"Finite momentum at string endpoints, with heavy ion applications"

Speaker: Steven Gubser, Princeton University

Classical string solutions exist with finite momentum at endpoints. I will explain the main features of finite endpoint momentum, including an extension of the Green-Schwarz superstring action. Finite endpoint momentum is useful in the study of holographic energy loss by light quarks. I will show how simple analytic methods suffice to extract the main features of the relevant string motions, and I will present some comparisons with RHIC and LHC heavy ion phenomenology. In a simple "shooting string" model, developed with Ficnar and Gyulassy, an acceptable fit to data can be achieved if the temperature of the quark-gluon plasma at the LHC is about 10% lower than conventional expectations.