

Exact results from approximate theories at critical points from a renormalization group treatment

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In this talk I will discuss how the renormalization group can yield exact predictions from approximate theories and how some of these lead to experimentally measurable quantities. The best known are the discontinuity in the measured superfluid density in thin films of ^4He and in the Young's modulus of a 2D colloidal crystal trapped at an air/water interface. Some other theoretical results will be discussed but these are more difficult to test experimentally.