

International Journal of Wavelets, Multiresolution and Information Processing: Special Issue **Digital Image Processing, Computer Vision and Its Application in Engineering**

Image and video are playing more and more important role in our daily life and industrial production. How to obtain interesting and useful information from massive image and video data is the focus of attention. It is not only time-consuming, inefficient, costly, but also often intensive, subjective and often impossible to accomplish tasks by only relying on human eyes.

Advances in artificial intelligence and fast processing chip technology have made it possible for computers to quickly and efficiently obtain useful information instead of manual methods. In practical applications, such as biometric matching, traffic security management, high-voltage power transmission, product quality testing, medical image analysis, etc., intelligent analysis of images and videos is playing an increasingly important role.

At present, people mainly carry out intelligent analysis of images and videos from the following two aspects: On the one hand, researches in many special areas require a large amount of images and videos, and it is usually difficult for ordinary researchers to obtain such large amounts of data, so many scholars carry out the related research by establishing different public data sets. The advantage of this kind of research is that it can ensure the comparability of algorithm results, whereas the disadvantage is that satisfactory application results cannot be achieved easily in many complex practical applications. So how to put the algorithm into real practice is still a challenge. On the other hand, many scholars have also carried out the research in some minority image and video fields, such as quality testing of industrial product of some specific types, hidden danger detection along high-voltage transmission line, building quality inspection, geological disaster assessment, etc. By solving these practical problems, they have found some new theoretical problems, which are often difficult to find just by reading the literature and tracking research. Finding new problems in practice and then ascending to the theoretical level is also a way to conduct scientific research.

This special issue is focusing on the latest development, trends, novel techniques, and new models in digital image processing, computer vision and their application in engineering. The principal topics planned to be covered are as follows, but are not limited to:

- Biometric recognition
- Object detection and recognition
- Moving object detection and tracking
- Medical image analysis
- Handwritten character recognition
- remote sensing image
- 3D vision and robot vision
- Modeling and solutions for engineering applications related to digital image processing and computer vision
- Fundamentals of digital image processing and computer vision
- Underlying visual understanding
- Machine Learning
- Multimedia analysis

Guest Editors

- Li Jinping, Professor, University of Jinan, Jinan, China, ise_lijp@ujn.edu.cn
- C. L. Philip Chen, Professor, University of Macau, Macau, China, philipchen@umac.mo
- Tong Zhang, Associate Professor, South China University of Technology, Guangzhou, China, tony@scut.edu.cn
- Wenwu Yu, Professor, Southeast University, Nanjing, China, wwyu@seu.edu.cn
- Yang Gongping, Professor, Shandong University, Jinan, China, gpyang@sdu.edu.cn
- Guo Maozu, Professor, Beijing University of Civil Engineering and Architecture, Beijing, China, guomaozu@bucea.edu.cn
- Miao Qiguang, Professor, Xidian University, Xi'an, China, qgmiao@xidian.edu.cn
- Zhan Yinwei, Professor, Guangdong University of Technology, Guangzhou, China, 18022352515@qq.com.
- Jin Zhou, Professor, University of Jinan, Jinan, China, ise_zhouj@ujn.edu.cn