Clean Code: A Handbook of Agile Software Craftsmanship, Robert C. Martin. Even bad code can function. But if code isn’t clean, it can bring a development organization to its knees. Every year, poorly written code causes the loss of countless hours and significant resources.

It doesn’t have to be that way. This book presents a revolutionary paradigm: Working with colleagues from Object Mentor, the author distilled the best agile practice of cleaning code on the fly into a book that can install the values of a software craftsman.

The author first describes the principles, patterns, and practices of writing clean code. Next, he presents several case studies of increasing complexity. Each study offers an exercise in cleaning up code: transforming a code base that has some problems into a sound and efficient one. Finally, the author presents a single chapter that contains a list of heuristics gathered while creating the case studies. This results in a knowledge base that describes how developers think when they write, read, and clean code.


Reactive Systems: Modelling, Specification and Verification, Luca Aceto, Anna Ingólfsdottir, Kim Gulstrand Larsen, and Jiri Srba. Formal methods specify and verify software and software systems using mathematical logic. Various methodologies have been developed and incorporated into software tools, of which the distributed systems sector supplies an important subclass.

This book offers a balanced introduction for graduate students that describes the various approaches to reactive systems, their strengths and weaknesses, and when they are best used. The authors cover Milner’s Calculus of Communicating Systems and its operational semantics, together with notions of behavioral equivalence based on bisimulation techniques and with variants of Hennessy-Milner modal logics.

Cambridge University Press; www.cambridge.org; 978-0-521-87546-2; 300 pp.

High-Performance Computing in Remote Sensing, Antonio J. Plaza and Chein-I Chang, eds. The recent use of latest-generation sensors in airborne and satellite platforms is producing a nearly continual stream of high-dimensional data. This, in turn, creates new processing challenges. To address the computational requirements of time-critical applications, researchers have begun incorporating high-performance computing (HPC) models in remote sensing missions.

This book explores state-of-the-art HPC techniques in the context of remote sensing problems. It focuses on the computational complexity of algorithms designed for parallel computing and processing.


Human Factors in Simple and Complex Systems, 2nd ed., Robert W. Proctor and Trisha Van Zandt. This book provides an understanding of the breadth and depth of human-factors issues that influence the design, implementation, and evaluation of products and systems. Emphasizing the close relationship between basic theory and application, the authors delineate a framework for the research process, present an integrated view of current knowledge, and examine how these factors can be applied to system design.

This edition provides a special focus on computer applications and human-computer interaction. It also addresses new topics, such as situational awareness, that capture the tremendous changes in human factors and ergonomics while tightly integrating basic research and application to strengthen the link between knowledge and practice. Demonstrating a general approach to solving a broad range of system problems, the book covers the theoretical foundation on which researchers have built the human-factors discipline.

Taylor & Francis Group; www.taylorandfrancisgroup.com; 0-8058-4119-9; 696 pp.

Malware Forensics: Investigating and Analyzing Malicious Code, Cameron H. Malin, Eoghan Casey, and James M. Aquilina. This book covers the evolving field of live forensics, where investigators examine a computer system to collect and preserve critical live data that might be lost if the system shuts down. The authors emphasize a live forensics approach, where investigators analyze and examining physical and process memory as a key investigative process.

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The authors also provide extensive coverage of the burgeoning forensic field of physical and process memory analysis on both Windows and Linux operating systems in the context of identifying and capturing malicious code and evidence of its effect on the compromised system.

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Elsevier Direct; www.elsevierdirect.com; 978-1-59749-268-3; 592 pp.

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