Editorial

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Biographical notes: Shiguo Lian received his PhD from Nanjing University of Science and Technology, China. He was a Research Assistant in the City University of Hong Kong in 2004. Since 2005, he has been a Research Scientist with France Telecom R&D (Orange Labs) Beijing. He is the author of more than 90 refereed international journal and conference papers covering topics of secure multimedia communication, intelligent multimedia services, and ubiquitous computing and communication. He has authored/edited six books, contributed 15 book chapters and held 16 patents. He received the Nomination Prize of 'Innovation Prize in France Telecom' and 'Top 100 Doctorate Dissertation in Jiangsu Province' in 2006.

Frank Y. Shih received his BS from the National Cheng-Kung University, Taiwan, his MS from the State University of New York, Stony Brook, and his PhD from Purdue University. He is presently a Professor at New Jersey Institute of Technology, USA. He is an internationally well-known scholar and served as a steering member, committee member, and Session Chair for numerous professional conferences and workshops. He has authored three books: *Digital Watermarking and Steganography*, *Image Processing and Mathematical Morphology*, and *Image Processing and Pattern Recognition*, and has published over 200 papers. His research interests include image processing, computer vision, watermarking, digital forensics and pattern recognition.

1 Introduction

This issue is composed of nine papers selected from regular submissions. All these papers have been blind-reviewed by at least two reviewers. They cover the interesting topics, e.g., video coding and transmission, information hiding and detection in voice or images, object detection and tracking, website security, secret communication, etc.

2   The papers in this issue

The first paper, 'A QoE-based approach for multiple description coding (MDC) streaming over video distribution network (VDN)' by M. Ghareeb and C. Viho, proposes the approach to generate multiple complementary descriptions of the video flow based on the group of pictures (GOPs) of the H.264/AVC standard, and to use the quality of experience (QoE) evaluations to adjust the streaming of these descriptions over multiple video distribution network (VDN) paths. This method dynamically selects the best overlay paths using the available bandwidth estimations, and shows apparent advantages of using multiple description coding (MDC) video streaming, against the traditional multi-streams splitting strategies, especially in overloaded environments.

In the second paper, 'Pulse position checking-based steganalysis of G.723.1 compressed speech in VoIP' by J. Lu et al., an effective steganalytic method is proposed to detect the steganography in G.723.1 compressed speech transmitted by voice over internet protocol (VoIP). This paper makes use of the pulse position that has special properties. By checking whether pulse position parameters are in available ranges or not, speeches with hidden information can be discovered quickly. Experimental results show that, this method outperforms previous methods, and is also effective and real-time.

The third paper, 'An adaptive matrix embedding based on LSB matching for grey-scale images' by G. Liu and W. Liu, proposes an adaptive matrix embedding method based on LSB matching for grey-scale images. The adaption mechanism of the method is used to embed less message bits in regions with high local correlation and embed more in regions with low local correlation. Experimental results indicate that in the test image database, the new method can improve the PSNR value greatly compared with simple LSB matching.

In the fourth paper, 'Robust object tracking under appearance change conditions based on Daubechies complex wavelet transform' by A.S. Jalal and V. Singh, a robust algorithm for object tracking is proposed, which exploits the properties of Daubechies complex wavelet transform to track region of interest (ROI). In this method, the object is represented in Daubechies complex wavelet domain to minimise the effect of frame to frame variations and noise, and an online adaptation scheme is used to update the reference object template and make the proposed tracker more robust. Better tracking results are yielded even in noisy video with significant variations in object's pose and illumination.

The fifth paper, 'Object tracking in video by egg shape boundary model and properties of HSV colour space' by S. Saravanakumar et al., proposes an egg shape boundary model for object tracking in video sequence. The target in the current frame is bounded initially and the features of the target object are extracted. In this model, the acceleration and velocity of the moving target object is considered for forming the egg shape boundary in the next frame by calculating the tangent points, and a moving predicted centre technique is proposed for failure detection and recovery. Some comparative results show that the proposed method is encouraging with respect to other recently proposed methods.

In the sixth paper, 'An effective IP algorithm for active IR thermographs: detecting defects metallic stuffs' by D. Azad et al., an interesting algorithm is proposed to detect metallic stuffs. Some practical tests are done, and comparative results are given to show the algorithm's features.

The seventh paper, 'Role of common website features on providing a secure news website: an empirical approach' by M. Farzaneh and S. Mohammadi, investigates the various factors that affect the news website's security. After the review, the potential approach is presented to improve the website's security. It is an interesting topic worthy of further study.

In the eighth paper, 'Identification of steganography software based on register dependence' by D. Zheng et al., a register-dependent method is presented to identify the steganography software. This method considers the data dependences when accessing data stored in the registers. Based on these dependences, the given program is divided into many code modules that are used as templates to compute the matching degree and thus used to identify the steganography software and their variants. Some experimental results are given to show the method's performances.

The ninth paper, 'Introducing a unified framework for content object description' by P. Daras et al., analysed a novel rich unified content description framework, which provides a uniform descriptor for all types of rich media content (content objects). This topic becomes hot because it is closely related to the popular applications, media search and retrieval. The work may encourage more researchers to follow.