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Seongyeol KIM
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Biography

Seongyeol Kim obtained PhD (Physics) degree at Ulsan National Institute of Science and Technology (UNIST) in August 2021 (Advisor: Prof. Moses Chung). During his PhD, he participated in the AWAKE (Advanced Wakefield Experiment) project at CERN as a collaboration member, performing the commissioning of an electron injector and studies on transfer line for suppression of synchrotron radiation effect.

Then, he joined the Argonne Wakefield Accelerator Group (AWA) in Argonne National Laboratory since October 2021 as a postdoc. He worked on the electron beam dynamics such as longitudinal beam manipulation using emittance exchange (EEX) beamline and beam control for partitioning of 6D emittance for high-gradient, high-efficiency structure-based advanced accelerators.

In addition, he worked for the number of collaborative projects such as phase space reconstruction using differentiable simulation with SLAC, bunch shaping with multi-leaf collimator and EEX beamline with UCLA, and X-band transverse deflecting cavity-based longitudinal bunch shaping with Euclid Techlabs.

His research interests are beam manipulations and accelerator optimizations to solve the challenging issues of the advanced wakefield accelerators and X-ray Free Electron Laser (XFEL), such as enhancement of acceleration efficiency in the beam-driven structure/plasma wakefield accelerators and control of the 6D emittance for high-quality XFEL.

His postdoctoral appointment at the AWA ends in July 2023, and he will join Pohang Accelerator Laboratory as a staff scientist for the PAL-XFEL in the following September.