The FGCS 2026 Winter International Workshop on Future Generation Computer Services

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

Jan. 20 - 23, 2026
Budapest, Hungary

Organized by

KCIA & AI+DA & SSL & GQAS

Message from the FGCS 2026 Winter Honorary Chairs

The FGCS 2026 Winter "Future Generation Computer Services, AI, Security, Quantum, Cloud, IoT, and Computing" will be held in Budapest, Hungary on Jan. 20 - 23, 2026. The FGCS 2026 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 2026 Winter
General Chairs
James J.(Jong Hyuk) Park, SeoulTech, Korea
David Camacho, Universidad Politécnica de Madrid, Madrid, Spain

Organization

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James J.(Jong Hyuk) Park, SeoulTech, Korea
David Camacho, Universidad Politécnica de Madrid, Madrid, Spain

Program Chair
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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
Jin Wang, Changsha University of Science and Technology, China

PROGRAM SCHEDULE FOR FGCS 2026 WINTER

Day 1, Jan. 20, 2026		
Time	**Min**	**HALL A**
17:00-20:00	180	**Welcome Reception (Only for Invited Members)**

Day 2, Jan. 21, 2026		
Time	**Min**	**HALL A**
13:40-14:00	20	**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 3, Jan. 22, 2026		
Time	**Min**	**HALL A**
10:00-11:40	100	**Session A-2**
11:40-13:00	80	**Lunch**

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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 4, Jan. 23, 2026		
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 2026 WINTER

Day 1, Jan. 20, 2026 (Tuesday)

17:00-20:00 **Welcome Reception**
(Only for Invited Members)

Day 2, Jan. 21, 2026 (Wednesday)

13:30-14:00 **Registration**

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

1. **Anomaly-aware Autoscaling Scheme for Secure and Resource-Efficient Industrial Control Systems**
   Byeonghui Jeong and Young-Sik Jeong
2. **A Comprehensive Survey on Zero-Shot Learning for Advanced Cyber Threat Detection in Operational Technology Systems**
   Byunghyun Jo and Jong Hyuk Park
3. **Variational Autoencoder-based Traffic Purification against Adversarial Attacks**
   Jungho Kang, Seungyeon Baek, Byeonghui Jeong, and Young-Sik Jeong
4. **A Layered Threat-Mitigation Framework for Containerized Workloads in Zero-Trust Environments**
   Bence Kovács, Zoltán Nagy

15:40-16:00 **Coffee Break**

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

"A Privacy-Preserving Federated Learning Framework for Secure Data Sharing in Heterogeneous IoT Networks"

Prof. Jin Wang,
Hunan University of Science and Technology, China

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17:40-18:00 **Break**

18:00-20:00 **Banquet**

Day 3, Jan. 22, 2026 (Thursday)

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

1. **Uncertainty-Aware Graph Structure Learning for Adversarial Malware Detection in Industrial Control Systems**
   Seungyeon Baek and Young-Sik Jeong
2. **Secure Orchestration Techniques for Distributed Cloud-Native Systems**
   Réka Horváth, Lilla Szabados, Judit Balogh
3. **Behavior-Driven Intrusion Detection for Kubernetes-Oriented Deployment Pipelines**
   Madeline Brooks, Jordan Fletcher, Evan Carter
4. **Design and Evaluation of a Reliability-Centric Testbed for Heterogeneous Wired and Wireless Network Service**
   Ji Su Park

11:40-13:00 **Lunch**

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

1. **GenAI-Driven Cyber Threats in OT Environments: A Survey on AI-Based Detection Models and Autoencoder-Driven Anomaly Analysis**
   Abir EL Azzaoui, Ji Su Park and Jong Hyuk Park
2. **A Threat-Driven Risk Assessment Model for Heterogeneous Cyber-Physical IoT Environments**
   Zhang Min, Chen Hao
3. **A Context-Aware Anomaly Detection Framework for Resource-Constrained IoT Devices**
   Selin Kaya, Klaus Buch

14:40-15:00 **Coffee Break**

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

"An Intelligent Edge-Driven Security Model for Adaptive Threat Mitigation in Large-Scale IoT Environments"

Prof. S. Vimal
National Engineering College, India

16:40-17:50 **Break**

Day 4, Jan. 23, 2026 (Friday)

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

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

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

Conference Venue

Novotel Budapest Danube, Budapest, Hungary

1027 Budapest, Bem rakpart 33-34., Hungary
https://novoteldanube.hu-budapest.com/