

Donghyun Kim

ASSISTANT PROFESSOR · UPDATE: JULY 2026

University of Massachusetts Amherst, Amherst, MA, US

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Employment History

University of Massachusetts Amherst

ASSISTANT PROFESSOR @ CICS, ADJUNCT PROFESSOR @ MIE

Amherst, MA, US

Jan. 2021 - Present

Massachusetts Institute of Technology

POSTDOCTORAL ASSOCIATE. ADVISOR: PROF. SANGBAE KIM

Cambridge, MA, US

Jan. 2019 - Dec.2020

University of Texas at Austin

POSTDOCTORAL SCIENTIST. ADVISOR: PROF. LUIS SENTIS

Austin, TX, US

Jan. 2018 - Jan. 2019

Apptronik Systems

RESEARCHER

Austin, TX, US

Jun. 2017 - Aug. 2017

Education

University of Texas at Austin

PH.D IN MECHANICAL ENGINEERING, ADVISOR: PROF. LUIS SENTIS

Austin, TX, US

Sep. 2012 - Dec. 2017

SNU (Seoul National University)

M.S. IN MECHANICAL ENGINEERING, ADVISOR: PROF. FRANK C. PARK

Seoul, S.Korea

Mar. 2010 - Feb. 2012

KAIST(Korea Advanced Institute of Science and Technology)

B.S. IN MECHANICAL ENGINEERING, ADVISOR: PROF. SUKYUNG PARK

Daejeon, S.Korea

Mar. 2003 - Aug. 2007

External Grant

PRINCIPAL INVESTIGATOR

2026	CAREER: Leveraging Toes for Energy-Efficient and Agile Humanoid Robot Locomotion, Single PI, National Science Foundation (NSF)	\$750k
2025	Human-Centered Development of Guide-dog Robots, PI, National Institutes of Health (NIH)	\$324k (Total: \$624k)
2024	Rapid Perception-Based Terrain-Adaptive Agile Locomotion of a Humanoid Robot, PI, National Science Foundation (NSF)	\$520k (Total: \$924k)
2026	A User-Centered Framework for Task Instruction and Adaptation of Domestic Humanoid Robots, Single PI, Electronics and Telecommunications Research Institute (ETRI)	\$49k
2025	Vision Language Model of Guide-Dog Robots for Blind and Low Vision Individuals, Single PI, NVIDIA Academic Grant Program Award	RTX PRO 6000 GPU x4
2025	Door Opening of a Humanoid Robot using a Non-holonomic Mobile Base, Single PI, AlphaZ	\$50k

CO-PRINCIPAL INVESTIGATOR

2025	MATH-DT: Functional Surrogate Modeling for Human Agile Locomotion with Wearable Technology, Co-PI, National Science Foundation (NSF)	\$120k (Total: \$490k)
2024	SPARC: Swift Preparation for Adversary-Resilient Contact through Contrastive Neurosymbolic Adaptation, Co-PI, Army Research Laboratory (ARL)	\$300k (Total: \$700k)
2022	A Novel Framework for the Hardware and Control Co-design of Dynamic Humanoid Robots with Electric Motors, Co-PI, National Robotics Initiative 3.0 (NSF-NRI)	\$350k (Total: \$1.2M)
2022	Mobile Robot System to measure human kinematics in the real-world environments, Co-PI, Stanford University Restore Center Pilot Project Award	\$ 15k (Total: \$ 30k)

Internal Grant

2026	Designing A Robotic Guide Dog for Inclusive Tourism, Co-PI , Interdisciplinary Research Grants	<i>\$8k (Total: \$15k)</i>
2026	Development of Intelligent Agricultural Robots, PI , Hokkaido University - UMass Amherst Joint Research Seed Fund	<i>\$8k</i>
2024	A Novel Bio-Inspired Exfoliation Platform for Assistive Robots, Co-PI , UMass Center for Personalized Health Monitoring	<i>\$7k (Total: \$20k)</i>
2024	Human-centered robotics: Center for personalized health monitoring research thrust, Co-PI , UMass Amherst Institute for Applied Life Sciences	<i>Total: \$25k</i>
2022	Nurturing Robotics at UMass Amherst: Development of a Core Robotics Research Team, Co-PI , UMass Mutual Mentoring Award	<i>Total: \$5k</i>

