

Integrating Modern Mathematics and Sensor Technologies in Civil Engineering

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Description:

The integration of mathematics and sensor technologies has revolutionized civil engineering by enhancing infrastructure design and maintenance. Mathematical modeling and algorithms enable engineers to simulate and optimize construction processes and provide real time data load environmental conditions. This integration allows more proactive and sustainable design practices. As civil engineering faces increasing demands for resilient and intelligent infrastructure, the synergy between mathematics and sensor innovation becomes essential to shaping the built environment of the future.

Integrating Modern Mathematics and Sensor Technologies in Civil Engineering explores the integration of mathematics and sensor technology in civil engineering. This book provides examples and progress of this integration. Covering topics such as artificial intelligence, predictive maintenance, and wireless sensor networks, this book is an excellent resource for graduate students, civil engineers, structural analysts, researchers in intelligent systems and artificial intelligence, data scientists, and infrastructure consultants.

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Hardcover: \$240 **Softcover:** \$200 **E-Book:** \$230 **Hardcover + E-Book:** \$290

Topics Covered:

Artificial Intelligence (AI)	Pothole Detection
Civil Engineering	Predictive Maintenance
Data Analytics	Probabilistic Modeling
Infrastructure Inspection	Risk Assessment
Internet of Things (IoT)	Robotics
Machine Learning (ML)	Sensor Technologies
Maintenance	Unmanned Aerial Vehicles (UAVs)
Mathematics	Wireless Sensor Networks (WSNs)

Subject: Physical Sciences and Engineering
Readership Level: Advanced-Academic Level (Research Recommended)

Classification: Edited Reference
Research Suitable For: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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