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Evaporating regular black holes in 2D gravity

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Quantum field theory in curved spacetime famously predicts that information is lost as a black hole evaporates through Hawking radiation. While many resolutions have been proposed, we consider the role of singularities in black hole evaporation. This talk will present a general model of evaporating black holes in 2D dilaton gravity, with a focus on a Bardeen-like regular black hole model. The formation and evaporation of a black hole, including backreaction, is simulated numerically. We find that the apparent horizons evaporate smoothly in finite time and that the final spacetime is free of pathologies such as singularities, event horizons, or Cauchy horizons. This suggests that the evaporation of regular black holes is a unitary process and that resolving the singularity can be a viable solution to the black hole information loss problem

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