

Chez Pierre

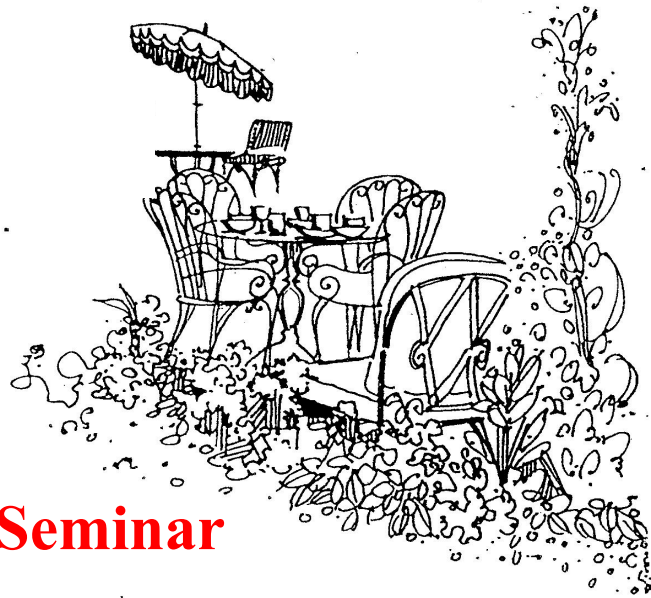
Presents ...

Monday, November 27, 2017

12:00pm Noon

MIT Room 4-331

Chez Pierre Seminar



Hong Ding - Institute of Physics, Chinese Academy of Sciences

“Majorana bound state in iron-based superconductor”

In this talk I will report our recent discoveries of topological superconductivity and Majorana bound state in Fe-based superconductor Fe(Te, Se). We have obtained convincing ARPES evidence of superconducting topological surface state of Fe(Te, Se) single crystal with $T_c \sim 14.5\text{K}$. By using low-temperature STM on this material, we clearly observe a pristine Majorana bound state inside a vortex core, well separated from non-topological bound states away from zero energy due to the high ratio between the superconducting gap and the Fermi energy in this material. This observation offers a new, robust platform for realizing and manipulating Majorana bound states at a relatively high temperature.