Agujeros Negros Cuánticos

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1 Campos sobre variedades curvas

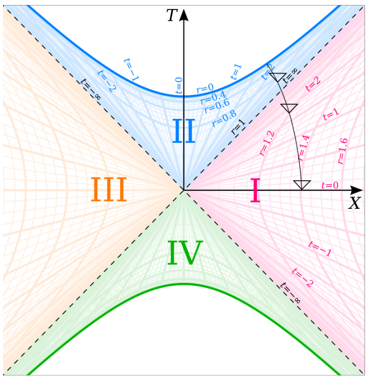
Para un oscilador armónico:

$$\frac{L}{2}\sum_{n=1}^{\infty}\left[\frac{1}{2}\rho\dot{A}_n^2+\frac{1}{2}\rho\omega_n^2A_n^2\right]$$

$$\hat{H}\left|n\right\rangle = E_n\left|n\right\rangle$$

$$E=\sum_{i=1}^{\infty}(n_i+\frac{1}{2})\hbar\omega$$

Coordenadas de Kruskal



$$(\Box - m^2)\phi = 0$$

$$\Box = \frac{\partial}{\partial t}\left[(-\eta)^{\frac{1}{2}}\eta^{00}\frac{\partial}{\partial t}\right]+\frac{\partial}{\partial x^a}\left[(-\eta)^{\frac{1}{2}}\eta^{ab}\frac{\partial}{\partial x^b}\right] \qquad \eta = det(\eta_{\mu\nu})$$

De forma general

$$\Box = (-g)^{-\frac{1}{2}}\frac{\partial}{\partial t}\left[(-g)^{\frac{1}{2}}g^{00}\frac{\partial}{\partial t}\right]+(-g)^{-\frac{1}{2}}\frac{\partial}{\partial x^a}\left[(-g)^{\frac{1}{2}}g^{ab}\frac{\partial}{\partial x^b}\right]$$