Honors & Awards

2026	NSF CAREER Award , NSF
2026	Finalist - Best Paper Award in Field and Service Robotics , ICRA
2026	Systems Paper Honorable Mention , International Conference on Human-Robot Interaction (HRI)
2025	NIH Trailblazer Award , NIH
2025	NVIDIA Academic Grant Program Award , NVIDIA
2024	Best Paper Award , ACM Conference on Human Factors in Computing Systems (CHI)
2020	Best Paper Award , IEEE Transactions on Mechatronics
2023	Sloan Faculty Fellowship , Sloan Foundation
2024	Finalist - Best Paper Award , International Conference on Ubiquitous Robots (UR)
2022	Finalist - Outstanding Dynamics and Control Paper , ICRA
2024	Finalist - Best WBC Paper , IEEE Whole-body control TC
2016	Finalist - Best WBC Paper , IEEE Whole-body control TC
2016	Finalist - Best WBC Video Award , IEEE Whole-body control TC

Publications and Patent

JOURNALS

1. Zhu, Shifan, Zixun Xiong, and **Donghyun Kim**. CEAR: Comprehensive Event Camera Dataset for Rapid Perception of Agile Quadruped Robots. IEEE Robotics and Automation Letters, 2024.
2. Jacoff, Adam, Jeongmin Jeon, Oliver Huke, Dimitrios Kanoulas, Sehoon Ha, **Donghyun Kim**, and Hyungpil Moon. Taking the First Step Toward Autonomous Quadruped Robots: The Quadruped Robot Challenge at ICRA 2023 in London [Competitions]. IEEE Robotics & Automation Magazine, 2023.
3. Zhongyang Zhang, Kaidong Chai, Haowen Yu, Ramzi Majaj, Francesca Walsh, Edward Wang, Upal Mahbub, Hava Siegelmann, **Donghyun Kim**, and Tauhidur Rahman. Neuromorphic High-Frequency 3D Dancing Pose Estimation in Dynamic Environment. Neurocomputing, 2023.
4. Jaemin Lee, Junhyeok Ahn, **Donghyun Kim**, Seung Hyeon Bang, Luis Sentis. Online gain adaptation of whole-body control for legged robots with unknown disturbances. Frontiers in Robotics and AI, 2022.
5. **Donghyun Kim**, Steven Jens Jorgensen, Jaemin Lee, Junhyeok Ahn, Jiawen Luo, and Luis Sentis. Dynamic Locomotion For Passive-Ankle Biped Robots And Humanoids Using Whole-Body Locomotion Control. International Journal of Robotics Research, 2020.
6. **Donghyun Kim**, Junhyeok Ahn, Orion Campbell, Nicholas Paine, and Luis Sentis. Investigations of a Robotic Testbed with Viscoelastic Liquid Cooled Actuators. IEEE Transactions on Mechatronics, 2018. **Best Paper Award**
7. **Donghyun Kim**, Ye Zhao, Gray Thomas, Benito Fernandez, and Luis Sentis. Stabilizing series-elastic point-foot bipeds using whole-body operational space control. IEEE Transactions on Robotics, 32(6):1362–1379, 2016. **Finalist of Best WBC Paper Award**
8. **Donghyun Kim**, Cheongjae Jang, and Frank C Park. Kinematic feedback control laws for generating natural arm movements. Bioinspiration & Biomimetics, 9(1):016002, 2014.
9. Jianwen Luo, Yao Su, Lecheng Ruan, Ye Zhao, **Donghyun Kim**, Luis Sentis, and Chenglong Fu. Robust Bipedal Locomotion Based on a Hierarchical Control Structure. Robotica, 2019.

