

Special Session I: Computer Vision and Its Applications

Chairs: Yongjun zhang, Guizhou University; Wenting Li, Guizhou university of Commerce, Nangyang Technological University.

Brief Description of the Session

Computer vision is an interdisciplinary scientific field that studies how to enable computers to gain a high-level understanding from digital images or videos. From an engineering perspective, it seeks to automate tasks that the human visual system can accomplish. Computer vision tasks encompass methods for acquiring, processing, analyzing, and understanding digital images, as well as extracting high-dimensional data from the real world to generate numerical or symbolic information, for instance, in the form of decisions. In this context, understanding implies transforming visual images (retinal inputs) into descriptions of the world that can be integrated with other thought processes and elicit appropriate actions. This image understanding can be seen as the extraction of symbolic information from image data using models constructed with geometry, physics, statistics, and learning theories. As a scientific discipline, computer vision involves the theory behind artificial systems that extract information from images. Image data can take various forms, such as video sequences, views from multiple cameras, or multidimensional data from medical scanners. As a technical discipline, computer vision seeks to apply its theories and models to the construction of computer vision systems. Subfields of computer vision include scene reconstruction, event detection, video tracking, object recognition, 3D pose estimation, learning, indexing, motion estimation, and image restoration.

This symposium seeks high-quality technical articles from both industry and academic to address current research challenges and provide innovative solutions for the scene reconstruction, event detection, video tracking, object recognition, pose estimation, learning, indexing, motion estimation, and image restoration, etc.

Topics

- Innovative methods and applications of image processing technology
- New algorithms and models for object detection
- Real time target tracking technology
- Video and Image Analysis and Understanding
- The Application of Deep Learning in Image Processing
- Image Enhancement and Restoration
- Medical image analysis
- Multiscale and multimodal image fusion
- Computer Vision and Pattern Recognition
- Image Processing Technology in Intelligent Monitoring System Stereo Vision

Brief Introduction of Chair and Co-chairs with Photo



Yongjun zhang, Institution of Artificial Intelligence, Guizhou University, China.

Zhang Yongjun (IEEE Member), PhD, Master's Supervisor/Associate Professor, Visiting Scholar at Cardiff University, UK, Executive Dean of the Artificial Intelligence Research Institute of Guizhou University, Director of Guizhou Provincial Remote Sensing Big Data Innovation Center. Council Member of the National Computer Education Research Association of Institutions of Higher Learning, Level 2 Innovation Method Instructor in Guizhou Province, Member of the Chinese

Association of Artificial Intelligence, Member of the Expert Consultation Committee of the China Security Protection Industry Association, He has published over 50 research papers in computer vision at top computer conferences/journals such as CVPR, ACCV, and IEEE Transactions, and has applied for 15 invention patents. His research focuses on intelligent video analysis and image processing, including binocular stereo matching, object detection and recognition, image enhancement, remote sensing image processing, and engineering applications, etc.



Wenting Li , Guizhou university of Commerce, Nanyang Technological University. China,

Prof. Wenting Li is a doctor of Computer Technology and Application. She received the PhD degree from Macau University of Science and Technology, Macau, China, in June 2017. She served as a visiting scholar at the School of Computer Science and Engineering, Nanyang Technological University, Singapore, starting from December 2023. She joined the Guizhou University of Commerce, China, in April 2018. Her research interests are intelligent transportation, computer Vision ,

recommendation system, stereo vision and scene understanding..