

JOINT TUFTS/MIT COSMOLOGY SEMINAR

Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity

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In this talk I will give an overview of recent and ongoing work regarding rotating black holes in dynamical Chern-Simons (dCS) gravity. dCS gravity is a well motivated modified theory of gravity which has been extensively studied in gravitational and cosmological contexts. I will first discuss unique geometric structures, ‘the Chern-Simons caps,’ which slowly rotating black holes in dCS gravity were recently found to possess. Motivated by the dCS caps, I will then discuss superradiance in the context of slowly rotating dCS black holes and show that there are corrections to the usual solution for a Kerr black hole. Lastly, I will comment on the observable implications for these corrections and point towards avenues for future work.

Tuesday, October 19, 2021, 2:30 pm

Zoom link will be distributed to joint cosmology seminar mailing list. If not subscribed see <https://cosmos.phy.tufts.edu/mailman/listinfo/cosmology-seminar>

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