

《机械CAD/CAM》

图书基本信息

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前言

It is widely recognized that the development of mechanical engineering technology nowadays depends strongly on computer technology. The development of computer aided design (CAD) and computer aided manufacturing (CAM) technology services as a typical result of application of computer technology in mechanical engineering. Despite the fact that more and more areas are being influenced by computer technology, CAD and CAM technologies consist of the most important fundamental knowledge for mechanical engineers and researchers. Thus, the basic topics on CAD/CAM should be of general interests to all students in mechanical engineering area no matter what kind of future they are looking for. CAD/CAM technology in mechanical engineering has experienced a development history over thirty years. Great achievements have been made in both research and application of the technology. However, this book will not be written as a comprehensive textbook including all the topics for some reasons. First of all, the purpose of the book is to provide an introduction with reasonable depth and breadth for bilingual teaching. Secondly, the space of the book would not allow too many subjects with sufficient depth and breadth. In addition, the authors' knowledge and ability are also limited. Thus, selection of the topics of the book is based on the authors' judgement on basic needs for students in their immediate application after graduation.

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内容概要

This book gives an introduction to CAD/CAM techniques. It is organized in the following way: Chapter 1 introduces the basic concepts and a brief history of CAD/CAM. Chapter 2 to chapter 4 introduce the mathematical description of curves, surfaces and solids. Chapter 5 discusses geometry transformations and various visual techniques. Chapter 6 introduces some popular methods for graphical manipulations and editings provided by commercial CAD/CAM systems. Finally Chapter 7 describes basic technology in CAM.

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