

$$L'(T_t\tilde{q}',t)=L(T_t\tilde{q},t)+\frac{\mathrm{d}}{\mathrm{d}t}W(T_t\tilde{q},t)+\int_{\mathbb{R}}\mathrm{d}\sigma\lambda(\tilde{q},t,\sigma)\delta\tilde{q}(\sigma)$$