

Zackory Erickson

zackory@cmu.edu
zackory.com

Carnegie Mellon University
Robotics Institute
5000 Forbes Avenue
Pittsburgh, PA 15213

Current Positions

Assistant Professor, Carnegie Mellon University, Robotics Institute
Courtesy appointment: Biomedical Engineering
Sept 2021–present

Education

Ph.D., Robotics 2016–2021
Georgia Institute of Technology
Advisor: Charles C. Kemp

M.S., Computer Science 2020
Georgia Institute of Technology
Advisor: Charles C. Kemp

B.S., Computer Science, Mathematics (double major) 2012–2016
University of Wisconsin–La Crosse

Honors and Awards

OSCAR Scholar, University of Pittsburgh, Alzheimer’s Disease Research Center (ADRC) 2024

Best Paper Award, ACM/IEEE International Conference on Human-Robot Interaction (HRI) 2024
“Independence in the Home: A Wearable Interface for a Person with Quadriplegia to Teleoperate a Mobile Manipulator”

Best Poster Award, CMU Mechanical Engineering Research Symposium 2024
“Extended Kalman Filter for Real-Time State Estimation of Cloth for Robot Manipulation”

NVIDIA Academic Hardware Grant 2022
“Adapting to Distribution Shift in Deformable Manipulation with Assistive Robots”

NVIDIA Fellowship Finalist 2020

Best Student Paper Award, IEEE International Conference on Rehabilitation Robotics (ICORR) 2019
“Multidimensional Capacitive Sensing for Robot-Assisted Dressing and Bathing”

Best Paper Award in Service Robotics Finalist, IEEE ICRA 2019
“Classification of Household Materials via Spectroscopy”

President’s Fellowship, Georgia Tech 2016–2020

4th Heidelberg Laureate Forum 2016

Honorable Mention, NSF GRFP 2016

Strzelczyk Award 2016
Awarded to the top graduating senior in the College of Science and Health
for academic achievement and service to the campus and community.

MIT CONVERGE 2015
One of 18 prospective PhD students in the nation invited to tour MIT.

Berkeley Engineering Preview Days	2015
One of 14 prospective PhD students nationwide invited to tour UC Berkeley.	
Grace Olwell Memorial Endowment Fund Scholarship	2015
Xcel Energy Scholarship	2015
John and Lois Storlie Scholarship in Computer Science	2014
Undergraduate Research Grant, UW-La Crosse	2013
Scottish Rite Abbott Scholarship	2013
Dean's List, UW-La Crosse	8 semesters

Mentoring

PhD Students

Junxiang (Jim) Wang , CMU, RI	2024–
Zheyuan Hu , CMU, RI (co-advised with Aviral Kumar)	2024–
Hongyi Chen , CMU, RI (co-advised with Jeffrey Ichnowski)	2024–
Kavya Puthuveetil , CMU, RI	2022–
Zulekha Karachiwalla , CMU, RI (co-advised with Henny Admoni)	2022–
Je-Han Yang , CMU, BME (co-advised with Douglas Weber)	2022–
Yufei Wang , CMU, RI (co-advised with David Held)	2021–
Akhil Padmanabha , CMU, RI (co-advised with Carmel Majidi)	2021–

M.S. Students

Alexis Hao , CMU, RI	2024–
Tiancheng (Tony) Wu , CMU, RI	2024–
Mino Nakura , CMU, RI	2024–
Pratik Bhowal , CMU, RI	2024–
Divyam Goel , CMU, RI	2024–
Xinwen Xu , CMU, MechE	2024–
Aditi Guruprasad , University of Pittsburgh, Bioengineering	2024–
Jing Gao , CMU, RI	2024–
Zoe LaLena , CMU, RI	2024–
Yatharth Ahuja , CMU, RI	2023–2024
Yiran Tao , CMU, RI	2023–
Michaela Tecson , CMU, RI	2023–
Tariq Hussain , CMU, MechE	2023–
Yexin Hu , CMU, CEE	2023–
Abhishek Tandon , CMU, RI	2023–2024
Current: Adobe	

