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Contribution ID: 4617 Type: **Oral Competition (Graduate Student) / Compétition orale (Étudiant(e) du 2e ou 3e cycle)**

## **(G\*) Evaporating non-singular black holes in 2D gravity**

*Monday 27 May 2024 11:30 (15 minutes)*

Arguments from general relativity and quantum field theory suggest that black holes evaporate through Hawking radiation, but without a full quantum treatment of gravity the endpoint of the process is not yet understood. Two dimensional, semi-classical theories of gravity can be useful as toy models for studying black hole dynamics and testing predictions of quantum gravity. Of particular interest are non-singular black holes, since quantum gravity is expected to resolve the singularities that are pervasive in general relativity. This talk will present a general model of evaporating black holes in 2D dilaton gravity, with a focus on a Bardeen-like regularized black hole model. I will discuss results from numerical simulations including the dynamics of the apparent horizons and additional trapped anti-trapped regions formed by backreaction.

### **Keyword-1**

Black holes

### **Keyword-2**

Quantum gravity

### **Keyword-3**

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