SELECTED CONFERENCE PUBLICATIONS

1. Shangqun Yu, Hochul Hwang, Trung Dang, Joydeep Biswas, Nicholas Giudice, Sunghoon Ivan Lee, and **Donghyun Kim**. Human-Centered Development of Guide Dog Robots: Quiet and Stable Locomotion Control. In IEEE International Conference on Robotics and Automation (ICRA), 2026.
2. Hochul Hwang, Soowan Yang, Nhat Hong Anh Nguyen, Parth Goel, Krisha Adhikari, Sunghoon Ivan Lee, Joydeep Biswas, Nicholas Giudice, and **Donghyun Kim**. GuideTWSI: A Diverse Tactile Walking Surface Indicator Dataset from Synthetic and Real-World Images for Blind and Low-Vision Navigation. In IEEE International Conference on Robotics and Automation (ICRA), 2026. **Best Paper Finalist**
3. Zihao Deng, Qianhuang Li, Peng Gao, Maggie Wigness, John G. Rogers III, **Donghyun Kim**, and Hao Zhang. Collaborative Planning with Concurrent Synchronization for Operationally Constrained UAV-UGV Teams. In IEEE International Conference on Robotics and Automation (ICRA), 2026.
4. Suyoung Kang, Rishav Dutta, Peng Gao, Maggie Wigness, John G. Rogers III, **Donghyun Kim**, Hao Zhang. Occlusion-Robust Relative Pose Estimation for Multi-Robot Systems via Geometric-Aware Diffusion Matching. In IEEE International Conference on Robotics and Automation (ICRA), 2026.
5. Hochul Hwang, Soowan Yang, Jahir Sadik Monon, Nicholas A Giudice, Sunghoon Ivan Lee, Joydeep Biswas, and **Donghyun Kim**. GuideNav: User-informed development of a vision-only robotic navigation assistant for blind travelers. In Proceedings of the 2026 ACM/IEEE International Conference on Human-Robot Interaction (HRI). ACM, 2026. **Best Paper Finalist**
6. Nisal Perera, Shangqun Yu, Daniel Marew, Mack Tang, Ken Suzuki, Aidan McCormack, Shifan Zhu, Yong-Jae Kim, and **Donghyun Kim**. StaccaToe: A Single-Leg Robot that Mimics the Human Leg and Toe. In IEEE-RAS International Conference on Intelligent Robots and System (IROS), 2024.
7. Hochul Hwang, Sunjae Kwon, Yekyung Kim, and **Donghyun Kim**. Is it safe to cross? Interpretable Risk Assessment with GPT-4V for Safety-Aware Street Crossing, In 2024 International Conference on Ubiquitous Robots (UR), 2024. **Best Paper Finalist**
8. Hochul Hwang, Hee-Tae Jung, Nicholas A Giudice, Joydeep Biswas, Sunghoon Ivan Lee, and **Donghyun Kim**. Towards Robotic Companions: Understanding Handler-Guide Dog Interactions for Informed Guide Dog Robot Design, In ACM Conference on Human Factors in Computing Systems (CHI), 2024. **Best Paper Award**
9. Shifan Zhu, Zhipeng Tang, Michael Yang, Erik Learned-Miller, and **Donghyun Kim**. Event Camera-based Visual Odometry for Dynamic Motion Tracking of a Legged Robot Using Adaptive Time Surface, In IEEE-RAS International Conference on Intelligent Robots and System (IROS), 2023.
10. Hochul Hwang, Tim Xia, Ibrahima Keita, Ken Suzuki, Joydeep Biswas, Sunghoon I. Lee, and **Donghyun Kim**. System configuration and navigation of a guide dog robot: Toward animal guide dog-level guiding work. In IEEE International Conference on Robotics and Automation (ICRA), 2023.
11. Se Hwan Jeon, Sangbae Kim, **Donghyun Kim**. Real-time Optimal Landing Control of the MIT Mini Cheetah, In IEEE-RAS International Conference on Robotics and Automation (ICRA), 2022. **Finalist of Outstanding Dynamics and Control Paper Award (ICRA), Finalist of Best WBC Paper Award (IEEE/WBC-TC)**
12. Gabriel B Margolis, Tao Chen, Kartik Paigwar, Xiang Fu, **Donghyun Kim**, Sang bae Kim, Pulkit Agrawal. Learning to Jump from Pixels. In Conference on Robot Learning (CoRL), 2021.
13. Md Mahmudur Rahman, Tauhidur Rahman, **Donghyun Kim**, Mohammad Arif Ul Alam. Knowledge Transfer across Imaging Modalities Via Simultaneous Learning of Adaptive Autoencoders for High-Fidelity Mobile Robot Vision, In IEEE-RAS International Conference on Intelligent Robots and System (IROS), 2021.
14. Lindsay Epstein, Andrew SaLoutos, **Donghyun Kim**, and Sangbae Kim. Bi-Modal Hemispherical Sensors for Dynamic Locomotion and Manipulation . In IEEE-RAS International Conference on Intelligent Robots and System (IROS), 2020.
15. Thomas Dudzik, Matthew Chignoli, Gerardo Bledt, Bryan Lim, Adam Miller, **Donghyun Kim**, and Sangbae Kim. Robust Autonomous Navigation of a Small-Scale Quadruped Robot in Real-World Environments. In IEEE-RAS International Conference on Intelligent Robots and System (IROS), 2020.
16. **Donghyun Kim**, Daniel Carballo, Jared Di Carlo, Benjamin Katz, Gerardo Bledt, Bryan Lim, and Sangbae Kim. Vision Aided Dynamic Exploration of Unstructured Terrain with a Small-Scale Quadruped Robot. In IEEE-RAS International Conference on Robotics and Automation (ICRA). IEEE, 2020.
17. Meng Yee Chuah, Lindsay Epstein, **Donghyun Kim**, Juan Romero, and Sangbae Kim. Bi-Modal Hemispherical Sensor: A Unifying Solution for Three Axis Force and Contact Angle Measurement. In IEEE-RAS International Conference on Intelligent Robots and System (IROS). IEEE, 2019.
18. **Donghyun Kim**, Jaemin Lee, Junhyeok Ahn, Orion Campbell, Hochul Hwang, and Luis Sentis. Computationally-Robust and Efficient Prioritized Whole-Body Controller with Contact Constraints. In IEEE-RAS International Conference on Intelligent Robots and System (IROS). IEEE, 2018.
19. Junhyeok Ahn, Orion Campbell, **Donghyun Kim**, and Luis Sentis. Fast Kinodynamic Bipedal Locomotion Planning with Moving Obstacles. In IEEE-RAS International Conference on Intelligent Robots and System (IROS). IEEE, 2018.

