Filip Marić

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Work experience

November 2018 - present

STARS lab (Toronto), LAMoR (Zagreb)
Junior researcher

Researching motion planning in robotics, facilitating collaboration between the above laboratories.

July 2016 – August 2016

INETEC - Institute for Nuclear Technology
Research and development intern

Designing framework for computer vision algorithms used in robot manipulator localization. Developing in C# with OpenCV libraries and utilizing structural properties of nuclear plant.

Projects and Publications

Towards Automatic Self-Calibration of Mobile Manipulator Kinematics and Sensor Extrinsics Using Contact Information
Accepted ICRA 2018 paper on kinematic self-calibration of an RGBD camera using contact.

Thing mobile manipulator
Developing motion planning and control for the Thing mobile manipulator at University of Toronto Institute for Aerospace Studies.

Kinematic Educational Robot (KER)
Open source, low-cost quadruped platform with ROS and simulation capabilities.

Robot arm teleoperation via RGBD sensor palm tracking
Paper presented at MIPRO 2016. Work is indexed in IEEE Xplore and results featured online.

Awards and Achievements

2018 **UofT Joint Educational Placement**
University of Toronto
Fully funded international PhD collaboration with the LAMoR laboratory at the UZagreb.

2017 **Dr. Jasna Šimunić-Hrvoić scholarship**
University of Zagreb
Full financing for working on my Master's thesis at the University of Toronto.

2016 **Rectors award**
University of Zagreb
Awarded for best student scientific thesis.

2015 **Erasmus scholarship**
European Comission
Exchange scholarship awarded based on academic results.

Education

now **Ph.D candidate**
University of Toronto
Researching high dimensional trajectory planning in stochastic environments at Space and Terrestrial Autonoums Robotic Systems Lab.

2017 **M.Sc Electrical Engineering and IT**
University of Zagreb
Attended Faculty of Electrical Engineering and Computing, focus on robotics.

2017 **Graduate exchange**
University of Toronto
Institute for Aerospace Studies

2016 **Graduate exchange**
Aalborg Universitat
Department of Electronic Systems

Software skills

Experienced	MATLAB, ROS, Simulink, Gazebo
Intermediate	C++, Git, Blender, Step 7, Linux
Basic	Python, PCL, AutoCAD, ZMQ

Engineering skills

Experienced	Robotics, Control, Motion Planning
Intermediate	Estimation theory, Optimization
Basic	Microcontrollers, Machine learning

Language skills

English	Full professional proficiency (TOEFL: 109/120)
French	Elementary proficiency
Croatian	Native speaker

Other experience

Leading 3 - 5 person (international) teams in multiple projects

Presenting projects at international conventions, for reporters, investors

Presenting results to audiences in both English and Croatian