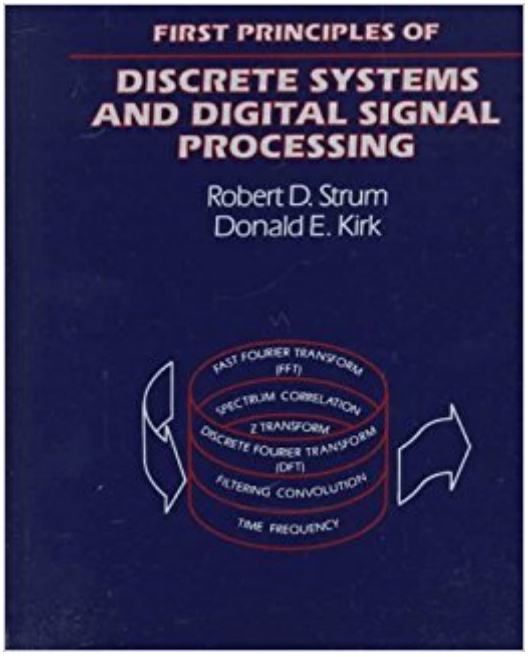
First Principles Of Discrete Systems And Digital Signal Processing (Addison-Wesley Series In Electrical Engineering)



Synopsis

This textbook presents both discrete systems and digital signal processing in a conversational style that relies on a minimum of mathematics. The authors use carefully crafted pedagogy and detailed examples to improve students' problem solving skills, to help them see interrelationships and connections, and to integrate new material with what they have seen in previous chapters. The book also provides a number of computer-based methods for solving problems.

Book Information

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Customer Reviews

Here is a valuable book for a first undergraduate course in discrete systems and digital signal processing (DSP) and for in-practice engineers seeking a self-study text on the subject. Readers will find the book easy to read, with topics flowing and connecting naturally. Fundamentals and first principles central to most DSP applications are presented through carefully developed, worked out examples and problems. Unlike more theoretically demanding texts, this book does not require a prerequisite course in linear systems theory. The text focuses on problem-solving and developing interrelationships and connections between topics. This emphasis is carried out in a number of innovative features, including organized procedures for filter design and use of computer-based problem-solving methods. Solutions Manual is available only through your Addison-Wesley Sales Specialist.

This is one of the best DSP books on the market today. As the title "First principles of ..." indicates the focus of the book is on fundamentals, it is designed for the beginning student and the authors provide many, many clear examples and illustrations to guide the student through the material from discrete systems to more advanced signal processing algorithms.If you are the unfortunate victim of a course being taught with Oppenheim and Schafer’s muddled text do yourself a favor and get this book as a supplement. It is complete with solved problems, questions with answers (to selected problems), it provides a necessary degree of mathematical rigor without becoming tedious and presents general numerical algorithms for solving major signal processing problems.I took a DSP course from the principal author while he was compiling the notes for this text (and eagerly awaited the publication of his book) and I must say the result is excellent (so was his course) and very highly recommended.One unfortunate attribute is the poor quality of this book’s construction and the reason I gave it 4 stars instead of 5. I purchased the book 10 years ago and the pages have yellowed very badly and the binding broke almost immediately. Although Addison-Wesley generally produces a superior quality book this one’s binding is more like a typical Prentice Hall cheapo.

I came across this in a "signals & systems" course that was intentionally being kept gentle. This book worked well enough, for students who didn’t need real analog analysis.Despite its title, this is a more of a "First Course" in discrete signals and systems. It does not, in fact, derive much at all from first principles. The Nyquist sampling theorem, for example, not proven but taken as a premise.If you want a quick view (or review) of digital signals and filter design without having to plod through proofs knee-deep, this might work for you - it works for me. It is not a title for the most serious student, though.

Not only this is the best DSP book I have used , but also thebest written engineering book I have experienced in my career. Subjects are presented clearly and the author prepares you well for the next lesson. I have been able to acquire the DSP knowledge I wanted in a few weeks and without any professors.Strum and Kirk are both great educators.

Circuits, Interconnections, and Packaging for Vlsi (Addison-Wesley VLSI systems series) Biomedical Signal Processing and Signal Modeling Cellular Signal Processing: An Introduction to the Molecular Mechanisms of Signal Transduction Principles of Risk Management and Insurance (9th Edition) (Addison-Wesley Series in Finance) VLSI Digital Signal Processing Systems: Design and Implementation Sampling in Digital Signal Processing and Control (Systems & Control: Foundations & Applications) Image Sensors and Signal Processing for Digital Still Cameras (Optical Science and Engineering) Readings in Medical Artificial Intelligence. The First Decade (Addison-Wesley Series in Artificial Intelligence) Digital Signal Processing: Principles, Algorithms and Applications (3rd Edition) Coaching Agile Teams: A Companion for ScrumMasters, Agile Coaches, and Project Managers in Transition (Addison-Wesley Signature Series (Cohn)) Mechanics and Thermodynamics of Propulsion (Addison-Wesley Series in Aerospace Science) R for Everyone: Advanced Analytics and Graphics (2nd Edition) (Addison-Wesley Data & Analytics Series) Continuous Delivery: Reliable Software Releases through Build, Test, and Deployment Automation (Addison-Wesley Signature Series (Fowler)) Fundamentals of Electrical Engineering (The Oxford Series in Electrical and Computer Engineering) Introduction to Econometrics (3rd Edition) (Addison-Wesley Series in Economics)