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Gravity and interacting O(N) model quantum mechanics (Bo Sundborg, Stockholm Univ.)

Wednesday, 4 April 2018 13:45 (1 hour)

I wish to apply quantum field theory (and quantum mechanics) to define a quantum gravity theory in a simple case. AdS/CFT and gauge/gravity correspondences suggest calculating bulk quantities by boundary methods, by-passing bulk action principles. Interacting O(N) model quantum mechanics is a simple relative to higher dimensional boundary theories dual to gravity with broken higher spin symmetry. I present some calculations relevant to a connection to d=2 bulk physics, and to choosing between gauging or not gauging theories of N-component vectors in the large N limit.

Summary