Title:

Applications of Computational Intelligence in Multimedia Security

Abstract:

With the rapid development of network technologies and the increasing popularity of digital camera devices, digital multimedia (text, audio, image and video data) has grown exponentially on the Internet. However, the wide use of multimedia data also leads to many security issues, such as illegal use of copyright data and privacy invasion.

Since computational intelligence technologies are effective in data mining and analysis, they have attracted a lot of attention in the recent years. A typical example is the deep learning techniques such as deep convolutional neural networks have gained great success in many basic computer vision tasks such as image classification and object recognition. Due to the promising performances of the computational intelligence technologies, it is also reasonable to extend the computational intelligence technologies to address the issues of multimedia security, such as copyright protection, privacy protection, identity authentication and information forensics.

Scope and Topics:

The objective of this workshop is to invite authors to submit original manuscripts that explore the recent advances in multimedia security related to computational intelligence. The workshop solicits novel papers on a broad range of topics, including but not limited to:

✧ Computational intelligence techniques for multimedia forensics.
✧ Computational intelligence techniques for information hiding.
✧ Computational intelligence techniques for image/video copy detection.
✧ Computational intelligence techniques for secret sharing and visual cryptography.
✧ Privacy protection in big data/cloud computing environment by computational intelligence techniques.
✧ Deep learning techniques for face recognition or facial expression recognition.
✧ Secure and private computational intelligence algorithm design and analysis.
✧ Secure and large-scale systems and platforms supporting computational intelligence paradigms.
✧ Real-world applications of computational intelligence for privacy and security.

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Zhili Zhou received the B.S. degree in communication engineering from Hubei University in 2007, and the M.S. and Ph.D. degrees in computer application from the School of Information Science and Engineering, Hunan University, in 2010 and 2014, respectively. He was a Postdoctoral Fellow with the Department of Electrical and Computer Engineering, University of Windsor, Canada. He is currently an Associate Professor with the School of Computer and Software, Nanjing University of Information Science and Technology, China. His current research interests include near-duplicate image/video retrieval, image search, graphical password, coverless information hiding, and digital forensics.

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