

《控制论的数学问题》

图书基本信息

书名：《控制论的数学问题》

13位ISBN编号：9789810246945

10位ISBN编号：9810246943

出版时间：2001-12

出版社：World Scientific Pub Co Inc

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页数：172

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内容概要

This book shows clearly how the study of concrete control systems has motivated the development of the mathematical tools needed for solving such problems. In many cases, by using this apparatus, far-reaching generalizations have been made, and its further development will have an important effect on many fields of mathematics. In the book a way is demonstrated in which the study of the Watt flyball governor has given rise to the theory of stability of motion. The criteria of controllability, observability, and stabilization are stated. Analysis is made of dynamical systems, which describe an autopilot, spacecraft orientation system, controllers of a synchronous electric machine, and phase-locked loops. The Aizerman and Brockett problems are discussed and an introduction to the theory of discrete control systems is given.

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