

Springer Series in Advanced Manufacturing

Cheng
Editor

Machining Dynamics

Fundamentals, Applications and Practices

Machining dynamics play an essential role in the performance of machine tools and machining processes in manufacturing. Current advances in computational modelling, sensors, diagnostic equipment and analysis tools, 3D surface metrology and manufacturing science are giving researchers and practising engineers a new perspective on the machining process.

Machining Dynamics: Fundamentals, Applications and Practices reflects the new integrated approach to studying machining dynamics by presenting state-of-the-art applications, practices and research in the field. Written by experts in each field, the first part of the book presents the basic theory, analysis and control methodology in addition to detailed modelling and diagnostic techniques for machining dynamics, while part two focuses on applying the fundamentals of machining dynamics in a variety of machining processes including turning, grinding, gear machining and non-traditional machining.

Advanced undergraduate and postgraduate students studying manufacturing engineering and machining technology will find *Machining Dynamics: Fundamentals, Applications and Practices* a comprehensive and up-to-date introduction to the subject while the book's thoroughness allows it to serve as a useful reference for manufacturing engineers, production supervisors, planning and application engineers and designers.

The **Springer Series in Advanced Manufacturing** publishes the best teaching and reference material to support students, educators and practitioners in manufacturing technology and management. This international series includes advanced textbooks, research monographs, edited works and conference proceedings covering all subjects in advanced manufacturing. The series focuses on new topics of interest, new treatments of more traditional areas and coverage of the applications of information and communication technology (ICT) in manufacturing.

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