Time-dependent Hamiltonian

- We consider a time-dependent Hamiltonian **inspired** by the adiabatic evolution

$$H(s) = (1-s)L - s\gamma \left|w\right\rangle \left\langle w\right|$$

where L is the **Laplacian** of the graph, s is the **interpolating schedule** and $\left|w\right\rangle \left\langle w\right|$ is the **oracle** Hamiltonian

- The evolution of the state is determined by solving the schroedinger equation

$$i\frac{d}{dt}\left|\psi(t)\right\rangle = H\left|\psi(t)\right\rangle$$

with the necessary boundary conditions.