Gauge/Gravity Duality 2015



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Electron-Phonon interactions, MIT and Holographic Massive Gravity

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Massive gravity is holographically dual to ''realistic" materials with momentum relaxation. In its fully covariant formulation it in fact provides an holographic effective description for electron-phonon interactions. I will show how phonons' degrees of freedom are enconded in massive gravity and which are the interesting phenomenological features concerning the transport properties of the dual theory. In particular non-linear interactions in the phonons-sector can provide a metal-insulator crossover and a pinned response in the optical Conductivity.

Presenter: BAGGIOLI, Matteo Session Classification: Parallel Session