

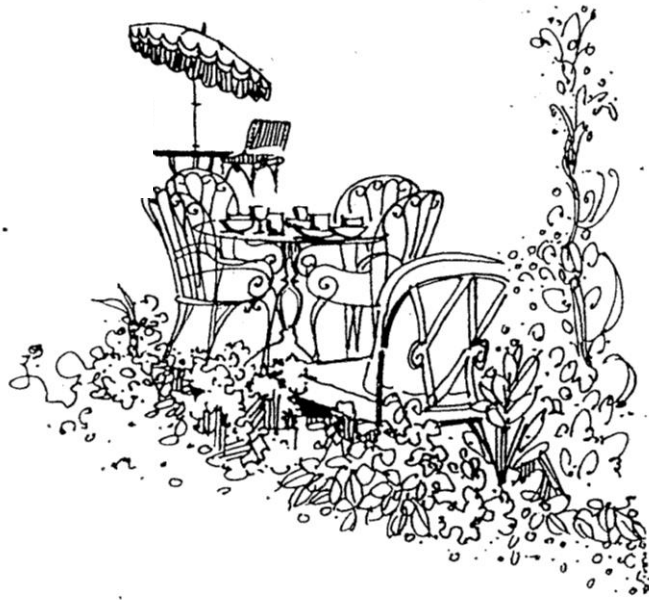
# *Chez Pierre*

Presents ...

**Monday, April 4, 2011**

**12:00pm**

**MIT Room 4-331**



**B.J. Kim**

**Argonne National Laboratory**

## ***"Novel Mott Phenomena Induced by Relativistic Spin-Orbit Coupling in Iridates"***

Recently, it was discovered that the strong spin-orbit coupling in transition metal oxides containing heavy 5d elements gives rise to a qualitatively new class of correlated electron phenomena. In particular, iridates are emerging as a new playground for novel quantum phases ranging from Heisenberg magnets to topological insulator and quantum spin liquid. In this talk, I will give an overview on how the spin-orbit coupling leads to these fascinating physics, with a focus on various experimental tools including angle-resolved photoemission, optical and x-ray absorption spectroscopies, elastic and inelastic x-ray scattering used to probe the spin-orbit ordered ground state and excitation spectra of it.