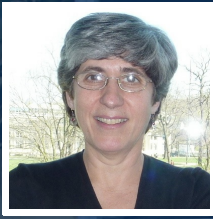# Need an Assistant? Try a Robot

Manuela Veloso
Professor Herbert A. Simon Professor, Computer Science

CURRENT RESEARCH

Autonomous agents that sense the world, make decisions, and actuate

Imagine multiple intelligent robots that have different sets of complementary capabilities and the ability to proactively invoke help from external resources, such as the web and humans thereby providing a seamless synergy of intelligence. Dr. Manuela Veloso, of Carnegie Mellon University, is working on just that as she researchers artificial intelligence and robotics. She hopes to one day produce the effective construction of autonomous agents where cognition, perception, and action are combined to address planning, execution, and learning tasks. With her students, Dr. Veloso investigates effective planning, execution, and learning algorithms for autonomous robots and agents within her CORAL laboratory. Such artificial intelligence and robotics will lead to the automation and assistance of many needs in society including working alongside patients in hospitals and nursing homes, assisting with secretarial work, and many other applications that will service humans.

As a full professor, with more than twenty years of research, Dr. Veloso's expertise in artificial intelligence and robotics is likely to lead to innovative technologies. Her autonomous robots are perhaps most incredible because rather than being completely independent, they are capable of asking for help when they need it. With the understanding that robots will always have limitations compared to humans, Dr. Veloso's approach to intelligence has been to create a team of robots that can complement one another to complete important tasks. In addition, her robots are capable of learning by optimizing how to perform actions after they have completed them. Dr. Veloso's innovative approach to robotics has helped to craft some of the most...

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AFFILIATION

Carnegie Mellon University

EDUCATION

- Ph.D., in Computer Science, 1992 , Carnegie Mellon University
- M.A., in Computer Science, 1986 , Boston University
- M.Sc., in Electrical and Computer Engineering, 1984 , Instituto Superior Tecnico, LIsbon, Portugal
- Licenciatura, in Electrical Engineering, 1980 , Instituto Superior Técnico, Lisbon, Portugal

AWARDS

- AAAS Fellow, the American Association for the Advancement of Science, elected December 2010
- IEEE Fellow, the Institute of Electrical and Electronics Engineers, elected November 2010
- AAAI Fellow, the Association for the Advancement of Artificial Intelligence, elected March 2003
- The 2009/10 Distinguished Alumna Award. Boston University, Department of Computer Science
- The 2009 ACM/SIGART Autonomous Agents Research Award
- and 1 more...

RESEARCH AREAS

Technology, Robotics, IOT, Devices, Data

FUNDING REQUEST

Your contributions will support the continued research of Dr. Manuela Veloso, of Carnegie Mellon University, as she build autonomous and intelligent robots. Funding will support the necessary $1.5M required for personnel and equipment. In choosing to support her research, you will play a role in advancing robot technology in order to eventually create affordable robotics that can assist humankind.