Record Nr. UNINA9910629283503321 Emerging Trends in Systems Engineering Leadership: Practical **Titolo** Research from Women Leaders // edited by Alice F. Squires, Marilee J. Wheaton, Heather J. Feli Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-031-08950-2 Edizione [1st ed. 2022.] 1 online resource (374 pages) Descrizione fisica Women in Engineering and Science, , 2509-6435 Collana Disciplina 658.4092 620.001171082 Soggetti Control engineering Science - Study and teaching Sex Control and Systems Theory Science Education Gender Studies Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Part A: Introduction -- Chapter 1: Introducing Systems Engineering Leadership and Emerging Trends -- Part B: Growing Demand for Essential Skills -- Chapter 2: Promoting Yourself into Leadership: Leading from Above, Beside, Below and Outside -- Chapter 3: System Engineering Leadership through Influence and Persuasion -- Chapter 4: Improving Competence in the Professional Competencies for Systems Engineers -- Chapter 5: Knowledge Sharing and Mentorship as a Systems Engineering Process: Stories and Methods from Industry Experts -- Part C: Focusing on Diversity, Equity, and Inclusion --Chapter 6: Gender Diversity in Systems Engineering Product, Project and Services Life Cycle Leadership – It's not Just Counting the Women -- Chapter 7: A Critical Analysis of the Systems Engineering Leadership Pipeline: Closing the Gender Gap -- Part D: Broadening Systems

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Leadership Approach for Complex Systems Integrated into the Systems Engineering Practice -- Chapter 10: The Role of Utilitarianism in Systems Engineering Leadership and System Design -- Part E: Emerging Technological Change -- Chapter 11: Building Systemic Resilience: The Role of Systems Leaders in Social-Ecological Systems -- Chapter 12: Achieving Value Through Digital Engineering Transformation.

This book celebrates the efforts of women in the international systems engineering community. While there are dozens of books that tackle the topic of systems engineering and thousands of books that address leadership, this book is unique. Emerging Trends in Systems Engineering Leadership: Practical Research from Women Leaders presents personal, well-researched, hands-on perspectives of emerging trends in systems engineering leadership from industry, government, and academia, covering timely topics applicable across many domains – all under one cover. This book presents material for engineers, scientists, technologists, and others to help them tackle challenges in their everyday work dealing with complex socio-technical systems. The book provides guidance for leaders on shoring up essential (soft) skills to address the increasing demand for professional competencies: addresses diversity, equity, inclusion, and empowering women in the workforce; discusses broader facets of systems engineering leadership including systems thinking, ethics and utilitarianism; and investigates the impact of emerging technological change on systems resilience and the digital enterprise. This book provides a multi-perspective approach for leaders to navigate a changing world and develop and deliver optimal system solutions to global societal challenges that meet human needs. To this end, the authors extend beyond the solid technical base to encompass the human aspect of system behavior. This book is written by twenty-six female authors (three of whom also serve as the editors) from around the world at varying career stages who share their research, achievements, perspectives, and successes in emerging areas of systems engineering leadership. Presents women's achievements in systems engineering, providing a strong foundation for those interested in technical leadership positions: Discusses a variety of perspectives on promoting yourself, influence, strategy, communication, diversity, and emerging technological change; Presents information from academia, government, and industry on research and applications for advancing leadership in systems engineering.