The FGCS 2024 Winter International Workshop on Future Generation Computer Services

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

February 22-24, 2024
Pattaya, Thailand

Organized by

KCIA & CSWRG & QISA & GQAS

Message from the FGCS 2024 Winter Honorary Chairs

The FGCS 2024 Winter "Future Generation Computer Services, AI, Security, Quantum, Cloud, IoT, and Computing" will be held in Pattaya, Thailand on February 22-24, 2024. The FGCS 2024 Winter is aimed at address key themes on " Future Generation Computer Services, AI, Security, Quantum, Cloud, IoT, and Computing ". The FGCS 2024 Winter 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 Winter
Honorary Chairs
Doo-soon Park, SoonChunHyang University, Korea

Organization

Honorary Chair
Doo-Soon Park, Soonchunhyang University, Korea

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

Program Chair
Ji Su Park, Jeonju University, Korea
Jin Wang, Changsha University of Science and Technology, China
Neil Y. Yen, The University of Aizu, Japan

Program Committee
Jungho Kang, Baewha Women's University, Korea
Hamid Arabnia, University of Georgia, USA
Victor Leung, University of British Columbia, Canada
Mohammad Obaidat, Monmouth University, USA
Ka Man, Xi'an Jiaotong-Liverpool University, China
Sherali Zeadally, University of Kentucky, USA
Arun Kumar Sangaiah, VIT University, India
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

PROGRAM SCHEDULE FOR
FGCS 2024 WINTER

Day 1, February 22, 2024		
Time	**Min**	**HALL A**
13:00-13:30	30	**Registration**
13:30-15:30	120	**Session A-1**
15:30-15:50	20	**Coffee Break**
15:50-16:50	60	**Special Presentation**
16:50-17:30	40	**Break**
17:30-19:30	120	**Banquet** **(Only for Invited Members)**

Day 2, February 23, 2024		
Time	**Min**	**HALL A**
10:00-12:00	120	**Session A-2**
12:00-13:30	90	**Lunch**
13:30-15:30	120	**Industry Session A-3**
15:30~15:50	20	**Coffee Break**
15:50-17:30	100	**Local Arrangement Committee Meeting** **(Only for Invited Members)**

Day 3, February 24, 2024		
Time	**Min**	**HALL A**
10:00-12:00	120	**Organizing Committee Meeting I**
12:00-13:30	90	**Lunch**
13:30-15:30	120	**Organizing Committee Meeting II**

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.**

DETAILED SCHEDULE FOR
THE FGCS 2024 WINTER

Day 1, February 22, 2024 (Thursday)

13:00-13:30   Registration

13:30-15:30   Session A-1
(HALL A)
(Chair: Ji Su Park)

1. **Enhancing Smart City Security with Quantum Cryptography: Implementing the BB84 Protocol in Digital Twin Environments**
   Abir El Azzaoui, Jong Hyuk Park
2. **Designing a Blockchain-Enabled Fog Computing Architecture for IoT via Software Definition**
   Jungho Kang
3. **Exploring Security Challenges in Cloud Computing: Threat Landscape and Mitigation Strategies**
   Ji Su Park
4. **Securing Home Networks with a Smart Card-Based Robust OTP Authentication**
   Byung Hyun Jo, Jong Hyuk Park

15:30-15:50   Coffee Break

15:50-16:50   Special Presentation
(HALL A)
(Chair: Kwang-il Hwang)

"Deep Learning for Big Data Applications - Challenges and Future Directions"
Yi Pan
(Georgia State University)

16:50-17:30   Break

17:30-19:30   Banquet
(Only for Invited Members)

Day 2, February 23, 2024 (Friday)

10:00-12:00   <u>**Session A-2**</u>
(HALL A)
(Chair: Deok Gyu Lee)

1. **Advancing Smart Home Security: A Comprehensive Framework for Protecting Home Appliances**
   Deok Gyu Lee
2. **Leveraging Convolutional Neural Networks for Real-Time IoT Malware Detection: A Dynamic Approach**
   Hayat Shahzeb, Hyoungsuk Yoo
3. **A Survey of Parameterized Algorithms for Tackling NP-Hard Problems: Methodologies and Insights**
   Heeji Park, Jong Hyuk Park
4. **Navigating the Threats of Advanced Persistent Threats (APTs): A Deep Dive into Strategies for Future Network Security**
   Jimin Ha, Jong Hyuk Park

12:00-13:30   **Lunch**

13:30-15:30   **Industry Session A-3**
(HALL A)
(Chair : Jungho Kang)

1. **Industry Trends in Multi/Hybrid Cloud**
   Sung Chul Yu (Ssangyong Information & Communications Corp)
2. **Methods for Collecting and Analyzing Spatial Data**
   Bong Sang Seo (ALL4LAND co.,LTD)
3. **Emerging Trends in Ambient Intelligence: Integrating IoT and Smart City Solutions**
   Tae Yoon Kwon (Neighbor system co.,Ltd)

15:30-15:50   **Coffee Break**

15:50-17:30   **Local Arrangement Committee Meeting**
                   (Only for Invited Members)

Day 3, February 24, 2024 (Friday)

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

12:00-13:30   **Lunch**

13:30-15:30   **Organizing Committee Meeting II**

Conference Venue

Hilton Pattaya

333/101 Moo 9, Nong Prue, Banglamung, Pattaya Chonburi, 20260, Thailand
https://www.hilton.com/en/hotels/bkkhphi-hilton-pattaya/