Anujraaj (Argo) Goyal , CMU, RI Current: Snapchat	2023–2024
Zhanyi Sun , CMU, RI Current: PhD Student at Stanford	2023–2024
MRSD Project: Operating room logistics , CMU, RI Students: Gaurav Sethia, Jinkai Qiu, Roman Kaufman, Tanmay Agarwal, Yungjun Kim, Siddharth Ghodasara	2023–
Sankalp Chopkar , CMU, RI	2022–2024
Atharva Kusalkar , CMU, RI	2022–2024
Saurav Kambil , CMU, MechE	2022–2024
Zilin Zhang , CMU, RI	2022–2024
MRSD Project: Auxilio , CMU, RI Students: Shaolin Kataria, Shivam Tripathy, Praveen Venkatesh, Abhinav Gupta, Atharva Pusalkar	2022–2023
Fukang Liu , CMU, MechE Current: PhD Student at Georgia Tech	2021–2023
Vaidehi Patil , CMU, RI	2021–2022
MRSD Project: TouRI , CMU, RI Students: Shivani Sivakumar, Jashkumar Diyora, Shruti Gangopadhyay, Prakhar Pradeep, Jigarkumar Patel	2021–2022
Pratyusha Karnati , Georgia Tech, CS Current: Google X Robotics	2020–2021
Yijun (Esther) Gu , Georgia Tech, CS Current: PhD Student at Imperial College London	2019–2021

Undergraduate Students

Divya Gupta , CMU, CS	2024–
Vivianna Lieu , CMU, CS	2024–
Annika Srinivasan , UIUC, MechE	2024–
Cindy Sun , CMU, MechE	2024–
Victoria de Leon , ITESM, Robotics	2024–
Tanisha Mehta , CMU, ECE, CS	2024–
Catherine Li , CMU, CS	2024–
Navin Sriram , Indian Institute of Technology Madras, CS	2024–
Sreyas Venkataraman , Indian Institute of Technology, Kharagpur, CS	2024–
Ziyu Wang , Tsinghua University, IIIS	2024–
Bharath Hegde , BITS Pilani University, CS	2024–
Zhenghao (Cary) Jin , CMU, ECE	2024–
Glenda Tan , CMU, CS	2024–
Jessica Han , CMU, CS	2024–
Ryan Ding , CMU, CS	2024–

Pranavi Kondapalli , CMU, CS	2024–
Maxwell Soh , CMU, CS	2023–
Ellen Lee , CMU, CS	2023–
Weikang Wan , Peking University, CS	2023–2024
Chen Chen , Tsinghua University, CS	2023–
Janavi Gupta , CMU, CS	2023–
Sumayya Syeda , CMU, CIT	2023–
Preethi Krishnamoorthy , CMU, CS	2023–
Jessie Yuan , CMU, CS	2023–
Madeliene Brutin , CMU, CS	2023–2024
Kendra Givens , Middle Tennessee State University (NSF REU, RISS), CS	2023–2024
Alexandra Gillespie , Colby College (NSF REU, RISS), CS	2023–2024
Yikang (Bruce) Cheng , CMU, CS	2022–2023
Jacob Delgado-López , University of Puerto Rico (NSF REU, RISS), CS	2022
Wesley Lewis , University of Virginia (NSF REU, RISS), CS	2022–2024
Allen Zheng , CMU, CS	2022–2024
Qin (Alicia) Wang , CMU, CS	2022–2023
Daphne Han , CMU, CB	2022
Alexandra (Sasha) Wald , CMU, CS	2021–2024
Kavya Puthuveetil , Virginia Commonwealth University (NSF REU), BME	2021–2022
Samantha Mutiti , Georgia Tech, BME	2021
Holden Schaffer , Georgia Tech, CS	2020–2021
Siyang (Sylvia) Li , Georgia Tech, CS	2018–2019
Jiaqi (Julia) Chen , Georgia Tech, CS Current: PhD Student at ETH Zurich	2018
Katelyn Sosnowski , University of Arizona (NSF REU), BME Current: BME PhD Student at University of Arizona	2018
Mallak Taleb , University of Michigan (NSF REU), BME	2018
Bharat Srirangam , Georgia Tech, CS Current: Woot, Inc.	2018–2020
Eliot Xing , Georgia Tech, CE	2017–2022
Vamsee Gangaram , Georgia Tech, CS Current: Microsoft	2017–2020
Jong Hwa (Austin) Jang , Georgia Tech, CS	2017–2018
Maggie Collier , University of Alabama at Birmingham (NSF REU), BME Current: Robotics PhD student at CMU, NDSEG fellow	2017
Nathan Luskey , Georgia Tech, BME Current: MSCS student at CMU	2017–2018

