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# KICS Fall Conference 2023 Program

**Date\_** November 22(Wed)~24(Fri), 2023

**Venue\_** Lahan Select Hotel, Gyeongju, Korea

**Organized by**



**Patrons**

SAMSUNG





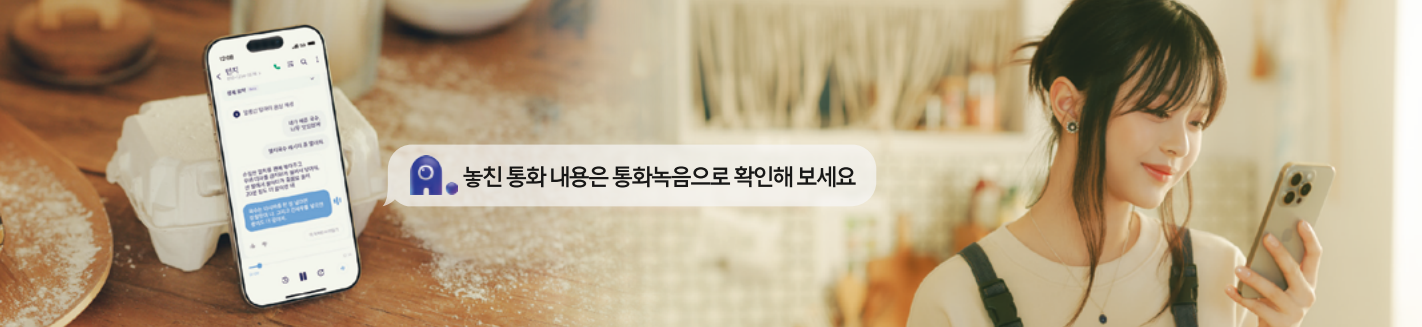
잠결에 나는 통화 내용도 녹음하고 요약해 뒀어요



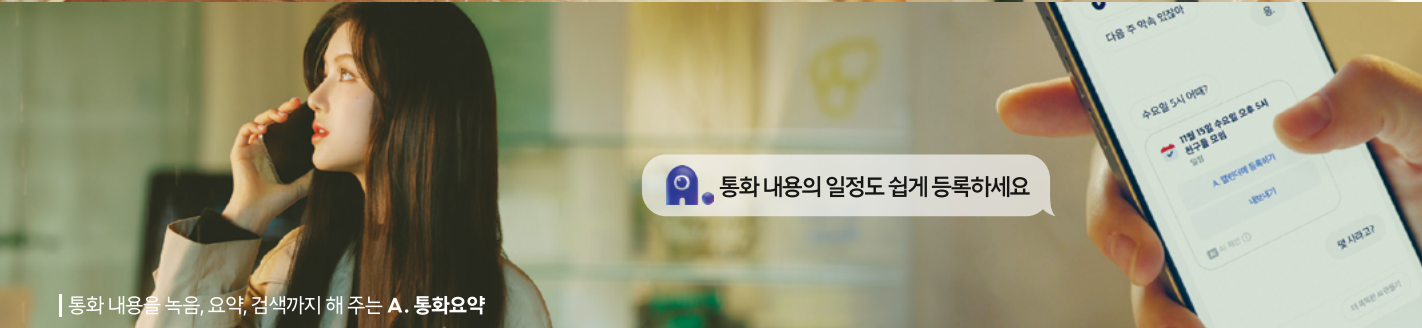
iPhone 통화녹음 내용을 쉽게 검색해 보세요



운전 중 통화한 내용도 녹음하고 기록해 뒀어요



농친 통화 내용은 통화녹음으로 확인해 보세요



통화 내용의 일정도 쉽게 등록하세요

| 통화 내용을 녹음, 요약, 검색까지 해 주는 A. 통화요약

**iPhone 통화녹음이 필요할 땐**  
나만의 AI 개인비서, 에이닷

SKT의 AI는 누구에게나 있다  
AI for Everyone

**SK telecom**

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## Message from the Chairs

Dear KICS Members,

We would like to express our gratitude to the members who are consistently working hard on R&D during this difficult time, and invite you to the KICS Fall Conference 2023, which will be held in Gyeongju, the ancient capital city of Silla. At this conference, we will have regular general meetings to share and exchange the results of your research, reflect on the various activities of the society over the past year, and prepare for the following year.

This year, we will have more than 560 academic papers in information technology, communication technology, and related convergence technologies. Sang Hoon Song, the ICT Policy Bureau of the Ministry of Science and ICT(MSIT), will give an invitational lecture on “Charter on the Values and Principles of a Digital Common Prosperity Society : Digital Bill of Rights”. In addition, Giuseppe Caire, the professor of Technical University of Berlin, Germany, will give an keynote speech on “Integrated Sensing and Communication Toolbox: Information Theory, Communication Theory, and Machine Learning”. In the special session of 6G RI, we will have experts from task-oriented networks, optimization of AI service offloading, performance-guaranteed networking and exchange the latest technologies. We will have a couple of industrial keynote speeches from Samsung and SKT. We will also have special sessions organized by KICS societies and various research centers. We will host diverse programs such as undergraduate research contests. We would like to encourage all members to participate in this year’s conference.

