

Robotics Engineering

AM Session

Unity Hall 243

8:30 am

Opening Remarks

8:45 – 9:00 am

Voice Control of a Hand Exoskeleton for Traumatic Brain Injury Patients with Motor Impairments and Aphasic Speech

Team Members: Connor Gaudette; Matt McGourty; Keenan Segenchuk; Allison Rozear

Advisors: Tess Meier; Christopher Nycz; Yunus Doğan Telliel; Erin Solovey; Haichong Zhang

9:00 – 9:15 am

FASTR – Flexible Articulating Surgical Transoral Robot

Team Members: Chase Beausoleil; Mark Gagliardi; Samay Govani; Cole Parks

Advisors: Stephen Bitar; Loris Fichera; Yuxiang Liu; Haichong Zhang; Yihao Zheng

9:15 – 9:30 am

Robotics Intracardiac Catheter Steering System

Team Members: Megan DeSanty; Isabelle Lachaux; Elizabeth Minor; Rebecca Young

Advisors: Loris Fichera; Shang Gao; Zhenglun Wei; Haichong Zhang; Yihao Zheng

9:30 – 9:45 am

Automated Control of External Ventricular Drain for Neuro-ICU

Team Members: Matthew Duncan; Yujie Guo; Haotian Liu; Haoran Zhang

Advisor: Christopher Nycz

9:45 – 10:00 am

Augmented Reality Human-Robot Interface for Assisting Robotic Manipulation

Team Members: Tyler Giroux; Justin Kyi; Dimitri Saliba; Alexander Sun; Bryon Tom

Advisors: Jane Li; Koksal Mus

10:00 – 10:15 am

SOPHT: Soft Prosthetic Hand

Team Members: Christina Aube; Jeff Davis; James Doucette

Advisors: Mahdi Agheli; Markus Nemitz; Haichong Zhang

10:15 – 10:30 am

Soft Assistive Robotics for Helping Daily Tasks

Team Members: Luis Aldarondo; Antonios Sevastos; Ethan Weisse; Hannah Zink

Advisors: Berk Calli; Loris Fichera; Cagdas Onal

10:30 – 10:45 am

Progressive Molding of Soft Robots for Ocean Conservation

Team Members: Sara Frunzi; Dilce Oliveira; Owen Rouse

Advisors: Cem Aygöl; Markus Nemitz

Unity Hall 400

8:45 am

Opening Remarks

9:00 – 9:15 am

Development of Cube Swarm for Search and Rescue Applications

Team Members: William Albert; Phillip Brush; Benjamin Dodge; Timothy Klein; Andrew

McCammon; Jason Rockmael; Dang Tran

Advisors: Greg Lewin; Shubbhi Taneja; Reinhold Ludwig

9:15 – 9:30 am

Social Robot for Interactive Play

Team Members: Joseph Baliestiero; Jayson Caissie; Kaley Du; Megan Jacques; Chloe Plasse; K. (V) Valery

Advisors: Rose Bohrer; Jane Li

9:30 – 9:45 am

LEMUR: Learning and Education of Machine Learning for Undergraduate Robotics

Team Members: Ashe Andrews; Andrew McKeen; Tuomas Pyorre

Advisors: Matt Ahrens; Kevin Leahy; Greg Lewin

9:45 – 10:00 am

Modular Hybrid Flux Motor Development for High Torque Robotics Applications

Team Members: Kaeden Berry; Adam Blanchard; Arturo Lemos

Advisors: Yarkin Doroz; Andre Rosendo

10:00 – 10:15 am

Multi-Robot Persistent Coverage Under Fuel and Stochastic Failure Constraints

Team Members: Camden Cummings; Samara Holmes; Yaşar İdikut

Advisor: Carlo Pinciroli

10:15 – 10:30 am

BranchBot: Autonomous Quadcopter for Branch Attachment

Team Members: Zane Altheimer; Keelan Boyle; Cooper Dean; Andrew Kerekon

Advisors: Dmitry Korokin; Robert Krueger; Oren Mangoubi; Andre Rosendo

10:30 – 10:45am

Symbiotic Multi-Agent Construction 5.0

Team Members: Genna Brown; Edward Enyedy; Can Güven; Isa Kaplan; Cambria Pomeranz; Isabella Rosenstein

