

STEFANOS CHARALAMBOUS

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EDUCATION

Eidgenössische Technische Hochschule Zürich (ETH Zurich) | Zurich, Switzerland

Master of Science in Robotics, Systems and Control

09/21 - Present

Georgia Institute of Technology (Georgia Tech) | Atlanta, GA USA

Bachelor of Science in Mechanical Engineering

GPA: 3.97

08/17 - 12/20

Institutional Honors: Highest Honor

HONORS & AWARDS

Scholarship: Onassis Foundation Scholar - Alexander S. Onassis Foundation

2021 - 2023

Fellowship: Robotics Student Fellow - Center for Robotics, ETH Zurich

2021

Honor: Faculty Honors - Georgia Tech

2017 - 2020

Scholarship: Cyprus State Scholarship Foundation

2017 - 2020

Scholarship: Cyprus Children's Fund

2018, 2020

Scholarship: German Academic Exchange Service (DAAD)

2019

Honor: Faces of Inclusive Excellence - Institute Diversity, Equity, and Inclusion at Georgia Tech

2019

RESEARCH

Robotic Systems Lab, ETH Zurich | Zurich, Switzerland

Research Assistant (Volunteer) - Supervisor: Jean-Pierre Sleiman

03/22 - Present

- Implement whole-body motion planning for ANYmal based on convex centroidal dynamics formulation using OCS2

Research Assistant (Intern/ Volunteer) - Supervisors: Dr. Farbod Farshidian, Ruben Grandia

07/21 - 12/21

- Deployed full autonomy stack to UGV and tested in search and rescue operation at the ETH Robotics Summer School
- Implemented Switching Time Optimization in Differential Dynamic Programming framework using OCS2 (C++)
- Researched and implemented trust-region and cubic regularization methods for non-convex optimization

Laboratory for Intelligent Decision and Autonomous Robots, Georgia Tech | Atlanta, GA USA

Visiting Student - Supervisor: Dr. Ye Zhao

01/21 - 06/21

- Navigated literature on trajectory optimization, slip detection and recovery and locomotion on slippery surface
- Implemented analytically derived cost on end-effector positions for safe friction cone margin using TOWR

Institute for Robotics and Intelligent Machines, Georgia Tech | Atlanta, GA USA

Undergraduate Research Assistant - Robotic Painting Group; Supervisor: Dr. Frank Dellaert

08 - 12/19

- Managed group to integrate stroke-based rendering, planning, simulation and execution w/ ROS for mobile manipulator

Department of Neuromuscular Diagnostics, Technical University of Munich | Munich, Germany

Research Intern - Supervisor: Dr. Raz Leib

05 - 08/19

- Programmed robotic manipulandum (C++), executed experiments w/ human subjects and analyzed data (MATLAB)

Data-driven Robotics for Environment Assessment and Monitoring Lab, Georgia Tech Lorraine | Metz, France

Undergraduate Research Assistant - Supervisor: Dr. Cédric Pradalier

01 - 05/19

- Implemented mapping and localization framework and calibrated camera parameters and IMU sigmas

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TEACHING EXPERIENCE

Innovation & Design Collaborative (Design Bloc), Georgia Tech | Atlanta, GA USA

Teaching Assistant & Workshop Lead - Director: Prof. Wayne Li

08/19 - 03/21

- Conducted design thinking workshops to 500+ high school, undergraduate, graduate college students, educators, and entrepreneurs about iterative design, design abstraction, empathy, user needs, ideation, and rapid prototyping
- Supervised faculty for total of 18 hours to develop course for intellectually and developmentally disabled students
- Developed curriculum and technical presentations for computer-aided design and high-fidelity prototyping

WORK EXPERIENCE

Tennibot | Auburn, AL USA

Robotics Engineering Intern

05 - 08/20

- Analyzed impact loading using FEA, validated results (<5% error) and optimized design based on results using CAD

Cypriot National Guard | Nicosia, Cyprus

Second Lieutenant - Honorable Discharge

07/16 - 08/17

- Supervised military personnel through daily schedule including training sessions, activities, and emergency responses

SKILLS

Relevant Coursework: (*Complete*) Programming in C++, Programming for Robotics, Robot Dynamics, Dynamic Programming and Optimal Control, Linear System Theory, Planning and Decision Making for Autonomous Robots, Nonlinear Dynamics and Chaos; (*In progress*) Model Predictive Control, Nonlinear Systems and Control, Recursive Estimation, Introduction to Machine Learning

Control: Differential Dynamic Programming, Sequential Quadratic Programming, Model-Predictive Control

Programming: C++, MATLAB, Python, Simulink, Java, Git

Spoken Languages: English (fluent), Greek (native)