We hope that this event will be useful and valuable to all of our members. Also, we would like to express our deepest gratitude to the Fall conference members of KICS and the secretariat for their hard work in preparing this event.

Warm regards,

November 2023

### Fall Conference 2023 Committee Chairs



Een-Kee Hong  
President of KICS



Jae-Hyun Kim  
Organizing/  
Technical Program  
Committee Chair



Sang-Hyo Kim  
Organizing/  
Technical Program  
Committee  
Vice-Chair



Yun Hee Kim  
Organizing/  
Technical Program  
Committee  
Vice-Chair



Pyung Soo Kim  
Organizing/  
Technical Program  
Committee  
Vice-Chair

## Committees

### General Chair

Een-Kee Hong (President of KICS, Kyung Hee Univ.)

### Organizing / Technical Program Committee

**Chairs** Jae-Hyun Kim (Ajou Univ.)

**Vice-Chairs** Sang-Hyo Kim (Sungkyunkwan Univ.) Yun Hee Kim (Kyung Hee Univ.)  
Pyung Soo Kim (Tech Univ. of Korea)

**Members** Kae Won Choi (Sungkyunkwan Univ.) Yongjune Kim (POSTECH)  
So Ryoung Park (Catholic Univ. of Korea) Minseok Choi (Kyung Hee Univ.)  
Su Min Kim (Tech Univ. of Korea) Byungju Lee (Incheon National Univ.)  
Seong Ho Chae (Tech Univ. of Korea) Hee-Youl Kwak (Univ. of Ulsan)  
Jae-Won Kim (Gyeongsang National Univ.) Chanki Kim (Jeonbuk National Univ.)  
Haneul Ko (Kyung Hee Univ.) KIM SEUNG YEON (Korea Univ.)  
Sangseok Yun (Pukyong National Univ.) Woonghee Lee (Hansung Univ.)  
Youn Joosang (Dong-Eui Univ.) Lee, Hoon (UNIST)  
Jungha Hong (ETRI)

**Undergraduate** Duk Kyung Kim (Inha Univ.) Daeyoung Park (Inha Univ.)  
Su Min Kim (Tech Univ. of Korea) Haejoon Jung (Kyung Hee Univ.)  
Bang Inkyu (Hanbat National Univ.)

### Special Program Committee

**Members** Sungtek Kahng (Incheon National Univ.) Namseok Ko (ETRI)  
Young-Chai Ko (Korea Univ.) Ko Jun Ho (TTA)  
KIM GYOUNGBAE (Seowon Univ.) Sehoon Kim (allradio)  
Jae-Hyun Kim (Ajou Univ.) Hyuncheol Park (KAIST)  
JungSook Bae (ETRI) SONG HONG-YEOP (Yonsei Univ.)  
Oh-Soon Shin (Soongsil Univ.) Won-Yong Shin (Yonsei Univ.)  
Jong Won Shin (GIST) JIHOON OH (TTA)  
YOON TAEHYUN (ETRI) Kyunghan Lee (Seoul National Univ.)  
MEONGHUN LEE (Sunchon National Univ.) Il-Woo Lee (ETRI)  
Jae-Min Lee (Kumoh National Institute of Technology) JIHEE LEE (KETEP)  
Minjoong Rim (Dongguk Univ.) KyungHi Chang (Inha Univ.)  
Haejoon Jung (Kyung Hee Univ.) Chan-Byoung Chae (Yonsei Univ.)  
Kae Won Choi (Sungkyunkwan Univ.) Choi Won Seok (Chungbuk National Univ.)  
Dong Seog Han (Kyungpook National Univ.) Jun Heo (Korea Univ.)

# Registration

## Registration Fee(KRW)

| Registration          |              | Early Birds                     | Regular/On-Site | Note                           |
|-----------------------|--------------|---------------------------------|-----------------|--------------------------------|
| Member                | Student      | 190,000                         | 240,000         | Banquet coupon is not included |
|                       | Regular/Life | 270,000                         | 310,000         |                                |
| Non-member            | Student      | 220,000                         | 270,000         | Banquet coupon is not included |
|                       | Regular      | 330,000                         | 370,000         |                                |
| Undergraduate Student |              | 90,000                          | 110,000         | Banquet coupon is not included |
| Tutorial Registration |              | Same as conference registration |                 |                                |

## Registration Policy

1. To be published in the [KICS Fall Conference 2023 Proceedings\(Available for download : ~December 31\)](#), a minimum of one author from each accepted paper MUST register and be a KICS member, and the paper must be presented at the conference.
2. A valid student ID is required at the registration desk to check the eligibility for student-rate registration.
3. Registrations include access to conference sessions, a program book, souvenirs, a luncheon (November 23), Banquet(November 23) and coffee breaks. (Student, Undergraduate Student : Banquet coupon is not included)
4. Non-refundable author registration fees must be paid prior to the early registration due.
5. For non-author registrations, absolutely no cancellations/refunds will be accepted after the early registration due.

