# PROGRAM SCHEDULE FOR WORLD IT CONGRESS 2018

## Day 1, Feb. 20, 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Min</th>
<th>HALL -A</th>
<th>HALL B</th>
<th>HALL C</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-12:00</td>
<td>120</td>
<td></td>
<td>Session A-0</td>
<td>ANMT 2018 (Closed Workshop)</td>
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<td></td>
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<td>Chair: Joon Min Gil</td>
<td>Chair: Joon Min Gil</td>
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<tr>
<td>13:00-15:00</td>
<td>120</td>
<td></td>
<td>Organizing Committee Meeting</td>
<td>(Only for Invited Members)</td>
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<tr>
<td>16:00-17:30</td>
<td>90</td>
<td></td>
<td>Local Arrangement Committee Meeting</td>
<td>(Only for Invited Members)</td>
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## Day 2, Feb. 21, 2018

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<tr>
<th>Time</th>
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<th>HALL B</th>
<th>HALL C</th>
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<tbody>
<tr>
<td>08:40-09:00</td>
<td>20</td>
<td>Registration</td>
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<tr>
<td>09:00-10:30</td>
<td>90</td>
<td>Session A-1</td>
<td></td>
<td>Session B-1</td>
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<td></td>
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<td>Chair: R. Young Chul Kim</td>
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<td>Chair: Jin Wang</td>
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<tr>
<td>10:30-10:40</td>
<td>10</td>
<td>Coffee Break</td>
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<tr>
<td>10:40-12:00</td>
<td>80</td>
<td>Session A-2</td>
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<td>Session B-2</td>
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<td></td>
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<td>Chair: Soohyun Cho</td>
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<td>Chair: Kyung-Soo Lim</td>
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<tr>
<td>12:00-13:10</td>
<td>70</td>
<td>Lunch</td>
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<tr>
<td>13:10-14:00</td>
<td>50</td>
<td>Keynote I: Internet of Battlefield Things: Challenges and Research Opportunities</td>
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<td>Kim-Kwang Raymond Choo, Ph.D.</td>
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<td></td>
<td></td>
<td>Professor at the University of Texas at San Antonio, USA</td>
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<td>Chair: Kyung-Soo Lim</td>
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<tr>
<td>14:00-14:10</td>
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<td>Coffee Break</td>
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<tr>
<td>14:10-15:30</td>
<td>80</td>
<td>Session A-3</td>
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<td>Session B-3</td>
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<td>Chair: Ganjar Alfian</td>
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<td>Chair: Kyung-Soo Lim</td>
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<tr>
<td>15:30-15:40</td>
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<td>Coffee Break</td>
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<td>Time</td>
<td>Min</td>
<td>Session A-4</td>
<td>Session B-4</td>
<td>Session C-4</td>
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<tr>
<td>15:40-17:00</td>
<td>80</td>
<td>Chair: Sangkee Suk</td>
<td>VASSI 2018 (Closed Workshop) Chair: Hwankuk Kim</td>
<td>ISWP 2018 (Closed Workshop) Chair: Yunsick Sung</td>
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</tbody>
</table>
| 18:00    |     | **Keynote II: Intelligent Decision Computing Paradigms in Sustainable Computing**  
Arun Kumar Sangaiah, Ph.D.  
VIT University, Vellore, India  
Chair: Kyung-Soo Lim  

Banquet (HALL B) |

**Day 3, Feb. 22, 2018**

<table>
<thead>
<tr>
<th>Time</th>
<th>Min</th>
<th>HALL -A</th>
</tr>
</thead>
</table>
| 10:00-12:00 | 120 | Session A-5  
IWIoE 2018 (Closed Workshop) Chair: Daewon Lee |
| 13:00-15:00 | 120 | Executive Meeting - Organized by World IT 2017 (Only for Invited Members) |
| 16:00-17:30 | 90  | Organizing Committee Meeting II (Only for Invited Members) |

1. A paper presentation should be made by one of the authors of the paper for 20 minutes. (10 minutes for the presentation itself and 5 minutes for Q/A)
2. All speakers of each session should meet the session chair at their room 10 minutes before the session begins.
3. Windows 7 laptops running the Adobe Reader and Microsoft Office for paper presentations will be prepared. Please prepare for your presentation.
DETAILED SCHEDULE FOR
THE 2018 WORLD CONGRESS ON
INFORMATION TECHNOLOGY, APPLICATIONS
AND SERVICES

(WORLD IT CONGRESS 2018)

Day 1, Feb. 20, 2018 (Tuesday)

