
Editorial

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Biographical notes: Robertt A.F. Valente is an Assistant Professor of Mechanical Engineering at the University of Aveiro. He received his PhD in Mechanical Engineering from the Faculty of Engineering of the University of Porto, in 2004. He is currently the Head of the Division of Plastic Forming of the GRIDS Research Group (TEMA-DEM). His research interests include the development of new finite element formulations with applications in metal forming and structural analyses, as well as the development of high-performance software codes for industrial applications.

António Andrade-Campos received his PhD in Mechanical Engineering from the University of Aveiro, Portugal, in 2005. He is an Assistant Professor of Mechanical Engineering at the University of Aveiro. He is currently the Head of the Division of Mechanical Engineering Optimization of the GRIDS Research Group (TEMA-DEM). His research interest includes inverse methods, identification and determination of constitutive model parameters, optimisation methods as well as the use of optimisation methods in mechanical systems and shape optimisation in metal forming problems.

Jean-Philippe Ponthot is a Full Professor at the University of Liège, Belgium, where he is responsible for the teaching of chairs on inelastic behaviour of solids, continuum mechanics, large deformation of solids and finite element method. He is the author (or co-author) of more than 250 publications in international journals and conferences, and a worldwide recognised leading researcher in the area of numerical methods and plastic forming simulation.

This special issue of the *International Journal of Mechatronics and Manufacturing Systems (IJMMS)* includes five research articles related to advances in optimisation and numerical simulation methodologies applied to metal forming industrial problems.

The papers in this special issue come from a selection of contributions to the symposium on ‘Optimisation methodologies and finite element numerical simulation applied to metal forming industrial problems’, within the 7th EUROMECH Solid Mechanics Conference ESMC2009 (September 7–11 2009, Lisbon, Portugal). This restrict selection aims to introduce the most relevant and promising contributions to the state-of-the-art of numerical methods and optimisation procedures applied to metal forming industrial problems.

Guest Editors Prof. Valente, Prof. Andrade-Campos and Prof. Ponthot would like to thank all the authors and all the referees for their availability and their thorough evaluations of the papers appear in this issue.