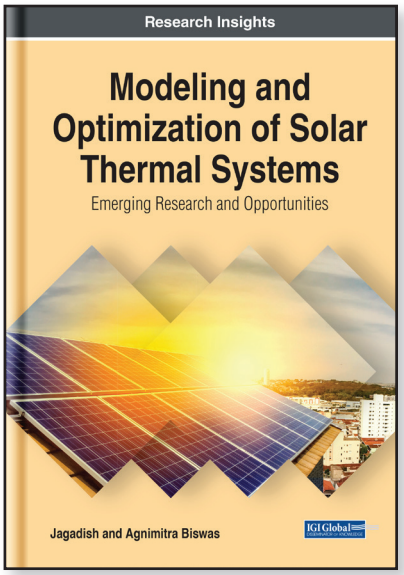
# Modeling and Optimization of Solar Thermal Systems: Emerging Research and Opportunities




Part of the Advances in Mechatronics and Mechanical Engineering Book Series

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## Description:

In recent years, scientists and researchers have been continually searching for efficient and effective ways to harness solar energy for heat and power production. The development of solar technologies and thermal systems are a prevalent area of study, as they represent a vital step in fully optimizing the potential of solar energy. Unfortunately, research is still lacking on the development and application of these solar thermal systems.

**Modeling and Optimization of Solar Thermal Systems: Emerging Research and Opportunities** provides emerging research exploring the theoretical and practical aspects of optimizing the performance of solar thermal technologies using multicriteria decision-making techniques. Featuring coverage on a broad range of topics such as parabolic trough collectors, hybrid solar energy, and thermal technology, this book is ideally designed for practitioners, engineers, academicians, researchers, students, industry professionals, and educators seeking current research on modern modeling methods of solar thermal systems.

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**Hardcover:** $185.00 **Softcover:** $140.00 **E-Book:** $185.00 **Hardcover + E-Book:** $220.00

## Topics Covered:

- Concentrated Thermal Systems
- Data Analysis
- Flat Plate Collectors
- Hybrid Solar Energy
- Multi-Criteria Decision Making (MCDM)
- Optimization Techniques
- Parabolic Trough Collectors
- Performance Design
- PV Array Modeling
- Solar Modeling
- Thermal Technology
- Tubular Solar Collectors

**Subject:** Science and Engineering

**Classification:** Research Insights

**Readership Level:** Advanced-Academic Level (Research Recommended)

**Research Suitable for:** Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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