10:00-12:00 Session A-0 ANMT 2018 (Closed Workshop)
(HALL A)
(Chair: JoonMin Gil)

1. Application of Weighted Bayesian Algorithm in Spam Messages Detection
   Quanzhu Yao, Huimin Fan, Rong Fei, Zan Bai, Jin Wang, Yuhui Zheng

2. End to End Performance Maximization through Data Transfer Node in a High-speed Network
   Jongseon Park, Jinhyung Park, Seungheae Kim, Minki Noh

3. How to detect and respond to the malicious website modified by a drive-by download attack
   Seung-Yup Jun, Young-Ho Shin, Hyuk-ro Lee

4. IT Security compliance issues in public sector and response plans
   Gwang-il Ju, Jinhyung Park, Wanyoung Heo, Hark-Soo Park

5. An Intelligent Residual Resource Monitoring Scheme in Cloud Computing Environments
   JongBeom Lim, HeonChang Yu, Joon-Min Gil

6. Accelerated Bulk Memory Operations on Heterogeneous Multi-Core Systems
   JongHyuk Lee, Weidong Shi, JoonMin Gil

7. Automatic Enhancement of Spatial Resolution to Local Area for Satellite Imagery Using Projection Transform
   Jea hee kim, Wanyoung Heo, Jinhyung Park

13:00-15:00 Organizing Committee Meeting I

16:00-17:30 Local Arrangement Committee Meeting
Day 2, Feb. 21, 2018 (Wednesday)

08:40-09:00 Registration

09:00-10:30 Session A-1 World-IT 2018
(HALL A)
(Chair: R. Young Chul Kim)

1. Recovery Techniques for Bigdata in Distributed File Systems
   Dong-Jin Shin, Ho-geun Lee, Jong-min Eun Sung-Hoon Cho, Jeong-Joon Kim
2. Visualizing Reusable Code patterns based on Object-Oriented Reusability Metrics
   Eun Young Byun, R. Young Chul Kim
3. An Estrus Detection Method based on Impulse and Fingerprint Indoor Location Information
   Jemin Song, Bong-Ki Son, Keun Ho Ryu
4. A novel Digital Auscultation Method using a Skin Image
   Sang-II Jo, Kwang-Seok Hong
5. Timeliness Guarantee Method of Electronic Record Based on Digital Continuity
   Yongjun Ren, Yuyi Huo, Xiaohua Wang, Jin Wang
6. Design of Blockchain-Based Decentralized Integrity Preservation In Digital Investigation
   Jung Hyun Ryu, Jong Hyuk Park
7. An Application Case of Process Asset Library (PAL) for Small & Medium Sized Software Companies
   So Young Moon, Bo Kyung Park, Woo Sung Jang, R. Young Chul Kim

09:00-10:30 Session B-1 World-IT 2018
(HALL B)
(Chair: Jin Wang)

1. A Performance Model for CAN over Noisy Channels
   Jin Yeong Um, Jongsuk Ahn
2. Design of mutual authentication protocol among NFC devices using NDEF digital signature
   Seung-Su Yang, Seung-Ho Han, Hyung-Joon Kim, Seok-Cheon Park
3. A Relay-Selection Technique Based on Near Future Location to Solve Broadcast Storm Problem in Vehicle Ad-hoc Networks
   Tae-Hwan Choi, Jong-Suk Ahn, Jin-Yeong Um
4. One Lightweight Security Authentication Protocol Based on Static ID Mechanism
   Ying Zheng, Longhai Jin, Yu Jiang, Hongtao Bai, Lili He
5. A Link Prediction Algorithm Based on Information Propagation in Uncertain Protein-protein Interaction Network
   Wei Liu, Liangyu Ma, Ling Chen, Jin Wang, Yili Wang
   Aaron Nichie, Sukyung Kang, Younghyun Kim, Myung-hye Park, Honggeun Kim
7. Eye-tracking and SNS Analysis-based User Modeling for Recommendation Reflecting Personal Preference
   Hyejin Song, Nammee Moon
09:00-10:30 Session C-1 World-IT 2018
(HALL C)
(Chair: Jun-Ho Huh)

1. Differential Privacy Protection Based on Sensitivity Control
   Chunyong Yin, Yuhang Zhu, Jin Wang, Suk-min Kang, Jeong-Uk Kim
2. SMS-based Database Security System for smart hospital
   Byung Wook Kwon, Jong Hyuk Park
3. A Cost optimization scheme using advanced attack graph for efficient security risk mitigation
   Jun Young Park, Eui-Nam Huh
4. A Study on Malicious Code Similarity Analysis Using API Call Sequence
   Kangsik Shin, Yoojae Won
5. Personalized (α, l)-Anonymity Method Based on Granularity Division
   Chunyong Yin, Shilei Ding, Jin Wang
6. Improved Deep Packet Inspection Technology in Data Stream Detection
   Chunyong Yin, Hongyi Wang, Jin Wang, Suk-min Kang, Jeong-Uk Kim
7. Code-based Preservation Mechanism of Electronic Record in Electronic Record Center of Cloud Storage
   Yongjun Ren, Zixuan Shen, Yaping Cheng, Jin Wang

