

Christoforos Mavrogiannis

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Last update: Sept. 30, 2021

EXPERIENCE

- Postdoctoral Research Associate** 2019 - Present
University of Washington (UW), Seattle, WA, USA
Paul G. Allen School of Computer Science & Engineering (CSE)
Personal Robotics Lab (PI: Prof. Siddhartha S. Srinivasa)
- Graduate Research Assistant** 2014-2019
Cornell University, Ithaca NY, USA
Department of Computer Science
Robotic Personal Assistants Lab (PI: Prof. Ross A. Knepper)
- Undergraduate Research Assistant** 2011-2013
National Technical University of Athens (NTUA), Athens, Greece
School of Mechanical Engineering
Control Systems Lab (PI: Prof. Kostas J. Kyriakopoulos)
- IAESTE Intern** 2011
Hydron Unipress, Łódź, Poland
Funded by the International Association for the Exchange of Students for Technical Experience (IAESTE)
Worked on mechanical design of solder production machines.

EDUCATION

- Ph.D., Cornell University** May 2019
Sibley School of Mechanical & Aerospace Engineering GPA: 4.05/4.30
Thesis title: "Motion Planning for Socially Competent Robot Navigation"
Committee: Ross A. Knepper (chair), Shimon Edelman, Guy Hoffman, Kilian Weinberger, Anca Dragan (Berkeley)
- M.S., Cornell University** Jan. 2017
Sibley School of Mechanical & Aerospace Engineering
Concentrations: Dynamics & Control, Artificial Intelligence, Cognitive Studies
- Diploma (BS/MS), National Technical University of Athens** March 2013
School of Mechanical Engineering GPA: 8.46/10.00 (top 5%)
Concentration: Mechanical Design & Control
Thesis title: "Grasp Synthesis Algorithms for Multifingered Robot Hands"
Advisor: Prof. Kostas J. Kyriakopoulos

SELECTED HONORS & AWARDS

- Participant, *Dagstuhl Seminar 19411: "Social Agents for Teamwork and Group Interactions"* 2019
Week-long, by-invitation-only seminar featuring experts in multiagent systems, AI, and HRI [39].
- Postdoc Travel Award, *Paul G. Allen School of Computer Science & Engineering* 2019
- "Most Ethical Design" Prize, *Lean Startup Machine Challenge, BMW Summer School* 2018
- "Best Paper Finalist", *ACM/IEEE International Conference on Human-Robot Interaction* 2017
Finalist in the *Technical Advances* category for "Implicit Communication in a Joint Action" [14].

Travel Grant, <i>Cornell University Graduate School</i>	2x2017, 2018
“R:SS Pioneer”, <i>Robotics: Science and Systems (R:SS)</i>	2018
Participant in the highly selective (38%) R:SS Pioneers doctoral consortium.	
“HRI Pioneer”, <i>ACM/IEEE International Conference on Human-Robot Interaction</i>	2017
Participant in the highly selective (31%) HRI Pioneers doctoral consortium.	
Travel Grant, <i>International Workshop on the Algorithmic Foundations of Robotics</i>	2016
2nd Place (\$10k) at the <i>Hackaday Prize</i> for the Openbionics project (2nd out of 900 projects)	2015
1st Place (SEK 110k) at the <i>Robotdalen International Innovation Award</i> for the Openbionics project	2015
Ph.D. Fellowship, <i>Sibley School of Mechanical & Aerospace Engineering, Cornell University</i>	2013
Award for Scientific Publications, <i>Thomaidion Institution, NTUA</i>	2013
“Regional Finalist” (Greece), <i>European Board of Engineering Students of Technology Competition</i>	2012
2nd Prize, <i>NTUA Innovative Design Competition</i>	2011
IAESTE Internship award	2011

PUBLICATIONS

Peer-Reviewed Journal Articles

- [1] C. Mavrogiannis, P. Alves-Oliveira, W. Thomason, and R. A. Knepper. “Social Momentum: Design and Evaluation of a Framework for Socially Competent Robot Navigation”. In: *ACM Transactions on Human-Robot Interaction* (2021).
- [2] C. Mavrogiannis and R. A. Knepper. “Hamiltonian coordination primitives for decentralized multiagent navigation”. In: *The International Journal of Robotics Research* 40.10-11 (2021), pp. 1234–1254. [Impact Factor: 4.703] [Invited submission].
- [3] C. Mavrogiannis and R. A. Knepper. “Multi-agent path topology in support of socially competent navigation planning”. In: *The International Journal of Robotics Research* 38.2-3 (2019), pp. 338–356. [Impact Factor: 4.703] [Invited submission].

