Strange Stuff:

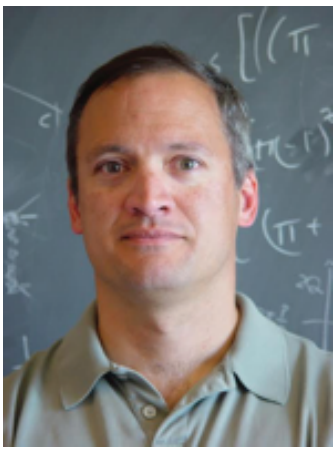
a free public lecture

A Second Quantum Revolution

Tuesday, July 26th
7 pm, Room G1B30
Duane Physics Building
University of Colorado

Weird but true: quantum mechanics tells us that reality is not what it seems. The glass is not necessary empty or full, but can be both at the same time. Erwin Schrödinger, one of the founders of quantum theory, imagined a cat that is simultaneously alive and dead. In practice, while such odd quantum states are common for microscopic particles, they are harder and harder to arrange for larger objects.

But more recently, researchers have turned this question around to ask: what sorts of weird quantum states ***can*** be achieved? The answers are surprising. Quite strange quantum behavior is possible even in large assemblies of electrons and atoms, realizing new forms of matter. These ideas are influencing not only our understanding of matter, but also that of information and gravity. In my talk, I'll introduce you to this second quantum revolution and its implications for the future.



Leon Balents is a theoretical physicist working broadly in the area of correlated electron systems, quantum magnetism, and complex materials. He received his PhD in 1994 from Harvard University, and is now a permanent member of the Kavli Institute for Theoretical Physics, and Professor of Physics at the University of California, Santa Barbara, where he has been on the faculty since 1999. Balents is a Fellow of the American Physical Society, the recipient of an NSF Career Award, the AP Sloan Fellowship, the David and Lucile Packard Fellowship, and several visiting chairs. His interests include correlation effects in one-dimensional systems, exotic quantum critical phenomena, topology in the solid state, and spin liquids in frustrated magnets.

No RSVP required. **For more information call (303) 492-3367**

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