

## Tentative Outline

Special Thematic Issue for the journal Recent Advances in Computer Science and Communication

Title of the Thematic Issue: "Computational Intelligence: theory and applications"

*Guest Editor: Dr. Sandeep Kumar*  
*Co-Guest Editor: Dr. Mukesh Prasad*

- **Scope of the Thematic Issue:**

Computational intelligence mimics the extraordinary capacity of the human intellect to assert and understand in an environment of uncertainty and imprecision. Computational intelligence is new-age multidisciplinary artificial intelligence. The main goal of computational intelligence is to develop intelligent systems to solve real-world problems that are not modelled or too hard to model mathematically. Computational intelligence combines three methodologies fuzzy logic, neural network, and probabilistic algorithm. These three techniques deal with uncertainty and imprecision. It is considered a branch of artificial intelligence emphasizing heuristic algorithms such as fuzzy systems, neural networks, and evolutionary computation. Computational intelligence is a set of computational methodologies and approaches inspired by nature to address complex real-world problems for which conventional techniques are impracticable. Many such real-life problems are not considered mathematically well-presented problems, but nature provides many models of biological systems that demonstrate the functionally necessary function.

**Keywords:** Computational Intelligence, Nature inspired Algorithms, Swarm Intelligence, Evolutionary Algorithms, Optimization, Artificial Intelligence.

### Sub-topics:

- Computational Intelligence for image processing and computer vision
- Computational Intelligence and machine learning, deep learning
- Computational Intelligence applications in agriculture and allied sector
- Computational Intelligence in image feature extraction and selection
- Intelligent Agents and Multi-Agent Systems
- Soft Computing: Techniques and applications
- Robotics and Autonomous Robots
- Image and Video Processing
- Computational Intelligence and Its Applications in the medical industry, the insurance industry, natural language processing, manufacturing, energy and utilities, banking, financial services, and insurance

### Schedule:

- Thematic issue submission deadline: **December 30, 2022**

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