

MATHIAS FASSINI MANTELLI

PERSONAL INFORMATION

Born in Brazil, 20 October 1993

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PROFESSIONAL EXPERIENCE

Mobile Robotics Engineer *Since December 2022* Instor Projects & Robotics
Making ground robot to become autonomous
Integrating different packages and developing new functionalities to the robots' frameworks

Research Project *May 2022 – Nov 2022* Postdoctoral Researcher
Conducted research on mobile robotics at ϕ -Robotics Research Lab
Developed Jaguar's autonomous system and a fleet system manager
Assisted masters and undergraduates students from Phi Group

Collaboration with Industry *Dec 2021 – Nov 2022* Robotics Software Engineer, Jaguar
Development of an autonomous system for a fleet of robots in collaboration with Instor
Developed the localization system and trajectory planner for autonomous ground robots
Lead the team of developers from the research lab throughout the project

Collaboration with Industry *Sep 2020 – Nov 2021* Robotics Software Engineer, Jaci
Development of an autonomous disinfection robot in collaboration with Instor
Developed the trajectory planner for an autonomous disinfection robot
Lead the team of developers from the research lab throughout the project

Research Project *Aug 2019 – Apr 2020* Exchange PhD Student, UiO
Robotics and Intelligent Systems, University of Oslo, Norway
Co-advised master students to develop UAV localization systems
Conducted research on exploration, object searching, and mapping algorithms
Taught Mobile Robotics for the course Advanced Topics in Artificial Intelligence for Intelligent Systems

EDUCATION

Doctorate *Mar 2017 – May 2022* Federal University of Rio Grande do Sul
 ϕ -Robotics Research Lab
Computer Science · *Specialization in Mobile Robotics*
Thesis: *Exploiting organisational semantic information in indoor environments for the object search problem*
Tutor in the course of Algorithms during the 3rd semester
Under orientation of Prof. Dr. Mariana Luderitz Kolberg

Master of Science *Mar 2015 – Feb 2017* Federal University of Rio Grande do Sul
 ϕ -Robotics Reserach Lab
Computer Science · *Specialization in Mobile Robotics*

Thesis: *A Novel Measurement Model for the Monte Carlo Algorithm Applied to the UAV Localization Problem Using Satellite Images*
 Tutor in the course of Algorithms during the 2nd semester
 Under orientation of Prof. Dr. Mariana Luderitz Kolberg

Mar 2011 – Feb 2015 Federal University of Mato Grosso

Bachelor of
Science

Computer Science
 Thesis: *Evaluation of Combined Classifiers Applied to the Diagnosis of Childhood Pneumonia*
 Tutor in the course of C Programming during the 7th semester
 Developed an autonomous car using Lego Mindstorms
 Under orientation of Prof. Rafael Teixeira

EXTRA-CURRICULAR ACTIVITIES

Mar 2010 – present Order of DeMolay

Volunteering

Held different positions such as President of the State of Mato Grosso and Treasurer and managed public affairs
 Received individual and group awards for outstanding leadership skills

PUBLICATIONS

- [1] Mathias Mantelli, Farzan M Noori, Diego Pittol, Renan Maffei, Jim Torresen, and Mariana Kolberg. "Semantic Temporal Object Search System Based on Heat Maps". In: *Journal of Intelligent & Robotic Systems* (2022).
- [2] Mathias Mantelli et al. "Autonomous Environment Disinfection Based on Dynamic UV-C Irradiation Map". In: *IEEE Robotics and Automation Letters* (2022).
- [3] Mathias Mantelli, Diego Pittol, Renan Maffei, Jim Torresen, Edson Prestes, and Mariana Kolberg. "Semantic Active Visual Search System Based on Text Information for Large and Unknown Environments". In: *Journal of Intelligent & Robotic Systems* 101.2 (2021).
- [4] Mathias Mantelli. "Alternative Position Estimation Systems for Micro Air Vehicles". In: *Autonomous Vehicles*. Ed. by George Dekoulis. Oxford: IntechOpen, 2020.
- [5] Mathias Mantelli, Diego Pittol, Renata Neuland, Arthur Ribacki, Renan Maffei, Vitor Jorge, Edson Prestes, and Mariana Kolberg. "A novel measurement model based on abBRIEF for global localization of a UAV over satellite images". In: *Robotics and Autonomous Systems* (2019).

COMPUTER AND LANGUAGE SKILLS

Programming

C++, C, Python, MATLAB, Git, L^AT_EX

Language

English · TOEFL-ITP B2, Spanish · Proficient

Interests

Teaching · Travelling · DeMolay

April 2, 2023