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Hiring Committee
Nokia Bell Labs
Murray Hill, New Jersey (On-site)

Dear Hiring Committee,

I am writing to apply for a Summer 2026 research internship at Nokia Bell Labs in Murray Hill (June 1 – August 7, 2026). I am a Ph.D. student in Electrical, Computer and Energy Engineering at Arizona State University, advised by Prof. Ahmed Alkhateeb. My work combines wireless communications and signal processing with modern machine learning, and I am excited about the opportunity to contribute to high-impact 6G research spanning physical-layer algorithms, feedback, (de)coding, and data-driven wireless system design.

My research background fits the role's emphasis on fundamentals, benchmarking, and publication-quality outcomes. I have published in *IEEE Transactions on Wireless Communications* (2025) and presented at *IEEE ISIT 2025*, with projects that study downlink MIMO and integrated sensing and communications (ISAC) under practical constraints such as limited feedback and imperfect channel knowledge. Across these projects, I focus on clearly defining evaluation criteria, comparing against strong baselines, and documenting insights in a form that can translate into technical reports and, when appropriate, conference/journal submissions.

I also recently released *LWM-Spectro* (arXiv / Hugging Face), a transformer-based foundation model pretrained on large-scale received baseband I/Q spectrograms. The work combines self-supervised masked modeling, contrastive learning, and a mixture-of-experts (MoE) architecture to learn transferable wireless representations that perform strongly on downstream tasks even with minimal labeled data. This project reflects hands-on experience in end-to-end research execution: data generation/curation, model design and tuning, rigorous evaluation, and clear technical write-up.

In addition, prior to starting my Ph.D., I worked as a manager in SK Telecom's LTE/5G RAN performance improvement group, where I contributed to L1/L2/L3 planning, troubleshooting, and performance analysis, and participated in commercial verification testing of 64TRX massive MIMO systems. This experience strengthened my ability to troubleshoot complex wireless systems and work effectively in collaborative teams.

I would welcome the chance to contribute to Bell Labs projects by (1) identifying state-of-the-art approaches, (2) proposing and analyzing new solutions, (3) benchmarking against legacy baselines, and (4) delivering clear reports and presentations. Thank you for your time and consideration.

Sincerely,
Namhyun Kim