



## Francesca Odone

Associate professor

✉ francesca.odone@unige.it

☎ +39 353 6667

### *Education and training*

2002

#### **PhD in Computer Science**

Object representation and identification in image sequences  
University of Genova - Genova

1997

#### **Laurea (MSc equivalent) in Information Sciences**

University of Genova - Genova - IT

### *Academic experience*

2014 - ONGOING

#### **Associate Professor**

University of Genova

2005 - 2014

#### **Ricercatore Universitario (Assistant Professor)**

University of Genova

2002 - 2005

#### **Researcher**

National Institute of Solid State Physics

1997

#### **Research Associate**

Heriot-Watt University - Edinburgh - GB

### *Research interests*

My research activity is in the fields of Computer Vision and Machine Learning. The main theme of the research activity is the study of adaptive methods for learning effective visual representations, able to capture the complexity of heterogeneous, noisy and high-dimensional data by exploiting any prior knowledge on the problem, the data, or the application domain.

The main problems I dealt with recently are:

- multi-resolution analysis of 2D and 2D + T signals with the goal of extracting and representing local features

- study and development of methods to obtain adaptive (data-driven) visual representations from high dimensional data, including variable selection, dictionary learning and sparse coding, deep learning;
- study and development of architectures for classification, detection, and recognition of objects in images and image sequences;
- study and development of methods for behavior understanding, action recognition, human activity analysis.

In some cases, basic research has been stimulated by collaborations with institutions and companies operating in various application sectors. For this reason the themes listed above have often contributed to the creation of working systems and prototypes, sometimes subject to technology transfer to companies operating in appropriate sectors. On this respect I mention the main applied research projects:

- visual perception for humanoid robots;
- vision-based assistive tools for Blind and Visually Impaired users;
- computer vision algorithms for assisted living and for healthy aging;
- real-time systems for video surveillance and automatic access control;
- artificial vision methods for logistics and quality control.