

TOMISLAV PETKOVIC

petkovich.github.io ♦ tomlav.petkovic.fer@gmail.com

EDUCATION

University of Zagreb

PhD student in Computer Science

Oct 2017 – Present

MS in Control Systems and Automation

Oct 2015 – Jul 2017

EXPERIENCE

University of Zagreb

Jun 2017 – Present

Research Associate, Faculty of Electrical Engineering and Computing

- Research in human intention recognition, path prediction and safety for integrated robotized warehouses
- Leading student projects and theses

AVL-AST

Sep 2016 – Feb 2017

Python Test Scripts Developer

- Developed automated test scripts for the FIRE simulation package

PROJECTS

SafeLOG (safelog-project.eu)

Jun 2017 – Present

- Improved warehouse throughput by **27.6%** and reduced human-robot encounters by **10%** in situations when warehouse worker does not follow the assigned path
- Experiments conducted in a real warehouse environment using augmented reality, virtual reality simulations and in-house large-scale warehouse simulator

L4MS (l4ms.eu)

Mar 2018 – Jun 2019

- Developed communication protocols between mobile platform and warehouse server for simultaneous localization and mapping
- Coordinated integration of Sick S300 safety laser with an industrial ethernet to serial devices server on an omnidirectional mobile platform

AWARDS

Dean's Award for exceptional results on courses of the 2nd undergraduate year (top 1%).

2014

Chancellor's Award for the project "Decentralized control of the multi-agent robotic system"

2016

SELECTED PUBLICATIONS

Human intention estimation based on hidden Markov model motion validation for safe flexible robotized warehouses, T Petkovic, D Puljiz, I Markovic, B Hein

Robotics and Computer-Integrated Manufacturing 57, 2019

Human Motion Prediction Framework for Safe Flexible Robotized Warehouses, T Petkovic, J Hvezda, T Rybecky, I Markovic, M Kulich, L Preucil, I Petrovic

Long-term Human Motion Prediction Workshop **ICRA** 2019

Open Platform Based Mobile Robot Control for Automation in Manufacturing Logistics, Marija Seder, Tomislav Petkovic, Ivan Markovic et al.

The 1st **IFAC** Workshop on Robot Control, 2019