FutureTech: Maja Mataric

Maja Mataric specializes in assistive interactive robotics. She's designing robot companions to help convalescent patients who have suffered strokes, partial paralysis, blindness or neurological conditions. A growing number of Americans will have to live with physical limitations like these as the population ages and people live longer.

"In the long run, we're really looking at putting robots in everyone's home," says Mataric, associate professor of computer science and director of USC's Center for Robotics and Embedded Systems. "We're building them really to help people in whatever area they need help."

Mataric says USC is a "tremendously vibrant place" for conducting this kind of interdisciplinary research. The emphasis on interdisciplinary work has allowed her and many colleagues to engage in truly innovative projects.

"Every problem that is worth studying is a multidisciplinary problem," she says. "We have faculty coming in from outside of engineering to study problems that really go well beyond any one discipline or any one field. I think the future is about multidisciplinary work, about looking at global issues, really hard problems, and putting parts together to do something truly magnificent."

Mataric has worked on developing the capabilities of robots to interact one-on-one with humans. She is also working on defense-funded projects to build teams of robots that would be capable of collaborating with each other to accomplish a task, such as cleaning up a toxic or poisonous chemical spill. That work is supported by the Defense Advanced Research Projects Agency.

"We're only about five years away from seeing teams of human and robotic rescue workers on the scenes of disasters," she says. "That collaboration is closer than people imagine."