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Technology Of Machine Tools - Arthur Gill - 2010-01-28
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Technology of Machine Tools - KRAR - 2019-02-21
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Twin-Control - Mikel Armentia - 2019-01-05
This open access book summarizes the results of the European research project “Twin-model based virtual manufacturing for machine tool-process simulation and control” (Twin-Control). The first part reviews the applications of ICTs in machine tools and manufacturing, from a scientific and industrial point of view, and introduces the Twin-Control approach.

The third part addresses the monitoring and data management infrastructure of machines and manufacturing processes and numerous applications of energy monitoring. Part 4 then highlights various features developed in the project by combining the developments covered in Parts 3 and 4 to control the manufacturing processes applying the so-called CPSs. Lastly, Part 5 presents a complete validation of Twin-Control features in two key industrial sectors: aerospace and automotive. The book offers a representative overview of the latest trends in the manufacturing industry, with a focus on machine tools.

Manufacturing Technology—Metal Cutting and Machine Tools, 4e (Volume II) - P N Rao - 2018-07-24
Mc-Graw Hill Education is proud to announce the fourth edition of Manufacturing Technology, Volume 2 on Metal cutting and Machine Tools, by our well-known author P N Rao. With latest industrial case studies and expanded topical coverage, the textbook offers a deep knowledge of the ever-evolving subject. A dedicated section on chapter-wise GATE questions provide support to the competitive examinations’ aspirants. This revised edition also maintains its principle of lucid presentation and easy to understand pedagogy. This makes the book a complete package on the subject which will greatly benefit students, teachers and practicing engineers. Salient Features: - Well organised description of equipment, from practical information to its process, supported with easy to understand illustrations, numerical calculation and discussion of the result. - Expanded topical coverage by adding One new chapter, on Micro-Manufacturing. Included new required topics like, Automation, Economics of Tooling, etc. - Latest Industrial Case Studies, like Turbine Blade Machining, Welding Fixture, etc.

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Machine Tools - Lubomir Soool - 2020-10
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Machine Tool Technology and Manufacturing Processes - C. Thomas Olivo - 1987
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Machine Tools for High Performance Machining - Norberto Lopez de Lacalle - 2008-10-01
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programming and CAD/CAM technology are discussed. The text also covers applications in many important sectors. Recent developments in new motion devices and numeric control have lead to considerable technical improvements in machine tools. The use of five-axis machining centers has also spread, resulting in reductions in set-up and lead times. As a consequence, feed rates, cutting speed and chip section increased, whilst accuracy and precision have improved as well. Additionally, new cutting tools have been developed, combining tough substrates, optimal geometries and wear resistant coatings. “Machine Tools for High Performance Machining” describes in depth several aspects of machine structures, machine elements and control, and application. The basics, models and functions of each aspect are explained by experts from both academia and industry. Postgraduates, researchers and end users will find all this book an essential reference.


A proven process for machine tool selection, installation, and maintenance. Written by an engineer with many years of experience in the industry, this practical guide provides a systematic approach to acquiring and setting up machine tools efficiently and cost-effectively. Machine Tools: Specification, Purchase, and Installation delivers a step-by-step plan for choosing the appropriate machine tool to meet your company's requirements and building the foundation that fits the specialized tool and the environment in which it will operate. Real-world examples and helpful checklists are included. Increase productivity, reduce equipment downtime, and save money by applying the streamlined methods presented in this valuable resource. Complete coverage of each phase of the process, including: Budgeting Specification Procurement Layout Foundation Installation Preparation Start up Maintenance


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Manufacturing Automation - Yusuf Altintas - 2012-01-16

Metal cutting is widely used in producing manufactured products. The technology has advanced considerably along with new materials, computers and sensors. This new edition considers the scientific principles of metal cutting and their practical application to manufacturing problems. It begins with metal cutting mechanics, principles of vibration and experimental modal analysis applied to solving shop floor problems. There is in-depth coverage of chatter vibrations, a problem experienced daily by manufacturing engineers. Programming, design and automation of CNC (computer numerical control) machine tools, NC (numerical control) programming and CAD/CAM technology are discussed. The text also covers the selection of drive actuators, feedback sensors, modelling and control of feed drives, the design of real time trajectory generation and interpolation algorithms and CNC-oriented error analysis in detail. Each chapter includes examples drawn from industry, design projects and homework problems. This is ideal for advanced undergraduate and graduate students and also practising engineers.

