**Faculty Profile: Minhee Jun**

Assistant Professor

Department: Electrical Engineering and Computer Science

School: School of Engineering

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Education: Ph.D., Electrical and Computer Engineering, Carnegie Mellon University, 2016

**Research Interests and Expertise:**   
Wireless Communication and Signal Processing Mathematical Modeling and Estimation, Internet-of-Things, Blockchain technology, Cybersecurity, Algorithm design, and Optimization Algorithm.

**Biography:**Dr. Minhee Jun is currently an Assistant Professor in the department of Electrical Engineering and Computer Science at the Catholic University of America. Dr. Jun completed her Ph.D. in Electrical and Computer Engineering (ECE) at Carnegie Mellon University (CMU) in 2016. Her research topic concerned the development of an efficient algorithm that finds an optimal configuration in time for a reconfigurable RF front-end, a multi-standards future wireless communication platform. In 2017, she joined the CMU CyLab Biometrics Center as a postdoctoral researcher working on experimental projects involving heart rate detection and face spoofing detection, using the Moiré effect caused by the display resolution of a spoofing electrical device. She designed a benchmarking system of a face detection algorithm for an artificial intelligence and security system at HawXeye Inc,. At Bossa Nova Robotics, she has developed algorithms that improve a stitching and blending tool to generate a panorama in a robot, has designed a detection and classification system of sensor issues in a dynamic robot based on a panorama, and has also designed a barcode associator that improves label detection. She has published research papers in leading wireless communication journals and conference publications, including the IEEE EURASIP Journal on Wireless Communications and Networking, and the IEEE Global Communications Conference, and some of the most well-known conferences in the field.

**Five Selected Papers:**

1. Mohammad Alharbi, Minhee Jun, Hang Liu, "A Time- and Energy-Efficient MassiveMIMO-NOMA

MEC Offloading Technique: A Distributed ADMM Approach, " In 2022 IEEE Global Communications Conference (GLOBECOM). IEEE, 2022

1. Minhee Jun, Rohit Negi, Shihui Yin, Mohamed Alawieh, Fa Wang, Megha Sunny, Tamal Mukherjee, and Xin Li, "Environment-Adaptable Fast Multi-Resolution (EAF-MR) optimization in largescale RF-FPGA systems," EURASIP Journal on Wireless Communications and Networking 2018, no. 1 (2018): 68.
2. Minhee Jun, Rohit Negi, Shihui Yin, Fa Wang, Megha Sunny, Tamal Mukherjee, Xin Li, "Phase Noise Impairment and Environment-Adaptable Fast (EAF) Optimization for Programming of Reconfigurable Radio Frequency (RF) Receivers," In 2015 IEEE Global Communications Conference (GLOBECOM), pp. 1-6. IEEE, 2015.
3. Minhee Jun, Rohit Negi, Ying-Chih Wang, Tamal Mukherjee, Xin Li, Jun Tao, and Larry Pileggi, "Joint invariant estimation of RF impairments for reconfigurable Radio Frequency (RF) front-end," In 2014 IEEE Globecom Workshops (GC Wkshps), pp. 954-959. IEEE, 2014.
4. Minhee Jun, RohitNegi, Jun Tao, Ying-ChihWang, Shihui Yin, Tamal Mukherjee, Xin Li, and Larry Pileggi, "Environment-adaptable efficient optimization for programming of reconfigurable radio frequency (rf) receivers," IEEE Military Communications Conference (MILCOM), pp. 1459-1465. IEEE, 2014.

**Professional Activities (please also include STEM education/diversity/outreach activities)**

* Member, Korean-American Scientists and Engineers (KASE) - kase.org

2023–present

* Member, Korean-American Women in Science and Engineering (KWiSE) - kwise.org

2023–present

* Professional Member, Institute of Electrical and Electronics Engineers (IEEE) - www.ieee.org

2020–Present

* EECS Spring Seminar, Catholic University of America

April, 2022

* Pannel, National Science Foundation (NSF) - CRII program

November, 2021