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Autore	Huang J. C. <1935->
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5.4 Rules for Moving and Simplifying Statements5.5 Discussion; 5.6 Supporting Software Tool; Exercises; 6 Static Analysis; 6.1 Data-Flow Anomaly Detection; 6.2 Symbolic Evaluation (Execution); 6.3 Program Slicing; 6.4 Code Inspection; 6.5 Proving Programs Correct; Exercises; 7 Program Instrumentation; 7.1 Test-Coverage Measurement; 7.2 Test-Case Effectiveness Assessment; 7.3 Instrumenting Programs for Assertion Checking; 7.4 Instrumenting Programs for Data-Flow-Anomaly Detection; 7.5 Instrumenting Programs for Trace-Subprogram Generation; Exercises; Appendix A: Logico-Mathematical Background Appendix B: GlossaryAppendix C: Questions for Self-Assessment; Bibliography; Index

Sommario/riassunto

An in-depth review of key techniques in software error detection Software error detection is one of the most challenging problems in software engineering. Now, you can learn how to make the most of software testing by selecting test cases to maximize the probability of revealing latent errors. Software Error Detection through Testing and Analysis begins with a thorough discussion of test-case selection and a review of the concepts, notations, and principles used in the book. Next, it covers:Code-based test-case selection methodsSpecification-based test-case