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This classic book features a richly illustrated, intensely visual treatment of basic machine tool technology and related subjects, including measurement and tools, reading drawings, mechanical hardware, hand tools, metallurgy, and the essentials of CNC. This new edition introduces introductory through advanced topics, Machine Tool Practices is formatted so that it may be used in a traditional lab-lecture program or a self-paced program. The book is divided into major sections that contain many instructional units. Each unit contains listed objectives, self-tests with answers, and boxed material covering shop tips, safety, and new technologies. In this updated edition there are over 600 new photos and 1,500 revised line drawings! Professionals in the manufacturing technology field.


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This work was originally published as four separate books; their titles, and
Photographs.


Salient Features Of Second Edition *

Machining Economics. Data On Recommended Cutting Speeds, Feeds And Tool Geometry For Various Operations Has Been Incorporated For Reference By The Practising Engineer.Salient Features Of Second Edition


Fundamentals of Metal Cutting and Machine Tools - B. L. Juneja - 2003

The Book Is Intended To Serve As A Textbook For The Final And Pre-Final Year B.Tech. Students Of Mechanical, Production, Aeronautical And Textile Engineering Disciplines. It Can Be Used Either For A One Or A Two Semester Course. The Book Covers The Main Areas Of Interest In Metal Machining Technology Namely Machining Processes, Machine Tools, Metal Cutting Theory And Cutting Tools. Modern Developments Such As Numerical Control, Computer-Aided Manufacture And Non-Conventional Processes Have Also Been Treated. Separate Chapters Have Been Devoted To The Important Topics Of Machine Tool Vibration, Surface Integrity And Machining Economics. Data On Recommended Cutting Speeds, Feeds And Tool Geometry For Various Operations Has Been Incorporated For Reference By The Practicing Engineer.Salient Features Of Second Edition


Advances in Mechanism and Machine Science - Tadeusz Uhl - 2019-06-13

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Machining—Recent Advances, Applications and Challenges - Luis Norberto L’opez de Lacalle - 2019-08-26
The Special Issue Machining—Recent Advances, Applications and Challenges is intended as a humble collection of some of the hottest topics in machining. The manufacturing industry is a varying and challenging environment where new advances emerge from one day to another. In recent years, new manufacturing procedures have gained increasing attention from the industrial and scientific community. However, machining still remains the key operation to achieve high productivity and precision for high-added value parts. Continuous research is performed, and new ideas are constantly considered. This Special Issue summarizes selected high-quality papers which were submitted, peer-reviewed, and recommended by experts. It covers some of the most advanced of the following topics: High-performance operations for difficult-to-cut alloys, wrought and cast materials, high alloys, ceramics, etc.; Cutting tools, grades, substrates and coatings. Wear damage; Advanced cooling in machining: Minimum quantity of lubricant, dry or cryogenic; Modelling, focused on the reduction of risks, the process outcome, and to maintain surface integrity; Vibration problems in machines: Active and passive/predictive methods; sources, diagnosis and avoidance; Influence of machining in new concepts of machine-tool, and machine static and dynamic behaviors; Machinability of new composites, brittle and emerging materials; Assisted machining processes by high-pressure, laser, US, and others; Introduction of new analytics and decision making into machining programming. We wish to thank the reviewers and staff from Materials for their comments, advice, suggestions and invaluable support during the development of this Special Issue.

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