
Editorial

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Biographical notes: Frank Shih received his BS from National Cheng-Kung University, Taiwan, his MS from 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 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.

Shiguo Lian received his PhD from Nanjing University of Science and Technology, China. He was a Research Assistant in City University of Hong Kong in 2004. Since July 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.

1 The papers in this issue

This issue is composed of five papers contributed by both our editorial board members and regular submissions. All these papers have been blind-reviewed by at least two reviewers. They cover the interesting topics, e.g., sports video analysis, information hiding in multimedia content, secret communication, digital watermarking, image authentication and recovery.

In the first paper, 'Playfield registration in broadcast soccer video' by X. Tong et al., a soccer video analysis method is proposed to find the geometric correspondence between a screen image plane and the standard playfield model automatically. Firstly, the field region is extracted by dominant colour detection. Then, the Hough transform is used to detect lines and extract their intersection points. Furthermore, the selected intersection points are mapped to the playfield model. Finally, the method is tested on thousands of frames in FIFA World Cup 2006 videos, and is proved practicable and robust in cases of player occlusion and moderate camera motion. This technique can be extended to other sports videos.

The second paper, 'A least-significant-bit substitution data hiding scheme by using modulus function and optimal permutation refining' by Y-A. Ho et al., presents a data hiding scheme based on least significant bit (LSB) substitution. Data hiding has been widely studied during the last 15 years. For data hiding methods, the embedding capacity and imperceptibility are two important metrics. To keep high image quality at the same embedding capacity, this paper adopts modulus function and optimal permutation search to substitute LSBs adaptively. The experimental results show that the proposed method raises the efficiency of current data hiding schemes and can be used in wild applications.

In the third paper, 'Histogram modification based robust image watermarking approach' by C. Deng et al., a robust image watermarking method is presented for copyright protection, which is based on histogram modification. Firstly, the histogram of the host image is computed and the bins with large number of pixels are then selected by a predefined threshold to form the appropriate embedding range. The watermark is then embedded in the host image by modifying the consecutive triple of bins belonging to the embedding range. In detection, the watermark is extracted by combining global search and local search. Experimental results are given to show the proposed image watermarking scheme's robustness against geometric distortions as well as common image processing operations. Especially, the comparison with existing works shows that it outperforms some of existing works in terms of robustness.

The fourth paper, 'Secure image transmission using steganographic methodologies' by G. Sahoo and R.K. Tiwari, proposes secure image transmission methods based on steganography. Nowadays, multimedia communication becomes more and more popular, and the security issues are also urgent. Secret communication based on multimedia content becomes also available. The paper presents the methods to hide images into speech and text data files. Some experiments are done, and results are given, which show that by concealing the secret image file, the high level of security with low bandwidth can be maintained. It also mentions another interesting topic, named steganalysis.

In the fifth paper, 'Colour filter array interpolation based self-recovery with anti-cropping capability' by Z. Qian et al., a watermarking based self-recovery and authentication method is proposed for image protection. This method generates some authentication-bits from the image, and embeds the authentication-bits together with reference-bits (computed from the colour image's channels) into the image itself. If the image is tampered, the tampered regions can be detected by extracting the authentication-bits, and the tampered regions can be recovered by extracting the reference-bits. Various experiments are done, which indicate the proposed method provides anti-cropping capability with good self-recovery quality. This method is potential for such application as mobile multimedia communication.

2 Call for special issues proposals

The *International Journal of Multimedia Intelligence and Security (IJMIS)* welcomes special issue proposals. You are encouraged to submit proposals for creating special issues in areas that are of interest to the journal. Preference will be given to proposals that cover some unique aspect of the technology and ones that include subjects that are timely and useful to the readers of the journal. Interested guest editors please submit the proposal to the editors-in-chief according to the following guidelines:

The following information should be included as part of the proposal:

- 1 proposed title for the special issue
- 2 description of the topic area to be focused upon and justification
- 3 review process for the selection and rejection of papers name, contact, position, affiliation, and biography of the guest editor(s)
- 4 tentative method to advertise the CFP
- 5 tentative time-table for the call for papers and reviews.

If a proposal is accepted, the guest editor will be responsible for:

- 1 Preparing the 'call for papers' to be included on the journal's website.
- 2 Distribution of the call for papers broadly to various mailing lists and sites.
- 3 Getting submissions, arranging review process, making decisions, and carrying out all correspondence with the authors. Authors should be informed the author instructions.
- 4 Providing us the completed and approved final versions of the papers formatted in the journal's style, together with all authors' contact information.
- 5 Writing a one- or two-page introductory editorial to be published in the special issue.

Additional guidelines for guest editors:

- 1 A special issue is typically composed of 100 pages (formatted according to the template).
- 2 Papers must be double-blind refereed according to our strict standards.
- 3 Papers should be sent to three referees preferably (two minimum) and must be amended according to their comments. Guest editors should retain the referees' reports until the paper has been published. The publisher reserves the right to re-referee and/or reject an accepted paper if the paper does not meet the criteria outlined in the review form or if the paper is in some other way deemed possibly unsuitable.
- 4 There must be a balance of papers internationally and topically, and account must be taken of the status and credibility of the research centres from where the submitted papers are accepted and published. It is also essential to ensure that papers submitted from the guest editors' institutes or research groups or from the guest editors themselves, as authors, are refereed and accepted independently and that the referees are not appointed by the guest editors.