IEEE Denver Computer, Information Theory, and Robotics Society & Computational Intelligence Society – Technical Meeting

May 17, 2023, 6:00 PM – 7:00 PM (MDT)

Denver IEEE Comput

Dr. Zhao Han

This section needs to be in third-person.

Denver IEEE Co ter Society Guest Lecturer

Postdoctor Research Fellow, Colorado School of Mines

Dr. Han holds a Ph.D. in Computer Science from UMass Lowell in the HRI Lab, directed by AAAI Fellow Dr. Holly Yanco. Previously, he spent time in Canada and received his M.S. (advised by Dr. Carson Leung in the Database and Data Mining Lab) and B.S. degrees in Computer Science from the University of Manitoba. Dr Han is currently a Post-Doctoral Fellow at Colorado School of Mines and will start as an Assistant Professor in the Computer Science and Engine uth Florida in August 2023. Dr. Han received the best long-paper aw report third prize at HRI 2022. Previously, he had led teams to win multiple robo place in the Panasonic Prototype 3D LiDAR Challenge and second place in the Fe ile Manipulation Challenge at ICRA 2019. In addition to research, he received a university-wide Mi ersity, Inclusion, and Access (DI&A) Award in 2022.

A paragraph on the topic.

Presentation: Bridging The Gap etween Robots and Humans Through Explainability

Abstract: Robots are traditionally placed behind fences for autonomous pick-and-place tasks. Today, we are witnessing robots moving to work with humans. They will not only need to manipulate but also hand objects to people and explain when autonomy fails. In this talk, I will start with how I tackled challenges in mobile manipulation tasks in a collaborative environment and a better way to let objects go for fluent human-robot handovers. Then I will focus on high-level hierarchical explanation generation algorithms using behavior trees and finer-level references for preferred concise explanations. This includes reference production through a cognitive status-informed approach and mixed-reality robot behavior replays to reason about objects no longer present. Finally, I will discuss how augmented reality can enable physically limited robots to gesture.

Invited: Everyone is welcome.

Cost: Free