

# System Dynamics and Control with Bond Graph Modeling

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## Synopsis

Written by a professor with extensive teaching experience, *System Dynamics and Control with Bond Graph Modeling* treats system dynamics from a bond graph perspective. Using an approach that combines bond graph concepts and traditional approaches, the author presents an integrated approach to system dynamics and automatic controls. The textbook guides students from the process of modeling using bond graphs, through dynamic systems analysis in the time and frequency domains, to classical and state-space controller design methods. Each chapter contains worked examples, review exercises, problems that assess students' grasp of concepts, and open-ended "challenges" that bring in real-world engineering practices. It also includes innovative vodcasts and animated examples, to motivate student learners and introduce new learning technologies.

## Sort review

"Bond Graphs provide an ideal platform to introduce undergraduate students to dynamic system modeling as it demonstrates the commonality of all energy-based systems. ... While other texts present bond graphs and their utility in modeling dynamic systems, this text appears especially suited to use in a first undergraduate course. The prose is clear and understandable, and the organization of the material provides a logical presentation."—Peter J. Gorder, Department of Mechanical and Aerospace Engineering, University of Colorado at Colorado Springs--This text refers to an alternate kindle\_edition edition. About the Author Javier A. Kypuros is an associate professor at the University of Texas-Pan American (UTPA), where he teaches courses in the areas of dynamic system modeling and control.--This text refers to an alternate kindle\_edition edition.

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## What people say about this book

Ray, "My Professor Wrote this book. I had to buy it because my professor wrote it. I took his class once before he had the book out and I was not quite understanding the material, so I retook the class now that he had the book out and it did help out in understanding the material better and has good examples."

ecentric, "Simplifies learning Bond Graph. A good book for the price."

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