The FGCS 2024 Spring
International Workshop on
Future Generation Computer Services

"Future Generation Computer Services,
AI, Security, Quantum, Cloud, IoT, and Computing"

April 27-28, 2024
Macau, China

Organized by

KCIA & QISA & GQAS

KCIA Korea Computer Industry Association   QISA Quantum Industrial Services and Application Society   GQAS 글로벌양자AI보안연구소 Global Quantum AI Security Center

Message from the FGCS 2024 Spring Honorary Chairs

The FGCS 2024 Spring "Future Generation Computer Services, AI, Security, Quantum, Cloud, IoT, and Computing" will be held in Macau, China on April 27-28, 2024. The FGCS 2024 Spring is aimed at address key themes on " Future Generation Computer Services, AI, Security, Quantum, Cloud, IoT, and Computing ". The FGCS 2024 Spring will be the most comprehensive conference focused on Information Technology, computing, and applications, and will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of future in IT, Applications, and Services (AITA). In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in future IT. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject.

Accepted and presented papers highlight new trends and challenges of Future Generation Computer Services. The presenters showed how new research could lead to novel and innovative applications. We hope you will find these results useful and inspiring for your future research.

We cordially thank all the authors for their valuable contributions and the other participants of this workshop. The workshop would not have been possible without their support. Thanks are also due to the many experts who contributed to making the event a success.

FGCS 2024 Spring
Honorary Chairs
Doo-soon Park, SoonChunHyang University, Korea

Organization

Honorary Chair

Doo-Soon Park, Soonchunhyang University, Korea

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James J.(Jong Hyuk) Park, SeoulTech, Korea
Han-Chieh Chao, National llan University, Taiwan
Yi Pan, Georgia State University, USA
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Program Chair

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David Camacho, Universidad Politécnica de Madrid, Madrid, Spain
Hwa-Young Jeong, Kyung Hee University, Korea
Deok-Gyu Lee, Seowon University, Korea
Min Choi, Chungbuk National University, Korea
Kwang-il Hwang, Incheon National University, Korea
Jin Wang, Changsha University of Science and Technology, China

PROGRAM SCHEDULE FOR
FGCS 2024 SPRING

Day 1, April 27, 2024		
Time	**Min**	**HALL A**
14:00-14:20	20	**Registration**
14:20-16:00	80	**Academic Presentation**
16:00-16:20	20	**Coffee Break**
16:20-17:40	80	**ICT Trend Presentation**
17:40-18:00	20	**Break**
18:00-19:30	90	**Banquet** **(Only for Invited Members)**

Day 2, F April 28, 2024		
Time	**Min**	**HALL A**
09:00-10:20	80	**Industry Presentation (with Online)**
10:20-10:40	20	**Coffee Break**
10:40-12:00	80	**Organizing Committee Meeting**

1. A paper presentation should be made by one of authors of the paper for 3~40 minutes.
   (2~30 minutes for the presentation itself and 10 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 10 laptops running the Adobe Reader and Microsoft Office for paper presentations will be prepared. Please prepare for your presentation.

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DETAILED SCHEDULE FOR
THE FGCS 2024 SPRING

Day 1, April 27, 2024 (Saturday)

14:00-14:20　　　**Registration**

14:20-16:00　　　**Academic Presentation**
(HALL A)
(Chair: Ji Su Park)

1. **A Survey on AI-based Cyber-Threat Detection and Prevention for Secure Network Environment**
   Joonsoo Shim, Jong Hyuk Park
2. **Quantum Machine Learning based Anomaly Detection for CCTV Environment**
   Jimin Ha, Jong Hyuk Park
3. **Efficient Analysis and Detection of Intelligent Security Threats in Cloud Environment**
   Ji Su Park
4. **Blockchain-based Secure Voting Mechanism Underlying 5G Network: A Smart Contract Approach**
   Sushil Kumar Singh, Deepak Kumar Verma

16:00-16:20　　　**Coffee Break**

16:20-17:40　　　**ICT Trend Presentation**
(HALL A)
(Chair: Jungho Kang)

1. **Lightweight Security using AI Technology**
   Young-Sik Jung
2. **New Challenges in the Digital Age**
   Jungho Kang
3. **Innovative Applications of Big Data and Cloud Computing**
   Neil Yen
4. **Sustainable IT Technology Trends**
   Jehn-Ruey Jiang

17:40-18:00　　　**Break**

18:00-20:00　　　**Banquet**
　　　　　　　　　　(Only for Invited Members)

Day 2, April 28, 2024 (Sunday)

09:00-10:20   **Industry Presentation - with Online**
(HALL A)
(Chair: Sung Chul Yu)

1. **Redefinition of SW According to Digital Changes**
   Sung Chul Yu (Ssangyong Information & Communications Corp)
2. **Trend Analysis of Spatial Data**
   Bong Sang Seo (ALL4LAND co.,LTD)
3. **Cybersecurity Threats and Technology Forecast to 2024**
   Hai Jin (Xsoft)
4. **About AI TRiSM**
   Yongsheng Wang (Wistron ITS)

10:20-10:40   **Coffee Break**

10:40-12:00   **Organizing Committee Meeting**

Conference Venue

Grand Dragon Hotel

Rua de Chaves, Thipa, Maco, China