1. Record Nr. UNINA9910254217403321 Autore Crowder James A Titolo Multidisciplinary Systems Engineering : Architecting the Design Process // by James A. Crowder, John N. Carbone, Russell Demijohn Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2016 **ISBN** 3-319-22398-4 Edizione [1st ed. 2016.] 1 online resource (316 p.) Descrizione fisica 620 Disciplina Soggetti Engineering economy Operations research **Decision** making Production management Engineering Economics, Organization, Logistics, Marketing Operations Research/Decision Theory **Operations Management** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. 1. Introduction: Systems Engineering – Why? -- 2. Multidisciplinary Nota di contenuto Systems Engineering -- 3. Multidisciplinary Systems Engineering Roles -- 4. Systems Engineering Tools and Practices -- 5. The Overall Systems Engineering Design -- 6. Systems of Systems Architecture Design -- 7. Systems Engineering Tasks and Products -- 8. Multidisciplinary Systems Engineering Processes -- 9. Plan Development Timelines -- 10. Putting it all Together - System of Systems Multidisciplinary Engineering -- 11. Conclusions and Discussion. Sommario/riassunto This book presents Systems Engineering from a modern, multidisciplinary engineering approach, providing the understanding that all aspects of systems design, systems, software, test, security, maintenance and the full life-cycle must be factored in to any largescale system design; up front, not factored in later. It lays out a stepby-step approach to systems-of-systems architectural design,

describing in detail the documentation flow throughout the systems

engineering design process. It provides a straightforward look and the entire systems engineering process, providing realistic case studies, examples, and design problems that will enable students to gain a firm grasp on the fundamentals of modern systems engineering. Included is a comprehensive design problem that weaves throughout the entire text book, concluding with a complete top-level systems architecture for a real-world design problem.