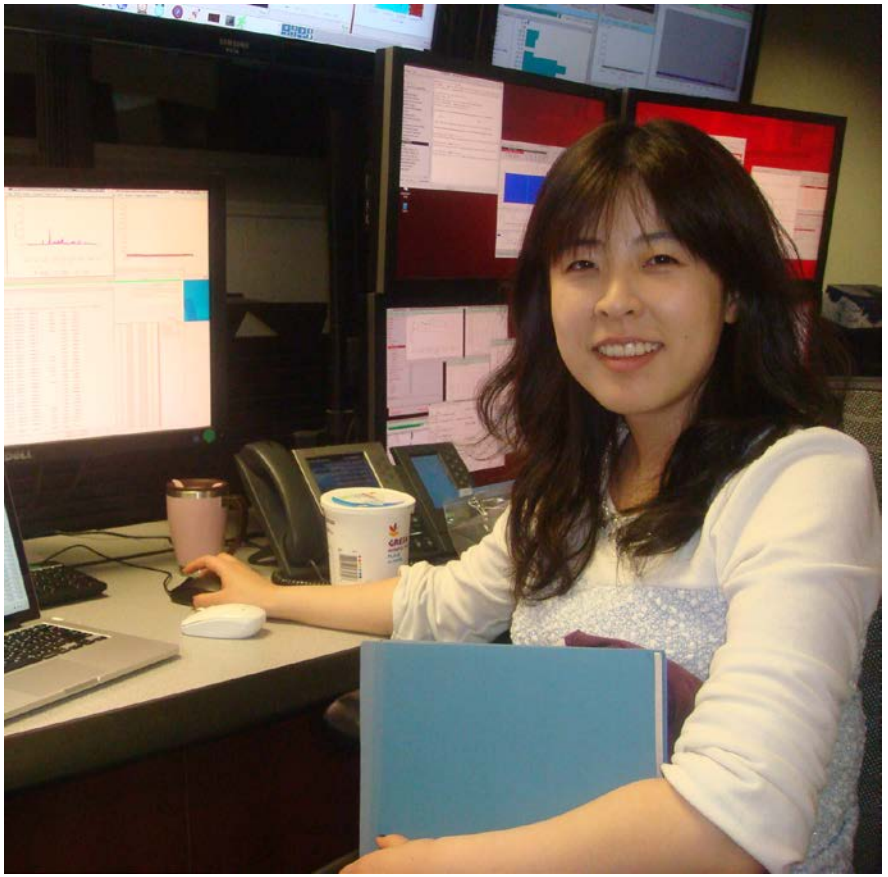
Minjung spent her childhood in Chuncheon, Korea. Her mother was a middle school music teacher, and her father was a carpenter. She wanted to be a painter until she read a book about the history of the special relativity and nuclear physics during middle school.

To study science, she went to Kangwon science high school in Wonju, and then she completed a B.A. in physics and B.A. in math at Seoul National University. After graduation, she enrolled in the Ph.D. program of physics in Seoul National University and started to research in the field of experimental nuclear physics under the direction of Dr. Kiyoshi Tanida.