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Collana	Women in Engineering and Science, , 2509-6427
Disciplina	658.56 620.0082
Soggetti	Quality control Reliability Industrial safety Electronic circuits Operations research Decision making Applied mathematics Engineering mathematics Engineering—Vocational guidance Quality Control, Reliability, Safety and Risk Circuits and Systems Operations Research/Decision Theory Mathematical and Computational Engineering Job Careers in Science and Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Lillian Moller Gilbreth: An Industrial Engineering Pioneer -- Chapter 2. Emergence of Statistical Methodologies With the Rise of Big Data -- Chapter 3. Specifying and Validating Probabilistic Inputs For Prescriptive Models of Decision Making Over Time -- Chapter 4. Towards a Scalable Graph Representation Learning Using Connection Subgraphs -- Chapter 5. Parameter Tuning Problem in Metaheuristics: A Self-Adaptive Local Search Algorithm for Combinatorial Problems --

Chapter 6. A Partition-based Optimization Approach for Level Set Approximation: Probabilistic Branch and Bound -- Chapter 7. Modeling Engineering Student Success Needs -- Chapter 8. A Study of Critical Thinking and Cross-disciplinary Teamwork in Engineering Education -- Chapter 9. Healthcare Teams Can Give Quality Patient Care, but at Lower Environmental Impact - Patient Centered Sustainability -- Chapter 10. Improving Patient Care Transitions at Rural and Urban Hospitals through Risk Stratification -- Chapter 11. To be Healthy, Wealthy, and Wise: Using Decision Modeling to Personalize Policy in Health, Hunger Relief, and Education -- Chapter 12. Improving Patient Safety In the Patient Journey: Contributions from Human Factors Engineering -- Chapter 13. Advanced Medical Imaging Analytics in Breast Cancer Diagnosis -- Chapter 14. Decision Making in Sequential Adaptive Clinical Trials, with implications for Drug Misclassification and Resource Allocation -- Chapter 15. Calibration Uncertainty and Model-based Analyses With Applications to Ovarian Cancer Modeling -- Chapter 16. Contributions to Humanitarian and Non-Profit Operations: Equity Impacts on Modeling and Solution Approaches -- Chapter 17. Simulation Based Approach to Evaluate the Effects of Food Supply Chain Mitigation and Compliance Strategies on Consumer Behavior and Risk Communication Methods -- Chapter 18. Contributions of Women to Multimodal Transportation Systems -- Chapter 19. Combining Exact Methods to Construct Effective Hybrid Approaches to Vehicle Routing -- Chapter 20. Modeling And Analysis of the Port Logistical Business Processes and Categorization Of Main Logistics Costs -- Chapter 21. Using Simulation to Improve Container Depot Operations: Technical and Life Lessons Learned -- Chapter 22. Sustainability and Lifecycle Product Design -- Chapter 23. Dynamic Price and Lead Time Quotation Strategies to Match Demand and Supply in Make-to-order Manufacturing Environments -- Chapter 24. Oyster mushroom Cultivation as an Economic and Nutritive Alternative for Rural Low-Income Women in Villapinzón (Colombia) -- Chapter 25. Data-Driven Intelligent Predictive Maintenance of Industrial Assets.

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## Sommario/riassunto

This book presents a diversity of innovative and impactful research in the field of industrial and systems engineering (ISE) led by women investigators. After a Foreword by Margaret L. Brandeau, an eminent woman scholar in the field, the book is divided into the following sections: Analytics, Education, Health, Logistics, and Production. Also included is a comprehensive biography on the historic luminary of industrial engineering, Lillian Moeller Gilbreth. Each chapter presents an opportunity to learn about the impact of the field of industrial and systems engineering and women's important contributions to it. Topics range from big data analysis, to improving cancer treatment, to sustainability in product design, to teamwork in engineering education. A total of 24 topics touch on many of the challenges facing the world today and these solutions by women researchers are valuable for their technical innovation and excellence and their non-traditional perspective. Found within each author's biography are their motivations for entering the field and how they view their contributions, providing inspiration and guidance to those entering industrial engineering. Features contributions from leading female scientists in industrial and systems engineering in academia, industry, and government jobs; Presents an opportunity to learn about the breadth, depth and impact of the field of ISE and women's important contributions to it; Covers a wide range of topics from optimization to human factors, to simulation.

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