

CU Physics Department Colloquium

Monday, April 25, 2011 4:10 PM 428 Pupin Hall

AdS/CFT - Playing the Devil's Advocate

AdS/CFT is a conjectured duality between weak coupling gravity in anti de Sitter space and a strong coupling field theory on the boundary of this space. It has been suggested that a variety of phenomena in condensed matter physics might be explained by this approach. We will take a serious look at several of these, including the presence of Fermi arcs in the pseudogap phase, the peak-dip-hump lineshape in the superconducting state, and the origin of cuprate superconductivity. In all of these cases, I will argue that AdS/CFT has not shed much light, nor is likely to, on the basic issues being debated.



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