

A Simple Way to Remove Singularities from General Relativity

Terry Bollinger
2022-08-29.11:12 EDT Mon
[No longer publicly available]

A Comment on the Fermilab post:
[Unknown. The video was by Dr. Don Lincoln on black holes.]
[This video still exists but was made private a few hours after first posting.]
<https://www.youtube.com/watch?v=XvOPYgdDHTE>

7:17 "an object of infinite density ... doesn't make any sense." One way to keep GR intact while avoiding singularities is to assume spacetime is a collective behavior of matter. This constrains GR from generating details smaller than the densest possible state of matter, quark-gluon plasmas.

Comment: Fermilab restricted public access to Dr. Lincoln's video hours after posting. They did not give a reason. The restriction is baffling since, as best I could tell, the video was a pretty mundane presentation on a widely covered physics topic, black holes.

I don't usually create an Apabistia Note for such a short comment, but in this case, the idea seems worth capturing, and it's the only way to make it available. The idea is that attaching spacetime generation to matter blocks singularity solutions without disrupting GR. I've speculated in other Apabistia Notes that attaching QFT to energy instead of to space leads to a "softer," more experimentally-accessible version of black holes. For example, event horizons become quark-gluon plasmas that generate extreme spacetime configurations, which would make their physics accessible by the LHC.

Terry Bollinger [CC BY 4.0](#)
2022-08-29.11.12 EDT Mon
PDF: <https://sarxiv.org/apa.2022-08-29.1112.pdf>