

Table of Contents

Preface

Exploring Artificial Intelligence for Tool Wear Prediction in Turn-Milling C. Lerez, V. Artiushenko and M. Hackert-Oschätzchen	1
The Role of Tool Texture Design on the Chip Formation in PEEK Machining A. Bottin, R. Bertolini, H. Gonzalez, E. Ukar and S. Bruschi	9
Condition-Robust Tool Remaining Useful Life Prediction under Highly Variable Milling Conditions S. Ferrisi, S. Lang, M. Afrasiabi, R. Guido, D. Umbrello, G. Ambrogio and M. Bambach	19
Cryogenic Machining of a Laser Powder Bed Fusion-Processed AlSi7Mg Aluminum Alloy R. Bertolini, T. Islam, S. Pan, E. Ghinatti and S. Bruschi	31
On the Use of Adaptive Mesh Refinement for Modelling the Taylor Impact Test with the CEL Formulation F. Ducobu, O. Pantalé, L. Spitaels and D. Umbrello	41
Potential of Cutting Fluid Application in Gear Hobbing of High-Strength Materials M. Beutner, M. Hackert-Oschätzchen, M. Eich and B. Karpuschewski	49
Influence of the Crystal Structure of AlCrN on Tool Coating Properties and Wear in Dry Gear Hobbing N. Paucke, M. Beutner, A. Lümke, K. Thomas, M. Učík, H. Bolvardi and M. Hackert-Oschätzchen	61
Scaling Methodology for Large Boring Bars with Tuned Mass Dampers M. Etxebeste, I.M. Arrieta, G. Ortiz de Zarate and P.J. Arrazola	71
Experimental and Analytical Study of Cutting Force and Temperature in Drilling of CF/PEEK Composite S. Tamura and T. Matsumura	83
Static Finite Element Modeling of Milling in Flexible Composite Plates M. Nutte, E. Rivière-Lorphèvre, V. Dambly, P.J. Arrazola, I. Lazoglu, A. Granjon and F. Ducobu	93
Laser Surface Texturing of Cylindrical Ejector Pins for Functionalization of Injection Molding Systems: A Preliminary Study A. Sposato, M.R. Saffioti, C. Morano, F. Modica, G. Rotella, I. Fassi and V. Basile	103
Drilling of Fiber Metal Laminates for Aerospace Applications: Experimental Evaluation of Surface Treatment Effects on Adhesive Strength and Hole Quality A. Sposato, M.R. Saffioti, Z. Liu, E. Simonetto, G. Rotella and D. Umbrello	111
Classification of Cutting Tool Wear Evolution in CNC Turning Using Convolutional Neural Networks D.A. Gartzonikas, N.E. Karkalos, A.P. Markopoulos and P. Benardos	119
Towards Solid-State Recycling of Ti6Al4V: Defining a Sustainable Machining Process Window for Low-Oxidation Chips G. Ortiz de Zarate, I. Rodriguez, A. Oruna, H. Otalora, M. Etxebeste and P.J. Arrazola	127