

$$\begin{aligned}
&\lambda(q, t, t + \zeta) \delta q(t + \xi) - \lambda(q, t - \xi, t) \delta q(t) = \\
&= \int_0^1 \mathrm{d}\eta \frac{\partial}{\partial \eta} [\lambda(q, t + (\eta - 1)\xi, t + \eta\xi) \delta q(t + \eta\xi)] \\
&= \xi \int_0^1 \mathrm{d}\eta \frac{\partial}{\partial t} [\lambda(q, t + (\eta - 1)\xi, t + \eta\xi) \delta q(t + \eta\xi)]
\end{aligned}$$