

## PREFACE

S.M.ART. BUIL.T. "Structural Monitoring of ARTistic and historical BUILding Testimonies" is a project founded by the European Territorial Cooperation Programme Greece-Italy 2007/2013 and leaded by the Polytechnic of Bari. The core idea of "S.M.ART. BUIL.T." is risks prevention, which concerns not only the prevention of loss of lives and properties, but also the preservation of artistic and historical buildings from natural hazards.

Architectural heritage is an important part of the history and identity of Italy and Greece, contributing to their economy and well being. On the other side, ancient buildings suffer a high vulnerability to dynamic loads, which may induce an unpredictable partial or total collapse. Recent past experience after L'Aquila earthquake strongly evidence this problem.

The main objectives of the international project "S.M.ART.BUIL.T." are the implementation of procedures for the structural monitoring, the seismic vulnerability assessment, the development of guidelines for strengthening and repair of the historical buildings (in Trani and Corfu). The project aims at providing to technical officials of the territorial authorities of Puglia and Ionian Islands Regions some indispensable training tools for the development and/or validation of structural restoration projects and seismic rehabilitation of historical buildings. Most of buildings of artistic value, in the two historic centers, are invariably built of masonry, a material as old as the civilization and with a 10,000 years record of success and lasting qualities, representative of a widespread typology in the Mediterranean area.

The final step has been the International Conference titled "HISTORICAL CENTRES AMONG CULTURE, ART AND TECHNIQUES: A NEW PARADIGMA FOR RISKS PREVENTION THROUGH STRUCTURAL MONITORING", which also represents the most important action of diffusion activities of the S.M.ART.BUIL.T. project.

The Final Conference has been open to all experts in the following topics: seismic and structural monitoring, historical and artistic heritage, computational and technological issues applied to historical heritage, in order to exchange experience of correlated research areas. The main purpose has been to make the conference a forum for dissemination of the latest scientific and technical developments and for exchange of new ideas in emerging topics of the project.

The main conference topics has been divided into three areas and chapters, following the three main souls of the project:

1. HISTORICAL AND ARTISTIC AREA
2. STRUCTURAL AREA
3. COMPUTATIONAL AND TECHNOLOGICAL AREA

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