BUET ACM CHAPTER

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Toward Fluent Collaboration in Human-Robot Teams

Speaker: **Tariq Iqbal**

Assistant Professor, Systems Engineering, University of Virginia

Tariq Iqbal is an Assistant Professor of Systems Engineering at the University of Virginia (UVA), where he leads the Collaborative Robotics Lab (CRL). Prior to joining UVA, he was a Postdoctoral Associate at Massachusetts Institute of Technology. He received his Ph.D. in CS from the University of California San Diego, MS from the University of Texas at El Paso, and BS from Bangladesh University of Engineering and Technology.

His research group focuses on building robotic systems that can solve problems alongside people in complex human environments, such as in factories, hospitals, and educational settings. To successfully work within a team, a robot must be able to perceive and predict people and use that knowledge to determine when, where, and how to act for the team's benefit. His group develops artificial intelligence, computer vision, and machine learning techniques to tackle these challenges.

Abstract

Robots currently have the capacity to help people in several fields, including health care, assisted living, and manufacturing, where the robots must share physical space and actively interact with people in teams. The performance of these teams depends upon how fluently all team members can jointly perform their tasks. To be successful within a group, a robot requires the ability to perceive other members' actions, model interaction dynamics, predict future actions, and adapt their plans accordingly in real-time. In the Collaborative Robotics Lab (CRL), we develop novel perception, prediction, planning, and scheduling algorithms for robots to fluently coordinate and collaborate with people in complex human environments. In this talk, I will highlight various challenges of deploying robots in real-world settings and will present our recent work to tackle many of these challenges.

When: Thursday, 16th July, 2020 (8:00 PM)

Where: Online. Zoom Meeting ID: 612 9856 8052, Password: 500878

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