The Grid 2: Blueprint for a New Computing Infrastructure, Ian Foster and Carl Kesselman, editors. This second edition of a book originally published in 1998 provides a broader and deeper understanding of the opportunities that Grid computing offers and the technologies needed to realize them. The book reveals the revolutionary impact of large-scale resource sharing and virtualization within science and industry; explores the intimate relationships between organization and resource sharing structures; and describes the new technologies required to enable large-scale secure, reliable, and efficient resource sharing.

The editors have once again assembled a team of experts who report their Grid experiences and explain both available technologies and the new technologies emerging from labs, companies, and standards bodies. Like its predecessor, this book serves as a manifesto, design blueprint, user guide, and research agenda for future Grid systems.

The book includes more than a dozen completely new chapters, Web access to 13 unchanged chapters from the first edition, and three personal essays by influential thinkers on the significance of Grids from the perspectives of infrastructure, industry, and science.

Morgan Kaufmann; www.mkp.com; 1-55860-933-4; 748 pp.; $59.95.

Agent-Based Software Development, Michael Luck, Ronald Ashri, and Mark D’Inverno. This book offers readers a comprehensive explanation of the methods, tools, standards, and techniques used to develop software with the agent-oriented approach. It supports the agent-software development community with practical guidance and helps readers understand the issues in developing agent-based software, select tools and techniques that aid in the development of agent systems, and become familiar with important methodologies that can be used to build different types of agent systems.

The authors cover four major areas: the basic agent concepts that motivate agent technology, available technological support for deployment of agent systems, industry-relevant initiatives, and methodologies for agent system development. Addressing issues of direct relevance to specific development and task objectives—as well as to industry-wide initiatives—the book provides an essential understanding of agent-based computing’s commercial realities.


UML by Example, Ghinwa Jalloul. Practicing software engineers who seek to add rigor to their techniques can use this step-by-step introduction to object-oriented software development for teaching and self-study. The book’s seven complete case studies are complemented by several shorter examples derived from small software projects developed for and delivered to real users. These examples use a bridge process, which presents a systematic approach for developing analysis models and unfolding them incrementally and iteratively through to design models and implementation.

The bridge process provides one example of unified software development and has the potential of being scalable to large software problems. It also provides a model for organizing deliverables obtained throughout different phases of the software life cycle. The case studies offer a medium for experimental use and act as templates that readers can tailor to fit specific needs and circumstances.

Cambridge University Press; www.cambridge.org; 0-521-00881-6; 276 pp.; $35.

The Government Machine: A Revolutionary History of the Computer, Jon Agar. This book traces the mechanization of government work in the United Kingdom from the 19th to the early 21st century. The author argues that this transformation has been tied to the rise of expert movements, groups whose authority has rested on their expertise. The deployment of machines was one attempt to gain control over state action—a revolutionary move. Agar shows how mechanization followed the popular depiction of government as machine-like, with British civil servants cast as components of a general-purpose government machine. He argues further that today’s general-purpose computer is the apotheosis of the civil servant.

Over the past two centuries, government has become the major repository and user of information, with the civil service itself acting as an information-processing entity. The author argues that the changing capacities of government have depended on the implementation of new technologies. Thus, to study the history of technology is to study the state, and vice versa.

MIT Press; mitpress.mit.edu; 0-262-01202-2; 576 pp.; $50.