10:30-10:40 Coffee break

10:40-12:00 Session A-2 World-IT 2018
(HALL A)
(Chair: Soohyun Cho)

1. Based on priority data with Adaptive IFS Channel Hopping in IoT Environment
   Gayoung Kim, Min-Su Seok, Jin-Yeong Um
2. Design of Improved Data Quality Management System for Providing Reliable Data
   Min-Hyung Park, Hyung-Joon Kim, Seung-Ho Han, Seok-Cheon Park
3. Incentive Mechanism of Data Storage for Wireless Sensor Network
   Yongjun Ren, Sai Ji, Jin Wang, Suk-min Kang, Jeong-Uk Kim
4. Design of Movie Information Service System Based on Augmented Reality
   Seung-Ho Han, Seung-su Yang, Hyung-Joon Kim, Seok-Cheon Park
5. A Method to Identify the High Significance Input Factors in Strawberry Growth and Production
   Vasanth Ragu, Myeongbae Lee, Salman Rahman, Jangwoo Park, Yongyun Cho, Changsun Shin
6. An Application of linear regression and Correlation for the prediction of Strawberry Growth
   Venkatesan Saravana Kumar, Saraswathi Sivamani, Myeongbae Lee, JangWoo Park, Changsun Shin, Yongyun Cho
7. Multithreaded Execution Method on Non-Volatile Memory File System for Object Storage and Cloud/Data-center Storages
   Jung-Geun Kim, Sang-Jae Nam, Su-Kyung Yoon, Shin-Dug Kim
10:40-12:00  Session B-2 World-IT 2018
(HALL B)
(Chair: Kyung-Soo Lim)

1. 2-Hop Label Size Reduction for Directed Acyclic Graph
   Jinhyun Ahn, Dong-Hyuk Im
   Ji Yeon Cho, Hye Sun Lee, Bong Gyou Lee
3. A Signal CFAR Detection Algorithm Based on Generalized S Transform
   Wang Jie, Lin Yun, Yu Xiaowan
4. Fuzzy Rule Mining by Clustering Approach to Estimate the Difficulty of Programming Problems
   Chowdhury Md Intisar, Yutaka Watanobe
5. Motion Adaptive Recursive Denoising Filter for Low-dose X-ray Fluoroscopy
   Sang Wook Park, Hui Jin Joo, Sung Suk Oh, Jeongwoo Sohn, Soowon Seo
6. Textile Fabric Defect Detection Via Sparse Subspace Clustering
   Peng Li, Junli Liang, Minghua Zhao, Xubang Shen, Jin Wang
7. Personalized Diet Recommendation Algorithm Based on Probabilistic Matrix Factorization with Adaboost for Diabetes
   Hongtao Bai, Xuan Li, Jin Wang, Ming-hao Zhao, Lili He, Yu Jiang
8. A Novel Feature Clustering and Weighting for Sentiment Estimation
   Yili Wang, Jin Wang, Hee Yong Youn

10:40-12:00  Session C-2 World-IT 2018
(HALL C)
(Chair: Jin Wang)

1. A workqueue based interrupt handling mechanism for improving delay time of a real-time operating system
   Tae-eun Yoon, Jeaho Hwang
2. Design and Implementation of Smart-Mirror supporting Apparel Image Collection Function and Costume Matching Recommendation Service
   Hyeon-woo An, Jae-hyun Cho, Ki-hoon Lee, Namhee Moon
3. Design and Implementation of Board Management Controller for High Performance Computing
   Cheol Shim, Min Choi
4. Cognitive Model for Sentimental Service Based on Multi-Modal Sensing
   Svetlana Kim, YongIk Yoon
5. A Secure and Efficient KSI System based on Threshold-Signature for Electronic Document Protection
   Gyeong-Jun Ra, Im-Yeong Lee
6. Parallel Hybrid Algorithms for Tridiagonal Equations on a GPU
   Xuan Li, Longhai Jin, Ximing Li, Yu Jiang, Hongtao Bai
7. Improved Superpixel based Graph Kernel Method for Hyperspectral Classification
   Chenyang Ma, Yunjie Chen, Yili Wang, Le Sun
Xiaofan Wang, Lei Wang, Yuhui Zheng, Jin Wang