Book Chapters

- [4] C. Mavrogiannis and R. A. Knepper. “Decentralized Multi-Agent Navigation Planning with Braids”. In: *Algorithmic Foundations of Robotics XII: Proceedings of the Twelfth Workshop on the Algorithmic Foundations of Robotics*. Ed. by K. Goldberg, P. Abbeel, K. Bekris, and L. Miller. Cham: Springer International Publishing, 2020, pp. 880–895.
- [5] C. Mavrogiannis and R. A. Knepper. “Multi-agent Trajectory Prediction and Generation with Topological Invariants Enforced by Hamiltonian Dynamics”. In: *Algorithmic Foundations of Robotics XIII*. Ed. by M. Morales, L. Tapia, G. Sánchez-Ante, and S. Hutchinson. Cham: Springer International Publishing, 2020, pp. 744–761.

Peer-Reviewed Conference Proceedings

- [6] A. Nanavati, C. Mavrogiannis, K. Weatherwax, L. Takayama, M. Cakmak, and S. S. Srinivasa. “Modeling Human Helpfulness with Individual and Contextual Factors for Robot Planning”. In: *Proceedings of Robotics: Science and Systems (R:SS)*. 2021. [Acceptance 27%].
- [7] N. Walker, C. Mavrogiannis, S. S. Srinivasa, and M. Cakmak. “Influencing Behavioral Attributions to Robot Motion During Task Execution”. In: *Proceedings of the Conference on Robot Learning (CoRL)*. 2021. [Acceptance 38.25%].
- [8] A. Wang, C. Mavrogiannis, and A. Steinfeld. “Group-based Motion Prediction for Navigation in Crowded Environments”. In: *Proceedings of the Conference on Robot Learning (CoRL)*. 2021. [Oral; top 6.5%].
- [9] L. Ke, A. Kamat, J. Wang, T. Bhattacharjee, C. Mavrogiannis, and S. S. Srinivasa. “Telemanipulation with Chopsticks: Analyzing Human Factors in User Demonstrations”. In: *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. 2020, pp. 11539–11546.

- [10] J. Roh, C. Mavrogiannis, R. Madan, D. Fox, and S. Srinivasa S. “Multimodal Trajectory Prediction via Topological Invariance for Navigation at Uncontrolled Intersections”. In: *Proceedings of the Conference on Robot Learning*. 2020. [Acceptance 34%].
- [11] C. Mavrogiannis, A. M. Hutchinson, J. Macdonald, P. Alves-Oliveira, and R. A. Knepper. “Effects of Distinct Robot Navigation Strategies on Human Behavior in a Crowded Environment”. In: *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI)*. 2019, pp. 421–430. [Acceptance 24%].
- [12] C. Mavrogiannis and R. A. Knepper. “Multi-agent Trajectory Prediction and Generation with Topological Invariants Enforced by Hamiltonian Dynamics”. In: *Proceedings of the International Workshop on the Algorithmic Foundations of Robotics (WAFR)*. 2018.
- [13] C. Mavrogiannis, W. B. Thomason, and R. A. Knepper. “Social Momentum: A Framework for Legible Navigation in Dynamic Multi-Agent Environments”. In: *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI)*. 2018, pp. 361–369. [Acceptance 23%].
- [14] R. A. Knepper, C. Mavrogiannis, J. Proft, and C. Liang. “Implicit Communication in a Joint Action”. In: *Proceedings of the 2017 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*. Vienna, Austria, 2017, pp. 283–292. [Best paper finalist][Acceptance 24%].
- [15] C. Mavrogiannis, V. Blukis, and R. A. Knepper. “Socially Competent Navigation Planning by Deep Learning of Multi-Agent Path Topologies”. In: *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. 2017, pp. 6817–6824.
- [16] C. Mavrogiannis and R. A. Knepper. “Decentralized Multi-Agent Navigation Planning with Braids”. In: *Proceedings of the International Workshop on the Algorithmic Foundations of Robotics (WAFR)*. 2016. [top 25%].
- [17] G. P. Kontoudis, M. V. Liarokapis, A. G. Zisimatos, C. Mavrogiannis, and K. J. Kyriakopoulos. “Open-source, anthropomorphic, underactuated robot hands with a selectively lockable differential mechanism: Towards affordable prostheses”. In: *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. 2015, pp. 5857–5862.
- [18] C. Mavrogiannis, M. V. Liarokapis, and K. J. Kyriakopoulos. “Quantifying Anthropomorphism of Robot Arms”. In: *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. 2015, pp. 4084–4089.
- [19] C. Mavrogiannis, C. P. Bechlioulis, M. V. Liarokapis, and K. J. Kyriakopoulos. “Task-Specific Grasp Selection for Underactuated Hands”. In: *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*. 2014, pp. 3676–3681.
- [20] A. G. Zisimatos, M. V. Liarokapis, C. Mavrogiannis, and K. J. Kyriakopoulos. “Open-source, affordable, modular, light-weight, underactuated robot hands”. In: *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. 2014, pp. 3207–3212.
- [21] C. Mavrogiannis, C. P. Bechlioulis, and K. J. Kyriakopoulos. “Sequential Improvement of Grasp based on Sensitivity Analysis”. In: *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*. 2013, pp. 1094–1099. [Acceptance 39%].

