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11:00 a.m. to 11:50 a.m. in ENW 115

Inexactly Posable Problems in Statistical Mechanics

Abstract:

Recent decades have shown remarkable insight into physical systems from exactly solvable models in statistical mechanics. In this talk, I will argue that a focal point of modern work in statistical mechanics will be on problems that not only cannot be solved exactly, they can't even be posed exactly. I will show how the framework of statistical mechanics can be used to gain valuable insight into these "wicked problems" using examples from work done in my group on nanomaterials design, naval architecture, and land-use planning.