



CoCo Seminar Series Spring 2019

Robot Decision Making in Human-Inhabited, Collaborative Environments



Dr. Shiqi Zhang
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Binghamton University

Wednesday February 13, 2019 11:00am-12:00pm
Engineering Building H-9 (Knoll-MacDonald Commons / Watson Commons)

Robots need sequential decision-making (SDM) capabilities to complete tasks that require more than one action. Robot SDM is difficult for reasons such as imperfect perception, unreliable action outcomes, and incomplete domain knowledge. This talk will cover a few ways of incorporating declarative knowledge representation and reasoning (KRR) into robot decision-making paradigms such as probabilistic planning and reinforcement learning. The contextual knowledge typically comes from humans, and tends to be sparse but potentially effective. The algorithms are mainly demonstrated using tasks of mobile service robots, including human guidance, object delivery, and dialog systems.

Dr. Shiqi Zhang is an Assistant Professor of Computer Science at Binghamton University. He obtained his PhD in Computer Science from Texas Tech University in 2013. His research interests are in developing algorithms that integrate reasoning, planning, and learning formalisms for mobile service robots that work in human-inhabited, collaborative, everyday environments.

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