Peer-Reviewed Workshop Papers

- [22] N. Walker, C. Mavrogiannis, S. S. Srinivasa, and M. Cakmak. “Influencing Behavioral Attributions to Robot Motion During Task Execution”. In: *Towards Curious Robots: Modern Approaches for Intrinsically-Motivated Intelligent Behavior*. IEEE International Conference on Robotics and Automation (ICRA) Workshop. 2021.
- [23] G. Lee, C. Mavrogiannis, and S. S. Srinivasa. “Towards Effective Human-AI Teams: The Case of Collaborative Packing”. In: *Symposium on Artificial Intelligence for Human-Robot Interaction*. Association for the Advancement of Artificial Intelligence (AAAI) Fall Symposium Series. 2019.
- [24] C. Mavrogiannis. “Inferring and Expressing Intentions in Systems of Multiple Navigating Agents”. In: *Intelligent Cars in Digital Roads: Frontiers in Machine Intelligence*. BMW Summer School. 2018.
- [25] C. Mavrogiannis. “Online Multi-Agent Trajectory Generation for Adaptive Navigation Planning”. In: *Pioneers Workshop*. Robotics: Science and Systems Conference (R:SS). 2018. [Acceptance 38%].

- [26] C. Mavrogiannis and R. A. Knepper. “Decentralized Navigation Planning Using Multi-Agent Trajectory Prediction Governed by Hamiltonian Dynamics”. In: *Workshop on Multi-robot Perception-Driven Control and Planning*. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). 2018.
- [27] C. Mavrogiannis, V. Blukis, and R. A. Knepper. “Inferring Strategies of Avoidance: Towards Socially Competent Navigation in Human Environments”. In: *Workshop on Mathematical Models, Algorithms and Human-Robot Interaction*. Robotics: Science and Systems (R:SS). 2017.
- [28] C. Mavrogiannis and R. A. Knepper. “Designing Algorithms For Socially Competent Robotic Navigation”. In: *Proceedings of the Companion of the ACM/IEEE International Conference on Human-Robot Interaction (HRI)*. Pioneers Workshop. 2017, pp. 357–358. [Acceptance 31%].
- [29] C. Mavrogiannis and R. A. Knepper. “Decentralized Multi-Agent Navigation Planning with Braids”. In: *North East Robotics Colloquium (NERC)*. 2016.
- [30] C. Mavrogiannis and R. A. Knepper. “Interpretation and Communication of Pedestrian Intentions Using Braid Groups”. In: *Workshop on Intention Recognition in HRI*. ACM/IEEE International Conference on Human-Robot Interaction (HRI). 2016.
- [31] C. Mavrogiannis and R. A. Knepper. “Towards Socially Competent Navigation of Pedestrian Environments”. In: *Workshop on Social Trust in Autonomous Robots*. Robotics: Science and Systems (R:SS). 2016.
- [32] M. V. Liarokapis, A. G. Zisimatos, C. Mavrogiannis, and K. J. Kyriakopoulos. “OpenBionics: An Open-Source Initiative for the Creation of Affordable, Modular, Light-Weight, Underactuated Robot Hands and Prosthetic Devices”. In: *Arizona State University Rehabilitation Robotics Workshop*. 2014.

