

$\|u(t)\|_{\infty} \leq C \|u\|_{\infty} e^{-\sigma t/2}, \quad \sigma =$
 $\leq C \|u\|_{\infty} e^{-\sigma t/2}$

Springer
Handbook of
Automation

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2nd Edition

 Springer

Springer Handbook of Automation

This thoroughly revised and updated second edition of the bestselling Springer Handbook of Automation provides the most advanced, comprehensive, and balanced coverage of the technical and engineering aspects of automation.

Starting with a holistic discussion on the history and societal impacts of automation, the book provides the tools to understand, design and implement automation solutions. This includes:

- the scientific foundations, from traditional control theory to the latest developments in artificial intelligence and machine learning
- the technical aspects of automation design, from hardware such as mechatronics and sensors to cyber-physical systems and human-machine interaction, to collaborative automation
- the methods of automation integration in products, processes and services and finally
- the technical, economic and ethical management of automation.

Readers will find the most complete and state-of-the-art overview on the implementation, effects and examples of automation in industrial contexts, as well as infrastructure, service, medical and healthcare, home, office and enterprise automation. The book concludes with up-to-date case studies from industrial fore-runners.

Edited by an internationally renowned and experienced expert and supported by a distinguished advisory board, this Springer Handbook offers a wealth of information for industry practitioners, aspiring engineers and automation experts alike.

Key Topics

- Development and impacts of automation
- Theory and scientific foundations
- Design theory, elements, and methods including integration
- Industrial automation, infrastructure and service
- Medical and healthcare systems
- Home, office, and enterprise automation

Features

- Comprehensive coverage of the fundamentals
- Up-to-date descriptions of tools and applications
- Written by experienced professionals, academic and industry experts
- Ideal resource for current and aspiring automation experts
- Emphasizes concepts over extensive mathematical derivations

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