

# Evgenii Safronov

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## EDUCATION

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### Ph.D. student, Bioengineering and Robotics

November 2019 - now

Università degli studi di Genova, Istituto Italiano di Tecnologia, Genova, Italy.

Supervisors: Dr. Lorenzo Natale and Dr. Michele Colledanchise, Istituto Italiano di Tecnologia, Genova

### Master of Science, Space and Engineering Systems

September 2017 - June 2019

Skolkovo Institute of Space and Technology (Skoltech), Moscow, Russia.

GPA: 5.0/5

Thesis project: Development of Mission Execution System for Unmanned Aircraft Systems

Supervisors: Dr. Ing. habil. Konstantin Kondak, DLR, Germany,

prof. Dzmitry Tsetserukou, Skoltech, Russia

### Bachelor of Science, Applied Physics and Mathematics

September 2013 - July 2017

Moscow Institute of Physics and Technology (MIPT), Dolgoprudnyy, Russia.

GPA: 4.92/5

Thesis project: Optimization of single and double superconducting qubit gates

Supervisors: Dr. Kirill Shulga, Gleb Fedorov, Russian Quantum Center

## EXPERIENCE AND INTERNSHIPS

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Istituto Italiana di Tecnologia, Genova

November 2019 - now

Sberbank Robotics Lab, internship, Moscow

July 2019 - October 2019

Master thesis internship, DLR/Elektra Solar GmbH, Munich

November 2018 - April 2019

Agrocompost LLC, Moscow

August 2018 - October 2018

Junior Researcher, Russian Quantum Center, Moscow

November 2016 - June 2017

Summer Internship, Helmholtz-Zentrum Berlin, Berlin

August 2016 - September 2016

Website development, dati.mipt.ru

October 2015 - June 2016

Tutor in physics, math and programming, Moscow

September 2014 - May 2016

## AWARDS AND SCHOLARSHIPS

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Best Research Thesis - the best in the track, top 5% of University, Skoltech

June 2019

Best Academic Excellence - top 10% of University, Skoltech

June 2019

Eurobot 2019 Finals, Vice champions

June 2019

Skoltech's academic mobility grant

November 2018 - April 2019

Eurobot 2018 Finals, 5th place

May 2018

Skoltech president stipend

November 2017 - June 2018

Letter from MIPT president in recognition of public achievements

November 2017

International Olympiad in Theoretical Physics, Gold medal

2017

Best general physics exam performance

June 2016

MIPT 'Abramovka' competitive stipend for excellent study

September 2014 - June 2016

All-Russian School Olympiad: regional winner for astronomy, physics, math and programming.

2011 - 2013

## SKILLS AND INTERESTS

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**Research** Task planning under partial observability

**Languages** C++, C, Python, JavaScript, CoffeeScript, Matlab, PHP

**Other** Linux, ROS, OpenCV, SolidWorks

**Interests** table tennis, snowboarding, cinematography

## PROJECTS

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<b>Automated Planning under Uncertainties for Autonomous Robots</b> <i>Ph.D. study at Uni. Genova &amp; Istituto Italiana di Tecnologia</i> Task planning in partially observable, non deterministic environment	November 2019 - now
<b>Development of Mission Execution System for Unmanned Aircraft Systems</b> <i>Master Thesis Project</i> <ul style="list-style-type: none"><li>· IEEE IROS 2019 conference contributed paper, 1st author</li><li>· High altitude pseudo satellites project in collaboration with Elektra Solar GmbH</li><li>· Control architecture</li><li>· Theoretical rework of behavior tree (BT) concept, novel variable-based approach for BT</li><li>· State synchronization for 3 redundant flight control computers</li><li>· C++ framework developed</li></ul>	November 2018 - May 2019
<b>UAV relative to ground mobile robot localization</b> <i>Industrial Immersion Project in Warevision, Skoltech startup</i> <ul style="list-style-type: none"><li>· IEEE VTC 2019 Spring conference contributed paper, 2nd author</li><li>· Localization system based on fusion of monocular camera and ultrasonic robot-to-UAV distance measurements.</li><li>· UAV had 2 concentric IR active markers - smaller for landing and take-off, bigger for high altitude flights.</li><li>· Choice of solution, Python/ROS framework development</li></ul>	2018, Summer
<b>Eurobot Open</b> <i>Skoltech</i> <ul style="list-style-type: none"><li>· Champions of Russia, Vice champions of Europe</li><li>· Leading mentor</li></ul>	2018-2019
<b>Eurobot Open</b> <i>Skoltech</i> <ul style="list-style-type: none"><li>· Team Captain, Software Development</li><li>· 1st place in Russia, 5th place in Europe (final stage).</li><li>· 2 mobile collaborative robots from the scratch</li><li>· Linux, Python/ROS, Odroid XU4, Behavior trees, IQP/Dynamic programming, LIDAR, Computer Vision</li><li>· ROS package</li><li>· Performance sample on YouTube</li></ul>	2017-2018
<b>Automated mission generation based on score rewards and tasks execution time</b> <i>Skoltech, Optimization Methods Course</i> <ul style="list-style-type: none"><li>· Best project grade</li><li>· Code &amp; presentation</li></ul>	2017
<b>"Magic wand"-like gesture recognition based on IMU sensor data</b> <i>Skoltech, Introduction to Data Science Course</i> <ul style="list-style-type: none"><li>· 96% cross validated score (accuracy). Best project grade</li><li>· Code &amp; presentation</li></ul>	2017
<b>Optimization of single and double superconducting qubit gates</b> <i>MIPT, Russian Quantum Center, Bachelor Thesis Project</i> <ul style="list-style-type: none"><li>· Theoretical investigation and simulation of single and double qubit systems</li><li>· Python framework development</li></ul>	2016-2017