

Call for Book Chapters

NAME OF THE BOOK

Cognitive Digital Twins for Sustainable Systems: AI-Driven Simulation for Environmental Resilience

About the Book

Focusing on the global climate crisis, this volume explores how AI can be used to design and manage infrastructure that survives and adapts to extreme weather events. It highlights the use of adaptive algorithms in smart grids, water management, and urban transportation systems. The book serves as a guide for civil engineers and data scientists to collaborate on building sustainable cities that can withstand the challenges of the 21st century

Tentative Topics

From Digital Twins to Cognitive Digital Twins (CDT)
Knowledge Graphs and Reasoning in Environmental Models
CDT for Lifecycle Assessment of Industrial Products
Semantic Interoperability in Sustainable Ecosystem Twins
AI-Driven Prediction of Biodiversity Loss
CDT for Optimization of Circular Economy Supply Chains
Modeling Carbon Sequestration with Cognitive Intelligence
IoT and Satellite Data Integration for Global CDT
CDT for Precision Agriculture and Soil Health
Real-time Simulation of Ocean Acidification and Cleanup
Decision Support Systems for Sustainable Forest Management
Human-Machine Collaboration in Cognitive Simulations
Scalability Challenges in High-Fidelity Environmental Twins
CDT for Smart Waste Management and Recycling
Energy Footprint of Maintaining Large-Scale Digital Twins
Causal Reasoning for Environmental Policy Simulation
CDT for Monitoring Air Quality and Urban Emissions
Disaster Recovery Planning using Cognitive Models
Standardizing Data Exchange for Global Resiliency Twins
Future Directions of Cognitive Environmental Intelligence

Publisher:
Bentham Science

Submission Guidelines

- Contributions must have a similarity index of 10% or lower, with no AI-generated content similarity.
- No Article Processing Charges (APC)
- The book will be submitted to Scopus for indexing after publication.

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