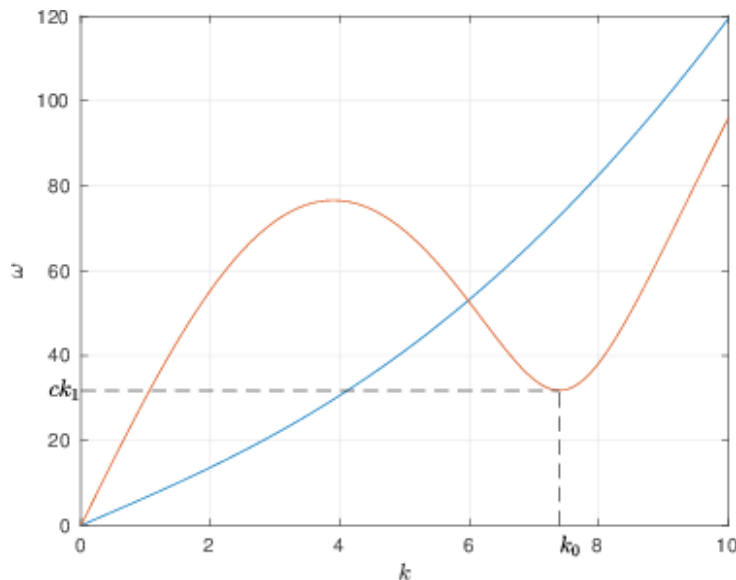


# Vortex reconnection in a non-local model of superfluid

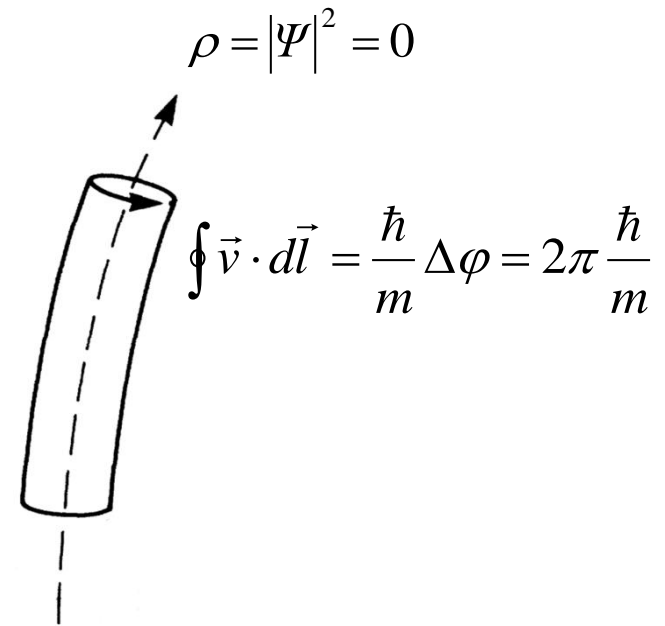
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Non-local Gross-Pitaevskii :

$$i\hbar\partial_t\Psi = -\frac{\hbar^2}{2m}\nabla^2\Psi + \Lambda\Psi\int V_0(|\vec{r}-\vec{r}'|)|\Psi(\vec{r}')|^2 d^3r'$$



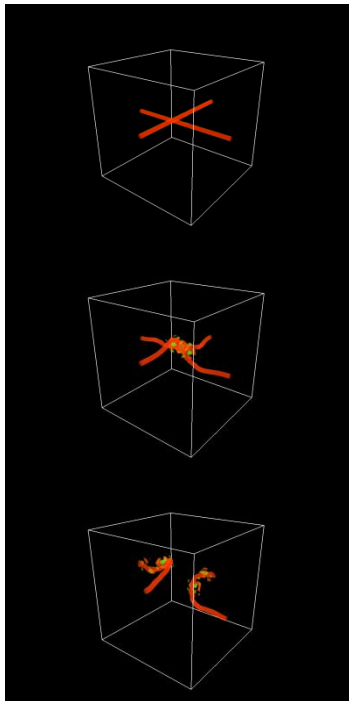
Quantum vortex :



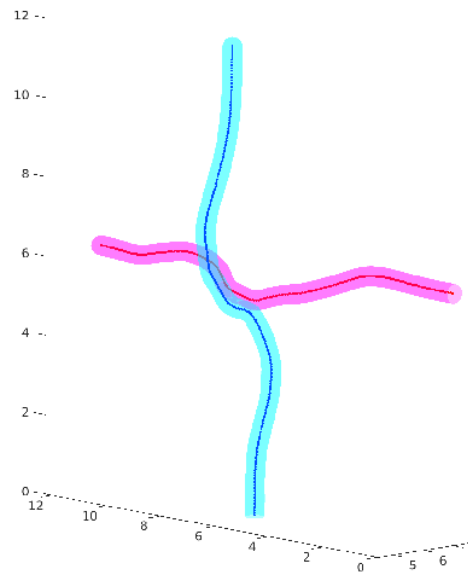
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Vortex reconnection :



Position tracking and energy :



- Increase of kinetic energy
- Small scales generation?