

## **EOI for Human-Robot Collaboration workshop at OzCHI2022-Xinyan YU**

My name is Xinyan Yu. I am a first-year PhD student in the Urban Interface Lab at the University of Sydney. My research interests lie in human-robot interaction, human-computing interaction, and human-centered interaction design. My current research explores new interfaces to bring explainability into interactions between autonomous vehicles and pedestrians.

With the recent technological advances in artificial intelligence (AI), autonomous vehicles (AVs) can perceive the environment, make real-time driving decisions, and operate reliably without human intervention. Due to the opaque nature of many intelligent systems, end-users of AVs, including passengers and other road users (e.g., pedestrians), generally do not have access to understand the AV's decision-making process. The absence of explanations of AV behaviour causes violations of the established usability principles and may hinder AV technology from being socially accepted by the public. The widespread adoption of AV technology relies on its degree of system transparency, trustworthiness, and compliance with regulations, which can be facilitated by providing intelligible explanations for AV behaviour. Hence, to meet the emerging need to make AV actions understandable to the general public, my research aims to investigate the potential of providing AV explainability for pedestrians to promote public acceptance and improve safety in introducing AVs into urban space.