Title: Using Human-inspired Signals in Social Navigation

Short abstract: People are proficient at communicating their intentions in order to avoid conflicts when navigating in narrow, crowded environments. Mobile robots, on the other hand, often lack both the ability to interpret human intentions and the ability to clearly communicate their own intentions to people sharing their space. In my research, I am interested in improving both abilities in robots. As a first step, I investigated how people implicitly communicate with each other through observations of behaviors such as gaze. Then, by augmenting a mobile robot with such gaze-inspired behavior, it can obtain better social navigation skills. In this talk, I will report initial results from this investigation, showing that people more easily interpret a gaze cue from a virtual head mounted on a robot, than an LED turn signal. Many works have investigated gaze as a means to predict another person's trajectory, but this work is unique in that it augments the robot with the gaze-like behavior, hence making it the initiator of an implicit interaction, just as people initiate such interactions among themselves.

Short bio: Reuth Mirsky is a postdoctoral fellow at the Computer Science department in the University of Texas as Austin. Her Advisor is Prof. Peter Stone. Before coming to UT, Reuth completed her Ph.D. at the department of Software and Information Systems Engineering in Ben Gurion University. Her adviser was Prof. Kobi Gal. Reuth's research focuses on algorithms, behaviors and frameworks that can improve existing AI with human-inspired design. Her algorithms have been applied in various tasks for education, clinical treatment and finance. Reuth's work has appeared in leading artificial intelligence conferences and journals. Her work has granted her with several awards including two awards from the Israeli Ministry of Science (Award for Leading Applied Research and scholarship for Excelling Women in STEM) and the Eric and Wendy Schmidt Postdoctoral Award for Women in Mathematical and Computing Sciences.