PEER-REVIEWED CONFERENCE PAPERS

1. Georges Chebly, Spencer Little, Nisal Perera, Aliya Abedeen, Ken Suzuki, and **Donghyun Kim**. Strong, Accurate, and Low-Cost Robot Manipulator, IEEE-RAS 24th International Conference on Humanoid Robots (Humanoids), 2025.

2. Daniel Marew, Nisal Perera, Shangqun Yu, Sarah Roelker, and **Donghyun Kim**. A Biomechanics-Inspired Approach to Soccer Kicking for Humanoid Robots, In 2024 IEEE-RAS 23rd International Conference on Humanoid Robots (Humanoids), 2024.
3. Shangqun Yu, Nisal Perera, Daniel Marew, and **Donghyun Kim**. Learning Generic and Dynamic Locomotion of Humanoids Across Discrete Terrains, In 2024 IEEE-RAS 23rd International Conference on Humanoid Robots (Humanoids), 2024.
4. Daniel Marew, Misha Lvovsky, Shangqun Yu, Shotaro Sessions, and **Donghyun Kim**. Integration of Riemannian Motion Policy with Whole-Body Control for Collision-Free Legged Locomotion, In 2023 IEEE-RAS 22nd International Conference on Humanoid Robots (Humanoids), 2023.
5. Neil Guan, Shangqun Yu, Shifan Zhu, and **Donghyun Kim**. Impedance Matching: Enabling an RL-Based Running Jump in a Quadruped Robot, In International Conference on Ubiquitous Robots (UR). IEEE, 2024.
6. Zuoxin Tang, **Donghyun Kim**, Sehoon Ha. Learning Agile Motor Skills on Quadrupedal Robots using Curriculum Learning, In International Conference on Robot Intelligence Technology and Applications (RITA), 2021.
7. M Chignoli, **Donghyun Kim**, E Stanger-Jones, and Sangbae Kim. The MIT Humanoid Robot: Design, Motion Planning, and Control For Acrobatic Behaviors. In IEEE-RAS International Conference on Humanoid Robots (Humanoid), 2021.
8. Junhyeok Ahn, **Donghyun Kim**, Seunghyeon Bang, Nick Paine, Luis Sentis. Control of A High Performance Bipedal Robot using Viscoelastic Liquid Cooled Actuators. In IEEE-RAS 19th International Conference on Humanoid Robots (Humanoids). IEEE, 2019.
9. **Donghyun Kim**, Steven Jorgensen, Hochul Hwang, and Luis Sentis. Control Scheme and Uncertainty Considerations for Dynamic Balancing of Passive-Ankled Biped and Full Humanoids. In 2018 IEEE-RAS 18th International Conference on Humanoid Robots (Humanoids). IEEE, 2018.
10. **Donghyun Kim**, Orion Campbell, Junhyeok Ahn, Nicholas Paine, and Luis Sentis. Investigations of Viscoelastic Liquid Cooled Actuators Applied for Dynamic Motion Control of Legged Systems. In 2017 IEEE-RAS 17th International Conference on Humanoid Robots (Humanoids). IEEE, 2017.
11. Jianwen Luo, Ye Zhao, **Donghyun Kim**, Oussama Khatib, Luis Sentis. Locomotion Control of Three Dimensional Passive-Foot Biped Robot Based on Whole Body Operational Space Framework. 2017 IEEE International Conference on Robotics and Biomimetics (ROBIO), IEEE, 2017.
12. **Donghyun Kim**, Steven Jens Jorgensen, Peter Stone, and Luis Sentis. Dynamic behaviors on the NAO robot with closed-loop whole body operational space control. In 2016 IEEE-RAS 16th International Conference on Humanoid Robots (Humanoids), pages 1121–1128. IEEE, 2016.
13. **Donghyun Kim**, Gray Thomas, and Luis Sentis. A method for dynamically balancing a point foot robot. In 2015 IEEE-RAS 15th International Conference on Humanoid Robots (Humanoids), pages 901–907. IEEE, 2015.
14. Ye Zhao, **Donghyun Kim**, Gray Thomas, and Luis Sentis. "Hybrid multi-contact dynamics for wedge jumping locomotion behaviors." In Proceedings of the 18th International Conference on Hybrid Systems: Computation and Control, pp. 293-294. ACM, 2015.
15. **Donghyun Kim**, Gray Thomas, and Luis Sentis. Continuous Cyclic Stepping on 3D Point-Foot Biped Robots Via Constant Time to Velocity Reversal. In The 13th International Conference on Control, Automation, Robotics and Vision, Singapore, December 2014.
16. **Donghyun Kim**, Ye Zhao, Gray Thomas, and Luis Sentis. Empirical Modifications to a Phase Space Planner Which Compensates for Low Stiffness Actuation in a Planar, Point-Foot, Biped Robot. In the ASME 2014 Dynamic Systems and Control Conference, page V001T11A001. ASME, 2014.
17. Y Zhao, **Donghyun Kim**, B Fernandez, and L Sentis. Phase space planning and robust control for data-driven locomotion behaviors. In 2013 13th IEEE-RAS International Conference on Humanoid Robots (Humanoids), pages 80–87. IEEE, 2013.

