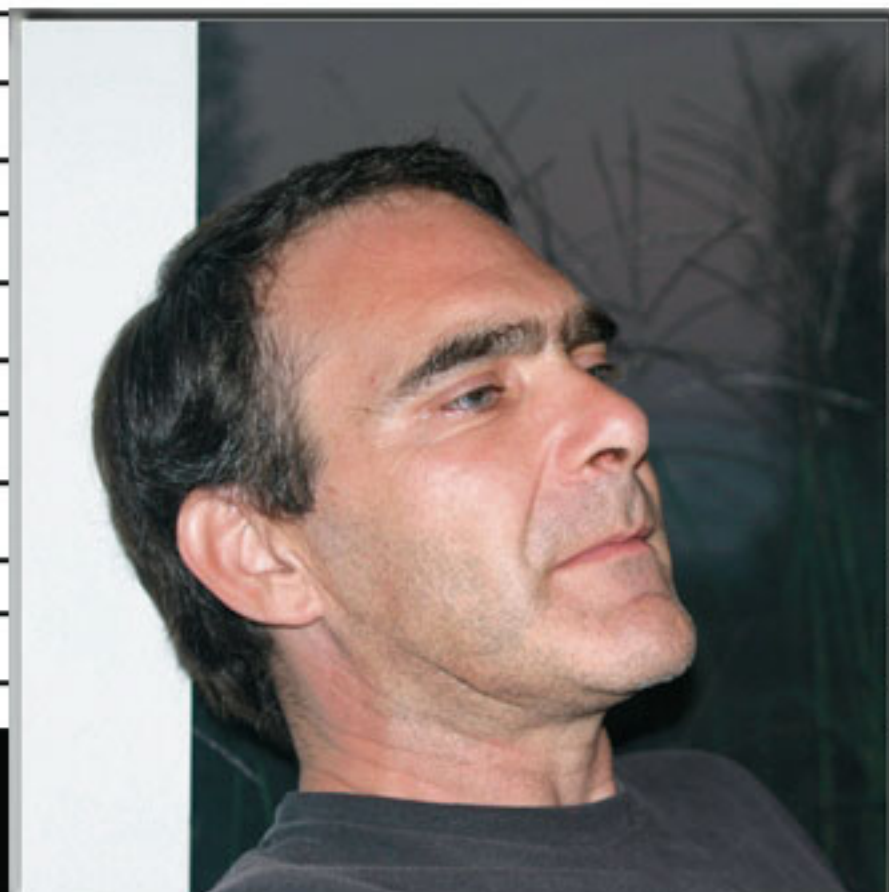


Department of Physics and Astronomy
Colloquium

Thursday, January 19, 2006 at 3:30

Room 1-434 Physics and Astronomy Building



L. Chayes, Professor
Department of Mathematics

Mean-Field driven phase transitions of the first type

Abstract:

A mathematical theory is developed which, for a wide variety of statistical mechanics problems, allows a complete proof of the following: If the mean-field theory of a particular model predicts there will be a first order transition, then the associated, fully interacting model also has this sort of transition either for $d \gg 1$ or, $d \geq 3$ with long-reaching interactions. The talk will be informal (i.e. no real proofs) and will provide the requisite background on MFT.

REFRESHMENTS TO FOLLOW IN ROOM 2-222 LEONARD LOUNGE