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Titolo	Fly Cutting Technology for Ultra-Precision Machining / / Suet To and Sujuan Wang, editors
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ISBN	981-9907-38-1
Edizione	[First edition.]
Descrizione fisica	1 online resource (316 illus., 252 illus. in color. eReference.)
Collana	Precision Manufacturing Series
Disciplina	671.35
Soggetti	Machining Milling (Metal-work)
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Overview of Fly Cutting in Ultra-precision Machining -- Cutting Mechanism and Surface Generation in UPRM -- Spindle Vibration and Its Effects on Surface Generation.-Spindle Inclination Induce Effects on Surface Generation -- Tool Wear Induced Effects on Surface Generation -- Material Induced Effects on Surface Generation -- Applications.
Sommario/riassunto	This handbook covers the fly cutting technique, an ultra-precision mechanical machining technology which is regarded as the fastest and most reliable low-cost machining method to generate high quality complex surfaces. The ultra-precision raster milling provides more flexibility and suitability for freeform and structural surfaces with a uniform quality with sub-micrometric form error and nanometric surface roughness. These surfaces are widely applied into optics, medicine, biotechnology, electronics, and communications. The fundamental and latest advancing knowledge of fly-cutting technology is important for the future development and applications in ultra-precision mechanical machining technology. This book provides a good reference for fly-cutting technology in ultra-precision machining for undergraduate and postgraduate students, researchers, engineers, and postdoctoral fellow in advanced manufacturing area. It gives the audience an overview of the working principles, process mechanism, salient features, applications, and research directions of ultra-precision fly-cutting technology.