The International Conference on Future Information Technology, applications and services (IFIT 2024)

October 31 ~ November 1, 2024
Seoul, Korea

Organized by

KCIA & KCIA & AI+DA & SSL & DSRC

2024-2025 International Conferences
(Sponsored / Technically Sponsored by KCIA)

The 16h International Conference on Computer Science and its Applications (CSA 2024)
 - Dec 18-20, 2024 (Pattaya, Thailand)
 - http://www.csa-conference.org/2024/

The 11th World Congress on Information Technology Applications and Services (World IT Congress 2025)
 - February 10-12, 2025 (Jeju, Korea)
 - http://www.worlditcongress.org/2025/ (Unopened)

The 19th International Conference on Multimedia and Ubiquitous Engineering (MUE 2025)
 - April 23-25 2024 (Hunan, China)
 - http://www.mue-conference.org/2025/ (Unopened)

The 20th International Conference on Future Information Technology (FutureTech 2025)
 - April 23-25 2024 (Hunan, China)
 - http://www.futuretech-conference.org/2025/ (Unopened)

The International Conference on Big data, IoT, and Cloud computing (BIC 2025)
 - August 13-15, 2025 (Phnom Penh, Cambodia)
 - http://www.bic-conference.org/2025/ (Unopened)

The 17h International Conference on Computer Science and its Applications (CSA 2025)
 - Dec 17-19, 2025 (Undecided)
 - http://www.csa-conference.org/2024/ (Unopened)

Message from the IFIT 2024 General Chairs

IFIT 2024 is the first event of the series of international scientific conference. This conference takes place on October 31 ~ November 1, 2024 in Seoul, Korea. The aim of the IFIT 2024 is to provide an international forum for scientific research in the technologies and application of information technology.

The conference papers included in the proceedings cover the following topics: Internet of Things and Sensors, Embedded system and Middle ware, Security and Trust Computing, Multimedia Computing, Networking and Communications, Bigdata and Data mining, Cloud Computing, Web and Internet Computing, Grid and Cloud computing, Green IT and Sustainable Computing, Copmutational Intelligent Computing, Human-centric Computing. Accepted and presented papers highlight new trends and challenges of future information technologies. We hope readers will find these results useful and inspiring for their future research.

We would like to express our sincere thanks to Program Chairs: Ji Su Park(Jeonju University, Korea), Jin Wang(Nanjing University of Information Science & Technology, China), Neil Yen(University of Aizu, Japan), all Program Committee members, and all reviewers for their valuable efforts in the review process that helped us to guarantee the highest quality of the selected papers for the conference.

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

IFIT 2024 General Chairs

Jungho Kang, Baewha Woman University, Korea

Message from the IFIT 2024 Program Chairs

Welcome to the 2024 International Conference on Future Information Technology, applications and services (IFIT 2024), which will be held in Seoul, Korea on October 31 ~ November 1, 2024. IFIT 2024 will the most comprehensive conference focused on the various aspects of information technologies. It will provide an opportunity for academic and industry professionals to discuss recent progress in the area of future information technologies. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in multimedia and ubiquitous engineering. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in these important subjects.

For IFIT 2024, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the IFIT 2024 proceedings, published by the Springer. All submitted papers have undergone blind reviews by at least two reviewers from the technical program committee, which consists of leading researchers around the globe. Without their hard work, achieving such a high-quality proceeding would not have been possible. We take this opportunity to thank them for their great support and cooperation. Finally, we would like to thank all of you for your participation in our conference, and also thank all the authors, reviewers, and organizing committee members. Thank you and enjoy the conference!

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IFIT 2024 Program Chairs

Ji Su Park, Jeonju University, Korea
Jin Wang, Hunan University of Science & Technology, China
Neil Yen, University of Aizu, Japan

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Organization

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PROGRAM SCHEDULE FOR IFIT 2024

Day 1, October 31, 2024		
Time	**Min**	**HALL A**
10:00-12:00	120	**Organizing Committee Meeting (Only for Invited Members)**
12:00-13:00	60	**Lunch**
13:00-13:30	30	**Registration**
13:30-15:30	120	**Session A-1 IFIT 2024 Chair: Joon-Min Gil**
15:30-16:00	30	**Coffee Break**
16:00-18:00	120	**Executive Meeting - Organized by IFIT 2024 (Only for Invited Members)**