PATENT

1. Sangbae Kim, Meng Yee Chuah, Lindsay Epstein, **Donghyun Kim**, and Juan Romero. Sensing system. U.S. Patent Application 16/409,537, filed September 24, 2020.

WORKSHOP PAPERS

1. Tang, Zhipeng, Shifan Zhu, Zezhou Cheng, **Donghyun Kim**, and Erik Learned-Miller. E-BARF: Bundle adjusting neural radiance fields from a moving event camera, In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, pp. 5052-5061. 2025.
2. Hochul Hwang, Ken Suzuki, Nicholas A Giudice, Joydeep Biswas, Sunghoon Ivan Lee, and **Donghyun Kim**. Lessons Learned from Developing a Human-Centered Guide Dog Robot for Mobility Assistance, ASSETS Workshop on the Future of Urban Accessibility, 2024.
3. Shifan Zhu, Nisal Perera, Shangqun Yu, Hochul Hwang, and **Donghyun Kim**. Dynamic Object Avoidance using Event-Data for a Quadruped Robot. IROS Workshop on Integrated Perception, Planning, and Control for Physically and Contextually-Aware Robot Autonomy, 2023.
4. **Donghyun Kim**, Ye Zhao, Gray Thomas and Luis Sentis. Whole-Body Operational Space Control: Undirectional Walking of a Point-Foot Series Elastic Biped. Dynamic Walking [Oral Presentation], 2015.
5. **Donghyun Kim**, Ye Zhao, Gray Thomas and Luis Sentis. Towards Agility in Compliant Point-Foot Biped. Dynamic Walking, 2014.

PREPRINTS

1. **Donghyun Kim**, Jared Di Carlo, Benjamin Katz, Gerardo Bledt, and Sangbae Kim. Highly Dynamic Quadruped Locomotion via Whole-Body Impulse Control and Model Predictive Control. arXiv.org, September 2019.

