TOMISLAV PETKOVIC

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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

TECHNOLOGIES

Python, **C++**, **Robot Operating System (ROS)**, **Django**, **JavaScript**, **React.js**, **Latex**

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