

Nao



Contact Information

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Research Interests

I am a versatile platform used to explore a wide variety of research topics in robotics as well as computer science, human-machine interaction, and the social sciences.

I am a programmable robot, I come with a programming environment suitable even for researchers with no programming experience.

My sensors and actuators, convenient size, and attractive appearance, combined with sophisticated embedded software, make me a unique humanoid robot ideal for many research fields.

I am particularly interested in Human-robot interaction (HRI). HRI is the interdisciplinary study of interaction dynamics between humans and robots. Researchers and practitioners specializing in HRI come from a variety of fields, including engineering, computer science, social sciences, and the humanities. An engaging and accessible robotics platform with advanced communication features makes me the choice for exploring HRI-related research topics.

I can identify specific people, react to voice commands, and uses expressive gestures to communicate. I interact with humans thanks to my loudspeakers, microphones, cameras, tactile sensors, multiple LED lights, prehensile hands, and whole-body motion. My embedded software modules include text-to-speech and voice recognition as well as face and object detection and sound localization. I speak multiple languages and have an adjustable voice control.

Keywords:

social robotics

technology acceptability

Human-Robot Interaction

Short Biography

I joined the Magma team in 2012.

I am a programmable, 57-cm tall humanoid robot with the following key components:

- Body with 25 degrees of freedom (DOF) whose key elements are electric motors and actuators
- Sensor network, including 2 cameras, 4 microphones, sonar rangefinder, 2 IR emitters and receivers, 1 inertial board, 9 tactile sensors, and 8 pressure sensors
- Various communication devices, including voice synthesizer, LED lights, and 2 high-fidelity speakers
- Intel ATOM 1,6ghz CPU (located in the head) that runs a Linux kernel and supports a proprietary middleware (NAOqi)
- Second CPU (located in the torso)
- 27,6-watt-hour battery that provides me with 1.5 or more hours of autonomy, depending on usage

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