Theses

- [33] C. Mavrogiannis. “Motion Planning for Socially Competent Robot Navigation”. PhD thesis. Cornell University, 2019.
- [34] C. Mavrogiannis. “Grasp Synthesis Algorithms for Multifingered Robot Hands”. MA thesis. National Technical University of Athens, 2013.

Preprints / In Review

- [35] C. Mavrogiannis, K. Balasubramanian, S. Poddar, A. Gandra, and S. S. Srinivasa. “Topology-Informed Model Predictive Control for Anticipatory Collision Avoidance on a Ballbot”. 2021. arXiv: 2109.05084 [cs.R0]. [In review at: *IEEE Robotics and Automation Letters (RA-L)*].
- [36] C. Mavrogiannis, F. Baldini, A. Wang, D. Zhao, P. Trautman, A. Steinfeld, and J. Oh. *Core Challenges of Social Robot Navigation: A Survey*. Mar. 2021. arXiv: 2103.05668 [cs.R0]. [In review at: *ACM Transactions on Human-Robot Interaction*].
- [37] C. Mavrogiannis, J. DeCastro, and S. S. Srinivasa. “Analyzing Multiagent Interactions in Traffic Scenes via Topological Braids”. 2021. arXiv: 2109.07060 [cs.R0]. [In review at: *IEEE International Conference on Robotics and Automation (ICRA)*].

Course Notes

- [38] R. A. Knepper, C. Mavrogiannis, J. Prof, and W. Thomason. *CS 4750/5750: Foundations of Robotics*. <https://rpal.cs.cornell.edu/foundations/>. [Online; accessed 13-Sept-2021]. 2016.

Technical Reports

- [39] C. L. Bethel, M. Bruijnes, M. Jung, C. Mavrogiannis, S. Parsons, C. Pelachaud, R. Prada, L. Riek, S. Strohkorb Sebo, J. Shah, E. Short, and M. Vázquez. “Working Group on Social Cognition for Robots and Virtual Agents”. In: *Dagstuhl Reports*. Ed. by E. André, A. Paiva, J. Shah, and S. Šabanović. Dagstuhl Seminar 19411. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, 2020, pp. 21–36.

- [40] C. Mavrogiannis, J. A. DeCastro, and S. S. Srinivasa. "Implicit Multiagent Coordination at Unsignalized Intersections via Multimodal Inference Enabled by Topological Braids". In: *arXiv e-prints*, arXiv:2004.05205 (2020). eprint: 2004.05205 (cs.RO).
- [41] S. S. Srinivasa, P. Lancaster, J. Michalove, M. Schmittle, C. Summers, M. Rockett, J. R. Smith, S. Choudhury, C. Mavrogiannis, and F. Sadeghi. "MuSHR: A Low-Cost, Open-Source Robotic Racecar for Education and Research". In: *CoRR* abs/1908.08031 (2019).
- [42] G. P. Kontoudis, M. V. Liarokapis, A. G. Zisimatos, C. Mavrogiannis, and K. J. Kyriakopoulos. *How to Create Affordable, Anthropomorphic, Personalized, Light-Weight Prosthetic Hands*. Tech. rep. National Technical University of Athens, 2015.
- [43] A. G. Zisimatos, M. V. Liarokapis, C. Mavrogiannis, G. P. Kontoudis, and K. J. Kyriakopoulos. *How to Create Affordable, Modular, Light-Weight, Underactuated, Compliant Robot Hands*. Tech. rep. National Technical University of Athens, 2015.

