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Soggetti	Systems engineering System design Context-aware computing
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Note generali	"The final book on the Embedded Systems Institute project Poseidon"--Pref.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I General -- Introduction: Situation Awareness, Systems of Systems, and Maritime Safety and Security -- Improving Situation Awareness in the Maritime Domain -- On the Architecture of Systems for Situation Awareness -- The POSEIDON Demonstrator -- Part II Situation Awareness -- Visualization of Vessel Traffic -- Extending Track Analysis from Animals in the Lab to Moving Objects Anywhere -- Recognizing Vessel Movements from Historical Data -- Density-Based Anomaly Detection in the Maritime Domain -- Analyzing Vessel Behavior using Process Mining -- The Simple Event Model -- Part III Systems of Systems -- Specification and Generation of Adapters for System Integration -- The POLIPO Security Framework -- Assessing Trust for Determining the Reliability of Information -- Online Fault Localization and Health Monitoring for Software Systems -- Prioritizing

Sommario/riassunto

This book discusses various aspects, challenges, and solutions for developing systems-of-systems for situation awareness, using applications in the domain of maritime safety and security. Topics include advanced, multi-objective visualization methods for situation awareness, stochastic outlier selection, rule-based anomaly detection, an ontology-based event model for semantic reasoning, new methods for semi-automatic generation of adapters bridging communication gaps, security policies for systems-of-systems, trust assessment, and methods to deal with the dynamics of systems-of-systems in run-time monitoring, testing, and diagnosis. Architectural considerations for designing information-centric systems-of-systems such as situation awareness systems, and an integrated demonstrator implementing many of the investigated aspects, complete the book.