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## Editorial

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**Biographical notes:** J. de Ciurana received his PhD in Mechanical Engineering from Universitat Politècnica de Catalunya in 1997. He is a Full Professor of Mechanical Engineering and Industrial Construction Department and the Director of Product, Process and Production Engineering Research Group (GREP) at Universitat de Girona. His current research interest includes design, production and manufacturing technologies (CIM, CAD, CAM, and CNC), flexible manufacturing, improvement of SMEs and system aided process planning. At present, he is working in process planning and manufacturing processes modelling. He has over 16 years of experience in teaching and researching about manufacturing processes. He has been a Reviewer and leads several funded research project.

T. Özel received his PhD in Mechanical Engineering from The Ohio State University in 1998. He is an Associate Professor of Industrial and Systems Engineering and the Director of Manufacturing Automation Research Laboratory at Rutgers University. His current research interest include advanced manufacturing, computational modelling of machining processes, mechatronics, automation, control of manufacturing systems, and micro/nano manufacturing sciences. He has extensive experience in teaching and researching about manufacturing processes, machining systems and manufacturing automation. He has been Editor, Guest Editor, Reviewer, and editorial board member for several international journals and member of scientific committee for many international conferences. He has published over 75 refereed articles in international journals and conferences.

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This special issue of the *International Journal of Mechatronics and Manufacturing Systems (IJMMS)* includes 11 research articles related to cutting tools and process parameters for machining advanced materials, investigations on the tool-workpiece contact problems, computational models applied to manufacturing processes, effects on part geometry, and surface integrity on the inspection planning in manufacturing of parts. A brief summary of the main contributions is discussed below.

In this special issue, the articles by Antonialli et al. and Beranoagirre et al. are related to machining advanced materials with milling processes. Antonialli et al. investigate cutting tool life and effects of tool features on milling forces when a titanium alloy is machined. Beranoagirre et al. present tool wear observations in milling of another titanium alloy. Ortega et al. examine electro-discharge dressing of a grinding wheel to improve process performance in grinding. Aligiri et al. consider electrical discharge process in order to study how process parameters affect the micro features on the workpiece. García-Plaza et al. show a strategy to monitor roundness defects in computer numerical control (CNC) turning process. The article by León et al. is about a forming process and explores how FEA could predict deformation on materials when angular drawing is developed. Huerta et al. and De Agustina et al. introduce their work about surface roughness and integrity. Huerta et al. studied surface integrity in turning of titanium alloy parts whereas De Agustina et al. studied surface roughness on turning an aluminium alloy. The special issue continues with two articles on computational models with artificial neural network (ANN) applied to manufacturing processes. Rodríguez et al. have applied an ANN model to study tool wear on ball-end milling processes. Míguez et al. utilised computational ANN models to grinding and turning processes for process planning. Finally, Barreiro et al. apply knowledge based engineering (KBE) to inspection planning.

The Guest Editor Prof. Ciurana 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.