Condensed Matter Theory Seminar

"Topological superconductivity in Fe-based superconductors"

Hong Ding, Chinese Academy of Sciences

Abstract: In this talk I will report our recent ARPES results on searching for topological superconductivity in Fe-based superconductors. We have obtained clear and strong ARPES evidence of 2D topological superconductivity on the surface of Fe(Te,Se) single crystals with $T_c \sim 15K$. Furthermore, Our ARPES results on Fe(Te,Se)/STO monolayer indicate that the 1D edge state of this monolayer materials may become high-temperature topological superconductor at a certain Te concentration. This intrinsic topological Fe(Te,Se) superconductor, which takes advantage of the natural surface/edge and interband superconducting coherence in the momentum space, may pave a new and exciting route for realizing topological superconductivity and Majorana fermions under higher temperature.

12:00pm noon
Friday, June 2, 2017
Duboc Room (4-331)

Host: Xiao-Gang Wen