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Altri autori (Persone)	TalibNorfazillah Binti MandalGurudas
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Sommario/riassunto	This book offers a comprehensive overview of the fundamentals, principles, and latest innovations in advanced machine and micromachining processes. Businesses are continually seeking innovative advanced machining and micromachining techniques that optimize efficiency while reducing environmental harm. This growing competitive pressure has spurred the development of sophisticated design and production concepts. Modern machining and micromachining methods have evolved to accommodate the use of newer materials across diverse applications, while ensuring precise machining accuracy. The primary aim of this book is to explore and analyze various approaches in modern machining and micromachining processes, with a focus on their effectiveness and application in successful product development. Consequently, the book emphasizes an industrial engineering perspective. This book covers a range of advanced machining and micromachining processes that can be

utilized by the manufacturing industry to enhance productivity and contribute to socioeconomic development. Additionally, it highlights ongoing research projects in the field and provides insights into the latest advancements in advanced machining and micromachining techniques. The 31 chapters in the book cover the following subjects: abrasive jet machining; water jet machining; principles of electro discharge machining; wire-electro discharge machining; laser beam machining; plasma arc machining; ion beam machining; electrochemical machining; ultrasonic machining; electron beam machining; electrochemical grinding; photochemical machining process; abrasive-assisted micromachining; abrasive water jet micromachining; electro discharge machining; electrochemical micromachining; ultrasonic micromachining; laser surface modification techniques; ion beam processes; glass workpiece micromachining using electrochemical discharge machining; abrasive water jet machining; ultrasonic vibration-assisted micromachining; laser micromachining's role in improving tool wear resistance; stress; and surface roughness in high-strength alloys; abrasive flow finishing process; elastic emission machining; magnetic abrasive finishing process; genetic algorithm for multi-objective optimization in machining; machining of Titanium Grade-2 and P-20 tool steel; and wet bulk micromachining in MEMS fabrication. Audience The book is intended for a wide audience including mechanical, manufacturing, biomedical, and industrial engineers and R&D researchers involved in advanced machining and micromachining technology.

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