Holographic Entanglement Beyond Einstein Gravity

Dr. Xi Dong will discuss the holographic entanglement entropy in theories with higher derivative gravity in the bulk, generalizing the minimal area prescription proposed by Ryu and Takayanagi for Einstein gravity. This is analogous to the Wald’s formula for the black hole entropy in higher derivative gravity, but now involves additional terms, which depend on the extrinsic curvature. In a slightly different direction, Dr. Xi Dong will also discuss previous work on the (bulk) one-loop corrections to the Ryu-Takayanagi formula.