

$$P(\tilde{q}, t, \rho) \coloneqq \int_{\mathbb{R}} \mathrm{d}\zeta \left[ \theta(\rho) - \theta(\zeta) \right] \frac{\delta L(T_{t+\zeta} \tilde{q}, t + \zeta)}{\delta \tilde{q}(t + \rho)}$$