

Preface

In recent years, new mathematical methods and tools have been developed and applied extensively in the field of aerospace engineering, for example, finite element method, computational fluid dynamics, optimization, control, eigenvalues problems. The interaction between aerospace engineering and mathematics has been significant in the past for both engineers and mathematicians and will be even stronger in the future.

The School of Mathematics “Guido Stampacchia” of the “Ettore Majorana” Foundation and Centre of Scientific Culture is the most appropriate site for aerospace engineers and mathematicians to meet. The present volume collects the papers presented at the Erice Workshop held on September 8–16, 2007, which was organized in order to allow aerospace engineers and mathematicians from Universities, Research Centres, and Industry to debate advanced problems in aerospace engineering requiring extensive mathematical applications.

The editors are confident to capture the interest of people from both academia and industry, particularly, young researchers working on new frontiers of mathematical applications to engineering.

The workshop was dedicated to Angelo Miele, Professor at Rice University in Houston, on the occasion of his 85th birthday. Angelo Miele is both an eminent mathematician and a famous engineer, among other activities, able to conceive new scenarios for space exploration. He has been the advisor of many PhD students at Houston, who became well-known professors in universities worldwide and are speakers at this workshop.

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