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Digital Forensics and Watermarking


17th International Workshop, IWDW 2018
Jeju Island, Korea, October 22–24, 2018
Proceedings

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Preface

The 17th International Workshop on Digital Forensics and Watermarking (IWDW 2018) was held in Jeju, South Korea, during October 22–24, 2018. IWDW 2018, following the principles of the IWDW series, aimed at providing a technical program covering the latest and most sophisticated technological developments in the fields of digital watermarking, steganography and steganalysis, forensics and anti-forensics, visual cryptography, and other multimedia-related security issues. Among 46 submissions from Europe, Asia, and North America, 28 papers for regular sessions and a special session were selected for publication, including three papers for the best paper awards. The selection was based on the reviews provided by 36 Program Committee members, the general chair, and two Special Session Committee members.

Besides the regular presentations, one special session was held. “Deep Generative Models (DGM) for Forgery and Its Detection” was organized by the general chair, Chang D. Yoo. The aim of the session was to introduce up-and-coming issues related to forgery with regard to the generative models considered in artificial intelligence. The session provided a wonderful platform to exchange ideas regarding DGM and to identify key challenges in detecting forged generated data including text as well as image.

In addition to the paper presentations, the workshop featured congratulatory remarks from the dean of Jeju University, Kyung Youn Kim, and three talks: (1) plenary talk “Opportunities and Challenges for Blockchain,” presented by Professor Yongdae Kim (Korea Advanced Institute of Science and Technology); (2) tutorial “Introduction to Deep Neural Networks, Convolutional Neural Networks, and Generative Adversarial Networks,” presented by Professor Junmo Kim (Korea Advanced Institute of Science and Technology); and (3) a special guest talk “Forensic Watermarking Application in Media Business by MarkAny,” presented by Go Choi (VP of MarkAny Strategy and Business Development).

The best paper awards were given to the papers titled “VPCID – A VoIP Phone Call Identification Database” by Yuankun Huang et al. (Shenzhen University, China); “Comparison of DCT and Gabor Filters in Residual Extraction of CNN-Based JPEG Steganalysis” by Huilin Zheng et al. (Sun Yat-sen University, China; New Jersey Institute of Technology, USA); and “Reconstruction of Fingerprints from Minutiae Using Conditional Adversarial Networks” by Hakil et al. (Inha University, South Korea).

We would like to thank all of the authors, reviewers, lecturers, and participants for their valuable contributions to IWDW 2018. Our sincere gratitude also goes to all the members of the Technical Program Committee, special session reviewers, and our local volunteers for their careful work and great efforts made in the wonderful organization of this workshop.

Finally, we are certain that the readers will enjoy this volume and hope that it will provide inspiration and opportunities for future research.

November 2018

Chang D. Yoo
Yun-Qing Shi
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Hyoung Joong Kim
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