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| Nota di contenuto | Basic concepts on systems of systems -- interfaces in evolving cyber-physical systems-of-systems -- emergence in cyber-physical systems-of-systems (CPSOSS) -- AMADEOS sysml profile for SoS conceptual modeling -- AMADEOS framework and supporting tools -- time and resilient master clocks in cyber-physical systems -- managing dynamicity in SoS -- case study definition and implementation. |
| Sommario/riassunto | This book is open access under a CC BY 4.0 license. Technical Systems-of-Systems (SoS) – in the form of networked, independent constituent computing systems temporarily collaborating to achieve a well-defined objective – form the backbone of most of today’s infrastructure. The energy grid, most transportation systems, the global banking industry, the water-supply system, the military equipment, many embedded |

systems, and a great number more, strongly depend on systems-of-systems. The correct operation and continuous availability of these underlying systems-of-systems are fundamental for the functioning of our modern society. The 8 papers presented in this book document the main insights on Cyber-Physical System of Systems (CPSoSs) that were gained during the work in the FP7-610535 European Research Project AMADEOS (acronym for Architecture for Multi-criticality Agile Dependable Evolutionary Open System-of-Systems). It is the objective of this book to present, in a single consistent body, the foundational concepts and their relationships. These form a conceptual basis for the description and understanding of SoSs and go deeper in what we consider the characterizing and distinguishing elements of SoSs: time, emergence, evolution and dynamicity.