## Method of Payment

|               |                                                                                                                                                                                                                                                                                                                                                                    |                                                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Card          | <ul style="list-style-type: none"> <li>• Visa, Master, and JCB are available to use for online registration.</li> <li>• Payment by credit card is available through the online procedure.</li> <li>• All service charges on credit card are to be paid by registrants.</li> <li>• Actual debit amount is subject to change according the exchange rate.</li> </ul> |                                                                            |
|               | <ul style="list-style-type: none"> <li>• All bank remittance charges are to be paid by registrants.</li> <li>• Sender's name should be the registrant's name.</li> </ul>                                                                                                                                                                                           |                                                                            |
| Bank Transfer | Bank Name                                                                                                                                                                                                                                                                                                                                                          | WOORI BANK                                                                 |
|               | Account No.                                                                                                                                                                                                                                                                                                                                                        | 192-05-027627                                                              |
|               | Swift Code                                                                                                                                                                                                                                                                                                                                                         | HVBKCRSE                                                                   |
|               | Bank Address                                                                                                                                                                                                                                                                                                                                                       | 1-203, Hoehyeon-dong, Jung-gu, Seoul, Korea                                |
|               | Beneficiary                                                                                                                                                                                                                                                                                                                                                        | Korea Information and Communications Society(KICS)                         |
|               | Beneficiary Address                                                                                                                                                                                                                                                                                                                                                | #06296, 3F, 32-3, Nonhyeon-ro 38-gil, Gangnam-gu, Seoul, Republic of Korea |
|               | Beneficiary TEL                                                                                                                                                                                                                                                                                                                                                    | +82-2-3453-5555                                                            |

## Registration

### ■ Refund policy

- If you have already registered for KICS Fall Conference 2023 and find that you are unable to attend or cancel the paper, please notify KICS Fall Conference 2023 secretariat in writing to [conf2@kics.or.kr](mailto:conf2@kics.or.kr) to request a refund and cancel your registration.
- Refund will be made upon receipt of this written notice after the conference.
- All bank service charges are to be paid by the registrant.
- No cancellations/refunds will be accepted after the early registration due.
- If you have any questions, please contact Registration Secretariat of KICS Fall Conference 2023 at [conf2@kics.or.kr](mailto:conf2@kics.or.kr).

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## Information for Presenters

### ■ Session Type

| Category      | Session Type        |
|---------------|---------------------|
| English Paper | Oral/Poster Session |

### ■ Guideline for Presenters

#### Oral Session

- Please show up 10 minutes before the session starts.
- Bring a USB memory with your PowerPoint presentation and make sure that your file is copied on the laptop computer in the session room.
- Each session is basically assigned 80 minutes with 6–8 presentations, making 10~15 minutes per presentation. (\*The presentation time can be changed according to the number of papers assigned.)

#### Poster Session

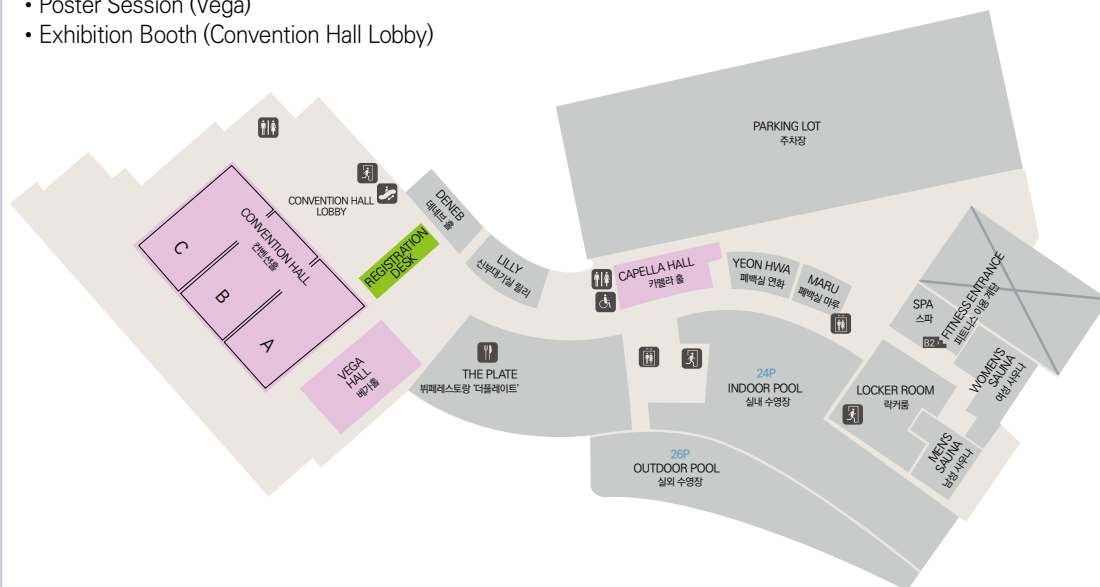
- Every presenters should check their place and time for the presentation.
- Please arrive at the presentation place 10 minutes earlier than the session beginning time.
- Every presenters will have a panel of their own in the conference hall. The panels have a session number on the top of it. (Example : A1–P) Presenters will attach their presentation material on the panel and prepare their presentation.
- Presentation panel size : 100cm width, 180cm length.
- Presenters can attach a single poster or several small sheets of paper that doesn't exceed the panel size for the presentation as they want.
- It needs to be prepared the presentation materials with the paper title, affiliation, and author name in it.
- Please prepare the presentation materials printed. (It will not be able to print out the materials at the conference.)
- Help desk will provide adhesive tape to attach the materials.
- Presenters will answer the questions faithfully in place until the end of the presentation.
- Remove the presentation materials 5 minutes before the end of the presentation.

