Editorial

We are pleased to release the first issue of the eighteenth volume of the **Journal of Multimedia Processing and Technologies** with the following research.

In the opening paper**, "Image Processing for Game Stability Assessment Using a Hybrid Fuzzy Neural Network Approach,** the authors Qianwei Zhang1, Lirong Yu advocated an improved method for assessing the motion stability of badminton athletes using advanced image segmentation techniques. They used a hybrid algorithm combining the computational efficiency of neural networks with the precision of fuzzy logic to better handle illumination changes and motion dynamics in video frames. The experimental results confirm improvements in both processing speed and segmentation quality, especially for complex motion scenarios.

In the paper**, "Enhanced Image Segmentation in Computer Vision Using PSO Optimisation"**, the authors presented an enhanced image segmentation model that combines the K-means clustering algorithm with Particle Swarm Optimisation (PSO) to improve computer vision performance. They integrate PSO to perform a global search for optimal initial cluster centers before applying K-means for local refinement. The test results showed that the enhanced model achieves the shortest segmentation runtime across all test images and delivers superior edge detail and segmentation accuracy.

In the last paper, "**Analysis of Human Motion Video Images Based on a Fuzzy Clustering Algorithm**," the author introduced an integrated approach for analyzing human movements using fuzzy clustering combined with deep learning techniques. The author pre-processed video frames to reduce noise, then applied fuzzy clustering-based image segmentation to distinguish players from the background. The results proved a measurable increase in motion precision over three months, confirming the model's practical utility.

We hope that the published research in this issue marks technical significance.

Editors