

**The International Conference on
Future Information Technology,
applications and services
(IFIT 2022 Seoul)**

October 28-29, 2022
Seoul, Korea

Organized by

KIPS CSWRG

2022 International Conferences
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Dec. 19 - 21, 2022, Vientiane, Laos

- The 16st KIPS International Conference on Ubiquitous Information Technologies and Applications (CUTE 2022)

Dec. 19 - 21, 2022, Vientiane, Laos

- The 14st The International Conference on Computer Science and its Applications (CSA 2022)

Message from the IFIT 2022 General Chairs

IFIT 2022 is the first event of the series of international scientific conference. This conference takes place on October 28-29, 2022 in Seoul, Korea. The aim of the IFIT 2022 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 2022 General Chairs

Jungho Kang, Baewha Woman University, Korea

Message from the IFIT 2022 Program Chairs

Welcome to the 2022 International Conference on Future Information Technology, applications and services (IFIT 2022), which will be held in Seoul, Korea on October 28–29, 2022. IFIT 2022 will be 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 2022, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the IFIT 2022 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!

IFIT 2022 Program Chairs

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

Organization

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Invited Speaker



Role of Privacy-aware AI in Smart Mobility

Pradip Kumar Sharma

Assistant Professor of Cybersecurity,

Department of Computing Science, University of Aberdeen, Aberdeen,
UK

Abstract

Today's smart mobility industry faces some challenges, such as how to trust the information received by each vehicle? How do achieve consistent and reliable communications among the vehicles, local base station, infrastructure, and network under arbitrary complex environmental conditions? Vehicle-to-Everything (V2X) communications will be a critical factor in the success of the mobility industry. Regulators have also stressed the need to protect messages from fraudulent or deceptive use. The user's privacy must be protected and preserved so that the driver's journey cannot be easily followed or reconstructed by listening to and compiling all the updates that a vehicle has sent and received within a certain period. With smart mobility comes the responsibility of managing the computing infrastructure, which processes huge amounts of data and protects privacy when collecting sensitive data at the edge. In this talk, we will discuss the role of privacy-aware AI in smart mobility.

Biography:

He is an Assistant Professor in Cybersecurity in the Department of Computing Science at the University of Aberdeen, UK. He received his Ph.D. in CSE from the Seoul National University of Science and Technology, South Korea. He was a Software Engineer at MAQ Software, India, and involved on variety of projects, proficient in building largescale complex data warehouses, OLAP models, and reporting solutions that meet business objectives and align IT with business.

He has published many technical research papers in leading journals from IEEE, Elsevier, Springer, MDPI, etc. Some of his research findings are published in the most cited journals. He has been an expert reviewer for IEEE Transactions, Elsevier, Springer, and MDPI journals and magazines. He received a top 1% reviewer in computer science by Publons Peer Review Awards 2018 and 2019, Clarivate Analytics. He has also been invited to serve as chair and program committee member in several reputed international conferences such as ACM ICDNC 20201, IEEE CCNC 2021, CSA 2020, HCIS 2020, IEEE ICC2019, IEEE MENACOMM'19, 3ICT 2019, etc.

PROGRAM SCHEDULE FOR IFIT 2022

Day 1, October 28, 2022			
Time	Min	HALL A	HALL B
08:40-09:00	20	Registration for IFIT 2022 & QARG 2022 Workshop	
09:00-11:00	120	Session A-1 IFIT 2022 Chair: Jungho Kang	Session B-1 IFIT 2022 & QARG 2022 Workshop Chair: Yunsick Sung
11:00-11:10	10	Break	
11:10-12:00	50	Keynote “Role of Privacy-aware AI in Smart Mobility” prof. Pradip Kumar Sharma Chair: Ji Su Park	
12:00-13:00	60	Lunch	
13:00-13:20	20	Registration for Cooperation Workshop	
13:20-13:30	10	2022 ‘Blockchain Opens Future Finance’ Workshop Opening Ceremony Chair: Hyuk-Jun Kwon	2022 ‘New Content Service Paradigm and Copyright Technology’ Workshop Opening Ceremony Chair: Byoungsoo Koh
13:30-17:30	240	Session A-2 Chair: Hyuk-Jun Kwon	Session B-2 Chair: Joon-Min Gil Jinho Pakr
17:30-18:00	30	Break	
18:00-20:00	120	Banquet (Only for Invited Members)	

Day 2, October 29, 2022		
Time	Min	HALL A
09:00-10:30	90	Organizing Committee Meeting (Only for Invited Members)
10:30-10:40	10	Coffee Break
10:40-12:10	90	Executive Meeting - Organized by IFIT 2022 (Only for Invited Members)

1. A paper presentation should be made by one of authors of the paper for 15 minute (10 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-22)

Day 1, October 28, 2022 (Friday)

08:40-09:00 Registration

**09:00-11:00 Session A-1 IFIT 2022
(HALL A)
(Chair: Jungho Kang)**

- 1. Human-centric Security Rating based on Keyword Classification of Technical Documents**
Yuna Han, Hangbae Chang
- 2. Energy-Aware Multi-UAV Aided mmWave Communication Network using DDPG**
Quang Tuan Do, Sungrae Cho
- 3. Lifetime Enhancement Protocol for Wireless Sensor Networks in Dramatic Change Environments**
Geeranuch Woraphonbenjakul, Sungrae Cho
- 4. CDC-FL: Clinical Data Curation-based Federated Learning for distributed multicenter studies**
Hyunwoo Park, Jaedong Lee
- 5. Ransomware Behavior Prediction with Deep Learning Model**
Seungyeon Baek, Jueun Jeon, Byeonghui Jeong, Young-Sik Jeong
- 6. Music Genre Classification using Deep Learning Model**
Kyuwon Park, Jueun Jeon, Sihyun Park, Young-Sik Jeong

