

**220 Anniversary of W.R. Hamilton and 20th Anniversary of the Hamilton Mathematics Institute
TCD Conference**

Friday, 14 March, 2 pm-3 pm

Talk by: Gregory Gabadadze

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Title: Quantum Anomaly Actions and Cosmology

Abstract:

Abstract: I will review certain quantum anomaly actions in 2 and 4 space-time dimensions and argue that they all require scalar degrees of freedom that are not manifest, or are absent in the initial classical theory. In particular, a 4 dimensional QFT coupled to General Relativity requires a new scalar degree of freedom for consistency.

I will present the full action for this degree of freedom, referenced as an anomalyon, discuss its holographic dual, and its applications in cosmology.