
Editorial

J. Paulo Davim

Department of Mechanical Engineering,
University of Aveiro,
Campus Santiago, 3810-193 Aveiro, Portugal
E-mail: pdavim@ua.pt

Biographical notes: J. Paulo Davim received a PhD Degree in Mechanical Engineering from University of Porto and the Aggregation from University of Coimbra. Between 1986 and 1996, he was a Lecturer in Department of Mechanical Engineering at the University of Porto. Currently, he is an Auxiliary Professor with Aggregation in Department of Mechanical Engineering at the University of Aveiro. He teaches undergraduate and graduate courses in machining and tribology. He has about 20 years of teaching and research experience. His main research interests include machining and tribology. He is the Editor of the international journals in these subjects. He is the Guest Editor, a Reviewer, and an Advisory for many international journals. He has also published more than 150 papers in refereed international journals and conferences.

Recently, the use of composite materials has increased in various areas of science and technology due to their special mechanical and physical properties. Composite materials are characterised by having a combination of light weight, very high strength, and a high stiffness. Therefore, composite materials have replaced conventional materials in various fields of application such as aeronautical, aerospace, automotive, as well as in other industries because of their own properties. As a result of these properties and potential applications, there exists a great necessity to understand the questions associated with the machining of these materials. Machining composite materials is a rather complex task, owing to their heterogeneity, heat sensitivity, and the fact that reinforcements are extremely abrasive.

Currently, the numerical/experimental models of composite machining are subjects of great scientific interest. First, four papers are dedicated to this subject. The drilling of composites is an operation of great importance while intending to assemble components in these materials. Six papers on this subject are presented. The surface finish is an aspect of great importance in the manufacturing engineering. Two papers on this subject are presented involving turning. The machining of metal matrix composites is a recent subject of great interest, particularly for the industries that start to use these materials. Finally, three papers on this subject are presented for locking up this special issue dedicated to composite machining.

The Guest Editor acknowledges to Professor M. Dorgham, Editor-in-Chief of IJMPT, and the team, for their adequate and professional support throughout the launch of this special issue. Finally, I would like to thank all the reviewers for their availability for this work.