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Abstract

In this talk, I will introduce our recent theoretical works, including: (i) The roles of the quantum interference and electron-electron interaction in the low-temperature low-field conductivity of topological insulators [1,5]. (ii) A quantum transport theory for the group-VI transition metal dichalcogenides (e.g. MoS2) [4]. (iii) The longitudinal and Hall conductances in the quantum anomalous Hall system [2,3], based on an effective model for topological insulator thin films [6].

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About the speaker

Haizhou Lu obtained his B.S. in Physics from Lanzhou University in 2002, and Ph.D. in Physics from IAS, Tsinghua University in 2007. From 2007 to present, he worked as a postdoc then research assistant professor at Department of Physics,