

The 8th International Conference on Pattern Recognition and Artificial Intelligence

Special Session **01**

Information Visualization using Computational Intelligent Systems

The ability to visualize complex datasets effectively is essential in an era where vast amounts of information are generated daily. Computational intelligent systems (CIS) have revolutionized the way data is processed, analyzed, and visualized, enabling the discovery of patterns and insights that were previously inaccessible. By integrating advanced techniques such as machine learning, neural networks, fuzzy logic, evolutionary algorithms, and deep learning, these systems enhance our understanding of data through interactive and intuitive visual representations. This special session aims to bring together researchers, academicians, and industry practitioners to share and discuss the latest advancements in information visualization facilitated by computational intelligent systems. The session will serve as a platform to explore innovative methodologies, applications, and tools that leverage CIS for enhanced data visualization across various domains such as healthcare, finance, environmental studies, and social sciences.



Session Team

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TOPIC OF INTEREST

• **Machine Learning for Visualization:**

Techniques that use machine learning models for dimensionality reduction, clustering, and data categorization to enable clearer visual outputs.

• **Neural Networks in Visualization:**

Applications of convolutional and recurrent neural networks in generating visual insights from complex data.

• **Evolutionary Algorithms for Interactive Design:**

Use of genetic algorithms and swarm intelligence in adaptive visualization systems.

• **Fuzzy Logic in Data Representation:**

Employing fuzzy systems for handling uncertainty and ambiguity in data visualization.

• **Explainable AI (XAI) and Visualization:**

Techniques that make AI outputs interpretable and accessible through visualization.

• **Deep Learning for Big Data Visualization:**

Innovations in visualizing high-dimensional data through autoencoders and generative models.

• **Cognitive and Perceptual Models:**

Understanding human perception and cognition for designing effective visual interfaces with intelligent systems.

► Important Dates

Submission Deadline (Regular)	March 25, 2025
Notification Date (Regular)	April 25, 2025
Registration Deadline	May 10, 2025

► Submission Information

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