

Education

- William Marsh Rice University** Houston, TX, USA
 • *Ph.D. in Computer Science, Advisor: Dr. Lydia E. Kavraki* *Aug. 2017 – Present*
 – 8 semesters completed
 – Research Areas: Integrating Learning and Planning, Representation Learning, Motion Planning, Task and Motion Planning
- Aristotle University of Thessaloniki** Thessaloniki, Greece
 • *Diploma in Electrical and Computer Engineering* *Sep.2011 – Apr.2017*
 – Graduated with 'Excellent', **8.86/10** cumulative average (Top 2%)
 – Thesis: Structural Analysis of Handwritten Equations Using Probabilistic Context-Free Grammars

Research Experience

- Kavraki Lab, <http://kavrakilab.org/>** Rice University, Houston
 • *Graduate Student* *Aug. 2017 – Present*
 – Authored research papers in Robotic Learning
 – Developed open-source software for education and research purposes
- TracLabs Robotics Group, <https://traclabs.com/>** TracLabs, Houston
 • *Research Intern* *Jul. 2019 – Aug. 2019*
 – Integrated a motion planning framework (OMPL) with existing infrastructure (CRAFTSMAN)
 – Investigated experience-based planning in an industrial manipulation problem
- Pandora Robotics Group, <http://pandora.ee.auth.gr/>** Aristotle University, Thessaloniki
 • *Software Engineer and Tester* *Sep. 2013 – Feb. 2015*
 – Mapped robot's georeferenced track and surrounding environment in a 2D geotiff (Qt, C++)
 – Developed an online diagnostic tester for ROS nodes

Open Source Software

- MotionBenchMaker** https://github.com/KavrakiLab/motion_bench_maker
 • *Core Developer/Maintainer* *January 2022 – present*
- Pyre Library** <https://github.com/KavrakiLab/pyre>
 • *Core Developer/Maintainer* *April 2021 – present*
- Robowflex Library** <https://github.com/KavrakiLab/robowflex>
 • *Core Contributor* *March 2019 – present*
- The Open Motion Planning Library (OMPL)** <http://ompl.kavrakilab.org/>
 • *Contributor* *Jul. 2019 – present*

Awards, Nominations and Fellowships

- Future Faculty Fellowship from Rice University** Rice University, Houston
 • *Awarded to Ph.D. students who are applying to tenure-track positions* *Sept. 2022*
- ICRA 2021 Best Paper nomination in Cognitive Robotics (Top-4)** Rice University, Houston
 • *Nominated to relevant papers in a competitive basis* *Jun. 2021*
- NSF Graduate Research Fellowship** Rice University, Houston
 • *Awarded to outstanding graduate students in the US in STEM* *May. 2019*
- ICRA 2019 Travel Grant** Rice University, Houston
 • *Awarded to attendees in a competitive basis* *Mar. 2019*
- Hellenic Professional Society of Texas Scholarship** Rice University, Houston
 • *Awarded to students with Greek Origins for Academic Excellence* *Jan. 2018*

Teaching Experience

- **Algorithmic Robotics (COMP 450/550)** Rice University, Houston
Guest Lecturer Nov. 2021
- **Artificial Intelligence (COMP 440/557)** Rice University, Houston
Teaching Assistant Aug. 2019 – Dec. 2019
- **Probabilistic Algorithms and Data Structures (COMP 480/580)** Rice University, Houston
Teaching Assistant Jan. 2019 – May 2019
- **Algorithmic Robotics (COMP 450/550)** Rice University, Houston
Teaching Assistant Aug. 2018 – Dec. 2018
- **Rice DataScience Bootcamp** Rice University, Houston
Teaching Assistant Aug. 2018
- **Statistical Machine Learning (COMP 440/540)** Rice University, Houston
Teaching Assistant Jan. 2018 – May. 2018

Skills/Service

Software: ROS, Keras, Tensorflow, OMPL, MoveIt

Programming: C/C++(Expert), Python(Expert), Java(Intermediate), MATLAB(Intermediate)

Languages: Greek(Mother Tonque), English(Excellent), German(Good)

Peer-Review Referee: IROS2021, IROS2022, ICRA2021, ICRA2022, RAL2022

Social: Officer of Rice University's CS-GSA, Graduate Wellbeing Peers.

Publications

- [1] C. Chamzas*, F. Eweje* , L. E. Kavraki, E. L. Chaikof “Human Helath and Equity in an Age of Robotics and Intelligent Machines” *National Academy of Medicine Perspectives*, 2022.
- [2] C. Chamzas, A. Cullen , A. Shrivastava, L. E. Kavraki “Learning to Retrieve Relevant Experience for Motion Planning” *IEEE International Conference on Robotics and Automation (ICRA)*, 2022.
- [3] C.Quintero-Peña*, C. Chamzas*, Z. Sun, V. Unhelkar, L. E. Kavraki “Human-Guided Motion Planning in Partially Observable Environments” *IEEE International Conference on Robotics and Automation (ICRA)*, 2022.
- [4] C. Chamzas, C. Quintero-Peña, Z. Kingston, A. Orthey, D. Rakita, M. Gleicher, M. Toussaint, L. E. Kavraki “MotionBenchMaker: A tool to Generate and Benchamark Motion Planning Datasets” *IEEE Robotics and Automation Letters (RAL)*, 2022.
- [5] M. Moll, C. Chamzas, Z. Kingston , L. E. Kavraki “HyperPlan: A Framework for Motion Planning Algorithm Selection and Parameter Optimization” *In IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021.
- [6] Z.Kingston, C. Chamzas, L. E. Kavraki “Using Experience to Improve Constrained Planning on Foliations for Multi-Modal Problems” *In IEEE/RSJ International Conference on Intelligent Robots and Systems(IROS)*, 2021.
- [7] C. Chamzas, Z. Kingston, C.Quintero-Peña, A. Shrivastava, L. E. Kavraki “Learning sampling distributions using local 3D workspace decompositions for motion planning in high dimensions” *IEEE International Conference on Robotics and Automation (ICRA)*, 2021. **Top-4 finalist for best paper in Cognitive Robotics**

- [8] C. Quintero-Peña*, C. Chamzas*, V.Unhelkar, L.E.Kavraki “Motion Planning via Bayesian Learning in the Dark” *In ICRA2021: Workshop on Machine Learning for Motion Planning*, 2021.
- [9] E. Pairet, C. Chamzas, Y. Petillot, L. E. Kavraki “Path Planning for Manipulation using Experience-driven Random Trees” *IEEE Robotics and Automation Letters (RAL)*, 2021.
- [10] D. Chamzas, C. Chamzas, K. Moustakas “cMinMax: A Fast Algorithm to Find the Corners in an N-dimensional Convex Polytope” *International Conference on Computer Graphics Theory and Applications (GRAPP)*, 2021.
- [11] C. Chamzas*, M. Lippi* , M. C. Welle*, A.Varava, A.Marino, D. Kragic, L.E.Kavraki “Structuring Latent Representation with Minimal Supervision for Robotic Tasks ” *3rd Robot Learning Workshop in NeurIPS*, 2020.
- [12] C. Chamzas, A. Shrivastava, L. E. Kavraki “Using Local Experiences for Global Motion Planning,” *IEEE International Conference on Robotics and Automation (ICRA)*, 2019.