

Samuel Kounev · Jeffrey O. Kephart
Aleksandar Milenkoski · Xiaoyun Zhu
Editors

Self-Aware Computing Systems

 Springer

Samuel Kounev and
Self-Aware Computing Systems



[continue reading](#)

This book provides formal and informal definitions and taxonomies for self-aware computing systems, and explains how self-aware computing pertains to many existing subfields of computer science, especially software engineering. It describes architectures and algorithms for self-aware systems and also the benefits and pitfalls of self-awareness, and reviews a lot of the latest relevant research across a wide array of disciplines, including open study challenges. It could be used as a handbook for professionals and researchers employed in areas related to self-aware computing, and may also serve as an advanced textbook for lecturers and postgraduate college students studying subjects like advanced software program engineering, autonomic processing, self-adaptive systems, and data-center resource administration. Each chapter is basically self-contained, and offers a lot of references for anyone desperate to pursue the subject more deeply. Next, Part II explores architectures for self-aware computing systems, such as generic principles and notations that allow an array of self-aware program architectures to be explained and weighed against both isolated and interacting systems. In addition, it examines topics such as adaptation, benchmarks and metrics. Part III targets methods and algorithms for self-conscious processing systems by addressing issues pertaining to system style, like modeling, synthesis and verification. It also reviews the current condition of reference architectures, architectural frameworks, and languages for self-aware systems. Part IV then presents applications and case studies in a variety of domains including cloud computing, data centers, cyber-physical systems, and the amount to which self-conscious computing approaches have been used within those domains. Lastly, Part V surveys open problems and future study directions for self-conscious processing systems. The chapters of this book are structured into five parts: Introduction, Program Architectures, Strategies and Algorithms, Applications and Case Research, and Outlook. Part I offers an intro that defines self-conscious processing systems from multiple perspectives, and establishes a formal description, a taxonomy and a set of reference scenarios that help unify the rest of the chapters.



[continue reading](#)

download Self-Aware Computing Systems mobi

download Self-Aware Computing Systems txt

[download Biodiversity for Sustainable Development \(Environmental Challenges and Solutions\) mobi](#)

[download free Community-Based Forest Management \(CBFM\) in Bangladesh \(World Forests\) epub](#)

[download free Banking Beyond Banks and Money: A Guide to Banking Services in the Twenty-First Century \(New Economic Windows\) pdf](#)