

ANNUNCIO DI SEMINARIO

Omnidirectional Vision (from History to Mobile Robots)

da parte del
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della Università di Padova

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ABSTRACT:

This talk will introduce the imaging technique called omnidirectional vision. With omnidirectional vision it is possible to grab images with a 360° field of view. The 360° image contains in one picture the complete information about the surrounding of the sensor. This enables high rate data acquisition and instantaneous understanding of complex dynamic scenes. Omnidirectional vision sensors demonstrated to be effective in applications like surveillance, inspection, virtual reality, robotics, and computer vision.

In this talk we will start from a brief history of omnidirectional vision and its ancestors, we will then focus on the modern sensors used to grab panoramic and omnidirectional images. In the end, we will discuss the structure and the properties of the omnidirectional images giving examples of successful applications (especially in the field of mobile robotics).

ABOUT THE SPEAKER

Emanuele Menegatti graduated in Physics from the University of Padua in 1998. In 1999, he got his MS in Artificial Intelligence at the University of Edinburgh (U.K.). In 2002, he got his Ph.D. in Computer Science from the University of Padua.

Since 2003, he is a Post-Doc Researcher at the University of Padua in the Intelligent Autonomous Systems Laboratory (IAS-Lab).

His main research interests are in the field of Robot Vision and in particular in omnidirectional vision. He spent three months in Japan working with Prof. H. Ishiguro, one of the pioneer of omnidirectional vision. At the moment he is working on Distributed Vision Systems for Autonomous Surveillance in which mobile robots cooperate with static sensors.

He is involved in the RoboCup International Project. He was one of the organisers of RoboCup2003 in Padua and of Robot Games at SMAU 2003 in Milan. He is in the program committees of forthcoming conferences, among the other RoboCup Symposium 2004 and Omnivis 2004.