



**Seminar Topic:
Van der Waals Spintronics**

Nanyang Assistant Professor Song Peng

Abstract

The development of materials science and physics concepts has made spintronic a research field that is not only able to reveal fundamental science, but also of great technical relevance. The emergence of atomically-thin two-dimensional (2D) crystals provides a fantastic playground to tune device physics and achieve new functionalities through engineering of spin-orbit coupling (SOC), a key concept in spintronics. In this talk, I will discuss how we use different methods to modulate SOC in 2D crystals and as a result, to tune spin-charge interconversion, magnetism and superconductivity in the crystals.

Biography

Dr Song Peng received his Bachelor degree in 2012 at Fudan University, and PhD degree in 2016 at National University of Singapore (NUS). From 2017 to 2021, he continued his postdoc research at NUS with Prof Loh Kian Ping and then at Max Planck Institute of Microstructure Physics with Prof Stuart Parkin. His research in two-dimensional materials physics and electronic devices has made several major breakthroughs and leads to publications in top scientific journals such as Nature, Nature Materials *etc.* In May 2021, he was awarded the prestigious Nanyang Assistant Professorship at Nanyang Technological University, with joint appointment in School of Electrical & Electronic Engineering and School of Materials Science and Engineering.

15 Sep 2021 || Time: 2:00 PM – 3:00 PM ||
Live streaming via: <https://ntu-sg.zoom.us/j/93932834255>
Meeting ID: 939 3283 4255 Passcode: 150921
Hosted by: Associate Professor Li Shuzhou