Real-Time Systems: Formal Specification and Automatic Verification, Ernst-Rüdiger Olderog and Henning Dierks. Real-time systems need to react to certain input stimuli within given time bounds. For example, an airbag in a car must unfold within 300 milliseconds in a crash. This text introduces three real-time specification techniques for embedded safety-critical applications: duration calculus, timed automata, and programmable logic control (PLC) automata.

The book brings together these techniques to form a seamless design flow—real-time requirements specified in the duration calculus, designs specified by PLC automata, and source code for hardware platforms of embedded systems. It introduces the syntax, semantics, and proof methods of the specification techniques; establishes their most important properties; and illustrates real-life examples of the techniques in use. Each chapter concludes with detailed case studies and exercises. This book may be of interest to students of real-time or embedded systems or researchers and professionals in transportation and automation.


Computerization Movements and Technology Diffusion: From Mainframes to Ubiquitous Computing, Margaret S. Elliott and Kenneth L. Kraemer, eds. A computerization movement (CM) refers to a special kind of social and technological movement promoting the adoption of computing within organizations and societies. In this book, the editors, along with more than two dozen noted scholars, trace the successes and failures of CMs from the mainframe and PC era to the current Internet era and the emerging era of ubiquitous computing.

Through theoretical analyses, empirical and field-based studies, and case studies of specific technologies, this book shows the utopian visions of technology that drove CMs and created a general bias in favor of computing adoption, despite the fact that many of these grand visions never became a reality. The studies in this book reinforce the need for critical and scholarly review of promising new technologies.


Software Product Management and Pricing: Key Success Factors for Software Organizations, Hans-Bernd Kallraus and Peter N. Clough. Software product management and pricing are important factors for the success of any software company or organization responsible for software in a company of a different industry. After defining the term software, the authors address the core elements of software product management and pricing, discussing all sales channels. They focus on strategic and management topics to optimize long-term success and explain how to coordinate an effective support structure. This book should appeal to product managers, software engineers, and developers.

Springer; www.springer.com; 978-3-540-76986-6; 231 pp.

Introduction to Software Testing, Paul Ammann and Jeff Offutt. This text takes an innovative approach to explaining the process of software testing. It defines testing as the process of applying a few well-defined general-purpose criteria to a structure or model of the software. With extensive examples, this book incorporates the latest innovations in testing—including techniques to test modern software types such as OO, Web applications, and embedded software—and its structure directly reflects the pedagogical approach.

Cambridge University Press; www.cambridge.org; 978-0-521-88038-1; 344 pp.

The Internet and American Business, William Aspray and Paul E. Ceruzzi, eds. When we think of the Internet, we generally think of Amazon, Google, Hotmail, Napster, MySpace, and other sites for buying products, searching for information, downloading entertainment, chatting with friends, or posting photographs. Picking up where most scholarly histories of the Internet leave off—the commercialization of the Internet and its effect on traditional business—this collection of essays focuses on companies both meeting challenges successfully and failing to adapt in this dynamic period of American business history.

Tracing the impact of the commercialized Internet on American business and society since 1995, the book describes new business models, new companies and adjustments by established companies, the rise of e-commerce, community building, dot-com busts, difficulties encountered by traditional industries, and newly created problems such as music file-sharing.

MIT Press; mitpress.mit.edu; 978-0-262-01240-9; 592 pp.

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