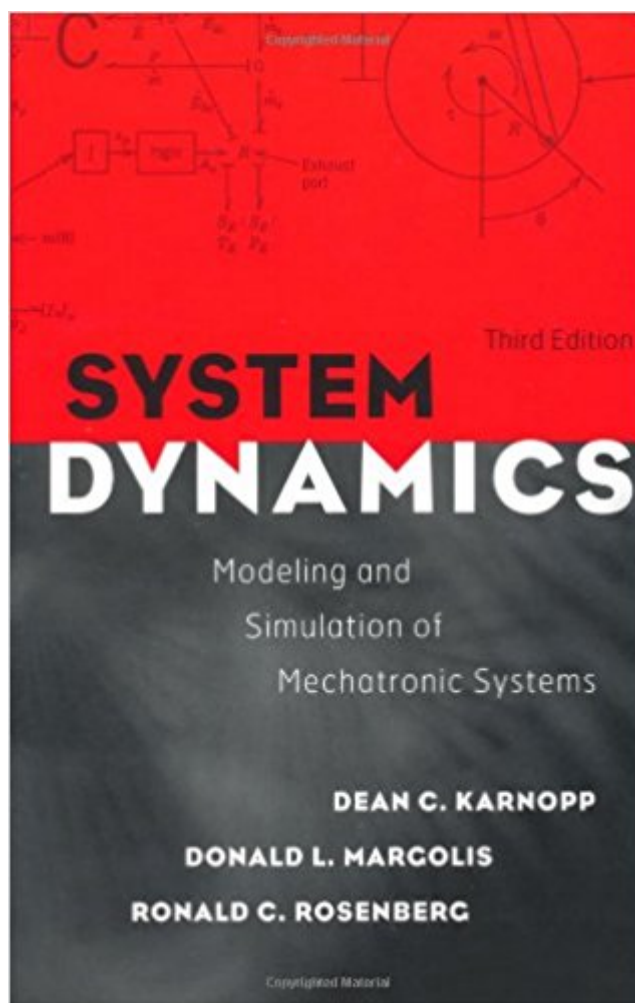The book was found

# System Dynamics: Modeling And Simulation Of Mechatronic Systems

## Synopsis

The standard in the field, updated and revised for today's complex mechatronic systems  More than ever before, engineers are responsible for the total system design of the products they create. While traditional modeling and simulation methods are useful in the design of static components, they are of little assistance to those charged with designing mechatronic systems comprising a variety of technologies and energy domains. Engineers who design such complex systems need more sophisticated tools to help them think and visualize on a dynamic systems level. This book arms them with one of the most important of those tools-bond graph modeling, a powerful unified graphic modeling language.  System Dynamics, Third Edition is the only comprehensive guide to modeling, designing, simulating, and analyzing dynamic systems comprising any number of electrical, mechanical, hydraulic, pneumatic, thermal, and magnetic subsystems. While it has been updated and expanded to include many new illustrations, expanded coverage of computer simulation models, and more detailed information on dynamic system analysis, it has lost none of the qualities that have helped make it the standard text/reference in the field worldwide. With the help of more than 400 illustrations, the authors demonstrate step by step how to: * Model a wide range of mechatronic systems using bond graphs * Experiment with subsystem models to verify or disprove modeling decisions * Extract system characteristics and predict system behaviors * Translate graphical models into complex mathematical simulations * Combine bond graph modeling with state-of-the-art software simulation tools  System Dynamics, Third Edition is an indispensable resource for practicing engineers as well as students of mechanical, electrical, aeronautical, and chemical engineering.

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DEAN C. KARNOPP and DONALD L. MARGOLIS are professors of mechanical engineering at the University of California, Davis. RONALD C. ROSENBERG is a professor of mechanical engineering at Michigan State University.

Great book to begin to understand the concepts of bond graphs. Also has chapters on deriving state equations. This book is definitely a "readers book". Its more of a book you sit down, read, and think about the material. Not so much a book filled with example problems.

Book Was in very good shape, as promised. Very little notes and comments made by the previous user, as promised.Book materiel is very well written but the subject matter is still hard. I am using it for a PhD. level class so I did expect the subject to be somehow harder than my previous classes.

I purchased this book for work as a reference for modeling vehicle ride characteristics. I had some background in bond graph modeling techniques, but needed a refresher. This book provides excellent background and step by step methods for obtaining bond graph models of mechanical and electrical systems. These models can be readily converted to systems of differential equations (state-space equations), which is what I needed for my project. This book describes techniques for both linear and nonlinear systems, more clearly than other references I had looked at.

For learning bond graphs this book is perfect especially for the very low price. This is the cheapest book I have purchased in school and I will be keeping it. The bond graph sections of this book are perfect but the equation derivation sections are lacking in terms of clarity and content. I would recommend this book for learning bond graphs and getting a brief understanding of deriving the equations and transfer functions.

This is great. It is a brand new book without any markers or notes on, which is definitely beyond my expectation under such cheap price.

This book is a comprehensive one full of usefull and practical technical details and applications. Nice and good work and Thanks!

Good

Just what I needed for school. I used it and did well in the class so i guess it did the job.

System Dynamics: Modeling, Simulation, and Control of Mechatronic Systems System Dynamics: Modeling and Simulation of Mechatronic Systems Atmospheric and Space Flight Dynamics: Modeling and Simulation with MATLABÃ Â® and SimulinkÃ Â® (Modeling and Simulation in Science, Engineering and Technology) Molecular Simulation Studies on Thermophysical Properties: With Application to Working Fluids (Molecular Modeling and Simulation) Molecular Gas Dynamics: Theory, Techniques, and Applications (Modeling and Simulation in Science, Engineering and

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