

Analytically continued FRG for dissipative open quantum systems

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- **Goal:** Investigate an Euclidean approach to critical dynamics

- Open system: Euclidean formulation of dissipation

$$\Gamma_k^{(2),E}(\omega_n, \mathbf{p}) = \omega_n^2 + \mathbf{p}^2 + \gamma_k |\omega_n| + m_k^2,$$

- Analytically continued Euclidean computations can be favorable to real-time

$$\Gamma_k^{(2),R}(\omega, 0) = - \lim_{\epsilon \rightarrow 0} \Gamma_k^{(2),E}(\omega_n \rightarrow -i(\omega + i\epsilon), 0)$$