Teaching

16-467: Introduction to Human-Robot Interaction, CMU	Spring 2025
16-762: Mobile Manipulation, CMU	Spring 2024
16-741: Mechanics of Manipulation, CMU	Fall 2022–2024
16-887: Robotic Caregivers and Intelligent Physical Collaboration, CMU	Spring 2022–2023
Robotic Caregivers (BMED 4833/8813), Co-instructor, Georgia Tech	Spring 2021
Robotic Caregivers (BMED 4803/8813), Co-developer and instructor, Georgia Tech	Spring 2020

Invited Talks

<i>Robot Learning and Wearable Interfaces in Pursuit of Robotic Caregivers</i> University of Texas at Austin	2024
<i>Robot Learning, Wearable Sensing, and Teleoperation in Pursuit of Robotic Caregivers</i> 16-761: Mobile Robotics, CMU	2024
CMU RI Seminar	2023
RISS RoboLaunch	2023
Northeastern University	2023
University of Utah	2023
University of Illinois Urbana-Champaign	2023
<i>My Journey to Professor</i> Robotics Institute Summer Scholars Seminar, CMU	2023
<i>Robotics and Artificial Intelligence in Healthcare and Opportunities for Innovation</i> Clinical Impact Symposia, BrightSpring Health Services	2023
<i>Capacitive Servoing and Spectroscopy for Physically Assistive Robotics</i> 16-722: Sensing and Sensors, CMU	2022
<i>Haptic Perspective-taking from Vision and Force</i> CMU RI Seminar	2022
<i>Capacitive Proximity Servoing for Physically Assistive Robotics</i> Close Proximity Human-Robot Collaboration, RSS	2022
<i>Robotic Caregiving and Human Interaction</i> 24-675: Humanoid Robotics and Cognition, CMU	2022
16-311: Introduction to Robotics, CMU	2022
05-899: Special Topics in HCI: Accessibility, CMU	2021
<i>Capacitive Servoing for Physically Assistive Robotics</i> 4th Workshop on Proximity Perception in Robotics, IROS	2021
<i>Robotic Caregivers—Sensing, Simulation, and Physical Human-Robot Interaction</i> Carnegie Mellon University	2021
University of Pennsylvania	2021
<i>Physics-based Cloth Simulation and Learning Towards Robotic Caregiving</i> Workshop on Representing and Manipulating Deformable Objects, ICRA	2021
<i>Robotic Caregivers—Recent Advances in Physics-based Simulation</i> Medical Robotics Club, Georgia Tech	2021
<i>Robot-Assisted Dressing</i> Workshop on Smart and Robotic Homes, RESNA	2018

Multimodal Anomaly Detection

Mathematics Colloquium, UW-La Crosse

2015

Academic Service

Area Chair — Robotics: Science and Systems (RSS) 2025

Workshop Organizer — HRI, Enhancing Independence with Physical Caregiving Robots 2025

Workshop Organizer — RSS, Learning for Assistive Robotics 2024

Faculty Senate — CMU, representing the Robotics Institute 2024–

Advisory board — University of Wisconsin-La Crosse, Computer Science Department 2024–

Panelist — HRI, Workshop on HRI for Aging in Place 2024

Workshop Organizer — ICRA, Exploring Role Allocation in Human-Robot Co-Manipulation 2024

Associate Editor — IEEE Robotics and Automation Letters (RA-L) 2023–
Manipulation and Grasping

NSF AI-CARING Arena Lead — NSF AI Institute 2023–
Arena on AI for Interactive Coaches and Services

Virtual Experience Chair — Conference on Robot Learning (CoRL) 2023

Seminar and Panel Organizer, Life as a Professor, CMU 2023–
Semesterly seminar where a panel of CMU faculty discuss their perspectives on becoming and being a professor for graduate students interested in the academic career path

Special Session Organizer — RO-MAN, Special Session on Human-Agent/Robot Interaction in Health-care and Medicine 2023

Workshop Organizer — ICRA, Emerging paradigms for assistive robotic manipulation: from research labs to the real world 2023

PhD Admissions Committee — CMU, Robotics Institute 2022–

Chair — IROS 2022 session on Art and Entertainment and Manipulation 2022

Co-Chair — ICRA 2022 session on Physical HRI 2022

Area Chair — Conference on Robot Learning (CoRL) 2022–2023

Workshop Organizer — IROS, 5th Workshop on Proximity Perception - Towards Next-Generation Multi-Modal Sensing in Soft Structures 2022