# Session Room Location

## Conference Venue : Lahan Select, Gyeongju

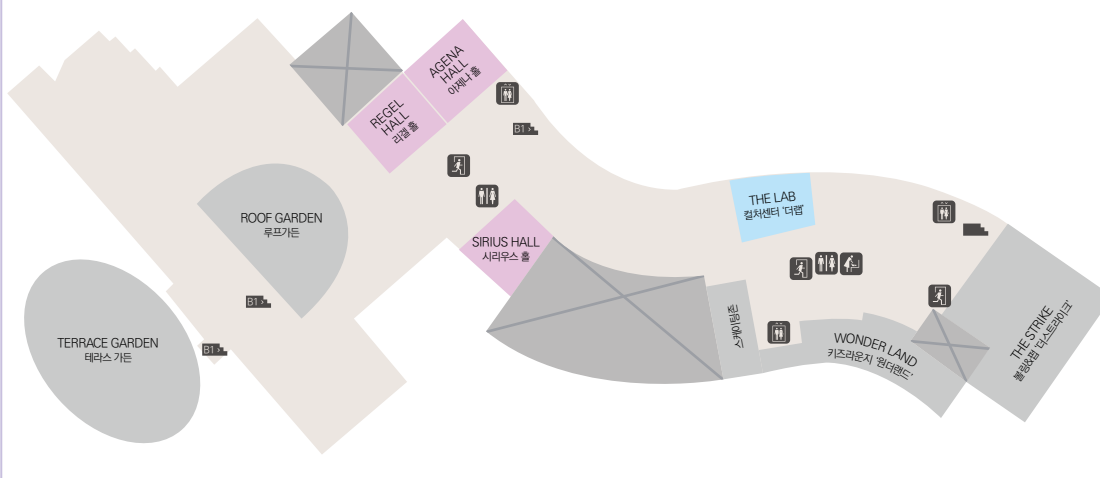
### B1F

- Registration Desk
- Oral Session (Convention A/B/C, Capella)
- Poster Session (Vega)
- Exhibition Booth (Convention Hall Lobby)



### 2F

- Oral Session (Agena, Regal, Sirius)



## Session Room Location

### B2F

- Lunch (Polaris)



## Program at a Glance

| November 22 (Wed)          |                                           |                      |                      |                      |                   |                 |                         |                         |
|----------------------------|-------------------------------------------|----------------------|----------------------|----------------------|-------------------|-----------------|-------------------------|-------------------------|
| Venue<br>Time              | Oral Session (B1F)                        |                      |                      |                      | Oral Session (2F) |                 |                         | Poster Session (B1F)    |
|                            | CONVENTION C                              | CONVENTION B         | CONVENTION A         | CAPELLA              | AGENA             | REGEL           | SIRIUS                  | VEGA                    |
| 12:00~<br>17:00            | Registration (CONVENTION HALL Lobby, B1F) |                      |                      |                      |                   |                 |                         |                         |
| 13:00~<br>14:20<br>(80min) | 1A                                        | 2A                   | 3A                   | 4A                   | 5A                | 6A              | 7A                      | 8A-P                    |
| 14:30~<br>15:50<br>(80min) | Special Session<br>(Young<br>Researcher)  | Special Session      | Workshop<br>(closed) | Workshop<br>(closed) | Special Session   | Special Session | Special Session         | Korean Paper<br>Session |
|                            |                                           | 2B                   |                      | 4B                   | 5B                |                 | 7B                      | 8B-P                    |
| 16:00~<br>17:20<br>(80min) | Special Session<br>(Tutorial 1)           | Special Session      | Special Session      | Special Session      | Special Session   | Special Session | Korean Paper<br>Session | Korean Paper<br>Session |
|                            |                                           | Workshop<br>(closed) |                      |                      | 5C                |                 | 7C                      | 8C-P                    |

