Save the Date:
November 29 at 4:30 p.m.

Lecture Title:
Unleashing Your Inner Maker

Robots are everywhere, and for some, their pervasiveness causes a difficult problem. How can we accelerate the creation of robots customized to specific tasks? Where are the gaps we need to address in order to advance toward a future where robots are common in the world and they help reliably with physical tasks? The digitization of practically everything — coupled with the mobile internet, automation of knowledge work and advanced robotics — promises a future with democratized use of machines and wide-spread use of robots and customization.

DANIELA RUS

Andrew and Erna Viterbi Professor
of Electrical Engineering and Computer Science
and director of the Computer Science and
Artificial Intelligence Laboratory (CSAIL) at MIT

Roboticist   Computer and Data Scientist

Researcher   Educator

UNIVERSITY LECTURE SERIES

"My big dream is to have a world with pervasive machines, pervasive robotics integrated into the fabric of everyday life, helping everyone with physical work and cognitive tasks."

Daniela Rus is at the forefront of contemporary robotics. Rus directs research as director of the Computer Science and Artificial Intelligence Laboratory (CSAIL) at MIT. At CSAIL, she leads numerous groundbreaking research projects in the areas of transportation, security, environmental modeling and monitoring, underwater exploration and agriculture.

She also leads the MIT Fifth Sense Project team to develop wearable devices for blind and low-vision people. These devices combine sensing, computation and interaction to provide the wearer with timely, task-appropriate information about the surroundings.

Named the 2014 Association for Computing Machinery Fellow and elected to the National Academy of Engineering, Rus is the recipient of the National Science Foundation Career Award and an Alfred P. Sloan Foundation Fellow Award. She is a Class of 2002 MacArthur Fellow and a fellow of the Association for the Advancement of Artificial Intelligence and the Institute of Electrical and Electronic Engineers.

ROBOTICS RESEARCH

In her research, Rus focuses on bridging the gap between machines and people through soft robots made out of soft and/or extensible materials. Her 2015 article in *Nature* outlines the recent developments in soft robotics.

She also focuses on robots that are faster to fabricate for particular tasks, which she discussed during her address at the World Economic Forum. Her current answer is a robot compiler. This is in addition to projects on self-reconfiguring robots, self-driving cars with a focus on mobility and multi-robot teams. Each of these projects can be explored at this page.

ROBOTICS IN EVERYDAY LIFE

Rus' robotics research also focuses on everyday tasks like cooking, gardening and dancing. Rus has collaborated on two different art projects with the Pilobolus dance company at the intersection of technology and art. Seraph, a pastoral story about human-machine friendship, was performed in 2010-2011 in Boston and New York City.

The Umbrella Project, a participatory performance exploring group behavior, was performed at PopTech 2012, in Cambridge, Baltimore and Singapore.

Rus discusses the possibilities of soft robotics on our lives in her TedxCambridge address.