Carnegie Mellon University

PhD Admissions Committee Co-Chair 2024–

PhD Admissions Committee 2023–

Organized Seminar Series, Life as a Professor 2023–

Associate Editor

IEEE Conference on Robot and Human Interactive Communication (RO-MAN) 2021, 2022

Reviewer

T-RO, ICRA, IROS, RA-L, CoRL, Humanoids, HRI, Sensors, RO-MAN, Science Robotics, RSS Pioneers

Workshop Organizer — ICRA, Learning for Caregiving Robots 2021

Seminar Organizer, Georgia Tech

Life as a Professor: Student Advising and Recruiting 2020

Life as a Professor: Funding 101 2019

Life as a Professor: Starting a Start-Up	2018
Panelist	
Graduate Intro to Robotics Research, Georgia Tech	2018
Summer Undergraduate Research Experience (SURE) Program, Georgia Tech	2017–2019
RoboGrads (robotics graduate student organization), Georgia Tech	
Vice President for Robotics PhD	2019–2020
President	2018–2019
Student Thesis Committees	
Caleb Escobedo, CU Boulder, PhD	2024–
Christian Berger, CMU, MSR	2024
Christopher Chang, CMU, MSR	2024
Zhiyang (Jerry) He, UC Berkeley, PhD	2023–
Student Qualifying Exam Committees	
Maggie Collier, CMU, PhD	2024
Ruixuan Liu, CMU, PhD	2023

Outreach

AI Scholars , Co-organizer, CMU	2023–
Each summer, AIS provides 30+ rising high school seniors who have historically been excluded from STEM fields the opportunity to explore artificial intelligence through 4 weeks of courses and hands-on projects with Carnegie Mellon faculty, staff, and researchers.	
AI4ALL , Co-organizer, CMU	2022
RoboGrads , Vice President of Outreach, Georgia Tech	2017–2018
Organized K-12 outreach events for over 30 robotics labs at Georgia Tech	
Biomedical Robotics Club , Mentor, Georgia Tech	2016–2019
Mentoring over 50 undergraduate students in how to research and build assistive devices and robots for people with impairments.	
FIRST Lego League , Judge	2015–2021
CS Outreach & Diversity Club , UW–La Crosse	2015–2016
Organizing CS and robotics events for K-12 students.	
FIRST Robotics , Mentor, Central High School and Holmen High School	2012–2016

Peer-Reviewed Publications (Conferences and Journals)

- [1] **High-density Electromyography for Effective Gesture-based Control of Physically Assistive Mobile Manipulators**
npj Robotics, 2025
 Jehan Yang, Kent Shibata, Douglas Weber, Zackory Erickson
- [2] **LAMS: LLM-Driven Automatic Mode Switching for Assistive Teleoperation**
ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2025
 Yiran Tao*, Jehan Yang*, Dan Ding, Zackory Erickson

