



Editorial

Valentia Lopresto¹

Published online: 1 April 2019
© Springer Nature Switzerland AG 2019

The Journal has dedicated the Special Issue “Dynamic Response and Failure of Composites: Recent Advances” to the Third Edition of the “International Symposium on Dynamic Response and Failure of Composite Materials, DRaf2018” organized in Ischia, Naples, every 2 years, since 2014. Selected papers on current research topics related to composite materials and sandwich structures under dynamic loading conditions have been presented.

The papers mostly focus on marine applications. Dr. Yapa D.S. Rajapakse, Manager of the Solid Mechanics Program (SMP) at the Office of Naval Research (ONR), and member of the Scientific and Organizing Committee of the conference, opened the works in all the three editions with interesting Plenary Lectures about his experience in Navy field. In 2018, the ONR Special Session was organized and chaired by M. Porfiri from NYU. In the same session, Prof. A. Shukla, PI of the SMP, from University of Rhode Island, gave a very impressive Plenary Lecture: “Implosion of Advanced Composite Structures within Complex Underwater Environments”.

Applications in Aerospace and Automotive fields were also presented in interesting Aerospace and Automotive Sessions. The Cosmonaut of the Italian Air Force, Lt. Col. Walter Villadei, gave a very interesting Plenary Lecture about Future Challenges in the Space Domain. The Chairpersons of the Symposium gratefully acknowledge him for accepting their invitation for the second time.

Prof. G. Belingardi and S. Boria from Politecnico di Torino and University of Camerino, respectively, chaired the automotive session with contributions from Fiat Research Centre, Altair and Exemplar. Prof. M. Ferraris from Politecnico di Torino organized and chaired a very interesting session on Ceramic Composites.

The primary objective of the symposium was to gather people from different universities, research centers and

industries, to discuss research directions about new materials and response under severe loading conditions, with the final aim to promote the interaction and the collaboration between scientists. All the speakers were personally invited by the organizing committee.

The Chairpersons of the Conference would like to thank all the participants as well as the University of Naples “Federico II” and the Department of Chemical, Materials and Industrial Production Engineering, ONR USA and MSC Software srl, for the technical and financial support.

Many thanks go to Prof. Young Kwon, Editor of the Journal, for supporting this project.

Valentia Lopresto
University of Naples “Federico II”
Dedication to Serge

The first Edition in 2014 was organized with the precious support of Serge Abrate, contributing a lot to the success of the conference. It is to him that this volume is dedicated as manifestation of gratitude. Of all the persons that, in different parts of the world, are dealing with the design of composite materials from the point of view of impact loading or structural vibration, who does not know Prof. Serge Abrate from the Southern Illinois University at Carbondale? Many researchers are deeply indebted to him for his scientific contributions that have enlightened very complex structural behaviors, catching and pointing out the essential keys for understanding, and have provided straightforward explanations and views to engineering problems.

Serge has been able to establish and maintain over the years an impressive number of strong relationships and friendships with people from all over the world, from emeritus professors, who appreciated his original approaches, to young students and researchers who were looking for a wise and skilled mentor. Above all, he has worked hard to show promising young people a path to help at the best the scientific research.

When Serge as a young researcher dedicated his research activity to composite materials, he made a wise choice and demonstrated to see far. At that time, composite materials were already used, but in recent years they have experienced

✉ Valentia Lopresto
lopresto@unina.it

¹ Università degli Studi di Napoli Federico II, Naples, Italy

a significant rise in the number of applications, in particular in the structures for means of transportation (airplanes, automobiles, ships, railway carriages, ...). The study of the impact response is one of the fundamental questions to be

solved when designing and constructing composite structures. For this reason, he believed in DRaf Symposium. Serge has been a true forerunner.