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Titolo	Control of cutting vibration and machining instability [[electronic resource]] : a time-frequency approach for precision, micro and nano machining // C. Steve Suh and Meng-Kun Liu
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Descrizione fisica	1 online resource (262 p.)
Altri autori (Persone)	LiuMeng-Kun
Disciplina	671.3/5
Soggetti	Cutting - Vibration Machine-tools - Vibration Machining Machinery, Dynamics of Time-series analysis Microtechnology Nanotechnology
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cutting Dynamics and Machining Instability -- Basic Physical Principles -- Adaptive Filters and Filtered-x LMS Algorithm -- Time-Frequency Analysis -- Wavelet Filter Banks -- Temporal and Spectral Characteristics of Dynamic Instability -- Simultaneous Time-Frequency Control of Dynamic Instability -- Time-Frequency Control of Milling Instability and Chatter at High Speed -- Multi-Dimensional Time-Frequency Control of Micro-Milling Instability -- Time-Frequency Friction Induced Instability -- Synchronization of Chaos in Simultaneous Time-Frequency Domain -- Appendix.
Sommario/riassunto	Presents new developments on machine tool vibration control based on discontinuous dynamical systems Machining instability is a topical area, and there are a wide range of publications that cover the topic. However, many of these previous studies have started by assuming that

the behavior of the system can be linearised. Meanwhile, there are many recent advances in the fields of signal processing, nonlinear dynamics, and nonlinear control, all of which are relevant to the machining stability problem. This book establishes the fundamentals of cutting mechanics and machine tool