- [3] **EMGBench: Benchmarking Out-of-Distribution Generalization and Adaptation for Electromyography**
Advances in neural information processing systems (NeurIPS), 2024
 Jehan Yang, Maxwell Soh, Viviana Lieu, Douglas J Weber, Zackory Erickson
- [4] **VoicePilot: Harnessing LLMs as Speech Interfaces for Physically Assistive Robots**
ACM Symposium on User Interface Software and Technology (UIST), 2024
 Akhil Padmanabha*, Jessie Yuan*, Janavi Gupta, Zulekha Karachiwalla, Carmel Majidi, Henny Admoni, Zackory Erickson
- [5] **DiffTORI: Differentiable Trajectory Optimization for Deep Reinforcement and Imitation Learning**
Advances in neural information processing systems (NeurIPS), 2024 (**Spotlight Presentation**)
 Weikang Wan*, Ziyu Wang*, Yufei Wang*, Zackory Erickson, David Held
- [6] **RoboGen: Towards Unleashing Infinite Data for Automated Robot Learning via Generative Simulation**
International Conference on Machine Learning (ICML), 2024
 Yufei Wang*, Zhou Xian*, Feng Chen*, Tsun-Hsuan Wang, Yian Wang, Katerina Fragkiadaki, Zackory Erickson, David Held, Chuang Gan
- [7] **RL-VLM-F: Reinforcement Learning from Vision Language Foundation Model Feedback**
International Conference on Machine Learning (ICML), 2024
 Yufei Wang*, Zhanyi Sun*, Jesse Zhang, Zhou Xian, Erdem Bıyık, David Held†, Zackory Erickson†
- [8] **Do Mistakes Matter? Comparing Trust Responses of Different Age Groups to Errors Made by Physically Assistive Robots**
IEEE International Conference on Robot and Human Interactive Communication (ROMAN), 2024
 Sasha Wald*, Kavya Puthuveetil*, Zackory Erickson
- [9] **Unfolding the literature: A review of robotic cloth manipulation**
Annual Review of Control, Robotics, and Autonomous Systems, 2024
 Alberta Longhini, Yufei Wang, Irene Garcia-Camacho, David Blanco-Mulero, Marco Moletta, Michael Welle, Guillem Alenyà, Hang Yin, Zackory Erickson, David Held, Júlia Borràs, Danica Kragic
- [10] **AdaFold: Adapting Folding Trajectories of Cloths via Feedback-Loop Manipulation**
IEEE Robotics and Automation Letters (RA-L), 2024
 Alberta Longhini, Michael C. Welle, Zackory Erickson, Danica Kragic
- [11] **BodyMAP-Jointly Predicting Body Mesh and 3D Applied Pressure Map for People in Bed**
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024
 Abhishek Tandon*, Anujraaj Goyal*, Henry M Clever, Zackory Erickson
- [12] **Force Constrained Visual Policy: Safe Robot-Assisted Dressing via Multi-Modal Sensing**
IEEE Robotics and Automation Letter (RA-L), 2024
 Zhanyi Sun*, Yufei Wang*, David Held†, Zackory Erickson†
- [13] **Independence in the Home: A Wearable Interface for a Person with Quadriplegia to Teleoperate a Mobile Manipulator**
ACM/IEEE International Conference on Human Robot Interaction (HRI), 2024 (**Best Paper Award**)
 Akhil Padmanabha, Janavi Gupta, Chen Chen, Jehan Yang, Vy Nguyen, Douglas J Weber, Carmel Majidi, Zackory Erickson
- [14] **Quantifying Assistive Robustness Via the Natural-Adversarial Frontier**
Conference on Robot Learning (CoRL), 2023
 Jerry Zhi-Yang He, Daniel S Brown, Zackory Erickson, Anca Dragan
- [15] **A Multimodal Sensing Ring for Quantification of Scratch Intensity**
Nature Communications Medicine, 2023
 Akhil Padmanabha, Sonal Choudhary, Carmel Majidi, Zackory Erickson

- [16] **Robust Body Exposure (RoBE): A Graph-based Dynamics Modeling Approach to Manipulating Blankets over People**
IEEE Robotics and Automation Letters (RA-L), 2023
 Kavya Puthuveetil, Sasha Wald, Atharva Pusalkar, Pratyusha Karnati, and Zackory Erickson
- [17] **One Policy to Dress Them All: Learning to Dress People with Diverse Poses and Garments**
Robotics Science and Systems (RSS), 2023
 Yufei Wang, Zhanyi Sun, Zackory Erickson*, David Held*
- [18] **HAT: Head-Worn Assistive Teleoperation of Mobile Manipulators**
IEEE International Conference on Robotics and Automation (ICRA), 2023
 Akhil Padmanabha*, Qin Wang*, Daphne Han, Jashkumar Diyora, Kriti Kacker, Hamza Khalid, Liang-Jung Chen, Carmel Majidi, Zackory Erickson
- [19] **SLURP! Spectroscopy of Liquids Using Robot Pre-Touch Sensing**
IEEE International Conference on Robotics and Automation (ICRA), 2023
 Nathaniel Hanson*, Wesley Lewis*, Kavya Puthuveetil, Donelle Furline Jr, Akhil Padmanabha, Taskin Padir, Zackory Erickson
- [20] **EDO-Net: Learning Elastic Properties of Deformable Objects from Graph Dynamics**
IEEE International Conference on Robotics and Automation (ICRA), 2023
 Alberta Longhini*, Marco Moletta*, Alfredo Reichlin, Michael C. Welle, David Held, Zackory Erickson, Danica Kragic
- [21] **Elastic Context: Encoding Elasticity for Data-driven Models of Textiles**
IEEE International Conference on Robotics and Automation (ICRA), 2023
 Alberta Longhini, Marco Moletta, Alfredo Reichlin, Michael C. Welle, Alexander Kravberg, Yufei Wang, David Held, Zackory Erickson, Danica Kragic
- [22] **A Study of Causal Confusion in Preference-Based Reward Learning**
International Conference on Learning Representations (ICLR), 2023
 Jeremy Tien, Jerry Zhi-Yang He, Zackory Erickson, Anca D. Dragan, Daniel S. Brown
- [23] **ToolFlowNet: Robotic Manipulation with Tools via Predicting Tool Flow from Point Clouds**
Conference on Robot Learning (CoRL), 2022
 Daniel Seita, Yufei Wang, Edward Yao Li, Sarthak J Shetty, Zackory Erickson, and David Held
- [24] **Learning Representations that Enable Generalization in Assistive Tasks**
Conference on Robot Learning (CoRL), 2022
 Jerry Zhi-Yang He, Zackory Erickson, Daniel S. Brown, Aditi Raghunathan, and Anca Dragan
- [25] **Characterization of a Meso-Scale Wearable Robot for Bathing Assistance**
IEEE International Conference on Robotics and Biomimetics (ROBIO), 2022
 Fukang Liu, Vaidehi Patil, Zackory Erickson, and Zeynep Temel
- [26] **Visual Haptic Reasoning: Estimating Contact Forces by Observing Deformable Object Interactions**
IEEE Robotics and Automation Letters (RA-L), 2022
 Yufei Wang, David Held, and Zackory Erickson
- [27] **CapSense: A Real-Time Capacitive Sensor Simulation Framework for Physical Human-Robot Interaction**
IEEE Robotics and Automation Letters (RA-L), 2022
 Christian Schöffmann, Zackory Erickson, and Hubert Zangl
- [28] **Bodies Uncovered: Learning to Manipulate Real Blankets Around People via Physics Simulations**
IEEE Robotics and Automation Letters (RA-L), 2022
 Kavya Puthuveetil, Charles C. Kemp, and Zackory Erickson