## Program at a Glance

| November 23 (Thur)   |       |                                                                               |                   |                                                        |                      |                   |                 |                                        |
|----------------------|-------|-------------------------------------------------------------------------------|-------------------|--------------------------------------------------------|----------------------|-------------------|-----------------|----------------------------------------|
| Time                 | Venue | Oral Session (B1F)                                                            |                   |                                                        |                      | Oral Session (2F) |                 |                                        |
|                      |       | CONVENTION C                                                                  | CONVENTION B      | CONVENTION A                                           | CAPELLA              | AGENA             | REGEL           | Poster Session (B1F)<br>SIRIUS<br>VEGA |
| 08:30~17:00          |       | Registration (CONVENTION HALL Lobby, B1F)                                     |                   |                                                        |                      |                   |                 |                                        |
| 09:00~10:20 (80min)  |       | 9A                                                                            | 10A               | 11A                                                    | 12A                  | 13A               | 14A             | 15A                                    |
|                      |       | Special Session (AI Top Conference)                                           | Workshop (closed) | Special Session                                        | Special Session      | Special Session   | Special Session | Special Session                        |
| 10:30~11:50 (80min)  |       | 9B                                                                            | 10B               |                                                        |                      | 13B               | 14B             | 15B                                    |
|                      |       | Special Session (6G RI)                                                       | Special Session   |                                                        |                      | Special Session   | Special Session | Special Session                        |
| 11:50~13:00 (70min)  |       | Lunch Break (POLARIS, B2F)                                                    |                   |                                                        |                      |                   |                 |                                        |
| 13:00~14:20 (80min)  |       | 9C                                                                            | 10C               | 11C                                                    | 12C                  | 13C               | 14C             | 15C                                    |
|                      |       |                                                                               | Special Session   | Special Session (Industry)                             | Korean Paper Session |                   | Special Session | Korean Paper Session                   |
| 14:30~15:50 (80min)  |       | 9D                                                                            | 10D               | 11D                                                    | 12D                  | Special Session   | 14D             | 15D                                    |
|                      |       |                                                                               |                   | Special Session (Distinguished International Scholars) | Korean Paper Session |                   | Special Session | Special Session                        |
| 16:10~17:40 (90min)  |       | 50th Annual General Meeting (CONVENTION HALL, B1F)<br>(Entrance Time : 16:00) |                   |                                                        |                      |                   |                 |                                        |
| 17:50~19:30 (100min) |       | Keynote Speech & Banquet (CONVENTION HALL, B1F)                               |                   |                                                        |                      |                   |                 |                                        |

## Program at a Glance

| November 24 (Fri)   |       |                                           |                      |                      |                      |                      |                      |                                                                            |
|---------------------|-------|-------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------------------------------------------------------------|
| Time                | Venue | Oral Session (B1F)                        |                      |                      |                      | Oral Session (2F)    |                      |                                                                            |
|                     |       | CONVENTION C                              | CONVENTION B         | CONVENTION A         | CAPELLA              | AGENA                | REGEL                | Poster Session (B1F)                                                       |
| 08:30~11:00         |       | Registration (CONVENTION HALL Lobby, B1F) |                      |                      |                      |                      |                      | VEGA                                                                       |
| 08:30~09:50 (80min) |       | 17A                                       | 18A                  | 19A                  | 20A                  | 21A                  | 22A                  | 23A                                                                        |
|                     |       | Special Session (Tutorial 2)              | Workshop (closed)    | Special Session      | Special Session      | Korean Paper Session | Special Session      | English Paper Session 1<br>Chair: Hee-Youl Kwak (University of Ulsan)      |
| 10:00~11:20 (80min) |       | 17B                                       | 18B                  | 19B                  | 20B                  | 21B                  | 22B                  | 23B                                                                        |
|                     |       | Special Session                           | Korean Paper Session | Korean Paper Session | Korean Paper Session | Korean Paper Session | Special Session      | English Paper Session 2<br>Chair: Pyung Soo Kim (Tech University of Korea) |
| 11:30~12:50 (80min) |       | 17C                                       | 18C                  | 19C                  | 20C                  | 21C                  | 23C                  | 24B-P                                                                      |
|                     |       | Korean Paper Session                      | Korean Paper Session | Korean Paper Session | Korean Paper Session | Special Session      | Korean Paper Session | Undergraduate Student Paper Awards <11:20>                                 |

## Oral Sessions – November 24 (Fri)

### 23A English Paper 1

November 24 (Fri) 08:30~09:50, SIRIUS (2F)

Chair: Hee-Youl Kwak (University of Ulsan)

