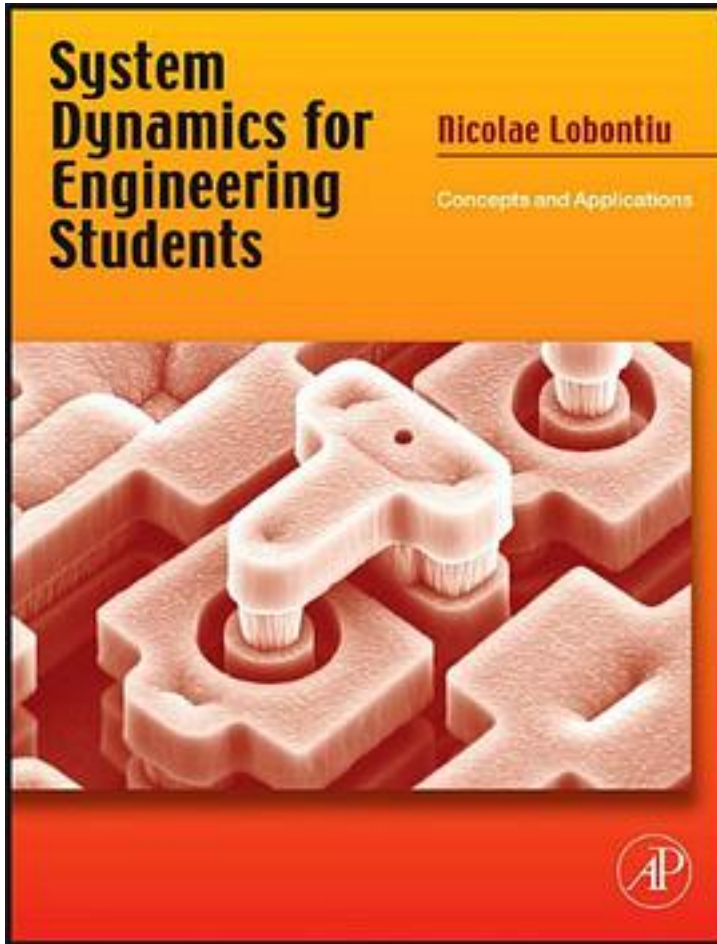# System Dynamics for Engineering Students w/Online Testing

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System Dynamics is an engineering discipline in which students learn how to create

and analyze mathematical models of dynamic mechanical, electrical/electromagnetic, thermal and fluid/pneumatic systems with the practical goal of using this knowledge to design and test various real-world systems before they are built, thus realizing significant cost savings. "System Dynamics for Engineering Students" by Nicolae Lobontiu, takes the classical approach to system dynamics, rearranges it into a more logical teaching progression, provides a more balanced coverage of the main field systems(mechanical, electrical/electromagnetic, thermal and fluid/pneumatic), and is the first system dynamics textbook to include extensive examples from the relatively new application areas of microelectromechanical systems (MEMS) and compliant (flexible) mechanical devices. Written by an established author with extensive teaching and research experience in the field of MEMS/NEMS, this book also provides unique coverage of couple-field problems and offers more ancillary instructor support than any other system dynamics text.

Unique Features and Benefits:

* Offers a more balanced treatment of mechanical and electrical systems, making it appealing to both engineering specialties.

* The first system dynamics textbook to introduce examples from compliant (flexible) mechanisms and micro/nano electromechanical systems (MEMS/NEMS).

*The first textbook to include a chapter on the important area of coupled-field systems. *Special icons placed throughout the text indicate where students can find additional content and worked examples on the book's Companion website.

* Includes treatment of topics that have not been included thus far in system dynamics texts, such as those from the magnetic and piezoelectric domains or actuation, sensing and instrumentation.

*MATLAB/Simulink computational software tools incorporated throughout the book.

* With available online instructor's manual, image bank, PowerPoint lecture slides, and optional design projects, provides more instructor support than any other system dynamics text.

作者介绍:

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