Department of Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Jackiw-Teitelboim Gravity and Rotating Black Holes

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Date: June 11, 2019
Time: 11.00 am
Venue: A-304, TIFR

We discuss how the free energy at low temperatures for near-extremal black holes is correctly obtained from the Jackiw-Teitelboim (JT) model of gravity. Our arguments apply to all black holes, including rotating ones, whose metric has a near-horizon AdS_2 factor and the associated SL(2,R) symmetry. We discuss the validity of these arguments from explicit calculations for rotating black holes in 4 and 5 dimensions. Our results suggest that the JT model could prove useful in analysing the dynamics of near-extremal Kerr black holes found in nature.

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