COMPUTER VISION

Computer vision is the science of automatic understanding of images and video. Main topics consists of computing properties of the 3D world from visual data, developing algorithms and representations to allow a machine to recognize objects, people, scenes, and activities and developing algorithms to mine, search, and interact with visual data. As image and video sources are more and more available, computer vision applications are multiplying. For example they are currently being used to relieve humans of boring, easy tasks (surveillance), to increase human-computer interaction, to provide perception for robotics / autonomous agents, to organize and give access to visual content, and so on.

Computer vision-based systems have also been used for years in a number of industrial applications, with one of the most relevant being factory automation, that is also the first high volume computer vision application. Nevertheless, as manufacturing processes become increasingly autonomous and more intelligent, the role of computer vision systems is becoming more and more important. In fact, in order for industrial automation systems to meaningfully interact with the objects they're identifying, inspecting and assembling, they must be able to recognize the objects and understand their surroundings. Cost-effective and capable vision processors, image sensors proving reliable depth maps and robust algorithms are transforming academic and industrial research outcomes into real high volume systems.

The technical special session on Computer Vision aims to bring in closer contact academic and industrial researchers to accelerate transition of basic research into high-tech products. It may also serve to stimulate the formation of partnerships in research grant proposal applications and other efforts. Scientists from both industry and academia will deliver talks about the state of computer vision techniques, projects and products, current and future. Each talk will be followed by a Q&A session.

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Short Curriculum Vitae

Marco La Cascia was born in Palermo, Italy, in 1969. He received the Electrical Engineering degree (summa cum laude) and the Ph.D. degree from the Università degli Studi di Palermo, Palermo, Italy, in 1994 and 1998, respectively. From 1998 to 1999, he was a post doctoral fellow with the Image and Video Computing Group, in the Computer Science Department at Boston University, Boston, Massachusetts and was visiting student with the same group from 1996 to 1998. From 1999 to 2000 he was at Offnet S.p.A., (Rome) as senior software engineer. In 2000 he joined the Faculty of Engineering of Università degli Studi di Palermo as an assistant professor and. Presently, he is a full professor at the same institution where he is also coordinator of the Computer and Telecommunication Engineering degrees. His research interests include low and mid-level computer vision with applications to image and video databases and distributed video-surveillance systems. He is co-author of more than 90 scientific papers. Marco La Cascia is member of IAPR and has served as reviewer for many international journals and conferences. He was also local coordinator in several research projects and participant in many others.