

# Mirco Colosi

## Curriculum Vitae

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## Education and Qualifications

- Oct 2017–  
exp. Nov 2020 **Ph.D. in Engineering in Computer Science**  
Sapienza University of Rome, Rome, Italy &  
Robert Bosch Corporate Research, department of Mapping, Localization and Navigation (CR/AAS3), Renningen, Germany  
*Research Field: SLAM, Mobile Robotics, Life Long SLAM*  
Advisor: Prof. Dr. Giorgio Grisetti, Prof. Dr. Kai Oliver Arras
- Sep 2014–  
Jul 2017 **Master of Science in Engineering in Artificial Intelligence and Robotics**  
Sapienza University of Rome, Rome, Italy  
*GPA – 110/110*
- Sep 2010–  
Mar 2014 **Bachelor of Science in Computer Engineering**  
University of Catania, Catania, Italy  
*GPA – 102/110*

## Publications

- 2020 **Plug-and-Play SLAM: A Unified SLAM Architecture for Modularity and Ease of Use**  
*Arxiv*  
M. Colosi, I. Aloise, T. Guadagnino, D. Schlegel, B. Della Corte, K.O. Arras and G. Grisetti  
DOI: [arXiv:2003.00754v2 \[cs.RO\]](https://arxiv.org/abs/2003.00754v2)
- 2019 **Better Lost in Transition Than Lost in Space: SLAM State Machine**  
*IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*  
M. Colosi, S. Haug, P. Biber, K.O. Arras and G. Grisetti  
DOI: [10.1109/IROS40897.2019.8968182](https://doi.org/10.1109/IROS40897.2019.8968182)
- 2018 **ProSLAM: Graph SLAM from a Programmer's Perspective**  
*IEEE International Conference on Robotics and Automation (ICRA)*  
D. Schlegel, M. Colosi and G. Grisetti,  
DOI: [10.1109/ICRA.2018.8461180](https://doi.org/10.1109/ICRA.2018.8461180)

- 2017 **Bridging Between Computer and Robot Vision Through Data Augmentation: A Case Study on Object Recognition**  
*IEEE International Conference on Computer Vision (ICCV)*  
A. D’Innocente, F.M. Carlucci, M. Colosi and B. Caputo  
DOI: 10.1007/978-3-319-68345-4\_34

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## Teaching Activities

- 2017/2018 **Tutor of Laboratorio di Intelligenza e Grafica Interattiva**, *Sapienza University of Rome*, Rome.  
Proff. Daniele Nardi, Roberto Capobianco
- 2017/2018 **Tutor of Tecniche di Programmazione**, *Sapienza University of Rome*, Rome.  
Proff. Daniele Nardi, Luca Iocchi, Alberto Pretto

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## Other Scientific Activities

### Reviewer

- Conferences** RA-L IROS 2020, IROS 2020, RA-L ICRA 2019, ICRA 2019, IAS 15, AAMAS 2019, RSS 2019, IJCAI 2019, IROS 2019, AURO 2019

### Personal Projects

- 2017 **Development of DASciS software for Bone scan index computation in scintigraphic images**, *Sapienza University of Rome*, Research Project, Dr. Viviana Frantellizzi.  
DOI: 10.2478/raon-2019-0058
- 2017 **Gesture recognition for Human-Robot Interaction**, *Sapienza University of Rome*, Exam Project, Prof. Luca Iocchi.
- 2016 **Development of a Simulation Environment for Teleoperated Surgical Task**, *Sapienza University of Rome*, Exam Project, Prof. Alessandro De Luca, Prof. Marilena Vendittelli.
- 2015 **Implementation of feedback controllers for unicycle robots**, *Sapienza University of Rome*, Exam Project, Prof. Giuseppe Oriolo.
- 2015 **A Third Person Game Based on the Three.js Library**, *Sapienza University of Rome*, Exam Project, Prof. Marco Schaerf.

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## Skills

### Computing and Robotics

- Solid C, C++ coding experience
- Good knowledge of Python, Bash, Java, OpenGL, MATLAB;
- Strong knowledge of robotics and computer vision libraries and tools: ROS, OpenCV;
- Experience with DevOps tools: Gitlab CI/CD, Docker, Jenkins;
- Daily use of version control software: Git;
- Daily use of Unix/Linux, Windows, MacOS;
- Good experience with Eclipse, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office, LibreOffice;

- Good experience in developing mobile multi-robotics applications under ROS environment.
- Hands-on and theoretical machine learning experience;

#### Teamwork

- Currently working at Robert Bosch Research Campus in Renningen, Germany, in the department of Mapping, Localization and Navigation (CR/AAS3) under the supervision of Dr. Alexander Kleiner, Dr. Peter Biber, and Prof. Dr. Kai Oliver Arras as Ph.D. student;
- Member of Prof. Dr. Daniele Nardi's research laboratory *Ro.Co.Co.* under the supervision of Prof. Dr. Giorgio Grisetti as a Ph.D. student;
- Good ability to adapt to multicultural environments and to live in different countries.

#### Languages

Italian **Mother tongue**  
 English **Advanced**  
 German **Beginner**

*Certification 2014: TOEFL(B2)*

#### Interests

##### Professional

SLAM, Sensor Calibration, Mobile Robotics, Autonomous Robotics, Robot Navigation and Control, Computer Vision, Machine Learning, Deep Learning

##### Personal

Music, Cinema, Video-games, Technology, Cooking

#### References

##### Prof. Dr. Giorgio Grisetti

**Associate professor at Sapienza University of Rome**

Department of Computer, Control, and Management Engineering  
 Sapienza University of Rome  
 Via Ariosto 25, 00185, Rome, Italy  
 ✉ [grisetti@dis.uniroma1.it](mailto:grisetti@dis.uniroma1.it)

##### Prof. Dr. Luca Iocchi

**Full professor at Sapienza University of Rome**

Department of Computer, Control, and Management Engineering  
 Sapienza University of Rome  
 Via Ariosto 25, 00185, Rome, Italy  
 ✉ [iocchi@dis.uniroma1.it](mailto:iocchi@dis.uniroma1.it)

##### Prof. Dr. Kai O. Arras

**Head of Robotics Program and Chief Expert Robotics**

Robert Bosch Corporate Research  
 Robert-Bosch-Campus 1, 71272, Renningen, Germany  
 ✉ [Kaioiver.Arras.ext@de.bosch.com](mailto:Kaioiver.Arras.ext@de.bosch.com)