宇田方程式

原型	$\frac{i\hbar}{\alpha}\lim_{\varepsilon\to0}\frac{\Phi[\chi(\square-\varepsilon)]-\Phi[\chi]}{\varepsilon}$ $=\int_{-\infty}^{\infty}dt\left\{\frac{1}{2m}\left[-\frac{i\hbar}{\alpha}\cdot\frac{\delta}{\delta\chi(t)}\right]^2+V(\chi(t))\right\}\Phi[\chi]$
変型	$\left\{\frac{1}{2m}\int_{-\infty}^{\infty}dt\left[-\frac{i\hbar}{\alpha}\cdot\frac{\delta}{\delta\chi(t)}-m\frac{d\chi(t)}{dt}\right]^2-S[\chi]\right\}\Phi[\chi]=0$ $S[\chi]\equiv\int_{-\infty}^{\infty}dt\left\{\frac{m}{2}\left[\frac{d\chi(t)}{dt}\right]^2-V(\chi(t))\right\}$

V＝0 の場合

$$\int_{-\infty}^{\infty}dt\left\{\frac{1}{2m}\left[-\frac{i\hbar}{\alpha}\cdot\frac{\delta}{\delta\chi(t)}-m\frac{d\chi(t)}{dt}\right]^2-\frac{m}{2}\left[\frac{d\chi(t)}{dt}\right]^2\right\}\Phi[\chi]=0$$

$$\int_{-\infty}^{\infty}dt\left\{\frac{1}{2m}\left[-\frac{i\hbar}{\alpha}\cdot\frac{\delta}{\delta\chi(t)}\right]^2+\frac{i\hbar}{\alpha}\cdot\frac{d\chi(t)}{dt}\cdot\frac{\delta}{\delta\chi(t)}\right\}\Phi[\chi]=0$$