12:00-13:10 Lunch break

13:10-14:00 Keynote Speech I
(HALL A)
(Chair: Kyung-Soo Lim)

“Internet of Battlefield Things: Challenges and Research Opportunities”
Kim-Kwang Raymond Choo, Ph.D.
The University of Texas at San Antonio, USA

14:00-14:10 Coffee break

14:10-15:30 Session A-3 World-IT 2018
(HALL A)
(Chair: Ganjar Alfian)

1. Balancing Between Replication and Deduplication for Flash Storage Systems
   Seung-Ho Lim
   Kyong-Hee Lee, Hui Kim, Do-Hyun Kim
3. A Low Cost IoT-based Traceability System for Perishable Food Supply Chain
   Ganjar Alfian, Muhammad Fazal Ijaz, Muhammad Syafrudin, Jaeho Lee, Jongtae Rhee
4. An Internet of Things System Architecture for Aiding Firefighters in the Scene of Disaster
   Hyesun Lee, Sang Gi Hong, Myungnam Bae, Kyo-Hoon Son, Mingi Jeong, Kang Bok Lee
5. A New Anomaly Detection Method of Spectrum Based on Deep Neural Networks
   Q. S. Feng, Y. B. Zhang, Z. Dou, Y. Lin, J. Wang
6. Personalized Journalism Platform Model based on Distributed System
   ByeoWool Kim and YongIk Yoon

14:10-15:30 Session B-3 World-IT 2018
(HALL B)
(Chair: Kyung-Soo Lim)

1. A Study of Nuclear cyber security regulation guideline inspection automation and information
   providing list derivation using ICT vulnerability check tool
   Jae-hong Kim, Yang-seo Choi, Jung-chan Na
2. Consensus Building Algorithm with BFT for Permissioned Blockchain
   Takumi Yamashita, Yutaka Watanobe
3. Blockchain-based Multiple AAA System in Edge Computing for IoT Networks
   N. Y. Kim, S.K. Suk, J. H. Park
4. Detection scheme of man-in-the-middle attack on smart devices
   Seung-Hak Kim, Sang-Jun Yoon, Bo-Geun Jang, Ki-Hyun Jung
5. Design of a De-identification Framework for Utilizing Various Clinical Research Data in a General Hospital  
   Jae Dong Lee, Jipmin Jung, Phillip Park, Ki Chung Ryu, Seunghyun Chung, Hyosoung Cha

6. Undetectable malicious attack using scheduler freezing in operating system  
   Soung-Ho Choi, Kyeong-Joo Jung, Ki-Hyun Jung

14:10-15:30 Session C-3 HRH 2018 (Closed Workshop)  
(HALL C)  
(Chair: Jun-Ho Huh)

1. Case Studies on the Measures on Efficient Processes in Overseas Procurement of Military Supplies  
   YK Jung, Jun-Ho Huh

2. Study on Policing for Open Innovation in Defense Science and Technology: Focused on the government-funded research institutions  
   YK Jung, Jun-Ho Huh

   Wonseop Lee, Jun-Ho Huh

4. Efficient LMS System Development and Its Test Bed for e-Learning and Mobile Based Learning  
   Sooyoung Jung, Jun-Ho Huh, Seung-il Moon

5. Design System and Method of Server Based Firefighting Sprinkler Equipment  
   Sooyoung Jung, Jun-Ho Huh, Seung-il Moon

6. A Study on the Device that Controls Power Dispersion of Distribution Line and Its Method  
   Sooyoung Jung, Jun-Ho Huh, Seung-il Moon

   Sooyoung Jung, Jun-Ho Huh, Seung-il Moon

8. The Social Coding of Software Development: Focused on the Case Examples of Git-Hub and Stackoverflow  
   Wonseop Lee, Jun-Ho Huh

9. Journalism Based Summary Algorithm in Python  
   Wonseop Lee, Jun-Ho Huh

15:30-15:40 Coffee break

15:40-17:00 Session A-4 World-IT 2018  
(HALL A)  
(Chair: Sangkee Suk)

1. Experimental Study on the Impact of Electrical shock in Vehicle Wireless Charging Environments  
   Taejun Park, Kwang-il Hwang

2. A Systematic Method to Design Automation for Enterprise System based on .NET with MDA  
   Deuk Kyu Kum
3. Signal Outages of CSMA/CA based Wireless Networks with Different AP Densities
   Soohyun Cho

