

1. Record Nr.	UNINA9910810499103321
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Titolo	Analysis and design of machine elements // Wei Jiang
Pubbl/distr/stampa	Singapore : , : Wiley, , [2019]
ISBN	1-119-27610-1 1-119-27608-X 1-119-27609-8
Descrizione fisica	1 online resource (xix, 434 pages) : illustrations
Disciplina	621.815
Soggetti	Machine design Machine parts
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	An overview of machine design -- Strength of machine elements -- Detachable joints and fastening methods -- Detachable fastenings for shaft and hub -- Permanent connections -- Belt drives -- Chain drives -- Gear drives -- Worm gear drives -- Shafts -- Rolling contact bearings -- Sliding bearings -- Coupling and clutches -- Springs.
Sommario/riassunto	Incorporating Chinese, European, and International standards and units of measurement, this book presents a classic subject in an up-to-date manner with a strong emphasis on failure analysis and prevention-based machine element design. It presents concepts, principles, data, analyses, procedures, and decision-making techniques necessary to design safe, efficient, and workable machine elements. Design-centric and focused, the book will help students develop the ability to conceptualize designs from written requirements and to translate these design concepts into models and detailed manufacturing drawings. Presents a consistent approach to the design of different machine elements from failure analysis through strength analysis and structural design, which facilitates students' understanding, learning, and integration of analysis with design Fundamental theoretical topics such as mechanics, friction, wear and lubrication, and fluid mechanics are embedded in each chapter to illustrate design in practice Includes examples, exercises, review questions, design and practice problems,

and CAD examples in each self-contained chapter to enhance learning. Analysis and Design of Machine Elements is a design-centric textbook for advanced undergraduates majoring in Mechanical Engineering. Advanced students and engineers specializing in product design, vehicle engineering, power machinery, and engineering will also find it a useful reference and practical guide.

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