



The Scientific World Journal

Special Issue on

**Recent Advances on Building Information Modeling**

# CALL FOR PAPERS

Building Information Modeling (BIM) technologies have been receiving a growing amount of attention in the Architecture, Engineering, and Construction (AEC) industry. Compared to the conventional 2D drawings and nonsemantic 3D models, BIM is capable of covering both geometric information and rich semantic information of building elements, as well as their relationships, to support lifecycle data sharing. BIM is a new trend for the use of Information Technologies (IT) in the AEC industry. However, BIM still suffers from the lack of fundamental research, such as the representation, exchange, and interoperability of information. In addition, research on various BIM applications is also very prospective. These trends provide new challenges and opportunities for researchers.

This special issue aims to bring researchers from academia and industry together to report and explore some new methodologies and applications in BIM and review the latest progress in this field.

Potential topics include, but are not limited to:

- ▶ Fundamental research of BIM:
  - ▶ BIM data representation and optimization
  - ▶ Information access and partial model extraction
  - ▶ BIM-based decision-making and (business) process modeling
- ▶ BIM-based applications:
  - ▶ BIM-based code compliance checking
  - ▶ Reasoning with BIM information
  - ▶ BIM-based information retrieval
  - ▶ BIM-based sustainability applications
  - ▶ BIM-based spatial reasoning
  - ▶ BIM-based lifecycle management and maintenance
  - ▶ 4D, 5D, and nD modeling and analysis applications
  - ▶ Virtual, mixed, and augmented Reality applications
- ▶ Standardization and collaboration of BIM:
  - ▶ BIM standards research
  - ▶ BIM-based collaboration framework
  - ▶ Interoperability to support data sharing
  - ▶ Governance models, legal, privacy, and copyright issues
- ▶ Crossover study with other disciplines:
  - ▶ Combining semantic web technologies and BIM
  - ▶ Combining cloud computing and BIM
  - ▶ Combining GIS and BIM data
  - ▶ Combining legal data and BIM data
  - ▶ Combining Internet of Things (IOT) and BIM

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