**09:00-11:00 Session B-1 IFIT 2022 & QARG 2022 Workshop
(HALL B)
(Chair: Yunsick Sung)**

- 1. Traffic Accident Classification Method using Trajectory Tracking and Influence Maps**
Yihang Zhang, Gunwoo Kim, Yunsick Sung
- 2. Next Point-of-Interest Recommendation: Considering Attention of Spatial-Temporal with Deep learning (~~NPOIR-AST~~)**
Sony Peng, Doo-Soon Park, Daeyoung Kim, Yixuan Yang, Sophort Siet, Phonexay Vilakone
- 3. Detection of Influential Users in Social Networks**
Kyoungsoo Bok, Jaeyong Choi, Hwanyong Choi, Hyeonbyeong Lee, Dojin Choi, Jongtae Lim, Jaesoo Yoo

4. Wireless Quantum Communication Framework for Enhanced Security in Unmanned Aerial Vehicle

Seo Yeon Moon, Tae Woo Kim, ~~Il-chul Shin~~, Jin Sang Park

5. QI6G: A Quantum Self-Learning Edge Intelligence in 6G Networks

Abir El Azzaoui, Jong Hyuk Park

6. Quantum Homomorphic Cryptography-based Efficient Medical Imaging Architecture for IoMT in Smart City Environments

Haotian Chen, Jong Hyuk Park

11:00-11:10 Coffee break

11:10-12:00 Keynote Speaker

(HALL A)

(Chair: Ji Su Park)

Role of Privacy-aware AI in Smart Mobility

Pradip Kumar Sharma

12:00-13:00 Lunch

13:00-13:20 Registration for Cooperation Workshop

13:20-17:30 2022 ‘Blockchain Opens Future Finance’ Workshop

(HALL A)

(Chair: Hyuk-Jun Kwon)

13:20-17:30 2022 ‘New Content Service Paradigm and Copyright Technology’ Workshop

(HALL B)

(Chair: Byoungsoo Koh, Joon-min Gil, Jinho Park)

17:30-18:00 Break

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

Day 2, October 29, 2022 (Saturday)

09:00-10:30 Organizing Committee Meeting

10:30-10:40 Break

10:40-12:10 Executive Meeting - Organized by IFIT 2022

WORKSHOP



2022
새로운 콘텐츠
서비스 패러다임과
저작권기술
워크숍

2022. 10.28^{FRI}
동국대학교 서울캠퍼스 신공학관 4층

주최 : 한국콘텐츠진흥원 문화체육관광기술진흥센터

주관 : 한국정보처리학회 컴퓨터소프트웨어연구회

운영위원회

조 직 위 원 장 강정호 교수, 배화여자대학교
운 영 위 원 장 박지수 교수, 전주대학교
프로그램위원장 김준민 교수, 대구가톨릭대학교

프로그램

2022년 10월 28(금) 13:00 ~17:30

13:00~13:20 등록
13:20~13:30 개회식

Session 1

새로운 콘텐츠 서비스에서의 블록체인과 NFT 활용 방안

13:30~14:10 메타버스 창작 플랫폼 구축과정에서 저작물, 저작권 쟁점과 이슈 (전, 홍익대 임익수)
14:10~14:50 새로운 콘텐츠 패러다임에 필요한 저작권 기술 (세종대 최승재 교수)
14:50~15:30 NFT 신뢰기반 유통을 위한 블록체인 활용방안 (한국조폐공사 이완섭 팀장)
15:30~16:00 실감콘텐츠를 위한 안무저작권의 필요성 (KETI 박병하 책임)
16:00~16:10 휴식

Session 2

SW 저작권기술의 현재와 미래

16:10~16:50 SW 플랫폼에서의 저작권 기술 (숙명여대 김철연 교수)
16:50~17:30 오픈소스 라이선스와 소스코드 저작권 (엘에스웨어(주) 조용준 이사)



주최 : 한국정보처리학회 블록체인 기술 및 응용 연구회
주관 : 한국정보처리학회 컴퓨터소프트웨어연구회

운영위원회

조직위원장 정영식 교수, 동국대학교
운영위원장 박지수 교수, 전주대학교
프로그램위원장 권혁준 교수, 순천향대학교

프로그램

2022년 10월 28(금) 13:00 ~16:20

13:00~13:20 등록
13:20~13:30 개회식

Session 1 기술이 이끄는 금융

13:30~14:10 부산블록체인 특구에서의 블록체인 기술 금융산업 적용
(Security Token Offering) 세종텔레콤 이규만 팀장
14:10~14:20 휴식

Session 2 분산 식별자 DID (Decentralized Identifier)

14:20~15:00 DID의 현황과 미래 코인플러그 허원호 이사
15:00~15:10 휴식

Session 3 Blockchain Mainnet

15:10~15:50 LG 모나체인 메인넷(Mainnet)의 공공 서비스 적용 LG CNS 윤준호 책임
15:50~16:00 휴식
16:00~16:20 AI 이미지 센서링과 DAO를 이용한 NFT 진위 감별서비스 모델 순천향대학교 권혁준 교수

CONFERENCE VENUE

Dongguk University



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MAP



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