

MATHIAS FASSINI MANTELLI

PERSONAL INFORMATION

Born in Brazil, 20 October 1993

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PROFESSIONAL EXPERIENCE

Aug 2019 – Apr 2020 Exchange PhD Student, UiO

Research Project *Robotics and Intelligent Systems, University of Oslo, Norway*
Co-advised master students to develop UAV localisation systems
Conducted research on exploration, searching, and mapping algorithms
Taught Mobile Robotics in the Advanced Topics in Artificial Intelligence for Intelligent Systems course.

Nov 2015 – May 2017 Organization Team Member, HRATC

International event *3rd and 4th Robotics and Automation Technology Challenge*
Extended an existing robot simulator by an additional environment
Supported international teams and assessed their performance

EDUCATION

Mar 2017 – present Federal University of Rio Grande do Sul

Doctorate Advisored by Mariana Luderitz Kolberg
 ϕ -Robotics Reserach Lab
Computer Science · *Specialization in Mobile Robotics*
Tutor for algorithm theory during 3rd semester
Research subject: *Long-term semantic simultaneous localization and mapping*

Mar 2015 – Feb 2017 Federal University of Rio Grande do Sul

Master of Science Advisored by Mariana Luderitz Kolberg
 ϕ -Robotics Reserach Lab
Computer Science · *Specialization in Mobile Robotics*
Tutor for Algorithm Theory during 2nd semester
Thesis: *A Novel Measurement Model for the Monte Carlo Algorithm Applied to the UAV Localization Problem Using Satellite Images*

Mar 2011 – Feb 2015 Federal University of Mato Grosso

Bachelor of Science Advisored by Rafael Teixeira
Tutor for C programming during 7th semester.
Developed an autonomous car using Lego Mindstorms
Thesis: *Evaluation of Combined Classifiers Applied to the Diagnosis of Childhood Pneumonia*

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 Fassini Mantelli. "Alternative Position Estimation Systems for Micro Air Vehicles". In: *Autonomous Vehicles*. Ed. by George Dekoulis. Oxford: IntechOpen, 2020, pp. 1–13.
- [2] Diego Pittol, Mathias Mantelli, Renan Maffei, Mariana Kolberg, and Edson Prestes. "Monocular 3D Exploration using Lines-of-Sight and Local Maps". In: *Journal of Intelligent & Robotic Systems* (2020), pp. 1–17.
- [3] Renan Maffei, Marcos Praisler de Souza, Mathias Mantelli, Diego Pittol, and Vitor Jorge. "Exploration of 3D terrains using potential fields with elevation-based local distortions". In: *2020 International Conference on Robotics and Automation (accepted)*.
- [4] Leonardo Perdomo, Diego Pittol, Mathias Mantelli, Renan Maffei, Mariana Kolberg, and Edson Prestes. "c-M2DP: A Fast Point Cloud Descriptor with Color Information to Perform Loop Closure Detection". In: *2019 IEEE 15th International Conference on Automation Science and Engineering - CASE*.
- [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).
- [6] Arthur Ribacki, Vitor A. M. Jorge, Mathias Mantelli, Renan Maffei, and Edson Prestes. "Vision-Based Global Localization Using Ceiling Space Density". In: *Robotics and Automation*. 2018.
- [7] R. Madhavan, A. Amory, E. Prestes, R. Guedes, A. Bergamin, R. Neuland, M. Mantelli, D. Kindin, and F. Rodrigues. "The 2017 Humanitarian Robotics and Automation Technology Challenge [Humanitarian Technology]". In: *Robotics Automation Magazine* (2017).
- [8] E. Prestes, L. Marques, R. Neuland, M. Mantelli, R. Maffei, S. Dogru, J. Prado, J. Macedo, and R. Madhavan. "The 2016 Humanitarian Robotics and Automation Technology Challenge [Competitions]". In: *IEEE Robotics Automation Magazine* (2016).

COMPUTER AND LANGUAGE SKILLS

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

Language English · TOEFL-ITP B2, Spanish · Proficient

Interests Teaching · Travelling · DeMolay · Podcasts and books

August 21, 2020