

Physics Seminar: Deog-Ki Hong
Wednesday, April 10 · 1:00 – 2:00pm

Location: 313
Speaker: Deog Ki Hong, Pusan National University

Title: Revisiting Chiral Magnetic Effects and Axions

Abstract: In this talk I will show that Fermi liquid suffers from the Adler-Bell-Jackiw (ABJ) anomaly. I will then revisit the chiral magnetic effects (CME) in Fermi liquid to derive CME valid even for massive fermions, which is consistent with the ABJ anomaly of Fermi liquid. I will then present a new axion search experiment, called LACME, to measure the CME current in conductors, induced by axion dark matter. These induced currents are the electron medium effects, directly proportional to the axion coupling to electrons, which depends on the microscopic physics of axions, and also suppressed by the Fermi velocity.