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## Editorial

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**Biographical notes:** Tuğrul Özel is an Associate Professor of Industrial and Systems Engineering and the Director of Manufacturing Automation Research Laboratory at Rutgers University. He received his PhD in Mechanical Engineering from The Ohio State University in 1998. His current research interests 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 high speed machining, manufacturing processes and 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 100 refereed articles in international journals and conferences.

Bilgin Kaftanoğlu received his BS in Mechanical Engineering with Summa Cum Laude from Middle East Technical University (METU) in 1960. He holds MS and PhD degrees from Imperial College of Science and Technology in London, UK. He has been Professor and Chairman at the Mechanical Engineering Department and Vice Rector at METU between 1969 and 2008. He is the Founder of Machine Design and Production Institute (MATIMAREN) and Computer Aided Design, Manufacturing and Robotics (BILTIR) in METU. He has been Professor and Chair of Manufacturing Engineering Department since 2008 and the Chairman of The Metal Forming Center of Excellence (MFCE) since 2013 at ATILIM University, Turkey. He has 237 publications.

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This special issue of the *International Journal of Mechatronics and Manufacturing Systems (IJMMS)* includes six research articles related to advances in manufacturing technology; forming processes such as forging and bending, micromachining such as diamond turning and micromilling, non-traditional processes such as electrical discharge machining, and tribology aspects in manufacturing such as minimum quantity lubrication

and boron nitride coating technologies. A brief summary of the main contributions presented in this special is discussed below.

In this special issue, wear behaviour and characteristics of nano-polycrystalline diamond in machining tungsten carbide has been presented by distinguished researchers in this field.

In micromachining, a novel fabrication methodology for customised micro end mills in polycrystalline diamond and tungsten carbide by utilising precision micro electro discharge machining is presented.

The application of analytical and numerical methods in optimisation of turbine blade forging and three-roll-push-bending processes has been presented in two papers. A comparison of analytical and numerical methods in modelling and analysing forming processes has been discussed by researcher from an internationally renowned research institute.

The special issue also includes excellent research articles on the industrial tribology. Analysis and optimisation of minimum quantity lubrication with an innovative approach in milling of Ti-6Al-4V alloy from a leading machining research group has been presented. The development of boron nitride coatings using magnetron sputtering for cutting tools and forming dies with extensive testing and characterisation has been introduced with its potential improvements for the manufacturing productivity.

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