Pediatric Robotics: A Journey from the Lab to a Child’s Home

It is estimated that one in six children born in the U.S. have one or more developmental disabilities. In this public lecture, Dr. Howard will provide a first look at how robotics and artificial intelligence are positively impacting pediatric rehabilitation. These impairments may impact a child’s day-to-day functioning and typically last as they mature into adults. For many of these children, proper early intervention is provided as a mechanism to support the child’s academic, developmental, and functional goals from birth and beyond. With the recent advances in robotics and artificial intelligence (AI), early intervention protocols using robots is now ideally positioned to make an impact in this domain. There are numerous challenges though that still must be addressed to enable successful interaction between patients, clinicians, and robots - developing interfaces for clinicians to communicate with their robot counterparts; developing learning methods to endow robots with the ability to playfully interact with the child; and ensuring that the robot can provide feedback to the parent and clinician in a trustworthy manner. Dr. Howard will describe examples of cutting-edge research focused on robots interacting with humans, while showing how the emerging field of healthcare robotics has the potential to enable a healthier, less stressful, equality of life – now, and in the future.