Editorial

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Biographical notes: Frank Y. Shih received his BS from the National Cheng-Kung University, Taiwan, MS from State University of New York, Stony Brook, and 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.

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 was awarded with 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., multimedia software architecture, multimedia data mining, face detection, information hiding, database security, etc.

The first paper, 'UML-profile for multimedia software architectures' by M. Derdour et al., investigates the meta-model for multimedia software architecture (MMSA). It enables the description of software architectures expressing a multimedia software

system as a collection of components which handle various types and formats of multimedia data, and interacts between them via adaptation connectors. The paper presents the model of architectural elements, including multimedia, applications, communication, etc., and also proposes a Unified Modeling Language (UML) profile for verification and validation of MMSA architectures and detection of heterogeneities between components communicating with multimedia flows. This software architecture is expected to drive the design of multimedia applications.

In the second paper, 'Analysing the presence of school-shooting related communities at social media sites' by A. Semenov et al., the presence of school shooting related information in various social media sites and its relation to past and perhaps future cases is analysed by data mining in social media networks. In detail, the paper presents an ontology that captures the salient behavioural and other properties of the past school shooters and also an ontology for multimedia material released by these persons prior to their attacks. The hypothesis is that most of school shooters have had a presence at websites and left traces, e.g., by WWW technologies, e-mail, chat, text messaging and social media. These traces may be detected by data mining techniques, and even the potential of a person to become a school shooter may be evaluated. This interesting paper is expected to drive some potential research topics.

The third paper, 'Image-based face detection CAPTCHA for improved security' by B.M. Powell et al., proposes an image-based completely automated public turing test to tell computers and humans apart (CAPTCHA) that relies on detecting human faces in a composite CAPTCHA image to minimise the attack rates. To make it difficult for automated face detection, faces of animals are also embedded in the CAPTCHA. Thus, the web-based secure services need human-interactive proof. The major benefit of the proposed image-based face detection CAPTCHA is that it does not have any language barriers since there is no text in the CAPTCHA. Thus, it is deployable to global audience. Whether the face is correctly detectable by computer in an automatic manner is the key challenge, and is also the topic to be studied.

In the fourth paper, 'A data-hiding scheme based on one-way hash function' by C-C. Chang et al., a reversible data hiding scheme is proposed to hide secret data in the VQ-index table. The proposed hiding scheme adopts MD5 to embed secret data into the VQ-index table and uses the concept of side-match vector quantisation (SMVQ) to increase the hiding capacity. During embedding, the VQ-index table together with a modified VQ-index table are generated for the cover image. Experimental results are given to show that the proposed scheme has better hiding capacity than related VQ-based schemes and can retrieve reversibly secret data and the VQ index.

The fifth paper, 'Performance comparison between the key representation database and the original database' by A.A. Elshiekh and P.D.D. Dominic, investigates the scheme to protect individual records in statistical database (SDB). The key representation auditing scheme (KRAS) is proposed to guarantee the security of online and dynamic SDBs. It converts the original database into a key representation database (KRDB), converts each new user query from a string representation into a key representation query (KRQ), and stores it in the audit query table (AQ table). The statistical analysis is provided to compare between the means and variances of the original database and the KRDB populations. The results of the tests showed that the differences are statistically significant.

2 Call for special issue proposals (selected best papers from international conferences)

The *International Journal of Multimedia Intelligence and Security* (*IJMIS*) welcomes special issue proposals based on international conferences. The conference organisers are encouraged to submit proposals for creating special issues in areas that are of interest to the journal. The special issue will include the revised or extended papers selected from international conferences. Additionally, the conference will be advertised in Inderscience's website. 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 (and the corresponding conference's website)

2 description of the conference, e.g., acceptance rate and number of international attendees

3 review process for the selection and rejection of papers

4 name, contact and affiliations of the guest editor(s)

5 tentative time-table for the submissions 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 Getting submissions, arranging review process, making decisions and carrying out all correspondence with the authors. Authors should be informed the author instructions.

3 Providing us the completed and approved final versions of the papers formatted in the journal's style, together with all authors' contact information.

4 Writing a one- or two-page introductory editorial to be published in the special issue.

Additional guidelines for guest editors:

1 There should be at least 40% differences between the considered paper and the conference paper.

2 A special issue is typically composed of 100 pages (formatted according to the template).

3 Papers must be double-blind refereed according to our strict standards.

4 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.

5   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.