LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS (LEPP)

Theory Seminar

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Quantum Gravity in Two Dimensional (nearly) AdS

Jackiw-Teitelboim gravity in two dimensional nearly AdS is decribed by the Schwarzian theory. This theory was originally proposed by Kitaev as a low energy effective theory for quantum mechanical systems presenting holographic behavior, beginning with the SYK model. In this talk, we will reformulate it as a limit of two dimensional Liouville theory. By using results from the conformal bootstrap of Liouville theory we obtain the exact correlation functions of the Schwarzian theory. We will also discuss the out-of-time-ordered four-point function and see how the bulk shockwaves appear after taking a semiclassical limit, reproducing the Dray-'t Hooft interaction.

SPECIAL TIME!

Tuesday, March 27, 2018

4:00pm

SPECIAL ROOM!

301 Physical Sciences Building