

CALL FOR PAPERS

Perception through vision has always played an essential role in human life, and images continue to be one of the most important information carriers even through rapidly changing technological environments. Recent advances in digital processing and computer hardware have led to an explosion in the use of digital images in a variety of scientific and engineering applications. These applications result from the progression from fundamental scientific research on the one hand to the development of new and innovative technologies—and their implementation—on the other hand.

Computational intelligence has emerged as a powerful tool for information processing, decision making, and knowledge management and has been successfully developed in areas such as neural networks, fuzzy systems, and evolutionary algorithms. It is apparent that computational intelligence will play an increasingly important role in tackling engineering problems, not least in the field of image processing.

Classical image processing methods often face great difficulties while dealing with images containing noise and distortions. Under such conditions, the use of computational intelligence approaches has recently been extended to address challenging real-world image processing problems. This Special Issue aims to provide a collection of high quality research articles that address the broad challenges in both theoretical and practical aspects of computational intelligence in image processing. We invite colleagues to contribute original research articles, as well as review articles, that will stimulate the continuing effort on the application of computational intelligence approaches to solve image processing problems.

Potential topics include but are not limited to the following:

- ▶ The use of computational intelligence techniques such as
 - ▶ Neural networks
 - ▶ Fuzzy logic
 - ▶ Rough sets
 - ▶ Metaheuristics (evolutionary algorithms, simulated annealing, tabu search, ant colony optimization, particle swarm optimization, harmony search, bee colony optimization, etc.)
 - ▶ Expert systems
- ▶ In/for the following:
 - ▶ Coding and compression
 - ▶ Sampling and interpolation
 - ▶ Quantization and halftoning
 - ▶ Quality assessment
 - ▶ Filtering and enhancement
 - ▶ Morphology
 - ▶ Edge detection and segmentation
 - ▶ Feature extraction
 - ▶ Indexing and retrieval

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/mpe/ciip17/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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