SELECTED INVITED TALKS

- Robotics Seminar, Cornell University** Sept. 2021
 "Formalizing the Structure of Multiagent Domains for Autonomous Robot Navigation in Human Environments"
- Dan Koditschek's Kod*Lab, University of Pennsylvania** Virtual, Aug. 2021
 "Formalizing the Structure of Multiagent Domains for Autonomous Robot Navigation in Human Environments"
- Honda Research Institute USA** Virtual, Aug. 2021
 "UW-UCSC Capstone Demo for the Honda Curious Minded Machine Project: A Curious Robot Photographer"
- Talking Robotics** Virtual, May 2021
 "Leveraging Structure for Autonomous Robot Navigation in Multiagent Human Spaces"
- Marc Toussaint's Intelligent Systems Lab, TU Berlin** Virtual, April 2021
 "Leveraging Structure for Autonomous Robot Navigation in Multiagent Human Spaces"
- Workshop on ML for Mobile Robot Navigation in the Wild, AAAI Spring Symposium** Virtual, March 2021
 "Leveraging Structure for Autonomous Robot Navigation in Multiagent Human Spaces"
- Honda Research Institute USA** San Jose, CA, July 2019
 "Motion Planning for Socially Competent Robot Navigation"
- Robotics Seminar, Cornell University** Ithaca, NY, Nov. 2018
 "Multiagent Trajectory Prediction & Generation with Topol. Invariants Enforced by Hamiltonian Dynamics"
- Robotics Colloquium, University of Washington** Seattle, WA, Oct. 2018
 "Socially Competent Robot Navigation"
- GAIPS Seminar, Instituto Superior Técnico** Lisbon, Portugal, Nov. 2018
 "Socially Competent Robot Navigation"
- AI Seminar, Cornell University** Ithaca, NY, Sept. 2017
 "Socially Competent Navigation Planning by Deep Learning of Multi-Agent Path Topologies"
- Robotics Colloquium, Cornell University** Ithaca, NY, Dec. 2016
 "Decentralized Multi-Agent Navigation Planning with Braids"

TEACHING EXPERIENCE

- Instructor, CSE 478: Autonomous Robotics** Winter 2020
 Paul G. Allen School of Computer Science & Engineering, University of Washington
 Attendance: 36, Average rating: 4.13/5.00
- Teaching Assistant, CS 4750/5750: Foundations of Robotics** Fall 2016, Fall 2017
 Department of Computer Science, Cornell University

MENTORING

University of Washington

Allan Wang	PhD Robotics, CMU	2021-	coauthor [8]	
Junha Roh	PhD CS, UW	2020-	coauthor [10]	
Amal Nanavati	PhD CS, UW	2019-	coauthor [6]	
Nick Walker	PhD CS, UW	2019-	coauthor [7]	
Patrick Lancaster	PhD CS, UW	2019-	coauthor [41]	
Pratik Gyawali	MS ME, UW	2020-		
Sriyash Poddar	BS Intern, IIT	2021-	coauthor [35]	
Alex Lin	BS ACMS, UW	2020-		
Liyiming Ke	PhD CS, UW	2020	coauthor [9]	
Gilwoo Lee	PhD CS, UW	2019-2020	coauthor [23]	now: Zordi
Krishna Balasubramanian	MS ME, UW	2020-2021	coauthor [35]	now: Fox Robotics
Anush Gandra	MS ME, UW	2020-2021	coauthor [35]	now: May Mobility
Matthew Rockett	MS CS, UW	2019-2020	coauthor [41]	now: Zordi
Nikita Filippov	BS CS, UW	2020	now: Amazon	
Rishabh Madan	BS Intern, IIT	2019-2020	coauthor [10]	now: PhD Cornell

MuSHR Team, UW

Arnav Thareja	BS CS, UW	2021-		
Akkshaj Singh	BS ECE, UW	2020-		
Tudor Fanaru	BS CS, UW	2020-		
Sidharth Talia	BS Intern, GGSIPU	2020-		
Adit Jha	BS ECE, UW	2019-		
Alrick Dsouza	MS ME, UW	2020-2021		
Stefan Layanto	BS CS, UW	2019-2021		now: Lyft
Podshara Chanrungmaneeikul	BS CS, UW	2019-2021		now: MS Rice
Sean Chen	BS CS, UW	2019-2020		

Cornell University

Alena Hutchinson	MEng CS, Cornell	2018-2019	coauthor [11]	now: Klaviyo
John Macdonald	BS CS, Cornell	2018-2019	coauthor [11]	now: Skydio
Joshua Lee	MEng CS, Cornell	2018		now: Google

OpenBionics Initiative

George Kontoudis	BS ME, NTUA	2013-2015	coauthor [17]	now: PhD Virginia Tech
Agisilaos Zisimatos	BS ECE, NTUA	2013-2015	coauthor [20]	now: Libre Space Fnd.

