

**Special issue on ' Managing Complex Computational Challenges' in
Journal of Computational Methods in Sciences and Engineering**
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Managing Complex Computational Challenges

A huge body of methods for making large-scale simulations and analyses are produced, which are more computationally efficient, enabling a wide range of research to be less time- and memory-intensive. The proposed methods and systems can synthesize domains that integrate many concepts from deep learning, machine learning, AI and other computational techniques. Keeping the scientific value while designing computational approaches that leverage increased computational power is essential. Developing one system identifies a few significant features or facets. However, generating a large model uses innumerable parameters and infinite indicators to bring broad models that analyse multidimensional patterns and function as generic with permissible customization. The future computational system can build newer interfaces with computers on one side, people, technologies, and domains on the other, and produce modalities. Robust techniques with insights create solution spaces with fewer computational complexities.

Advanced big data analytics offer solutions to research questions in many different disciplines. Computational techniques coupled with intelligence are more successful for complex processes in many domains, and the refining activities lead to domain precision. In recent years efficient machine learning models have been recorded that solve many complex issues in other fields.

Many approaches in research currently warrant intensive computational methods and have become more inevitable to solve research questions. Research can generate unique and highly objective scalable solutions to the complexity and understanding of how the different propositions can help product possible systems to solve the tasks with domain knowledge.

Complexity reduction leads to robustness, structured results, higher accuracy, and resolved issues and is mainly achieved by applying computational methods. The proposed special issue will address many agendas codified in the above description and, more specifically, but not limited to the below themes.

Neural models

Spatio-temporal data modelling

DL approaches to analyse patterns

Convolutional Long Short-Term Memory network

Data Transfer Framework

Data security

Data correlational dependencies

Knowledge-driven machine learning

Information and Systems Intelligence

Computational Modelling

Intelligent agent-supported processing

Intelligent control systems

Domain-specific smart models and architectures

Complex data and sparse modelling

Semantics-induced segmentation and clustering

Edge Intelligence

The important dates

Submission of Papers: May 31, 2023

Acceptance/Rejection Notification: June 30, 2023

Revised version: August 15, 2023

Issue Publication: (will be notified later)

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