

Fv

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July 5, 2025

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1 Standard Diffusion equation

$$\begin{aligned}\nabla \cdot (D(x) \nabla c) &= f(x) \quad \text{in } \Omega \\ c(x) &= 0 \quad \text{on } \Gamma\end{aligned}$$

2 Finite Volume

Integral Form $\int_{\Omega} \nabla \cdot (D(x) \nabla c - f) = 0$

$$\int_{\partial \Omega} D(x) \nabla c \cdot \vec{n} - \int_{\Omega} f(x) \, dx = 0$$

```
import numpy as np
np.zeros(10)
```