

## Preface

Composite structures are massively exploited in many engineering fields. For instance, the state-of-the-art civil aircraft (B787 and A350) are mostly made of composite materials. The design of composites leads to challenging tasks since those competences that stemmed from the adoption of metallic materials are often inadequate for composites. Insights on many different disciplines and tight academic/industrial cooperation are required to fully exploit composite structure capabilities. The skills and the employability of young researchers increase to a great extent through an interdisciplinary and intersectoral training. The FULLCOMP project fall in this framework. FULLCOMP is funded by the European Commission under a Marie Skłodowska-Curie Innovative Training Networks grant for European Training Networks (ETN). FULLCOMP provides intersectoral, interdisciplinary and international training to Early Stage Researchers (ESRs). The FULLCOMP consortium is composed of 7 Universities - Politecnico di Torino (Italy), University of Bristol (UK), Ecole Nationale Supérieure d'arts et Métiers (Bordeaux, France), University of Hannover (Germany), University of Porto (Portugal), University of Washington (USA), RMIT (Australia)- 1 research institute (Luxembourg Institute of Technology) and 1 company (Elan-Ausy, Hamburg, Germany). FULLCOMP will recruit 12 PhD students who will work in an international framework to develop integrated analysis tools to improve the design of composite structures. The full spectrum of the design of composite structures will be dealt with, such as manufacturing, health-monitoring, failure, modeling, multiscale approaches, testing, prognosis, and prognostic. The FULLCOMP research activity is aimed at many engineering fields, e.g. aeronautics, automotive, mechanical, wind energy, and space.

A FULLCOM progress meeting has been held in Torino on 20-21 November 2015 as a continuation of the 23rd Congress of Associazione Italiana di Aeronautica ed Astronautica, which was held in Torino 17-19 November 2015.

This book collects Selected Plenary Lectures and Key-Note Contribution of the Conference as well as chapters by invited other eminent scientists whose contribution has made this volume more complete.

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