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Safety and Reliability of Engineering Systems and Structures

Edited by

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Preface

Within the last few years, evaluation and reduction of risk has rapidly become a key item in engineering research and applications. Indeed, it is essential for rational allocation of resources, for the preservation of the environment, for the protection of human safety: in short, for the progress of modern society. This context has created fertile grounds for the development of probabilistic and statistical methods, that up to a couple of decades ago most engineers considered some form of oddities reserved to high-brow specialists.

This is the background of the increasing success of the International Conferences on Structural Safety and Reliability – ICOSSAR – that since 1969 have gathered every four years the applied probability specialists from all over the world, and every time host more and more designers and practicing engineers besides professors and researchers.

This Volume and the accompanying CD-Rom, that contain respectively the abstracts and the full texts of the lectures and papers presented at the Ninth ICOSSAR – held in Roma, Italy, 19-23 June 2005 – are further proofs of this success.

The over 500 papers included in these Proceedings present an up-to-date overview and significant novel contributions over a range of problems much wider than the “structural safety and reliability” of the traditional ICOSSAR denomination, and concern all types of engineering systems.

The scientific programme of ICOSSAR’05 includes invited lectures, organized sessions, mini-symposia, and sessions of spontaneously contributed papers. A peculiarity of this Conference is the large proportion of communications presented in organized sessions and mini-symposia (about 50%).

Three panel discussions are also included in the Conference programme.

In this Volume, apart from the plenary and semi-plenary lectures, the abstracts are arranged under eight subjects, from a) Earthquake Engineering to h) Random Vibrations. A special place is reserved for the first Organized Session, devoted to the results of a technical investigation on the Twin Towers disaster of 11 September 2001.

The Editors are sure that these Proceedings will be for many years a significant reference source and a stimulus for further studies and applications.

Roma, June 2005

G. Augusti, G.I. Schuëller, M. Ciampoli



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(coordinated by K.K. Phoon & C. Cherubini)

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