

# **The FGCS 2025 Winter International Workshop on Future Generation Computer Services**

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

Feb. 26 - 28, 2025  
Bern, Swiss

**Organized by**  
**KCIA & AI+DA & SSL & GQAS**

## Message from the FGCS 2025 Winter Honorary Chairs

The FGCS 2025 Winter "Future Generation Computer Services, AI, Security, Quantum, Cloud, IoT, and Computing" will be held in Bern, Swiss on Feb. 26 - 28, 2025. The FGCS 2025 Winter is aimed at address key themes on " Future Generation Computer Services, AI, Security, Quantum, Cloud, IoT, and Computing ". The FGCS 2025 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 2025 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

Young-Sik Jeng, Dongguk University, Korea

Hans Dermot Doran, ZHAW, Swiss

Han-Chieh Chao, National Ilan University, Taiwan

David Camacho, Universidad Politécnica de Madrid, Madrid, Spain

### Program Chair

Ji Su Park, Jeonju University, Korea

Klaus Buchheim, Klepsydra, Swiss

Stefanos Gritzalis, University of Piraeus, Greece

Jin Wang, Changsha University of Science and Technology, China

Neil Y. Yen, The University of Aizu, Japan

Sushil Kumar Singh, Marwadi University, India

### 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

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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 2025 WINTER

Day 1, Feb. 26, 2025		
Time	Min	HALL A
13:40-14:00	30	Registration
14:00-15:40	100	Session A-1
15:40-16:00	20	Coffee Break
16:00-17:40	100	Special Speaker
17:40-18:00	20	Break
18:00-20:00	120	Banquet (Only for Invited Members)

Day 2, Feb. 27, 2025		
Time	Min	HALL A
10:00-11:40	100	Session A-2
11:40-13:00	80	Lunch
13:00-14:40	100	Session A-3
14:40~15:00	20	Coffee Break
15:00~16:40	100	Special Speaker
16:40~17:30	50	Break

Day 3, Feb. 28, 2025		
Time	Min	HALL A
10:00-12:00	120	Program Committee Meeting
12:00-13:30	90	Lunch
13:30-15:30	120	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.

## DETAILED SCHEDULE FOR THE FGCS 2025 WINTER

**Day 1, Feb. 26, 2025 (Wednesday)**

**13:30-14:00      Registration**

**14:00-15:40      Session A-1  
(HALL A)**

- 1. A Survey on Advanced Cyber Attacks on OT System in Smart Factory Environment**  
*Byunghyun Jo, Jong Hyuk Park*
- 2. Deep Ensemble-Based Framework for Adversarial Malware Detection**  
*Byeonghui Jeong, Young-Sik Jeong*
- 3. A Novel Zero-Shot learning Method for Detecting New Cyber Threats in Smart Factory Environment**  
*Abir EL Azzaoui*

**15:40-16:00      Coffee Break**

**16:00-17:40      Special Speaker 1**

**“A design of AI-driven Hybrid Network Architecture  
for Sustainable Smart City”**

**Pradip Kumar Sharma**  
Assistant Professor of Cybersecurity,  
Department of Computing Science, University of Aberdeen, Aberdeen, UK

**17:40-18:00      Break**

**18:00-20:00      Banquet**

## Day 2, Feb. 27, 2025 (Thursday)

**10:00-11:40**      **Session A-2**  
**(HALL A)**

- 1. Quantum Machine Learning based Cyber Threats Detection Labeling to Create Synthetic Training Data Set**  
*Byunghyun Jo, Ji Su Park, Jong Hyuk Park*
- 2. Application Permissions for Android Ransomware Detection**  
*Bille Remy, Stefanos Geroulanos*
- 3. Deep Neural Network-Based Adversarial Anomaly Detection Scheme for Secure Cloud-native Environment**  
*Byeonghui Jeong, Jungho Kang, Young-Sik Jeong*

**11:40-13:00**      **Lunch**

**13:00-14:40**      **Session A-3**  
**(HALL A)**

- 1. Quantum Clustering Algorithms for Security in Smart City**  
*Rajiv Kumar Gurjwa, Laila Fatah, AK Sangaiah*
- 2. An AI-based Authentication Protocol for Sensor Networks**  
*Wei-jing Guan, Yan Li, Jin Wang*
- 3. Adversarial Malware Generation Scheme for Black Box Attack**  
*Klaus Buchheim, Sascha Möhrle*

**14:40-15:00**      **Coffee Break**

**15:00-16:40**      **Special Speaker 2**

**“Application of Artificial Intelligence-based Security Technology”**

**Sushil Kumar Singh**  
**Associate Professor,**  
**Department of Computer Engineering,**  
**Marwadi University, Rajkot, Gujarat, India**

**16:40-17:50**      **Break**

**Day 3, Feb. 28, 2025 (Friday)**

**10:00-12:00      Program Committee Meeting**

**12:00-13:30      Lunch**

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



## Conference Venue



### Impact Hub Bern, Bern, Swiss

Address: Spitalgasse 28, 3011 Bern, Swiss

<https://bern.impacthub.net/>

