Non-linear Langevin equation via holography

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Abstract: In this poster I will briey recount the holographic derivation of a non-linear Langevin equation describing the effective dynamics of a quark probing a thermal CFT. In the gravitaional description the quark guises as a string probing a doubled black brane geometry dual to the SK contour of the CFT. The Langevin couplings satisfy the non-linear fluctuation dissipation relation derived from weakly coupled calculations. Our results furnish a double check for this weak coupling prediction as well as the prescription for the holographic Schwinger Keldysh contour.