Day 2, November 1, 2024			
Time	**Min**	**HALL A**	**HALL B**
09:00-09:30	**30**	**Registration**	**2024 년도 국방미래도전&양자컨퍼런스 (DFCC&Q 2024)**
09:30-11:00	**90**	**Session A-2 IFIT 2024 Chair: Jueun Jeon**	
11:00-11:10	**10**	**Coffee Break**	
11:10-12:40	**90**	**Session A-3 IFIT 2024 Chair: Jong Hyuk Park**	
12:40-14:00	**80**	**Lunch**	
14:00-14:20	**20**	**Registration for Workshop**	
14:20-16:20	**120**	**Session A-4 Korea - EU Cooperation Workshop**	
16:20-16:30	**10**	**Coffee Break**	

Time	Min	HALL A
16:30-18:00	90	**Session A-5 Korea-China Cooperation Workshop**
18:00-18:20	20	**Break**
18:20-20:00	100	**Banquet (Only for Invited Members)**

1. **A paper presentation should be made by one of authors of the paper for 10 - 15 minute (10-15 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 10 laptops running the Adobe Reader and Microsoft Office for paper presentations will be prepared. Please prepare for your presentation.**

DETAILED SCHEDULE FOR
THE INTERNATIONAL CONFERENCE ON FUTURE
INFORMATION TECHNOLOGY, APPLICATION AND
SERVICES (IFIT 2024)

Day 1, October 31, 2024 (Thursday)

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

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

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

13:30-15:30   <u>Session A-1</u> IFIT 2024
(HALL A)
(Chair: Joon-Min Gil)

1. **An Assessment of API Security Functions Identifying Vulnerabilities and Proposing Future Enhancements**
   Wook Jae Cha, Hyuk Jun Kwon
2. **Ensemble Malware Classifier with Feature Squeezing based on Arithmetic Coding**
   Seungyeon Baek, Byeonghui Jeong, Jueun Jeon, Young-Sik Jeong
3. **Lightweight Secure Aggregation with Multi-Client Encryption for Privacy-Preserving Healthcare Data Collaboration**
   Hyunwoo Park, Jaedong Lee
4. **Analysis of the Effectiveness of Applying Attention Mechanism for Object Pair Relationship Detection in Images**
   Min-Kyu Kim, Minsoo Jang, Hee-Gook Jun, Jinhyun Ahn, Dong-Hyuk Im

15:30-16:00   **Coffee Break**

16:00-18:00   **Executive Meeting**

Day 2, November 1, 2024 (Friday)

09:00-09:30   **Registration**

09:30-11:00   <u>**Session A-2**</u> **IFIT 2024**
(HALL A)
(Chair: Jueun Jeon)

1. **Deep Learning Framework for Automated Classification of Engineering Characteristics and KANO Based on Customer Reviews**
   Sumin Seo, Eun Sun Kim, Jeongeun Byun
2. **Proposal of a safe and robust random number generation method using interference and diffraction phenomena of light**
   Hyeok Kang, You-Boo Jeon, Chang-Sung Jeong
3. **Execution Order Management Techniques for GPU Tasks Based on GPU Usage Time in Container Environments with a Shared GPU**
   Hyunsu Jeong, Jihun Kang, Joon-Min Gil
4. **Few-Shot Learning for Real-Time Detection of Evolving Cyber Threats in IoT Systems**
   Mikail Mohammed Salim, Jong Hyuk Park
5. **VAE-based CNN + LSTM Anomaly Detection Model for Secure V2X Communication**
   Yonas Teweldemedhin Gebrezgiher, Jong Hyuk Park

11:00-11:10   **Coffee Break**

11:10-12:40   <u>**Session A-3**</u> **IFIT 2024**
(HALL A)
(Chair: Jong Hyuk Park)