- [29] **Characterizing Multidimensional Capacitive Servoing for Physical Human-Robot Interaction**
IEEE Transactions on Robotics (T-RO), 2022
 Zackory Erickson, Henry M. Clever, Vamsee Gangaram, Eliot Xing, Greg Turk, C. Karen Liu, and Charles C. Kemp
- [30] **Assistive VR Gym: Interactions with Real People to Improve Virtual Assistive Robots**
IEEE Conference on Robot and Human Interactive Communication (RO-MAN), 2020
 Zackory Erickson*, Yijun Gu*, and Charles C. Kemp
- [31] **Multimodal Material Classification for Robots using Spectroscopy and High Resolution Texture Imaging**
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2020
 Zackory Erickson, Eliot Xing, Bharat Srirangam, Sonia Chernova, and Charles C. Kemp
- [32] **Bodies at Rest: 3D Human Pose and Shape Estimation from a Pressure Image using Synthetic Data**
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020 (Oral)
 Henry M. Clever, Zackory Erickson, Ariel Kapusta, Greg Turk, C. Karen Liu, and Charles C. Kemp
- [33] **Assistive Gym: A Physics Simulation Framework for Assistive Robotics**
IEEE International Conference on Robotics and Automation (ICRA), 2020
 Zackory Erickson, Vamsee Gangaram, Ariel Kapusta, C. Karen Liu, and Charles C. Kemp
- [34] **Learning to Collaborate from Simulation for Robot-Assisted Dressing**
IEEE Robotics and Automation Letters (RA-L), 2020
 Alexander Clegg, Zackory Erickson, Patrick Grady, Greg Turk, Charles C. Kemp, and C. Karen Liu
- [35] **Active Robot-Assisted Feeding with a General-Purpose Mobile Manipulator: Design, Evaluation, and Lessons Learned**
Robotics and Autonomous Systems, 2020
 Daehyung Park, Yuuna Hoshi, Harshal P. Mahajan, Ho Keun Kim, Zackory Erickson, Wendy A. Rogers, Charles C. Kemp
- [36] **Multidimensional Capacitive Sensing for Robot-Assisted Dressing and Bathing**
IEEE International Conference on Rehabilitation Robotics (ICORR), 2019 (Best Student Paper)
 Zackory Erickson, Henry M. Clever, Vamsee Gangaram, Greg Turk, C. Karen Liu, and Charles C. Kemp
- [37] **Classification of Household Materials via Spectroscopy**
IEEE Robotics and Automation Letters (RA-L), 2019 (Best Paper Award in Service Robotics Finalist at ICRA 2019)
 Zackory Erickson, Nathan Luskey, Sonia Chernova, and Charles C. Kemp
- [38] **Personalized Collaborative Plans for Robot-Assisted Dressing via Optimization and Simulation**
Autonomous Robots, 2019
 Ariel Kapusta, Zackory Erickson, Henry M. Clever, Wenhao Yu, C. Karen Liu, Greg Turk, and Charles C. Kemp
- [39] **Autonomous Tool Construction Using Part Shape and Attachment Prediction**
Robotics: Science and Systems (RSS), 2019
 Lakshmi Nair, Nithin Srikanth, Zackory Erickson, Sonia Chernova
- [40] **Deep Haptic Model Predictive Control for Robot-Assisted Dressing**
IEEE International Conference on Robotics and Automation (ICRA), 2018
 Zackory Erickson, Henry M. Clever, Greg Turk, C. Karen Liu, and Charles C. Kemp
- [41] **Tracking Human Pose During Robot-Assisted Dressing using Single-Axis Capacitive Proximity Sensing**

