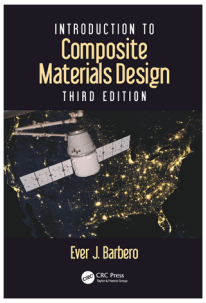

Introduction to Composite Materials Design– Third edition

E. J. Barbero

CRC Press, Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL, 33487-2742, USA. 2018. Distributed by Taylor & Francis Group, 2 Park Square, Milton Park, Abingdon, OX14 4RN. xxxv; 535pp. Illustrated. £92. (20% discount available to RAeS members via www.crcpress.com using AKQ07 promotion code). ISBN 978-1-1381-9680-3.

It seems only yesterday that I was writing a review of the Second edition of this book, but in reality, 7 years have passed since it was published in *The Aeronautical Journal* May 2011, and 20 years since the First edition appeared in 1998. Having recently reviewed Third editions of two other textbooks on composites, I was pleased to see the Third edition of this one, as an acknowledgement of its rightful place among the selected few which stood the test of time.

Like the first two editions, it is aimed at senior level undergraduate engineering students with no prior knowledge of composites as well as at self-studying practicing engineers wishing to be able to design and fabricate composite structures. The Third edition incorporates the latest state-of-the-art analysis techniques for the preliminary of composite structures.

All 13 chapters of the Second edition have been retained and appear in the same order as before. The first seven chapters – Introduction, Materials, Manufacturing Processes, Micromechanics, Ply Mechanics, Macromechanics and Strength – cover the material that can be taught, in view of many who use this book in their teaching, as a one-term undergraduate course. However, in some chapters, the order of sections has been changed to make exposition more logical, and new sections on Biodegradable Matrices, Textile Manufacturing, Temperature Dependent Properties, Last Ply Failure have been added.

Chapters 8–13 cover a number of applied composite design topics including Damage (Chapter 8), Fabric-reinforced Composites (Chapter 9) and composite structures such as Beams, Plates and Stiffened Panels and Shells (Chapters 10–12). Chapter 13, which first appeared in the Second edition of the book, is dedicated to Strengthening of Reinforced Concrete, the most promising application of composite materials in civil engineering. Aimed at advanced undergraduate and graduate level, these chapters offer topics suitable for special projects or introductory courses for particular audiences.

The Third edition contains 88 fully worked-out examples and more than 200 end-of-chapter problems/exercises. All examples have been revised and new examples covering

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various types of composite structures such as pressure vessels, pipes, domes, shafts and tanks, to name but a few, introduced. Appendices have been revised too and now include SCILAB code for Classical Lamination Theory as well as details of Periodic Microstructure Micromechanics and Longitudinal Compressive Strength.

I have no doubt that the Third edition of this textbook will help the new generation of readers to gain a better understanding of material selection, fabrication, material behaviour and structural analysis involved in design of composite structures.

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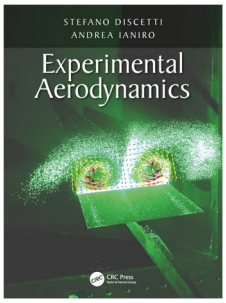

Experimental Aerodynamics

Edited by S. Discetti and A. Ianiro

CRC Press, Taylor & Francis Group, 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL, 33487-2742, USA. 2017. Distributed by Taylor & Francis Group, 2 Park Square, Milton Park, Abingdon, OX14 4RN, UK. xiii; 468pp. Illustrated. £120. (20% discount available to RAeS members via www.crcpress.com using AKQ07 promotion code). ISBN 978-1-4987-0401-4.

There have very few text or reference books on experimental aerodynamics. Previous works have focused on wind-tunnel testing or provide a general overview of different experimental techniques with some limited applications. This book attempts to cover this gap in the market by bringing together different contributors from around the world to in compiling a one-stop reference/textbook for students and practitioners in aerospace engineering.

Overall, the book is focused on aerodynamic applications and methods are presented with this in mind. The entire range of

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