4. An approach to enhance data transfer performance utilizing a DTN in cloud environment
   Wontaek Hong, Jeonghoon Moon, Woojin Seok, Jinwook Chung

5. Time Synchronization Method for LPWA Using Simple Sync Procedure in IoT Wireless Network
   Sungwhan Kang, Minseok Seo, Joonyoung Eom, Bong-Hwan Lee

15:40-17:00  Session B-4 VASSI 2018 (Closed Workshop)
   (HALL B)
   (Chair: Hwankuk Kim)

1. Study on Binary Auto-Analysis Tools for Detecting Vulnerability
   Soojin Yoon, Geonbae Na, Taeeun Kim, Hwankuk Kim

2. A Study on Automatic Patch Model to Respond to Memory Corruption Vulnerabilities
   Geonbae Na, Sungwhan Oh, Taeeun Kim, Jungho Kang, Hwankuk Kim

3. Design of Hybrid Fuzzing System Based on Software Complexity Metrics
   JeeSoo Jurn, TaeEun Kim, HwanKuk Kim

4. A study on improvement of the existing vulnerability assessment system for the IoT environment
   Daeil Jang, Eunhye Ko, HwanKuk Kim

5. Keyword Generation for Vulnerability Information Using Multiple Topic Models
   Sarang Na, Taeeun Kim, Hwankuk Kim

6. A study on a scanning engine for discovering vulnerable Internet-connected devices
   Hwankuk Kim, TaeEun Kim, Daeil Jang

15:40-17:00  Session C-4 ISWP 2018 (Closed Workshop)
   (HALL C)
   (Chair: Yunsick Sung)

1. Cognitive Decision Engine Based on Binary Particles Swarm Optimization with Non-linear Decreasing Inertia Weight
   Chengzhuo Shi, Zheng Dou, Yun Lin

2. Real-time 3D Reconstruction for Objects using Sparse Point Clouds
   Seoungjae Cho, Kyungeun Cho

3. Collected Data Analysis-based RSSI Revision Method for UAVs
   Yunsick Sung

4. A Ground Smoothing Method based on Median Filter in 3D Environment Reconstruction System
   Mingyun Wen, Seoungjae Cho, Kyungeun Cho

5. Efficient Hierarchical Scheme for Sensor Data Management on Internet of Things with Cloud Computing
   Seungchul Kim, Hyun-Woo Kim, Gangman Yi, Doo-Soon Park, Young-Sik Jeong

6. Method for Object Removal from Ground Mesh and Billboard for Multi-sensor Fusion System
   Mingyun Wen, Seoungjae Cho, Kyungeun Cho
Keynote Speech II & Banquet
(HALL B)
(Chair: Kyung-Soo Lim)

“Intelligent Decision Computing Paradigms in Sustainable Computing”
Arun Kumar Sangaiah, Ph.D.
VIT University, Vellore, India

Day 3, Feb. 22, 2018 (Thursday)

Session A-5 IWIoE 2018 (Closed Workshop)
(HALL A)
(Chair: Daewon Lee)

1. Cooperative Situation Awareness for User Authentication Using Smart Wearable
   Seung-Hyun Kim, Soo-Hyung Kim, Kyung-Soo Lim
2. Parallel Hough Transform Method Based on GPU
   Qianlong Yang, Lili He, Longhai Jin, Ting Li, Hongtao Bai
3. Job Submission Manager for Modeling and Simulation in Integrated Computing Environment
   Daeyong Jung, Myungil Kim, Jungha Lee, Han-Yee Kim, Daewon Lee
4. Context-Aware Multimodal Authentication for FIDO Authenticator
   Seung-Hyun Kim, Jong-Hyuk Roh, Seok-Hyun Kim, Soo-Hyung Kim, Kyung-Soo Lim
5. A Survey on Mobile Edge Cloud Computing
   Thanongsak Xayasouk, DaeWon Lee, HwaMin Lee
6. An Implicit Privacy Risk Assessment Based on Accumulated Exposure of Private Information for Unmodified Android
   Seung-Hyun Kim, Soo-Hyung Kim, Kyung-Soo Lim
7. Data deduplication system in cloud storage environment
   Won-Bin Kim, Im-Yeong Lee
8. A Functional Consideration for Intelligent Video Surveillance using Cloud Computing
   Kyung-Soo Lim, Jong Wook Han, Geon-Woo Kim

Executive Meeting - Organized by World IT 2018

Organizing Committee Meeting II
Conference Venue

Booyoung Jeju Hotel
Booyoung Hotel & Resort Jeju
222, Jungmungwangwang-ro, Seogwipo-si,
Jeju Special Self-Governing Province, South Korea

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