Institut Henri Poincaré

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String Theory in Greater Paris

Rencontres Théoriciennes

"Supergravité, théorie des cordes et théorie M"

Jeudi 19 Octobre 2017, 10:00

Niko Jokela

University of Helsinki

Holographic pinning in probe-brane models

In a holographic probe-brane model exhibiting a spontaneously spatially modulated CDW+SDW ground state, I will introduce explicit sources of symmetry breaking in the form of ionic and antiferromagnetic lattices. I will demonstrate pinning, in which the translational Goldstone mode is lifted by the introduction of explicit sources of translational symmetry breaking. The numerically computed optical conductivity fits very well to a Drude-Lorentz model with a small residual metallicity, precisely matching analytic formulas for the DC conductivity. I also demonstrate an instability of the striped phase in the presence of a large-amplitude ionic lattice.

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