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Sommario/riassunto

This book focuses on the topic of improving software quality using adaptive control approaches. As software systems grow in complexity, some of the central challenges include their ability to self-manage and adapt at run time, responding to changing user needs and environments, faults, and vulnerabilities. Control theory approaches presented in the book provide some of the answers to these challenges. The book weaves together diverse research topics (such as requirements engineering, software development processes, pervasive and autonomic computing, service-oriented architectures, on-line adaptation of software behavior, testing and QoS control) into a coherent whole. Written by world-renowned experts, this book is truly a noteworthy and authoritative reference for students, researchers and practitioners to better understand how the adaptive control approach can be applied to improve the quality of software systems. Book chapters also outline future theoretical and experimental challenges for researchers in this area. -- back cover.
