

## SOCIAL ROBOTICS

Nowadays, our society is moving from an old framework where the robots were essentially employed as mechanized slaves working in the assembly lines of industries, to a new framework where the robots are companions acting in every house and even outdoors.

The ultimate goal of the current robot revolution is a new society where humans and robot will live together hand in hand. Social robotics is a new discipline that takes into account the outcomes of technical subjects, like AI, Robotics, and Computer Science; theoretical ones as Philosophy and Linguistics, and empirical ones, like Psychology, and Neuroscience to face new research items related with the close interactions between humans and robots.

Keywords:

- Robot emotions;
- Robot consciousness;
- BCI based human-robot interactions;
- Robot creativity;
- Trust interactions in human-robot teams;
- Ethical aspects of social robotics.

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Short Curriculum Vitae

Antonio Chella was born in Florence on March 4, 1961. He graduated in Electronic Engineering summa cum laude from the University of Palermo in 1988. In 1992 he obtained his Ph.D. in electronic and computer engineering at the same University. From 2001 he is a full professor of Robotics at the University of Palermo. He is a former Director of the Department of Computer Engineering of the University of Palermo; he has been the coordinator of the course of study in Computer Engineering and the Ph.D. course in Innovation Technology.

He published more than 200 papers on social robotics, machine consciousness, cognitive systems and neural networks.

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Short Curriculum Vitae

Lucia Pallottino is Associate Professor at the Centro di Ricerca "E. Piaggio" and the Dipartimento di Ingegneria dell'Informazione at the University of Pisa. She received the "Laurea" degree in Mathematics in 1998 and the Doctoral degree in Robotics and Industrial Automation in January 2002. She is deputy Director of Centro di Ricerca "E. Piaggio" (since Jan. 2017) and Chair of the IEEE Robotics & Automation Society Italian Chapter (I-RAS) (since Jan. 2015). She is Associate Editor of the IEEE Robotics and Automation Letters and of the IEEE Transaction on Robotics. Her main research interests within Robotics are in motion planning and control of humanoid robots and of multiple nonholonomic vehicles, optimal control of constrained systems, coordination of multi-robot vehicles, distributed algorithm for multi-vehicles management and quantised control.