

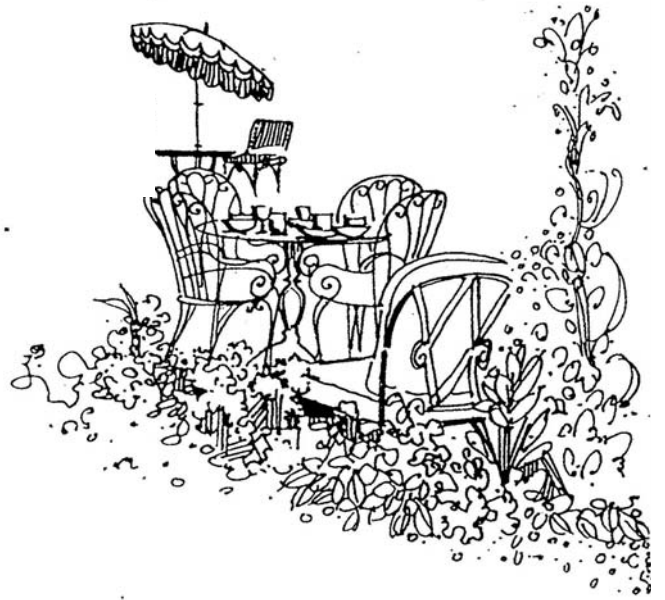
Chez Pierre

Presents ...

Monday, December 7, 2009

12:00pm

MIT Room 4-331



Sung-Sik Lee

McMaster University

“Emergent Supersymmetry and String in Condensed Matter Systems”

Quantum field theories arise as low energy effective descriptions for gapless states in condensed matter systems. Although strongly coupled quantum field theories are rather common, currently there is no systematic way of understanding those theories. In this talk, I will discuss about two condensed matter systems where non-perturbative tools may shed some light on the strongly coupled low energy physics. In the first part, I will talk about a 2+1 dimensional lattice model where emergent superconformal symmetry enables one to understand a strongly interacting critical point non-perturbatively. In the second part, a 2+1 dimensional non-Fermi liquid state will be discussed where a matrix/string theory emerges in the low energy limit.