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Area C

Symposium C.3

Title: Advanced Subtractive Manufacturing / machining

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Abstract

Challenges in manufacturing are continuously growing due to the trend of parts miniaturization and increased geometry complexity, the emergence of new materials and the demand for specific surface texture and properties in the final products. Especially, new materials are very demanding in terms of manufacturing, given their high strength and low machinability. To meet the challenges associated with these trends, improved tool designs and materials coated with sophisticated thin hard films are developed. Their efficient exploitation assumes well-established knowledges of both workpiece and tool material properties and functional behaviors.

The symposium aims to exchange current and future trends in manufacturing procedures, with a view to advancing state-of-the-art and encouraging innovation for the efficient exploitation of new tool and workpiece materials in various applications. Hereupon, advanced characterization methods of materials and coatings are of high interest. The symposium focuses on both the scientific and industrial application, trying to bridge the gap between academia and industry. The topics covered may include, but are not limited to: Machinability of materials, Tool materials, coatings and characterization methods, Material removal processes, Material forming processes, EDM/ECM processes, Meso/micro/nano manufacturing, Material models in manufacturing processes, Tribology and wear.