



## Seunghyeong Yoo

Ph. D. student

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## EDUCATION

### • Korea Advanced Institute of Science and Technology, Daejeon

*School of Electrical Engineering*

*Aug. 2024 - Present*

GPA: 3.46/4.3

### • Ulsan National Institute of Science and Technology, Ulsan

*Department of Electrical Engineering*

*Mar. 2022 - Aug. 2024*

GPA: 3.71/4.3

– Advisor: Jinseok Choi

### • The Catholic University of Korea, Seoul

*Department of Information Communication and Electronics Engineering*

*Mar. 2015 - Feb. 2022*

GPA: 3.97/4.5

## PROJECTS

### • Multiple-Functional High-Reliable Power Conversion System for DC Microgrid

*Development of Basic Communications System*

*Jun. 2023 - Feb. 2026*

BRL, NRF

– Tools & technologies used: PSIM, MATLAB

### • 6G Wireless Communications System Development

*Development of OFDM-MIMO Systems*

*Mar. 2024 - Feb. 2027*

Samsung Electronics

– Tools & technologies used: MATLAB

## ACHIEVEMENTS

### • Journals

[02] Mintaek Oh, **Seunghyeong Yoo**, Namyon Lee<sup>†</sup>, and Jinseok Choi\*, "Generalized Power Iteration-Based Precoding With Low-Complexity Matrix Inversion Approaches for Massive MIMO Systems", TVT, 2025

[01] Sumin Bae, **Seunghyeong Yoo**, Sangmin Lee, and Jinseok Choi\*, "Joint Secure Max-Min Fairness Precoding and Antenna Selection under Coarse Quantization", TVT, 2025

### • International Conference

[04] Sumin Bae, Sangmin Lee, **Seunghyeong Yoo**, Jinseok Choi\*, "Max-Min Fairness Precoding with Low Resolution DACs", ICTC, 2024

[03] Sungyu Kim, **Seunghyeong Yoo**, Jinseok Choi\*, "Downlink Satellite Network Analysis with Beam Gain in Shadowing Channel", ICTC, 2023

[02] Mintaek Oh, **Seunghyeong Yoo**, Sungyu Kim, Jinseok Choi\*, Seyoung Kim, Jeonghun Park, "A Survey on Statistical Channel Modeling for Underwater Acoustic Communications", ICTC, 2023

[01] **Seunghyeong Yoo**, Seokjun Park, and Jinseok Choi\*, "Joint Precoding and Combining for Quantized Full-Duplex MU-MIMO Systems", VTC, 2023

### • Domestic Conference

[10] **Seunghyeong Yoo**, Seokjun Park, Mintaek Oh, and Jinseok Choi\*, "Performance Analysis Experiment of Full-Duplex System with Low-Resolution Quantizer", JCCI, 2024

[09] Eunsung Choi, **Seunghyeong Yoo**, Sungyu Kim, Junil Choi<sup>†</sup>, Jinseok Choi\*, "Survey of Low Earth Orbit Coverage Analysis", KSAS, 2024

[08] Soomin Bae, **Seunghyeong Yoo**, Sangmin Lee, and Jinseok Choi\*, "Fairness-Aware Beamforming for Low-Resolution DAC Systems", KICS, 2024

[07] Sungyu Kim, **Seunghyeong Yoo**, and Jinseok Choi\*, "Analyzing Downlink Satellite Network in Shadowing Channel with Beam Gain", KICS, 2023

[06] **Seunghyeong Yoo**, Seokjun Park, and Jinseok Choi\*, "Precoder Design for Quantized Full-Duplex MU-MIMO Systems", KICS, 2023

[05] Yunmo Kang, Yunho Kang, Jaeseung Shin, **Seunghyeong Yoo**, and Seung Chang Park\*, "A New Experiment of a Autonomous Controlled Prototype to Implement the Edge Computing and the Cloud Computing Useful for Smart Marine Logistics", IEIE, 2020

[04] Yunmo Kang, Yunho Kang, Jaeseung Shin, **Seunghyeong Yoo**, and Sangoh Yoo\*, "Security Management System to Block Abnormal Symptoms Using IoT Sensor and Artificial Intelligence", KIPS, 2020

[03] Yunmo kang, Yunho Kang, Jaeseung Shin, **Seunghyeong Yoo**, and Seung Chang Park\*, "A Development of the Autonomous Berth Simulator consisting of the Newest Edge Computing and Artificial Intelligence Useful for Smart Offshore Logistics", KIPS, 2020

[02] **Seunghyeong Yoo**, Hyunjin Hwang, and So Ryoung Park\*, "Modeling of the Angle Deception Using Cross-Polarization Jamming Against Monopulse Radar", KICS, 2020

[01] Hyunjin Hwang, **Seunghyeong Yoo**, and So Ryoung Park\*, "Effect of Scattered Field by Terrain Bounce on Radar Angle Tracking Under Cross-Eye Jamming", KICS, 2020

## AWARDS

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<b>Project Award</b>	<i>Dec.2020</i>
<i>Winning the Silver Prize in the Smart Marine Logistics Category of Hanium ICT Contest</i>	Ministry of Science and ICT
<b>Project Award</b>	<i>Dec.2020</i>
<i>Winning the Encouragement of Award in the Free Topic Category of Hanium ICT Contest</i>	Ministry of Science and ICT
<b>Academic Honors</b>	<i>Dec.2020</i>
<i>Award for Encouragement of Academic Research Conference</i>	The Catholic University of Korea