

# Table of Contents

## Preface

|                                                                                                                                                                                                                               |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <b>Application of Desirability Function Based on Neural Network for Optimizing the Process Parameters in Turning of PEEK CF30 Composites</b><br>I. Hanafi, K. Abdellatif, F.M. Cabrera and J.T. Manzanares                    | 1   |
| <b>Application of Artificial Neural Network for the Prediction of Surface Roughness in Drilling GFRP Composites</b><br>K. Palanikumar, B. Latha, V.S. Senthilkumar and J.P. Davim                                             | 21  |
| <b>Prediction of Cutting Forces during Turning PA66 GF-30 Glass Fiber Reinforced Polyamide by Soft Computing Techniques</b><br>N.A. Fountas, I. Ntziantzias, J. Kechagias, A. Koutsomichalis, J.P. Davim and N.M. Vaxevanidis | 37  |
| <b>Optimisation of End Milling Parameters on Aluminium/SiC Composites Using Response Surface and Artificial Neural Network Methodologies</b><br>V. Krishnaraj                                                                 | 59  |
| <b>Fuzzy Modeling and Analysis on the Turning Parameters for Machining Force and Specific Cutting Pressure in CFRP Composites</b><br>T. Rajasekaran, V.N. Gaitonde and J.P. Davim                                             | 77  |
| <b>Soft Computing Applications in Drilling of GFRP Composites: A Review</b><br>V.S.S. Kumar and C. Ezilarasan                                                                                                                 | 99  |
| <b>Surface Roughness Minimization in Turning PEEK-CF30 Composites with TiN Cutting Tools Using Particle Swarm Optimization</b><br>F.M. Cabrera, I. Garrido, J. Tejero, V.N. Gaitonde, S.R. Karnik and J.P. Davim              | 109 |
| <b>Multi-Response Optimization in Drilling of Glass Epoxy Polymer Composites Using Simulated Annealing Approach</b><br>S.R. Karnik, V.N. Gaitonde, S. Basavarajappa and J.P. Davim                                            | 123 |