- 23A-1      **Edge Computing-Based Stacked Package Recognition for AGV**  
 Indah Monisa Firdiantika, Seongryeong Lee, Chaitali Bhattacharyya, Yewon Jang, Sungho Kim, \*Changjin Oh, \*Youngkyun Yoon, \*Seungjae Oh(영남대학교, \*피에이치에이)
- 23A-2      **An Integrated Deep Learning Approach for Joint channel Estimation and Signal Detection in NOMA-OFDM System**  
 Md Abdul Aziz, Md Habibur Rahman, Mohammad Abrar Shakil Sejan, Rana Tabassum, Hyoung-Kyu Song (세종대학교)
- 23A-3      **Intelligent Reflective Surface Assisted Wireless Communication Performance Measurement Using Bi-LSTM**  
 Rana Tabassum, Mohammad Abrar Shakil Sejan, Md Habibur Rahman, Md Abdul Aziz, Hyoung-Kyu Song (세종대학교)
- 23A-4      **Exploring Sentiment Analysis of Silicon Valley Bank Collapse: Deep Learning Approaches on Google News Headlines**  
 Shubhangi Saileja R. Garnaik, Jihoon Ryoo(State University of New York Korea)
- 23A-5      **Blockchain-Enhanced IoT Security for Multi-Ownership Smart Buildings**  
 Azimbek Khudoyberdiev, \*Ho Young Kim, \*Jihoon Ryoo(State University of New York Korea, \*한국뉴욕주립대학교)
- 23A-6      **Chroma Subsampling for Sub-block-based Perceptual Encryption Algorithms**  
 Ijaz Ahmad, Seokjoo Shin(조선대학교)
- 23A-7      **ADCT: Adaptive Distributed Client Training for Robust Federated Learning with Non-IID Data**  
 Made Adi Paramartha Putra, Ahmad Zainudin, Revin Naufal Alief, Dong-Seong Kim, Jae-Min Lee (Kumoh Institute of Technology)
- 23A-8      **Automobile Service Upselling Feature Extraction using Multiple Feature Importance Techniques**  
 Paul Michael Custodio, Robin Matthew Medina, Judith Nkechinyere Njoku, \*Cosmas Ifeanyi Nwakanma, Jae-Min Lee, Dong-Seong Kim(금오공과대학교, \*ICT-CRC)

## Oral Sessions – November 24 (Fri)

### 23B English Paper 2

November 24 (Fri) 10:00~11:20, SIRIUS (2F)

Chair: Pyung Soo Kim (Tech University of Korea)

- 23B-1      **Efficient Voucher Distribution and Non-Transferability in NFT Loyalty Programs**  
Gifar Arif Haryadi, Muhammad Rasyid Redha Ansori, Jae-Min Lee, Dong Seong Kim  
(Kumoh Institute of Technology)
- 23B-2      **Performance Analysis of Full-Pilot Zero Forcing in Full-Duplex Cell-Free Massive MIMO**  
Yakubu Bunyaminu, Prince Anokye, Kyoung-Jae Lee(Hanbat University)
- 23B-3      **Enhancing Parameter Selection and Scheduling in V2X Communications Through Federated Learning**  
Sanjay Bhardwaj, Da-Hye Kim, Dong-Seong Kim(Kumoh Institute of Technology)
- 23B-4      **Gathering Entire Common Crawl and Low-Rank Adaptation of LLMs on Consumer Hardware for Low-Resource Languages**  
Bethel Melesse Tessema, Tae-Sun Chung(아주대학교)
- 23B-5      **TF-IDF Empowered Content-Based Recommendation System for Labor Complaints and Service Operations**  
Mohamed Abubakar Dini, Taesoo Jun, Jae Min Lee(Kumoh Institute of Technology)
- 23B-6      **Blockchain Empowered Secure Medical Appointment for the Patients Using Smart Contract**  
Md Facklasur Rahaman, Mohtasin Golam, Made Adi Paramartha Putra, Gifar Arif Haryadi, Dong-Seong Kim, Jae-Min Lee(금오공과대학교)
- 23B-7      **Automating Organ Matching With Blockchain Smart Contract Enabled Medical Record Storage System**  
Igboanusi Ikechi Saviour, \*Kim Dong-Seong(ICT-CRC, \*Kumoh Institute of Technology)
- 23B-8      **Analysis on Efficient Batch NFT-Based System for Electronic Manufacturing Supply Chain**  
Allwinnaldo, Gifar Arif Haryadi, Muhammad Rasyid Redha Ansori, Revin Naufal Alief, Jae Min Lee, Dong-Seong Kim(금오공과대학교)

## Poster Sessions - November 23 (Thur)

### 16A-P 지능 네트워크/서비스 및 English Paper

November 23 (Thur) 09:00~10:20, VEGA (B1F)

Chairs: Hyok Song (KETI), Seong Ho Chae (Tech University of Korea)

