benchmark Study
Felicioni, S.; Burani, E.; Leomanni, M.; Fravolini, M. L., Valigi, P.; Costante, G.; 2024 IEEE 20th International Conference on Automation Science and Engineering (CASE), 2665-2671

2023

ARD-VO: Agricultural Robot Dataset of Vineyards and Olive groves
Crocetti, F.; Bellocchio, E.; Dionigi, A.; Felicioni, S.; Costante, G.; Fravolini, M.L.; Valigi, P.; Journal of Field Robotics, 1678-1696

A Benchmark Analysis of Data-driven and Geometric Approaches for Robot Ego-Motion Estimation
Legittimo, M.; Felicioni, S.; Bagni, F.; Tagliavini, A.; Dionigi, A.; Gatti, F.; Verucchi, M.; Costante, G.; Bertogna, M.; Journal of Field Robotics, 1-29

MA-VIED: A Multisensor Automotive Visual Inertial Event Dataset
Mollica, G.; Felicioni, S.; Legittimo, M.; Meli, L.; Costante, G.; Valigi, P.; IEEE Transactions on Intelligent Transportation Systems

2021

GOLN: Graph Object-based Localization Network
Felicioni, S.; Legittimo, M.; Fravolini, M.L.; Costante, G.; 2021 20th International Conference on Advanced Robotics (ICAR), 849-856

InteractionGCN: A Graph Convolutional Network based framework for social interaction recognition in egocentric videos
Felicioni, S.; Dimiccoli, M.; 2021 IEEE International Conference on Image Processing (ICIP), 2348-2352