1. Record Nr.   UNISA996466594603316

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   Titolo   Mathematical modelling of industrial processes : lectures given at the 3rd Session of the Centro Internazionale Matematico Estivo (C.I.M.E.) held in Bari, Italy, Sept. 24-29, 1990 / / S. Busenberg, B. Forte, H. K. Kuiken, edited by V. Capasso, A. Fasano

   Pubbl/distr/stampa   Berlin, Germany ; ; New York, New York : , : Springer, , [1992]
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   ISBN   3-540-47247-9

   Edizione   [1st ed. 1992.]

   Descrizione fisica   1 online resource (VII, 166 p.)

   Collana   C.I.M.E. Foundation Subseries ; ; 1521

   Disciplina   500

   Soggetti   Manufacturing processes - Mathematical models

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Note generali   Bibliographic Level Mode of Issuance: Monograph

   Nota di bibliografia Includes bibliographical references.

   Nota di contenuto   Mathematical modelling of industrial processes -- Inverse problems in mathematics for industry -- Case studies in industrial mathematics.

   Sommario/riassunto   The 1990 CIME course on Mathematical Modelling of Industrial Processes set out to illustrate some advances in questions of industrial mathematics, i.e.of the applications of mathematics (with all its "academic" rigour) to real-life problems. The papers describe the genesis of the models and illustrate their relevant mathematical characteristics. Among the themesdealt with are: thermally controlled crystal growth, thermal behaviour of a high-pressure gas-discharge lamp, the sessile-drop problem, etching processes, the batch-coil-annealing process, inverse problems in classical dynamics, image representation and dynamical systems, scintillation in rear projections screens, identification of semiconductor properties,pattern recognition with neural networks. CONTENTS: H.K. Kuiken: Mathematical Modelling of Industrial Processes.- B. Forte: Inverse Problems in Mathematics for Industry.- S. Busenberg: Case Studies in Industrial Mathematics.