- 16A-P-1 이중 가상운영 환경을 지원하는 서버리스 프레임워크  
최영운, 손재기, 김동민(한국전자기술연구원)
- 16A-P-2 gns3와 mininet을 활용한 ONOS 기반 세그먼트라우팅 시험  
박미룡, 장석원, 변성혁, 고남석 (한국전자통신연구원)
- 16A-P-3 교통 약자를 위한 역사 내 스마트 내비게이션  
성진원, 손원준, 최린(고려대학교)
- 16A-P-4 LoRaWAN 환경에서 원근 관계에 따른 ADR 알고리즘 내 SNR 마진 및 시스템 성능 관계에 대한 연구  
김찬기(전북대학교)
- 16A-P-5 IP기반 라이트필드 영상 서비스 플랫폼에 관한 연구  
윤국진, 이봉호, 정원식, 추현곤(한국전자통신연구원)
- 16A-P-6 LTP 버전별 디코딩 성능 비교 초기 결과  
박희용, 안상일(한국항공우주연구원)
- 16A-P-7 클라우드 환경에서 HPC 워크로드를 위한 클러스터 기반의 리소스 관리 방법 연구  
손아영, 박준영, 조혜영, 정기문(한국과학기술정보연구원)
- 16A-P-8 다시점 실사 입체영상 획득 및 MIV 인코딩  
이봉호, 김준수, \*유상현, 윤국진, 이광순, 정원식, 추현곤(한국전자통신연구원, \*서경대학교)
- 16A-P-9 DLMS 서버를 위한 멀티스레드 구조 설계  
김광현, 오하령, 성영락(국민대학교)
- 16A-P-10 LTE 통신망을 활용한 수중-육상 소방대원 위치추적 기술에 관한 연구  
김현수, 권상형, 이재훈(기람테크)
- 16A-P-11 인터넷 프로토콜 버전6 TTA Verified 시험인증 방안에 관한 연구  
윤여훈, 진소희, 이효빈, 박근우(한국정보통신기술협회)
- 16A-P-12 FDTLS기반의 보안성이 강화된 스마트미터 및 게이트웨이 개발  
이정도, 박부식, \*김경모(한국전자기술연구원, \*시큐리티플랫폼)
- 16A-P-13 행정기관 인터넷전화 서버 보안 성능품질 TTA Verified Ver.4 시험인증 기준 제개정에 관한 연구  
이병진, 김행인, 박근우(한국정보통신기술협회)
- 16A-P-14 적응형 스트리밍 시스템에서 비트레이트 선택 알고리즘 설계 요소 분석  
이제원, 정준영(한국전자통신연구원)
- 16A-P-15 블록체인 환경의 데이터품질 검증 방안: 영지식 증명을 중심으로  
채봉수, 공준익, 이진규(한국정보통신기술협회)

## Poster Sessions - November 23 (Thur)

- 16A-P-16 머신러닝을 통한 악성 도메인 탐지 및 특징 분석  
정현주, 황경호(한밭대학교)
- 16A-P-17 에너지설비 관제를 위한 마이크로서비스 기반 디지털트윈 플랫폼  
이형옥, 손승철, 김낙우, 고석갑(한국전자통신연구원)
- 16A-P-18 클라우드-IP 기반 원격 접속 미디어 스위칭 제어 설계 및 구현  
오혜주, 김순철, 이재영(한국전자통신연구원)
- 16A-P-19 최근 SDN 및 SDN 지원 Cloud 관련 머신러닝 할당 알고리즘에 관한 연구 동향  
윤민성, 김기천(전국대학교)
- 16A-P-20 다중 데이터 모달 기반의 의미론적 통신 시스템에 대한 연구 동향  
원동욱, 이충현, 이동현, 김재민, 송치현, 조성래(중앙대학교)
- 16A-P-21 모델 가중치 및 기율기 압축 기술 기반 통신 효율적 연합 학습: 포괄적 조사  
오준석, 이동현, 김재민, 원동욱, 허동현, 송치현, \*박래혁, \*\*나웅수, 조성래(중앙대학교, \*서울과학기술대학교, \*\*국립공주대학교)
- 16A-P-22 연합 학습 환경에서 사용자 선택을 위한 최적화기법의 연구 동향에 대한 조사  
김재민, 이동현, 오준석, 원동욱, 송치현, 허동현, 조성래(중앙대학교)
- 16A-P-23 A Study on Establishing Security against Simon's Algorithm  
김연준((주)LG유플러스)
- 16A-P-24 Compact CTR-DRBG implementation through feedback techniques  
Chi Trung Ngo, Van Pham Khanh, Sang Tran, 최지우, 홍종필(충북대학교)
- 16A-P-25 S2P-GAN: Police Sketch to Photograph Conversion Model for Public Wanted  
Wangyu Choi, Jongwon Yoon(한양대학교)
- 16A-P-26 Minimizing Electricity Cost in Energy Trading Using Particle Swarm Optimization  
Celestine Emeka Obi, Laura Kharatovi, Quota Alief Sias, Rahma Gantassi, Yonghoon Choi(전남대학교)
- 16A-P-27 A Study on Community Detection in Social Networks based on SLPA method  
김상철, 오동소(국민대학교)
- 16A-P-28 A Monocular Ranging Algorithm Combining Visual Markers and Convolutional Neural Networks  
Nan Yin, Yuxiang Sun, Hyunsoo Kim, Youngin Kim, Jae Soo Kim(경북대학교)
- 16A-P-29 From Clusters to Conversions: Enhancing Automotive Dealership Performance with Big Data Insights and XAI  
Judith Nkechinyere Njoku, \*Cosmas Ifeanyi Nwakanma, Jae-Min Lee, Dong-Seong Kim(금오공과대학교, \*ICT-CRC)
- 16A-P-30 Leveraging Feature Importance Techniques for Automotive Recommendation System  
Robin Matthew Medina, Paul Michael Custodio, Judith Nkechinyere Njoku, Cosmas Ifeanyi Nwakanma, Jae-Min Lee, Dong-Seong Kim(금오공과대학교)

