Gualtiero Volpe

Associate professor

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Education and training

1999
Master degree in Computer Engineering
110/110 cum laude
University of Genova - Genova - IT

2003
PHD in Electronic and Computer Engineering
Computational models of expressive gesture in multimedia systems
University of Genova - Genova - IT

Academic experience

2003 - 2005
Post-doctoral fellow
University of Genova - Genova - IT

2005 - 2014
Assistant professor
University of Genova - Genova - IT

2014 - ONGOING
Associate professor
University of Genova - Genova - IT

Language skills

Italian	**English**	**French**
Mother tongue	Proficient	Independent

Postgraduate research and teaching activity

PhD committees membership

Since 2013, I am faculty member of the Doctoral School in Computer Science and System Engineering.

Postgraduate (PhD) teaching activity

I gave the course of *Multimodal Interfaces* for the Doctoral School in Computer Science and System Engineering in the following academic years: 2014-2015 (20 hours), 2015-2016 (23 hours), 2016-2017 (20 hours), and 2017-2018 (21 hours).

Research interests

Scientific activities is primarily positioned in the areas of human-machine interaction and of multimedia and multimodal systems (sectors H.5, H.5.2 and H.5.3 in the ACM Computing Classification System 1998 and further updates), with a focus on multimodal interactive systems, social signal processing, sound and music computing, and affective computing. Research topics include conception, design, and development of techniques for increasing effectiveness in human-machine interaction both for single users and for a group of users interacting collectively with the system. In more details, major research topics are:

- The investigation of the nonverbal expressive mechanisms involved in human-machine interaction, with a focus on how users convey expressive and emotional content through their full-body movement and gesture. The goal is to design and develop techniques for the automatic analysis of such expressive and emotional content.
- The investigation of the social interaction mechanisms and of their temporal dynamics in small groups of users, with a focus on the development of techniques for the automated analysis of coordination in the behavior of the users, of the functional roles in the group (e.g., leader-follower relationships), of salient behaviors in individuals and in the group.
- The design of software architectures and interfaces for multimodal interactive systems.

Research outputs are exploited in many application areas, including active experience of multimedia content and of cultural heritage, systems and technologies for the performing arts (e.g., music, dance, theatre), for entertainment, well-being, education, and rehabilitation.
Research activities are carried out mainly at Casa Paganini - InfoMus, a center for scientific research in the area of new technologies (multimedia and human-machine interaction, especially) applied to performing arts and new media. The center was created following an agreement between the University of Genoa, the regional government (Regione Liguria), and the town government (Comune di Genova). I actively contributed to the creation of this research center and I am deeply involved in the research activities of the center, including supervision of scientific and educational activities at the center. Moreover, my research activity is carried out in the framework of several national and international research projects and benefits of many international collaborations (e.g., with University College London, KTH in Stockholm, IPEM – Ghent University and so on, see also my publications).