Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP 2025)

October 15-17, 2025, The Splendor Hotel, Taichung, Taiwan

Special Session on <u>Pattern Recognition and Feature Learning in Complex Visual Data</u>

Call for Papers

Organizers: Prof. Yung-Chen Chou and Chun-Hsiu Yeh

In recent years, the rapid development of Artificial Intelligence (AI) and Deep Learning has significantly advanced the capabilities of pattern recognition and feature extraction from complex visual data. This special session aims to bring together researchers, practitioners, and academics to explore cutting-edge methodologies, algorithms, and systems for intelligent analysis and interpretation of high-dimensional and heterogeneous visual information.

Complex visual data — such as natural scenes, medical images, satellite imagery, and video streams — pose significant challenges in terms of variability, occlusion, noise, and semantic ambiguity. Overcoming these challenges requires innovative approaches to feature learning, representation, and pattern recognition, leveraging advances in AI, machine learning, and image processing.

Topics of interest include but are not limited to the following:

1. **Artificial Intelligence in Visual Understanding**
   - Deep learning architectures for visual pattern recognition
   - Self-supervised and unsupervised learning methods
   - AI models for context-aware visual interpretation
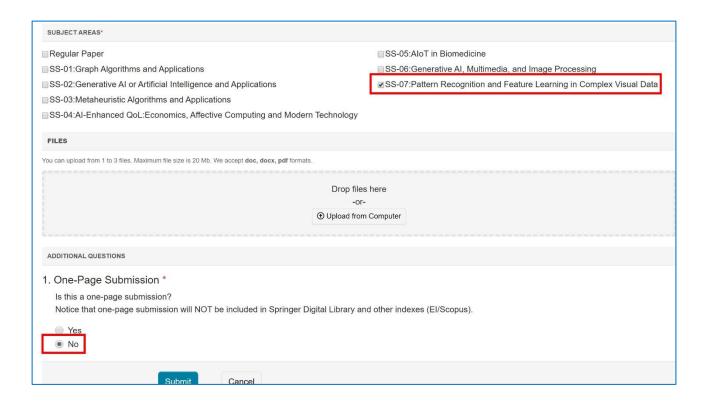2. **Feature Learning in Complex Data**
   - Transfer learning and domain adaptation for vision tasks
   - Geometric and topological feature extraction
   - Metric learning and similarity-based classification
3. **Pattern Recognition and Image Processing**
   - Object detection and recognition in real-world scenarios
   - Semantic segmentation and scene understanding
   - Face and gesture recognition

Submissions:

Papers should follow the template announced on the IIHMSP 2025 conference website (https://iihmsp25.csie.cyut.edu.tw), and be submitted via **Microsoft CMT** system and then select SUBJECT AREAS: **SS-07:Pattern Recognition and Feature Learning in Complex Visual Data.** for submission (please refer to the following captured figure).

Conference Proceeding Information:

Papers that are presented orally at the conference and meet the publication requirements of IIHMSP-2025 conference proceedings will be published in Springer's book series titled "Smart Innovation, Systems and Technology". Normally, this series will be indexed by Scopus and EI Compendex.

Important Dates: (If IIHMSP 2025 extends the dates, follow those dates announced on the website)

Paper submission deadline: **May 30, 2025**

Acceptance notification: **July 30, 2025**

Camera-ready copy and registration: **July 15, 2025**

For more information:

Please visit the IIHMSP 2025 official websites (https://iihmsp25.csie.cyut.edu.tw or https://iihmsp25.github.io/) or contact the organizers of this special session as follows:

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