## Poster Sessions - November 23 (Thur)

- 16A-P-31 Time Series Classification Based on Representation Fusion and Contrast Learning  
LI KUNPENG, Jong-Chul Lee(광운대학교)
- 16A-P-32 Lasso Regression for Predictive Optimization of TPS in Blockchain Networks  
Syamsul Rizal, Dong-Seong Kim(ICT-CRC)
- 16A-P-33 A Study on Distributed Cloud Computing  
Xuan-Qui Pham, Dong-Seong Kim(ICT-CRC)
- 16A-P-34 Machine Learning and IoT Orchestration for Smart Farm Monitoring of Fall Armyworm (FAW)  
Cosmas Ifeanyi Nwakanma, \*Kelechi Andrew, \*Rosemary Eberechi Keyagha, \*\*Judith Nkechinyere Njoku, \*\*Dong-Seong Kim(ICT-CRC, \*Federal University of Technology Owerri, \*\*금오공과대학교)
- 16A-P-35 Coverage Probability Analysis for Active RIS-Assisted Vehicular Communications  
Waqas Khalid, \*Heejung Yu(Korea University Sejong Campus, \*고려대학교 세종캠퍼스)
- 16A-P-36 Blockchain for Financial Management in Content Creation Industry Review  
Igboanusi Mirian Odigomma, \*Kim Dong-Seong(ICT-CRC, \*금오공과대학교)
- 16A-P-37 Blockchain-Based Parameter Aggregation in Federated Learning Framework  
Love Allen Chijioke Ahakonye, Cosmas Ifeanyi Nwakanma, Jae Min Lee, Dong-Seong Kim(금오공과대학교)



Bring digital to every person, home and organization  
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# Metaverse (UVERSE)

전 세계를 멈추게 했던 코로나 팬데믹은 또다른 세계, 바로 ‘메타버스’에 눈을 뜨게 했습니다. LG유플러스는 보안·편의·활용·지속성을 모두 갖춘 메타버스 캠퍼스인 ‘유버스’를 구축해 시대의 변화를 만들어가고 있습니다. 미래 세대의 교육은 바로 이곳에서 시작될 것입니다.

## Key Accomplishments

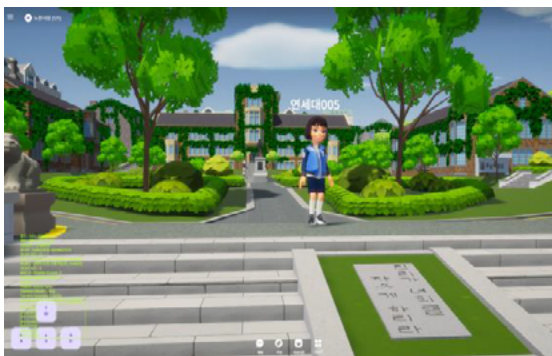
### 메타버스 기반 캠퍼스 환경 구축 추진

- ✓ 대학 전용 메타버스 플랫폼 ‘유버스’(UVERSE) 출시(2023년 4월)
- ✓ 앱 다운로드 필요 없는 웹 기반 메타버스로 PC·모바일 버전 제공
- ✓ 3D모델링 비용 부담없이 대학 표준 맵 구현, 월 구독형 요금제
- ✓ 도서관, 홍보관부터 입학, 취업 박람회까지 8종 대학 특화 기능



<University Standard Map>

## References



<Yonsei Virtual Campus>

### 주요 대학 대상, 각 학교 별 특성에 맞는 메타버스 제공

- ✓ 연세대 버추얼캠퍼스 (2024)
- ✓ 숙명여대 스노우버스 제공 중
- ✓ 청주대 메타라이프 제공 중
- ✓ 순천향대 메타버스 제공 중
- ✓ 대학표준맵 활용 사례: 전주교대, 한국외대, 방송통신대 등

## Next Step

캠퍼스 추가 개발 및 활성화 사업 추진으로 디지털 대학 전환 기반을 마련  
학사 시스템 연동 및 대학 간 경계 없는 대학로 제공 예정

- ✓ SSO(Single Sign On), LMS(Learning Management System) 대학별 연동
- ✓ 유버스 가입 유저가 모두 모이는 공통 공간 대학로, 광장, 기업존 등으로 구성

# Shape the Future with Innovation and Intelligence

Samsung Research is the advanced R&D hub of Samsung's Device eXperience (DX) Division to prepare the future of Samsung Electronics.



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We lead the development of the future technologies with about 10,000 researchers and developers working in overseas R&D centers.

Under the vision of "Shape the Future with Innovation and Intelligence", Samsung Research is actively conducting research and development to identify new future growth areas and secure advanced technologies to create new value and improve people's lives.

## Vision & Mission



**Securing New Growth Engine**  
Identifying new business opportunities



**Increasing Competitive Edge**  
Creating new value for our business



**Innovating Advanced Core Technologies**  
Securing world leading AI competencies & technical leadership in core research areas

## Research Areas

### Intelligence

- Artificial Intelligence
- Data Intelligence

### Device Innovation

- Robotics
- Next Gen. Digital Appliances

### Communications & Media

- Next Gen. Communications
- Next Gen. Display & Media

### Platform

- Tizen
- SoC Architecture
- Security & Privacy
- Software Engineering