Igor Bogoslavskyi

Roboticist, Ph.D.

Address

Munich, Germany

On the Web

GitHub::niosus
LinkedIn::Igor Bogoslavskyi

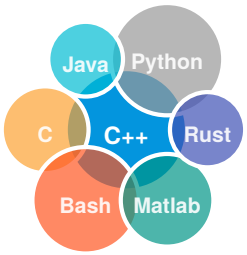
Phone

+49 1520 4471543

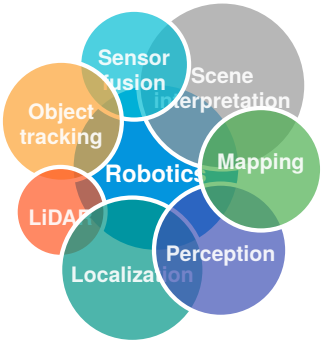
Mail

igor.bogoslavskyi@gmail.com

Programming



Fields of Interest



Languages

English ★★★★★
German ★★★★☆
Ukrainian ★★★★★
Russian ★★★★★

Experience

02/19 - Now **Senior Software Engineer for Autonomous Driving**
BMW Group, Munich, Germany

I work on Obstacle Avoidance feature as part of a team. In addition to that, I am Deputy Facilitator of Software Quality community, one of a handfull of people defining standards for C++ within the company, and I wrote the library for error handling mechanism used throughout the BMW Group codebase.

07/17 - 12/17 **Robotics Software Engineer Intern** Nuro, Mountain View, USA

I worked as part of a small perception team developing the first ever autonomous delivery bot. My work focused on LiDAR scene segmentation, sensor fusion, and sensor calibration. I was fully responsible for all software for cameras and LiDAR calibration.

05/14 - 02/19 **Research Fellow** University of Bonn, Bonn, Germany

I was the first student at the lab and have set up all the lab infrastructure including a full CI setup. Scientifically I have worked on various topics such as mobile robot navigation, range-based scene interpretation, and mapping. I published at top-tier international conferences such as ICRA and IROS and my code is available as open source.

01/12 - 05/14 **Research Assistant** AIS lab, University of Freiburg, Freiburg, Germany

As a research assistant in the Autonomous Intelligent Systems lab at the University of Freiburg, led by Prof. Dr. Wolfram Burdard, I dealt with Kinect RGBD sensors mounted onto various platforms. I have implemented traversability analysis for a mobile robot as part of the ROVINA project. The developments in this project led to a publication at ECMR already during my masters.

12/11 - 03/12 **Tutor, Image Processing** University of Freiburg, Freiburg, Germany

During my first semester I was tutoring the Image Processing course.

03/10 - 10/11 **Junior Software Engineer** Timecode LLC, Kyiv, Ukraine

Developed casual games for Android and a Web store for ASUS Xtion.

Selected Projects

2016 - Now **EasyClangComplete**

As a hobby project I have written and maintain one of the most used plugins for C/C++ code completion plugins for Sublime Text 3. It has more than 450 stars on GitHub and has been downloaded more than 29000 times.
`https://github.com/niosus/EasyClangComplete`

2017 - Now **MPR - Multi-Cue Photometric Registration**

I have co-developed MPR — a unified framework for registering data from various 3D sensors through generalized photometric error minimization.
`https://gitlab.com/srrg-software/srrg_mpr`

2016 - Now **Depth Clustering** Bonn, Germany

I have developed a robust and efficient algorithm for clustering LiDAR data. The project has around 360 stars on GitHub and is used both in academia and in companies.
`https://github.com/PRBonn/depth_clustering`

2012 - 2016 **ROVINA** Freiburg im Br. and Bonn, Germany

Developing an autonomous robot for underground exploration I was responsible for traversability analysis, navigation, exploration and some of the mapping tasks. The project received excellent reviews from the EU commission.

Video Lectures on C++ on YouTube

I have designed and released a course on Modern C++ for Image Processing. It has more than 40000 views to date and gains popularity in the robotics circles. It is available on **YouTube** and on the website of the IPB lab: `http://www.ipb.uni-bonn.de/teaching/modern-cpp/`.

First-author Publications

A general framework for flexible multi-cue photometric point cloud registration ICRA 2018

Analyzing the quality of matched 3d point clouds of objects IROS 2017

Efficient Online Segmentation for Sparse 3D Laser Scans PFG 2017

Fast range image-based segmentation of sparse 3d laser scans for online operation IROS 2016

Robust homing for autonomous robots ICRA 2016

Where to Park? Minimizing the Expected Time to Find a Parking Space ICRA 2015

Efficient Traversability Analysis for Mobile Robots using the Kinect Sensor ECMR 2013

Honors & Awards

2013 **MINT Excellence Network Member** MLP Stiftung

I was chosen as one of 300 best applicants across Germany to the MINT Excellence Network. The candidates were chosen from the students who work in the fields of Maths, Computer Science, Natural Sciences and Tech across Germany.

2018 **Best PhD Thesis of the Faculty Award** University of Bonn

My PhD thesis ”Robot mapping and navigation in real-world environments” has been awarded the title of the best out of all written at my faculty in 2018.

Education

2014 - 2019 **Ph.D.** University of Bonn, Germany

I am the first student of Prof. Dr. Cyrill Stachniss and have been at the lab for Photogrammetry and Mobile Robotics since its foundation. My work has resulted in a number of publications on first-tier conferences and in a couple of popular open-source projects. I have graduated with ”summa cum laude” and a thesis: ”Robot mapping and navigation in real-world environments”.

2011 - 2014 **MSc. Applied Computer Science** University of Freiburg, Germany

Majoring in Robotics, minoring in Computer Vision. My final grade was ”excellent”. My master thesis title was: ”Where to Park? An In-vehicle Parking Space Occupancy Estimation and Guidance System”.

2007 - 2011 **BSc. Applied Maths** Cybernetics, Kyiv National Taras Shevchenko University, Ukraine

I have been studying applied mathematics at the chair of computational methods. My thesis was focusing on implementing a heat distribution process on an Android device.

2004 - 2007 **Higher basic education** Lyceum 145, Kyiv, Ukraine

I have been studying at one of the best lyceums in Ukraine with a strong emphasis on Maths, Physics and Programming.

October 11, 2019

Dr. Igor Bogoslavskyi