- IEEE Robotics and Automation Letters (RA-L)*, 2018
Zackory Erickson, Maggie Collier, Ariel Kapusta, and Charles C. Kemp
- [42] **3D Human Pose Estimation on a Configurable Bed from a Pressure Image**
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2018
Henry M. Clever, Ariel Kapusta, Daehyung Park, Zackory Erickson, Yash Chitalia, Charles C. Kemp
- [43] **Semi-Supervised Haptic Material Recognition for Robots using Generative Adversarial Networks**
Conference on Robot Learning (CoRL), 2017
Zackory Erickson, Sonia Chernova, and Charles C. Kemp
- [44] **What Does the Person Feel? Learning to Infer Applied Forces During Robot-Assisted Dressing**
IEEE International Conference on Robotics and Automation (ICRA), 2017
Zackory Erickson, Alexander Clegg, Wenhao Yu, Greg Turk, C. Karen Liu, and Charles C. Kemp
- [45] **Learning to Navigate Cloth using Haptics**
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2017
Alexander Clegg, Wenhao Yu, Zackory Erickson, C. Karen Liu, and Greg Turk
- [46] **A Multimodal Execution Monitor with Anomaly Classification for Robot-Assisted Feeding**
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2017
Daehyung Park, Hokeun Kim, Yuuna Hoshi, Zackory Erickson, Ariel Kapusta, and Charles C. Kemp
- [47] **Multimodal Execution Monitoring for Anomaly Detection During Robot Manipulation**
IEEE International Conference on Robotics and Automation (ICRA), 2016
Daehyung Park, Zackory Erickson, Tapomayukh Bhattacharjee, and Charles C. Kemp

Workshop Papers

- [1] **Towards an LLM-Based Speech Interface for Robot-Assisted Feeding**
UIST 2024 demo track: Symposium on User Interface Software and Technology, 2024
Jessie Yuan, Janavi Gupta, Akhil Padmanabha, Zulekha Karachiwalla, Carmel Majidi, Henny Admoni, Zackory Erickson
- [2] **Towards the Development of Wound Care Robots: An Observational Study Outlining Robotic Design Needs for Wound Care**
HRI 2024: Workshop on HRI for Aging in Place, 2024
Zulekha Karachiwalla, Ellen Lee, Andrew Dierkes, Zackory Erickson, Henny Admoni
- [3] **Elastic Context: Encoding Elasticity for Data-driven Models of Textiles**
ICRA 2023: Embracing contacts. Making robots physically interact with our world, 2023
Alberta Longhini, Marco Moletta, Alfredo Reichlin, Michael C. Welle, Alexander Kravberg, Yufei Wang, David Held, Zackory Erickson, Danica Kragic
- [4] **HAT: Head-Worn Assistive Teleoperation of Mobile Manipulators**
ICRA 2023: Emerging paradigms for assistive robotic manipulation: from research labs to the real world, 2023
Akhil Padmanabha*, Qin Wang*, Daphne Han, Jashkumar Diyora, Kriti Kacker, Hamza Khalid, Liang-Jung Chen, Carmel Majidi, Zackory Erickson
- [5] **A Study of Causal Confusion in Preference-Based Reward Learning**
ICML 2022: Workshop on Spurious Correlations, Invariance and Stability, 2022
Jeremy Tien, Jerry Zhi-Yang He, Zackory Erickson, Anca Dragan, Daniel S. Brown