

Misha Savchenko

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EMPLOYMENT

Robotics Engineer - METECS

October 2019 to Current

- ❖ Managed task order reporting, communication, and upkeep between METECS and NASA.
- ❖ Led software integration of newly developed robot agnostic technologies to the VR interface of the Valkyrie platform.
- ❖ Facilitated motion planning algorithm development and integration for the Valkyrie robot.
- ❖ Developed perception, motion planning, task planning, and infrastructure for the Robonaut 2 robot at NASA.

Research Assistant – Hunter College Physics Department

Fall 2016 to January 2017

- ❖ Researched novel methods of simulating transcription in vivo using computational and analytic methods.
- ❖ Virtual stochastic simulation of transcription behavior on a molecular level.

PROJECTS

Valkyrie - Stance Generation

October 2021 - Current

- ❖ Implemented and developed stance generation algorithm for finding body pose based on end effector placement.
- ❖ Integrated stance generation and footstep planning algorithms with the existing VR interfaces.

Robonaut 2 - Motion Planning, Task Execution, Perception

October 2019 - October 2021

- ❖ Supported Gazebo simulation development of manipulation and locomotion tasks to accomplish logistical functions.
- ❖ Improved on existing perception algorithms that improved the locomotion abilities of Robonaut 2 robot.
- ❖ Collaborated with Ames research center on the ISAAC project, further developing the robot's capabilities and task execution.

Autonomous Motion Planning for the Robosimian - Duke-IML

July 2018 - June 2019

- ❖ Flexible framework for the generation of efficient and high quality motion for a quadruped robot.
- ❖ Lidar integration for terrain detection and obstacle recognition.
- ❖ Extensive programming in Python, C++, and ROS.

EDUCATION

Duke University

August 2017 to June 2019

- ❖ Master of Science, Mechanical Engineering

Hunter College

August 2012 to January 2017

- ❖ Bachelor of Sciences, Physics & Bachelor of Sciences, Chemistry

RELEVANT SKILLS

- ❖ Coding Expertise with: Python, Mathematica, MATLAB, C, C++, C#
- ❖ Software: Docker, SolidWorks, Unity, Git, Pycharm, Atom, ROS, Klamp't (Robotics Python/C++ package)
- ❖ Windows and Linux based systems
- ❖ Fluent in Russian