2. **Donghyun Kim**, Jaemin Lee, and Luis Sentis. Robust Dynamic Locomotion via Reinforcement Learning and Novel Whole Body Controller. arXiv.org, August 2017.
3. Steven Jens Jorgensen, Orion Campbell, Travis Llado, **Donghyun Kim**, Junhyeok Ahn, and Luis Sentis. Exploring Model Predictive Control to Generate Optimal Control Policies for HRI Dynamical Systems. arXiv.org, January 2017.
4. **Donghyun Kim**, Ye Zhao, Gray Thomas, and Luis Sentis. Assessing Whole-Body Operational Space Control in a Point-Foot Series Elastic Biped: Balance on Split Terrain and Undirected Walking. arXiv.org, page 2855, January 2015.

Student Awards and Mentorship Outcomes

2025	Honors Research/Creative Activity Fellowship , Shiven Patel, Undergraduate
2025	Humanoids 2025 IEEE/RAS Travel Support , Nisal Perera, Ph.D
2025	Proposal Writing Fellowship (UMass Amherst, CICS) , Daniel Marew, Ph.D
2025	Robert and Deanna Hagerty Robotics Scholarship , Anh Nguyen, Undergraduate
2025	Robert and Deanna Hagerty Robotics Scholarship , Shifan Zhu, Ph.D
2024	1st Place at TAPIA Poster Competition , Shiven Patel, Undergraduate
2024	UMass Amherst Rising Researcher , Shiven Patel, Undergraduates
2024	Robert and Deanna Hagerty Robotics Scholarship , Hochul Hwang, Ph.D
2022	Edward Riseman and Allen Hanson Scholarship , Shifan Zhu, Ph.D
2020	Spaulding-Smith Fellowship , Daniel Marew, Ph.D

Professional Activities

EDITORIAL ROLES

Associate Editor	IEEE Transactions on Robotics (TRO), 2026–present
Associate Editor	IEEE/ASME Transactions on Mechatronics (TMech), 2025–present
Editorial Board/ Associate Editor	• IEEE International Conference on Robotics and Automation (ICRA). 2022, 2023, 2024, 2025. • IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). 2022, 2023, 2024, 2025. • Conference on Robot Learning (CoRL), Area Chair. (2025) • IEEE-RAS International Conference on Humanoid Robots (Humanoid). 2024, 2025. • International Conference on Ubiquitous Robots (UR). 2023, 2024, 2025. • International Conference on Robot Intelligence Technology and Applications (RiTA). 2021, 2024

CONFERENCE ORGANIZATION AND COMMITTEES

Chair	IEEE Whole-Body Control Technical Committee, 2025–present
Organizing Committee	Quadruped Robot Challenges, IEEE ICRA 2023 (London), 2024 (Yokohama)
Co-Organizer	Perceptive Locomotion Workshop, IEEE/RSJ International Conference on Intelligent Robots and Systems 2022
Organizing Committee	Northeast Robotics Colloquium (NERC), 2024

REVIEWING & PANELS

Journal Reviewer	Nature, Science Robotics, IJRR, T-RO, RA-L, T-MECH
Conference Reviewer	ICRA, IROS, RSS, CoRL, etc.
Panelist	• NSF: Foundational Research in Robotics (FRR) • NSF: Human-Centered Computing (HCC) • NSF: Smart Health & Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH)

DEPARTMENTAL AND UNIVERSITY SERVICE

Admission Committee	Grudate Admission Committee (AY2021-2022, AY2022-2023, AY2023-2024, and AY2024-2025)
Search Committee	• AY2021-2022: Member, Senior Robotics Faculty Search. Recruited Prof. Scott Nikeum and Prof. Hao Zhang. • AY2023-2024: Member, Joint COE/CICS Senior Robotics Faculty Search. • AY2024-2025: Member, Joint COE/CICS Senior Robotics Faculty Search. Recruited Prof. Holly Yanco
Portfolio Committee	Member, Graduate Portfolio Committee (AY2022, AY2023, AY2024, and AY2025)
Club Advisor	Faculty Advisor for the Robotics Club at UMass Amherst

OUTREACH

Girls Inc. Eureka!	Conducted outreach workshops for underrepresented K-12 female students, Summer 2022.
Massenberg	Delivered robotics lectures for the Massenberg STEM Symposium, Summer 2024 and Summer 2025.
PLAIRS	Founded Pioneer Leaders in AI and Robotics (PLAIRS), a robotics research program for high school students, Fall 2025.
Founders Day	Presented humanoid and quadruped robots for public outreach events, 2025 and 2026.
Lab Tours	Hosted robot demonstration sessions for visitors at UMass Amherst (approximately 10 sessions annually).