SERVICE

Proposal Evaluation

NSF Proposal Evaluation Panel	2021
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Academic Event Organization

<i>Robot Curiosity in HRI</i>	2022
<i>ACM/IEEE International Conference on Human-Robot Interaction (HRI)</i>	Virtual
I am part of the organizing committee for this proposed HRI 2022 workshop together with Ali Ayub, Marcus Scheunemann, Jimin Rhim, Verena Hafner, Chrystopher Nehaniv, Daniel Polani, and Kerstin Dautenhahn.	
<i>Social Robot Navigation</i>	2021
<i>Robotics: Science and Systems (R:SS)</i>	Virtual
I co-organized this R:SS 2021 workshop together with Pete Trautman, Francesca Baldini, Marynel Vázquez, Leila Takayama, and Siddhartha Srinivasa.	
Attendance: 120	

Geometry and Topology in Robotics: Learning, Optimization, Planning, and Control 2021
Robotics: Science and Systems (R:SS) Virtual
I co-organized this R:SS 2021 workshop together with Noémie Jaquier, Claire Liang, Leonel Rozo, Vasileios Vasilopoulos, Hans-Peter Schröcker, Søren Hauberg, Subhrajit Bhattacharya, Florian Pokorny, Siddhartha S. Srinivasa, and Suvrit Sra.

Towards Curious Robots: Modern Approaches for Intrinsically-Motivated Intelligent Behavior 2021
IEEE International Conference on Robotics and Automation (ICRA) Virtual
I co-organized this ICRA 2021 workshop together with Heni Ben Amor, Soshi Iba, David Isele, and Joshua Tenenbaum.
Attendance: 105

NERC: Northeast Robotics Colloquium 2016
I helped organize this regional annual robotics conference as a student volunteer at Cornell University.

Program Committee Member

International Joint Conference on Artificial Intelligence (IJCAI) 2021
International Symposium on Multi-Robot and Multi-Agent Systems (MRS) 2019
Pioneers Workshop, Robotics: Science and Systems (RSS) 2019
SpLU & RoboNLP Workshop, Conf. of the NA Chapter of the Assoc. for Comp. Linguistics (NAACL) 2019

Member of Ph.D. Examination Committee

Gal Gorjup, University of Auckland, New Zealand 2021

Departmental Service

Reader, Ph.D. Admissions Committee 2020

Paul G. Allen School of Computer Science & Engineering, University of Washington

I was a volunteer reader of Ph.D. applications for the 2020 cycle, contributing more than 50 reviews.

Covid Safety Lead for Robotics Labs Sep. 2020 - April 2021

Paul G. Allen School of Computer Science & Engineering, University of Washington

I was a safety plan lead for the robotics labs of the Allen School. I co-developed and deployed a protocol that enabled robotics researchers to work safely and productively while respecting the Covid safety restrictions set in place by the University and local authorities. I delivered regularly Covid Safety training sessions to UW robotics researchers and monitored the application of the developed protocol.

Outreach

Mentor, Mad Hacks: Fury Code Vehicle Cybersecurity Hackathon 2021

National Security Innovation Network USA Virtual

I was a mentor on vehicle autonomy topics for more than 20 teams (website: <https://unum.nsin.us/fury-code>).

Demo Lead, Personal Robotics Lab Feb. 2020

Annual Meeting of the American Association for the Advancement of Science (AAAS) Seattle, WA

I led a team of 16 students and staff members from the Personal Robotics lab to present 4 interactive robotics demos to the general public at the Annual AAAS meeting.

Reviewer

International Journal of Robotics Research (IJRR)
Robotics: Science and Systems (R:SS)
IEEE Transactions on Robotics (T-RO)
IEEE Robotics and Automation Magazine (RAM)
Journal of Field Robotics (JFR)
Transactions on Human-Robot Interaction (THRI)
Frontiers in Robotics AI
Robotics and Autonomous Systems
IEEE Transactions on Human-Machine Systems
European Journal of Control
International Workshop on the Algorithmic Foundations of Robotics (WAFR)
ACM/IEEE International Conference on Human-Robot Interaction (HRI)
Conference on Robot Learning (CoRL)
ACM CHI Conference on Human Factors in Computing Systems
IEEE Robotics and Automation Letters (RA-L)
IEEE Transactions on Cognitive and Developmental Systems
IEEE International Conference on Robotics and Automation (ICRA)
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)
International Symposium on Experimental Robotics (ISER)
IEEE Mediterranean Conference on Control and Automation (MED)
IEEE/RAS International Conference on Humanoid Robots
IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob)
IEEE International Conference on Automation Science and Engineering (CASE)
ACM/SIGGRAPH Conference on Motion, Interaction and Games (MIG)
AAAI-HRI Fall Symposium Series: Artificial Intelligence for Human-Robot Interaction

