

# Contents

Preface — V

About the Editor — VII

List of contributors — XI

Prasanta Sahoo, Suman Kalyan Das

**1 Emerging trends in additive and subtractive manufacturing — 1**

Moisés Batista, Ana Pilar Valerga, Jorge Salguero,  
Severo Raul Fernandez-Vidal, Franck Girod

**2 State of the art of the fused deposition modeling using PLA:  
improving the performance — 59**

Viktor P. Astakhov, Swapnil Patel

**3 Development of the basic drill design for cored holes in additive  
and subtractive manufacturing — 113**

Ke Huang, Tianxing Chang, Yandong Jing, Xuwei Fang, Bingheng Lu

**4 Additive manufacturing of magnesium alloys — 149**

Theodora Kontodina, Dimitrios Tzetzis, J. Paulo Davim, Panagiotis Kyratsis

**5 Additive manufacturing for patient-specific medical use — 199**

Samad Nadimi Babil Oliaei, Behzad Nasseri

**6 Stereolithography and its applications — 229**

Van-Du Nguyen, Ngoc-Hung Chu

**7 Ultrasonic-assisted deep-hole drilling — 251**

Karmjit Singh, Ibrahim A. Sultan

**8 Information and computational modeling for sustainability evaluation  
and improvement of manufacturing processes — 271**

**Index — 289**

