New 2D Atomically Thin Crystals

Speaker: **Jiwoong Park, University of Chicago**

electron devices society

Cornell University
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Computer Engineering

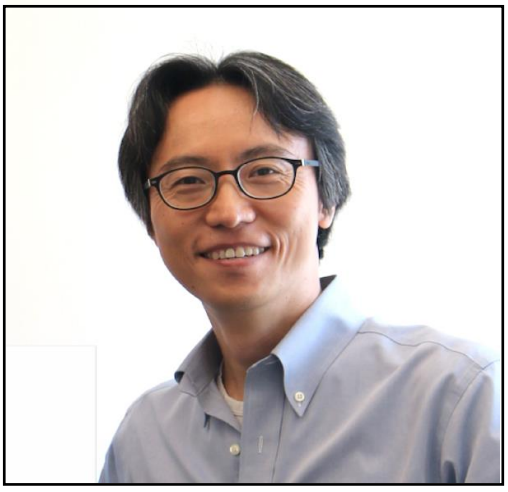
Abstract :

Two-dimensional (2D) electron transport has been one of the most important topics in science and technology for decades. It was originally studied in 3D semiconductors and then continued in 2D van der Waals (vdW) crystals. In this talk, I will start with the large-scale processes for generating 2D crystalline semiconductor films and superlattices that could be used to fabricate atomically thin integrated circuits. Then we will discuss more recent directions, where we use these 2D materials to realize non-electronic 2D transport phenomena, for example, observed from phonons, photons, and mass. These new approaches could empower the development of 2D phononics, 2D photonics, and 2D mechanics.

Bio:

Jiwoong Park a professor in Chemistry and Molecular Engineering at the University of Chicago. His research group is working on the science and technology of atomically thin crystalline materials and recently showed how to chemically synthesize and control 2D van der Waals crystals and molecular structures to produce real, large-scale materials useful for future applications.

He received a B.S. degree from Seoul National University (1996) and a Ph.D. from the University of California, Berkeley (2003; advisor: Prof. Paul McEuen). Before coming to the University of Chicago in 2016, he was a faculty member at Cornell University (2006-2016). Park currently serves as an associate editor of Nano Letters.



Virtual Talk

Friday, April 30th, 2021

Talk begins: **12:00pm**

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