

Walkin' Robin

Walking on Stars with Robin Boundary Conditions

(SIG Reading Group)

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Definition

Given an (ordinary/partial) differential equation with domain Ω ,

- A **Dirichlet boundary condition** fixes the value of solution on the boundary of domain.
- A **Neumann boundary condition** fixes the derivative (normal) applied at the boundary of the domain.
- A **Robin boundary condition** is a weighed combination of the previous two. Explicitly, for given *functions* a, b, g defined on $\partial\Omega$ the associated Robin boundary condition is (for target function f)

$$a f + b \partial_n f = g \quad \text{on } \partial\Omega$$

where $\partial_n(\cdot)$ denotes the normal derivative.

3. Theoretical Background

4. Applied Approaches

Applied stuff.

Thank you!