LEADERSHIP

UW Team Lead, *Curious Minded Machine (CMM)*

2019-2021

CMM (website: <https://cmm.usa.honda-ri.com>) was a multi-year, multi-institution (MIT, UPenn, UCSC, UW) project, funded by the Honda Research Institute USA focusing on the development of robots that curiously learn and interact with humans and their environments. As a team lead for the University of Washington team, I was in close contact with the Honda Research Institute, collaborated closely with coPIs Prof. Maya Cakmak of UW and Prof. Leila Takayama of the University of California Santa Cruz, mentored Ph.D. students, and managed the delivery of research projects, demos, and project deliverables.

Research Mentor, *MuSHR: Multiagent System for nonHolonomic Racing*

2019-Present

MuSHR (website: <https://mushr.io>) is a research project on the development of an open-source, highly-performing autonomous robotic racecar. As a mentor, I have supervised more than 10 undergraduate and graduate students in carrying out quarter projects, and master's theses involving research, and engineering using the MuSHR racecar.

Co-founder & Partner, *Openbionics Initiative*

2013-2015

Openbionics (website: <https://openbionics.org>) is an open-source Initiative for the development of low-cost hardware, primarily targeting robotic manipulation applications, such as robotic grasping. As part of the founding team, I conducted research, mentoring and management of open-source projects related to the design of robotic and prosthetic hands.

SELECTED PRESS

IEEE Spectrum Video Friday Feature on our Chopsticks robot [9].	Oct. 16 2020
Communications of the ACM "Allen School Releases Robotic Race Car Platform to Drive Advances in AI Research, Education"	Aug. 27 2019
AI³ Theory, Practice, Business "A Low-Cost, Open-Source Robotic Racecar for Education and Research"	Aug. 16 2019
Wired "These Small Cars Can Help Drive the Autonomous Future"	Oct. 5 2019
Import AI "Is it a bird? Is it a plane? No, it's a MuSHR robocar!"	Aug. 26 2019
GeekWire "Robotic race car platform from Univ. of Washington designed to speed research around A.I."	Aug. 21 2019
Allen School News "Allen School releases MuSHR robotic race car platform to drive advances in AI research and education"	Aug. 21 2019
Cornell Chronicle "Humans must overcome distrust of robots"	Jan. 19 2017
ERT (Greece National Public TV) Interview about https://openbionics.org at a morning news show	Dec. 27 2016
3ders.org "OpenBionics adds NFC ready fingers to 3D printed hand prosthetics for 2015 Hackaday Prize finals"	Nov. 5 2015
blog.atmel.com "1:1 interview with Hackaday Prize finalist OpenBionics"	Nov. 3 2015
Hackaday.com "10 finalist projects prove we can save the world"	Oct. 5 2015
Hackaday.com "Hackaday Prize Semifinalist: OpenBionics Affordable Prosthetic Hands"	Sept. 2 2015
3dprint.com "OpenBionics Affordable Bionic Hand is Selected as a Hackaday Prize Semifinalist"	Sept. 23 2015
Hackaday.com "Hackaday Prize Entry: OpenBionics"	June 17 2015
GoodNews.gr "The most Affordable Prosthetic Hands will be made in Greece" [in Greek]	May 8 2015
RoboHub.com "OpenBionics prosthetic hands: Open source, affordable, lightweight, anthropomorphic"	April 9 2015
3ders.org "Greek OpenBionics unveils affordable, light-weight 3D printed bionic hands with 144 grasp movements"	March 18 2015
3DPrint.com "OpenBionics open source prosthetic hand can execute 144 different grasps & costs under 200"	March 18 2015

LANGUAGES

English	Full Professional Proficiency
Greek	Full Professional Proficiency (Native)
French	Minimum Professional Proficiency (DALF C2 2010)