

**Education**

- **William Marsh Rice University** Houston, TX, USA  
*Ph.D. in Computer Science, Advisor: Dr. Lydia E. Kavraki* *Aug. 2017 – May 2023*  
 – Thesis: Retrieval-Based Learning for Efficient High-DoF 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

**Work Experience**

- **Worcester Polytechnic Institute** WPI, Worcester  
*Assistant Professor, Robotics Engineering* *July. 2023 – Present*  
 – Teaching Courses: Robotic Motion Planning (RBE550)  
 – Research Areas: Learning and Planning, Planning under Uncertainty, Task and Motion Planning
- **Kavraki Lab, <http://kavrakilab.org/>** Rice University, Houston  
*Graduate Student* *Aug. 2017 – May 2023*  
 – Authored research papers in Robotic Learning  
 – Developed open-source software for educational and research purposes
- **NVIDIA Seattle Robotics Lab, [https://nvidia\\_srl.gitlab.io/](https://nvidia_srl.gitlab.io/)** NVIDIA, Remote  
*Research Intern* *Sept. 2022 – Dec. 2022*  
 – Worked on robust Task and Motion Planning
- **Adacomp Lab, <https://adacomp.comp.nus.edu.sg/>** NUS, Singapore  
*Research Intern* *Jul. 2022 – Aug. 2022*  
 – Developed a POMDP formulation for planning with manipulators
- **TracLabs Robotics Group, <https://trac labs.com/>** TracLabs, Houston  
*Research Intern* *Jul. 2019 – Aug. 2019*  
 – Integrated a Motion Planning framework and experience-based planning in an industrial problem
- **Pandora Robotics Group, <http://pandora.ee.auth.gr/>** Aristotle University, Thessaloniki  
*Software Engineer and Tester* *Sep. 2013 – Feb. 2015*  
 – Worked on robot mapping and online diagnostic testers

**Awards, Nominations and Fellowships**

- **Future Faculty Fellowship from Rice University** Rice University, Houston  
*Awarded to Ph.D./Postdoctoral students applying to tenure-track positions* *Sept. 2022*
- **ICRA 2021 Best Paper Top-4 Finalist in Cognitive Robotics** Rice University, Houston  
*Nomination of 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*

## Open Source Software

- **MotionBenchMaker** [https://github.com/KavrakiLab/motion\\_bench\\_maker](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

## Teaching Experience

- **Algorithmic Robotics (COMP 450/550)** Rice University, Houston  
*Guest Lecturer* Nov. 2022
- **Graduate Seminar (COMP 600)** Rice University, Houston  
*Instructor Assistant* Sept 2022
- **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

## Service

**Reviewer:** *IROS, ICRA, RAL, TMECH, TRO*

**Invited Talks:** TU Berlin, *IEEE* RAS School,

**Organized Workshops:** “Evaluating Motion Planning Performance”, *IROS* 2022

## Skills/Other

**Software:** ROS, Keras, Tensorflow, OMPL, MoveIt

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

**Languages:** Greek(Mother Tongue), English(Excellent), German(Good)

**Social:** Officer of Rice University’s CS-GSA, Graduate Wellbeing Peer

## Publications

- [1] C. Chamzas\*, M. Lippi\*, M. C. Welle\*, A. Varava, L. E. Kavraki, D. Kragic “Comparing Reconstruction-and Contrastive-based Models for Visual Task Planning”, *IEEE/RSJ International Conference on Intelligent Robots and Systems, 2022 (IROS)*, 2022.
- [2] Y. Lee, C. Chamzas, and L. E. Kavraki “Adaptive Experience Sampling for Motion Planning using the Generator-Critic Framework”, *IEEE Robotics and Automation Letters (RAL)*, 2022.
- [3] 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.
- [4] 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.
- [5] 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.
- [6] 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.
- [7] 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.
- [8] 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.
- [9] 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**
- [10] 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.
- [11] 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.
- [12] 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.
- [13] 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.
- [14] C. Chamzas, A. Shrivastava, L. E. Kavraki “Using Local Experiences for Global Motion Planning”, *IEEE International Conference on Robotics and Automation (ICRA)*, 2019.