In Memoriam

Professor José Joaquim de Almeida Grácio (1959–2014)

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Professor José Joaquim de Almeida Grácio dedicated his research career to the study of material forming at different scales. Motivated by the understanding of the low scale physical factors that control the mechanical behavior of materials, he contributed to the development of constitutive models and their applications to numerical simulations of manufacturing processes. The multi-scale concept was so strong in his mind that he applied it at all levels of his professional life. Following the model of materials, for which a particular composition

with an organized microstructure leads to desired properties and performance, he selected individuals and associated them “at different scales”, namely: i) Very small clusters of experts assembled in sub-working groups, ii) Scale transition to larger size groups dedicated to traditional fields of mechanical engineering, nanoengineering, transportation technology, biomechanics and applied energy and finally, iii) Integration of all these groups into the Centre for Mechanical Technology and Automation - TEMA - a R&D unit that he created and led to international recognition. Professor José Grácio was a visionary and, by designing TEMA 20 years ago, he created nothing less than a contemporary research unit not only capable of developing high quality research but also suited for convergence engineering in support of the Portuguese industry.

Besides research, Professor José Grácio, was an outstanding mentor to many students, undergraduate, graduate and post-doctoral, who were guided with enthusiasm, optimism and motivation, and committed to excellence. Prior to TEMA, Professor José Grácio also founded the Mechanical Engineering Department of the University of Aveiro, which is one of the best in Portugal, and contributed actively to the progress of this institution. From the human side, Professor José Grácio was warm, generous, with a great sense of humor, and he will remain in our memory as a singular character impossible to forget. Those of us who had the pleasure of working with him will always remember his wonderful personality.

In July 2016, colleagues, collaborators, former students, mentors and friends met in Aveiro at the conference on Recent Trends in Mechanical Engineering (RTME) organized to honor the memory of Professor José Joaquim de Almeida Grácio. This special issue, is a collection of papers presented at this conference and related to material forming. We are deeply indebted and grateful to the Editor-In-Chief of the International Journal of Material Forming – Professor Francisco Chinesta, for providing us the opportunity to publish this very special issue on “Modeling Materials and Processes, in Memory of Professor José J. Grácio.”

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