Advisors: Greg Lewin; Carlo Pinciroli; Markus Nemitz

10:45 – 11:00 am

Underwater Filmography Using Robots

Team Members: Riley Blair; Christopher Chow; Gabriel Demanche; Olivia Simon

Advisor: Markus Nemitz

PM Session

Unity Hall 400

1:00 – 1:15 pm

NASA Lunabotics

Team Members: Brendan Byrne; Zeb Carty; Giovanni Giacalone; Kelli Huang; Ian MacInerney;

James Nguyen; Terence Tan; Sean Thal

Advisors: Carlo Pinciroli; Ken Stafford

1:15 – 1:30 pm

Trashbot: Autonomous Trach Collecting Robot

Team Members: Liliana Loughlin; Cristobal Rincon Rogers; Matthew Sweeney; Yuhan Wu

Advisors: Fabricio Murai; Neil Rosenberg; Andre Rosendo,

1:30 – 1:45 pm

SailBot

Team Members: Mathew Gomes; Erin Murphey;

Anthony Virone; Theodore Winter

Advisors: William Michalson; Kenneth Stafford

1:45 – 2:00 pm

BiQu: Bimodal Quadruped Robot

Team Members: Ethan Chandler; Akshay Jaitly; Yifu Yuan; Puen Xu; Lehong Wang; Tao Zou

Advisors: Mahdi Agheli; Jing Xiao

2:00 – 2:15 pm

Design and Assembly of a 3D Printed

Humanoid Robot for At-Home Assistive Care

Team Members: Shivank Gupta; Anna McCusker; Wil Michels; Merel Sutherland

Advisors: Dirk Albrecht; Pradeep Radhakrishnan; Derren Rosbach

2:15 – 2:30 pm

Waste Sorting Robot for Recycling

Team Members: Valerie Childers; Brett Cohen; Dylan Hunt; Nicholas Moy; Isaac Noble; Gabriel Ward; Lily Wolf

Advisors: Berk Calli; Sarah Jane Wodin-Schwartz

2:30 – 2:45 pm

Advancing Humanoid Robots: Demonstration of Standing and Assisted Walking Alongside a New Simulation Framework

Team Members: Stephen Fanning; Jatin Kohli; Dylan Nguyen; Scott Pena; Jack Rothenberg; Ana Roure

Advisors: Dirk Albrecht; Pradeep Radhakrishnan

2:45 – 3:00 pm

Eve - Agricultural Harvesting Robotic System

Team Members: Soumaya El Mansouri; Lexi Krzywicki; Timothy Rinaldi

Advisors: Berk Calli; Yarkin Doroz; Sarah Wodin-Schwartz

POSTER ONLY

Automated Flying Disc Inventory

Team Members: Benjamin Antupit; Jonathan Whooley; Daniel Ouellette; David Costa; Tristan Andrew; Matthew Adam; Claire Higginson

Advisors: Greg Lewin; Walter Towne

POSTER ONLY

The Design and Prototyping of a Low-Cost & Efficient Ocean Cleanup Robot

Team Members: Gabriel Espinosa; Danny Ngo; Sebastian Valle; Alexander Wadsworth

Advisors: Vincent Aloj; Selcuk Guceri

POSTER ONLY

HURON: Full-size Humanoid Robot (Lower Body)

Team Members: Thai Duc Doan; Sahen Jueja; Nhi Nguyen; Carlos Giralt Ortiz

Advisors: Berk Calli; Mahdi Agheli; Markus Nemitz; Nitin Sanket

3:00 pm

Closing Remarks