1. **Generating Security Rating Questions based on Impact Factors Using LLM Alignment**
   Yuna Han, Simon Shim, Deva Kumar Gajulamandyam, Yeji Choi, Hyunwoo Lee, Hangbae Chang
2. **Dataset Curation and Benchmark for Prosthetic Leg Pose Estimation**
   Tae Beom Lee, Dong Yoon Seo, Sang Pil Kim
3. **Utilizing Federated Learning and Graph Convolutional Networks for Improved Collaborative Filtering in Recommendation Systems**
   Sony Peng, Sophort Siet, Sadriddinov Ilkhomjon, Dae-Young Kim, Kyuwon Park, Doo-Soon Park
4. **Optimized Maximal Balanced Biclique Enumeration in Bipartite Graphs**
   Ilkhomjon Sadriddinov, Sony Peng, Sophort Siet, Dae-Young Kim, Kyuwon Park, Doo-Soon Park, Gangman Yi
5. **Development and application of obstacle recognition for electronic wheelchair safety**
   Eru Choi, Min Choi

12:40-14:00   **Lunch**

14:00-14:20   **Registration for Workshop**

14:20-16:20   **<u>Session A-4</u> Korea - EU Cooperation Workshop**
(HALL A)

16:20-16:30   **Coffee Break**

16:30-18:00   **<u>Session A-5</u> Korea-China Cooperation Workshop**
(HALL A)

18:00-18:20   **Break**

18:20-20:00   **<u>Banquet</u> (Only for Invited Members)**

Workshop

국방미래도전&양자 컨퍼런스
DFCC & Q 2024

2024. 11. 1. FRI
동국대학교 서울캠퍼스 신공학관 4층

주최 : 한국지능정보사회진흥원, 한국정보보호학회, 국방과학연구소
주관 : 동국대학교 국방안전연구센터, 서울과학기술대학교 글로벌양자AI보안연구소,
국민대학교, 전주대학교, 배화여자대학교, 강원테크노파크, 한국컴퓨터산업협회

운영위원회

조 직 위 원 장	박진호 교수, 동국대학교
운 영 위 원 장	이옥연 교수, 국민대학교
프 로 그 램 위 원 장	강지원 교수, 세종대학교

프로그램 2024년 11월 1일(금) 09:00 ~ 13:30

08:30~08:50	등록
08:50~09:00	개회식
09:00~09:40	국가 공간정보 활용을 위한 양자보안기술 (동국대 국방안전연구센터장 박진호 교수)
09:40~10:20	양자정보통신 및 양자소프트웨어 (전주대 박지수 교수)
10:20~11:00	양자시티 구현를 위한 양자정보통신 구성 요소 및 분석 (강원TP 양자팀장 문서연 박사)
11:00~11:20	휴식
11:20~12:00	퀀텀 머신러닝 기반 데이터 분석 및 보안 (서울과기대 GQAS 연구소장 박종혁 교수)
12:00~12:40	무선양자통신 및 이동기지국 기술 (배화여대 강정호 교수)
12:40~13:30	종합토론

KCIA Korea Computer Industry Association

AI+DA

UNIVERSITY OF PIRAEUS
SYSTEMS SECURITY LABORATORY (SSL)

동국대학교 국방안전연구센터 Defense Safety Research Center

CONFERENCE VENUE

Dongguk University

Address

#4142, 10F, Engineering Building II(B/D No.32) – 신공학관

26, Pil-dong 3-ga jung-gu Seoul, Korea 100-715

URL   http://www.dongguk.edu/mbs/en/index.jsp

MAP

1	Noble Eightfold Path	11	Main Gate	22	Dongguk Millanium Monument	33	Namsan Residence Hall
2	Central Library	12	90thAnniversary Hall B	23	Manhae Hall	34	Wonheung Hall
3	Mt. Namsan Trail	13	90thAnniversary HallA	24	Law Building	35	Geumgang Dormitory
4	Lee Hae-Rang Theater	14	Building of Social Sciences and Business Administration	25	Sangiokwon (Cafeteria)	36	Gymnasium
5	Jeonggakwon	15	Swimming Pool	26	Sangiok Rest Area	37	Information Engineering Building
6	University Museum	16	Main Stadium	27	Science Building	38	Manhae Square
7	Manhae Monument	17	Outdoor Café	28	Myeongjin Hall	39	Student Union
8	Outdoor Café	18	Hyehwa Hall	29	Dahyang Hall	40	Gyesan Hall
9	Hanul Maru(Rooftop Garden)	19	Hyehwa Annex	30	Gaurun (Gift Shop)	41	Hakrim Hall
10	Dongguk Hall of Honor	20	Hyehwa Gate	31	Administration Building	42	Rear Gate
		21	College of Law Dormitory A	32	Engineering Building II	43	Chungmuro Digital Image & Contents Center

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