Computer Architecture: A Quantitative Approach, 5th ed., John L. Hennessy and David A. Patterson. The computing world today is in the midst of a revolution in which mobile and cloud computing have emerged as the dominant paradigms driving programming and hardware innovation. In an updated edition that covers the mobile computing revolution, the authors explore the ways in which cell phones, tablets, laptops and other mobile computing devices access software and technology in the cloud. Each chapter includes two real-world examples, one mobile and one data-center, to illustrate this revolutionary change.

Morgan Kaufmann; 978-0-12383-872-8; 708 pp.

Building Software for Simulation: Theory and Algorithms, with Applications in C++, James J. Nutaro. Written for those new to the field of modeling and simulation as well as experienced practitioners, this book explains how to design and implement simulation software used to engineer large systems while presenting relevant mathematical concepts and algorithms for code development. The author covers those elements of Zeigler’s theory of modeling and simulation that are most important for building simulation tools and provides comprehensive examples of their use in robotics, control and communications, and electric power systems. Readers will explore the design of object-oriented simulation programs, simulation using multi-core processors, and the integration of simulators into larger software systems.

John Wiley & Sons; 978-0-470-41469-9; 547 pp.

Number-Crunching: Taming Unruly Computational Problems from Mathematical Physics to Science Fiction, Paul J. Nahin. The author demonstrates how the power of modern computing can be applied to unusual scientific problems. He describes how the art of number-crunching has changed since the advent of computers and explains how high-speed technology helps to solve conundrums such as the three-body, Monte Carlo, leapfrog, and gambler’s ruin problems. The book provides a historical background for the problems presented, offers numerous examples and challenges, supplies Matlab codes for the theories discussed, and includes detailed solutions.


Semantic Web for the Working Ontologist: Effective Modeling in RDFS and OWL, 2nd ed., Dean Allemang and James Hendler. Semantic Web models and technologies provide information in machine-readable languages that enable computers to access the Web more intelligently to perform tasks automatically without the direction of users. Focused on developing useful and reusable models, this book explains how to build semantic content and applications that access that content. It surveys the latest Semantic Web tools for organizing, querying, and processing information and includes detailed information about the current ontologies used in key Web applications including e-commerce, social networking, and data mining.

Morgan Kaufmann; 978-0-123-85965-5; 384 pp.

Cyber Warfare: Techniques, Tactics and Tools for Security Practitioners, Jason Andress and Steve Winterfeld. This book explores the battlefields, participants, and tools and techniques used in today’s digital conflicts. The authors provide concrete examples of cyber attacks and offer real-world guidance on how to identify threats and defend networks against malicious attacks, offering an insider’s point of view that details the ethics, laws, and consequences of cyber warfare and how computer criminal law might evolve. The concepts discussed in this book will give those involved in information security a better idea of how cyber conflicts are carried out now, what they might look like in the future, and how to detect and defend against them.

Elsevier; 978-1-59749-637-7; 289 pp.

Digital Forensics with Open Source Tools, Cory Altheide and Harlan Carvey. As a definitive resource on the use of open source tools to investigate computer systems and media, this book details core concepts and techniques for forensic file system analysis on both Linux and Windows systems. The authors demonstrate both well-known and novel forensic methods using command-line and graphical open source tools to examine a wide range of target systems and artifacts.

Syngress; 978-1-59749-586-8; 264 pp.

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