**Graduate Seminar**

**Autonomous Service Robots: Learning and Explanations in Human-Robot Interaction**

**Manuela M. Veloso**

Herbert A. Simon University Professor in Computer Science and Head of the Machine Learning Department

Thursday, September 15th  4:30 pm  Scaife Hall 125

**Abstract:**
We research on autonomous mobile robots with a seamless integration of perception, cognition, and action. In this talk, I will first introduce our CoBot service robots and their novel localization and symbiotic autonomy, which enable them to consistently move in our buildings, now for more than 1,000km. I will then introduce multiple human-robot interaction contributions, and detail the use and planning for language-based complex commands, and robot learning from instruction and correction. I will conclude with the robot explanation generation to reply to language-based requests about their autonomous experience.

**Bio:**
Manuela M. Veloso is the Herbert A. Simon University Professor in the School of Computer Science at Carnegie Mellon University. She is the Head of the Machine Learning Department, and has a joint appointment in the Computer Science Department and courtesy appointments in the Robotics Institute and Electrical and Computer Engineering Department.

She researches in Artificial Intelligence and Robotics. She founded and directs the CORAL research laboratory, for the study of autonomous agents that Collaborate, Observe, Reason, Act, and Learn, [www.cs.cmu.edu/~coral](http://www.cs.cmu.edu/~coral).

Professor Veloso is IEEE Fellow, AAAS Fellow, AAAI Fellow, Einstein Chair Professor, and the co-founder and past President of RoboCup, and past President of AAAI.

Professor Veloso and her students research with a variety of autonomous robots, including mobile service robots and soccer robots. See [www.cs.cmu.edu/~mmv](http://www.cs.cmu.edu/~mmv) for further information, including publications.

**SEMINAR NOTES:** *(REFRESHMENTS SERVED AT 4 PM)*