



Centro Ricerche Musicali

***Forme Immateriali* by Michelangelo Lupone:  
structure, creation, interaction, evolution of a permanent adaptive music work.**

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**Abstract**

The paper presents the technical, musical and aesthetical aspects of 'Forme Immateriali' by Michelangelo Lupone, an adaptive site-specific music work totally integrated into the architectural space of the courtyard in the Galleria nazionale d'arte moderna e contemporanea (*National gallery of modern and contemporary art*) in Rome. Here the space is completely pervaded by the music, diffused by the water inside two ancient fountains by means of two special acoustic lens.

The music of 'Forme Immateriali' results from the manipulation and transformation of the sounds coming from the water flowing from the two fountains into the respective pools. The music form evolves in time on the basis of the adaptive criteria about the surroundings and its previous states, to create a musical dialogue made of background and foreground sounds into the space of the courtyard. A higher level of interaction allows the public, by means of the immersion of a stick, to generate sounds correlated to the motion and to the shape of the gestures.

This paper describes the hardware structure of the installation, the computer vision and gesture sonification algorithms, the compositional and aesthetical paradigms used in the work.

Forme Immateriali, realized by CRM - Centro Ricerche Musicali of Rome, is the first Italian music work financed by the Ministero dei Beni e delle Attività Culturali e del Turismo (MiBACT) that is part of a permanent collection of visual arts exhibited in a museum.