Governing equation: $\nabla \cdot (\mathbf{K} \cdot \nabla h) = \zeta \frac{\partial h}{\partial t}$

Substitute

$h(\mathbf{x}, t) = e^{-S(\mathbf{x},t)}$

$$\frac{d\mathbf{x}}{dt} = \frac{1}{\zeta}\mathbf{p} \cdot \mathbf{K}$$

Ray equations:

$$\frac{d\mathbf{p}}{dt} = \nabla\left[\frac{1}{\zeta}\nabla \cdot (\mathbf{K} \cdot \mathbf{p})\right]$$

Solve numerically

Use simulator

$$\mathbf{p} = -\frac{\nabla h}{h}$$

$$T = \int_{\mathbf{x}} \frac{1}{v} dx = \int_{x} s dx$$

Perturbation method

Sensitivity

$$\delta T = \int_{x} \delta s(x) dx$$