

Jointly organised by the Swiss Chapter of the IEEE Engineering in Medicine and Biology Society and the ARTORG Center for Biomedical Engineering Research

Computerized face recognition technologies: 3D face analysis and synthesis

Prof. Raimondo Schettini



Wednesday, 23 June 2010
16:30 to 17:30 with apero afterwards

Room D103 (apero in Room D101)
Frauenklinik, entrance 17
Effingerstrasse, 3010 Bern

Directions: <http://www.frauenheilkunde.insel.ch/index.php?id=3992>

Abstract

Face detection and recognition have attracted the attention of many research groups. Important applications in fields such as video surveillance, law enforcement, and human-computer interfaces require the detection and recognition of human faces. The real challenge in these applications is the ability to handle all those scenarios where subjects are non-cooperative and the acquisition phase is unconstrained. Given the variability of a subject's face image, face detection and recognition are considered as two of the toughest problems in the fields of pattern recognition, computer vision and biometrics.

During the talk the latest advance related to automatic detection, analysis and recognition of 3D face images will be illustrated with a focus on the research performed at our lab. In particular the on-going project entitled FACE³ will be presented. The use of 3D data is preferred since depth information facilitates the detection and isolation of occluding objects and consequently the detection and recognition of partially occluded faces. Other well known advantages of 3D sensors include: lighting independence, ability to normalize pose and orientation, and last but not least, 3D sensors are more difficult to circumvent compared to 2D cameras. Additionally, recent activities related to 3D face modeling using physical models and preliminary results related to face synthesis and animation will be demonstrated.

Biography

Raimondo Schettini is Associate Professor at the University of Milano Bicocca (Italy). He is Vice-Director of the Department of Informatics, Systems and Communication, and Head of the Imaging and Vision Lab. He has been associated with Italian National Research Council since 1987 where he has led the Color Imaging Lab from 1990 to 2002. He has been team leader in several research projects and published more than 200 refereed papers and six patents about image processing, analysis and classification.

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