Advising and Thesis Committees

PHD SUPERVISOR: COMPLETED

Daniel Marew Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Summer 2021– Spring 2026

PHD SUPERVISOR: CURRENT

Hochul Hwang	Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Summer 2021–present
Shifan Zhu	Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Fall 2021–present
Nisal Perera	Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Fall 2022–present
Shangqun Yu	Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Fall 2022–present
Qianhuang Li	Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Fall 2024–present
Jahir Monon	Manning College of Information and Computer Sciences, University of Massachusetts Amherst, Fall 2025–present

GRADUATE STUDENT RESEARCH ADVISING

Yash Pathak	Independent Study, M.S., Manning College of Information and Computer Sciences, UMass Amherst, Spring 2026
Hang Yang	Independent Study, Ph.D., Mathematics & Statistics, UMass Amherst, Fall 2025 – Spring 2026
Loick Marion	Independent Study, M.S., Manning College of Information and Computer Sciences, UMass Amherst, Fall 2025
Krishna Adhikari	Independent Study, M.S., Electrical and Computer Engineering, UMass Amherst, Fall 2024
Anavi Dhawat	Independent Study, M.S., Manning College of Information and Computer Sciences, UMass Amherst, Fall 2024
Zixun Xiong	Independent Study, M.S., Manning College of Information and Computer Sciences, UMass Amherst, Fall 2023
Linnet Preshma Pereira	Independent Study, M.S., Manning College of Information and Computer Sciences, UMass Amherst, Fall 2022
Neil Guan	Independent Study, M.S., Electrical and Computer Engineering, UMass Amherst, Fall 2022

UNDERGRADUATE RESEARCH ADVISING

Jonathan Coombs	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2025–Spring 2026
Alex Tong	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2025–Spring 2026
Shiven Patel	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2025–Spring 2026
Steven Gao	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Spring 2025–Fall 2025
Nehal Garg	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2025
Shlok Raval	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2025
Aliya Abedeen	Independent Study, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2025
Georges Chebly	Honors Thesis, Mechanical Engineering, UMass Amherst, Fall 2024–Spring 2025
Ibrahima Keita	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2023 – Spring 2024
Krishna Adhikari	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2023–Spring 2024
Aryan Dang	Independent Study, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2023
Pratim Sadhu	Independent Study, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2023
Matthew Hersey	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2022–Spring 2023
Shotaro Sessions	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2022
Michael Lvovsky	Independent Study, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2021–Spring 2022
Rohan Bapat	Honors Thesis, Manning College of Information and Computer Sciences, UMass Amherst, Fall 2021–Spring 2022

Teaching

Advanced Robot Dynamics and Control

INSTRUCTOR

University of Massachusetts Amherst

Fall 2023, Fall 2024

Make: A Hands-on introduction to physical computing

INSTRUCTOR

University of Massachusetts Amherst

Spring 2022, Spring 2023, Spring 2026

Introduction to Robotics

INSTRUCTOR

University of Massachusetts Amherst

Fall 2021, 2022, Spring & Fall 2025

Bio-inspired Robotics

LECTURE ASSISTANT

MIT

Sep. - Dec. 2019/2020

Selected Media Coverage

2024 **A New Dog Learns Old Tricks**, [Magazine Online Link]

Significant Bits
Magazine

2021 **MIT is Building a Dynamic, Acrobatic Humanoid Robot**, [Article Link]

IEEE spectrum

2019 **These dog-like robots do backflips and play soccer. Yes, they're adorable**, [Article Link]

CNN Business

2019 **Highly Dynamic Quadruped Locomotion**, [Page Link]

IEEE spectrum

2019 **Dynamic Locomotion of DRACO Bipedal Robot**, [Page Link]

IEEE spectrum

2018 **Biped Robot Balancing**, [Link]

UT Austin News

2018 **Aspiring engineers constructing robots for the present and future**, [Video Link]

KVUE News

2018 **Mercury robot experiment video**, [Link]

IEEE spectrum

2015 **Presentation in Dynamic Walking 2015**, [Page Link]

IEEE spectrum

2015 **Point-foot biped robot balancing**, [Page Link]

IEEE spectrum

2014 **2D point-foot biped robot walking**, [Page Link]

IEEE spectrum