Constraint-Based Design Recovery for Software Reengineering : Theory and Experiments /

Woods, Steven G.

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Monografía

The great challenge of reverse engineering is recovering design information from legacy code: the `concept recovery' problem. This monograph describes up-to-date research dealing with this problem. It discusses a theory of how a constraint-based approach to program plan recognition can efficiently extract design concepts from source code, and it details experiments in concept recovery that support the authors' claims of scalability. Constraint-Based Design Recovery for Software Reengineering: Theory and Experiments presents models and experiments in sufficient detail so that they can be easily replicated. This book is intended for researchers or software developers concerned with reverse engineering or reengineering legacy systems. However, it may also interest those researchers who are interested in using plan recognition techniques or constraint-based reasoning. The reader is expected to have a reasonable computer science background (i.e., familiarity with the basics of programming and algorithm analysis), but is not required to have a familiarity with the fields of reverse engineering or artificial intelligence (AI). This book is designed as a reference for advanced undergraduate or graduate seminar courses in software engineering, reverse engineering, or reengineering. It can also serve as a supplementary textbook for software engineering-related courses, such as those on program understanding or design recovery, for AI-related courses, such as those on plan recognition or constraint satisfaction, and for courses that cover both topics, such as those on AI applications to software engineering

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