

# Giacomo Golluccio

PhD in Robotics & AI  
Perception Engineer at Stellantis

Turin, Italy

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## Education

- Fall 2019 **Ph.D in Robotics & AI**, *Robot Planning and Control combined with Machine Learning Techniques*, under the supervision of Prof. A. Marino, Prof. G. Antonelli., University of Cassino and Southern Lazio, Cassino, Italy.
- Spring 2023 **BMW Group & Technical University of Munich (TUM)**, (*award winner*) *Intelligent Cars on Digital Roads Frontiers in Machine Intelligence - Generative AI*, Cote d'Azur, France.
- Spring 2021 **Google DeepMind | Artificial & Natural Intelligence Toulouse Institute (ANITI)**, *Reinforcement Learning School*, University of Toulouse, France.
- Spring 2020 **IMT School for Advanced Studies Lucca**, *Model Predictive Control*, Prof. A. Bemporad, Lucca, Italy.
- Summer 2020 **Professional Engineering Licensure (Italian legislation)**, University of Cassino and Southern Lazio, Cassino, Italy.
- Spring 2018 **Master's Degree**, *Computer Engineering (cum laude)*, University of Cassino and Southern Lazio, Cassino, Italy.
- Spring 2016 **Bachelor's Degree**, *Computer and Telecommunications Engineering*, University of Cassino and Southern Lazio, Italy.

## Work Experience

- Spring 2024 **R&D Engineer | Stellantis**, *Robot Perception and Sensor Fusion in Autonomous Driving (L2+/L3)*, Turin, Italy.  
present
- Fall 2023 **R&D Engineer | DXC Luxoft (Consultant for Stellantis)**, *Robot Perception and Sensor Fusion in Autonomous Driving (L2+/L3)*, Turin, Italy.
- Spring 2024
- Fall 2021 **Visiting | KUKA Deutschland GmbH**, *Machine Learning for Robotic Grasping and Collision Detection in Simulation and Reality*, under the supervision of Dr. J. Schwinn, Dr. D. Joho Augsburg, Germany.
- Summer 2022
- Fall 2018 **Research Fellow | CIRA (Italian Aerospace Research Centre)**, *Distributed Control Techniques for Multi-Robot Systems*, University of Cassino and Southern Lazio, Cassino, Italy.
- Fall 2019
- Spring 2018 **Intern | ST Microelectronics**, *Study of the Zaidman's Equations for the Calculation of the Emission Current from the Semiconductor Surface and Implementation in C++*, University of Cassino and Southern Lazio, Italy.

## Skills

- **Programming Languages:** Python, C/C++, MATLAB, SQL, VHDL (FPGA)
- **AI & Computer Vision:** PyTorch, TensorFlow, OpenCV, Open3D
- **Robotics & Simulation:** ROS, Gazebo, RViz, Foxglove, PyBullet, MuJoCo, CARLA
- **Tools, Version Control & Infrastructure:** Git, Docker, Bazel, AWS
- **Industrial Automation:** PLC Programming (SFC, LADDER)

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## Publications

### Journal

- [4] **G. Golluccio, D. Di Vito, G. Antonelli, A. Marino**, *Deep Learning-based Collision Detection Framework for Robot Tasks in Clutter*, *Robotica*, 2025.
  - [3] **G. Golluccio, P. Di Lillo, D. Di Vito, A. Marino, G. Antonelli**, *Objects Relocation in Clutter with Robot Manipulators via Tree-based Q-Learning Algorithm: Analysis and Experiments*, *J. of Intelligent and Robotic Systems (JINT)*, Springer, 2022.
  - [2] **C. Carissimo, G. Cerro, L. Ferrigno, G. Golluccio, A. Marino**, *Development and Assessment of a Movement Disorder Simulator based on Inertial Data*, *Sensors*, 2022.
  - [1] **G. Golluccio, G. Gillini, A. Marino, G. Antonelli**, *Robot Dynamics Identification: a Reproducible Comparison with Experiments on the KINOVA Jaco2*, *IEEE Robotics and Automation Magazine*, 2020.
- Selected for presentation at IEEE ICRA 2022 in Philadelphia (USA), IEEE ICRA 2021 in Xi'an (China) and at IEEE IROS 2021 in Prague (Czech Republic)

### Conference

- [6] **G. Golluccio, P. Di Lillo, A. Marino, G. Antonelli**, *When Local Optimization is Bad: Learning What to (Not) Maximize in the Null-space for Redundant Robot Control*, *IEEE 9th Int. Conf. on Control, Decision and Information Technologies (CoDIT)*, Rome - Italy, 2023.
- [5] **C. Carissimo, L. Ferrigno, G. Golluccio, A. Marino, G. Cerro**, *Parkinson's Disease aided Diagnosis: Online Symptoms Detection by a Low-Cost Wearable Inertial Measurement Unit*, *IEEE Medical Measurements & Applications (MeMeA)*, Taormina - Italy, 2022.
- [4] **C. Carissimo, G. Cerro, L. Ferrigno, G. Golluccio, A. Marino**, *Realization and Validation of Data IMU Simulator for Detection and Classification of Tremor in Parkinson's disease*, *Conf. of Italian Association of Telemedicine and Medical Informatics (AITIM)*, 2021.
- [3] **G. Golluccio, D. Di Vito, A. Marino, G. Antonelli**, *Robotic Weight-based Object Relocation in Clutter via Tree-based Q-learning Approach using Breadth and Depth Search Techniques*, *IEEE 20th Int. Conf. on Advanced Robotics (ICAR)*, Ljubiana - Slovenia, 2021.
- [2] **G. Golluccio, D. Di Vito, A. Marino, A. Bria and G. Antonelli**, *Task-Motion Planning via Tree-based Q-learning Approach for Robotic Object Displacement in Cluttered Spaces*, *18th Int. Conf. on Informatics in Control, Automation and Robotics (ICINCO)*, Virtual Streaming for COVID-19, 2021.
- [1] **D. Patti, G. Busatto, G. Golluccio, D. Marciano, A. Sanseverino, F. Velardi**, *Operation Principle and Perspective Performances of Metal Oxide Vacuum Field Effect Transistor-MOVFET*, *IEEE 22nd European Conf. on Power Electronics and Applications (EPE'20)*, Lyon - France, 2020.