

Title in title Page

Author's Name

Chair of Scientific Computing
University of Bayreuth

Partner Company/University

29 February 2021

1 Basics

2 Some Examples

1 Basics

2 Some Examples

Presentation basics

Let u be something.

Let u be something. It can be expressed as:

$$u(x) = \int_{\Gamma} S(x, y) \gamma_1 u(y) dS_y - \int_{\Gamma} \gamma_{1,y} S(x, y) \gamma_0 u(y) dS_y, \quad x \in \Omega \quad (1)$$

Let u be something. It can be expressed as:

$$u(x) = \int_{\Gamma} S(x, y) \gamma_1 u(y) dS_y - \int_{\Gamma} \gamma_{1,y} S(x, y) \gamma_0 u(y) dS_y, \quad x \in \Omega \quad (1)$$

Some properties of u :

Let u be something. It can be expressed as:

$$u(x) = \int_{\Gamma} S(x, y) \gamma_1 u(y) dS_y - \int_{\Gamma} \gamma_{1,y} S(x, y) \gamma_0 u(y) dS_y, \quad x \in \Omega \quad (1)$$

Some properties of u :

- Property 1

Let u be something. It can be expressed as:

$$u(x) = \int_{\Gamma} S(x, y) \gamma_1 u(y) dS_y - \int_{\Gamma} \gamma_{1,y} S(x, y) \gamma_0 u(y) dS_y, \quad x \in \Omega \quad (1)$$

Some properties of u :

- Property 1
- Property 2

Fundamental Solution

Theorem

Blocks can be used to formulate theorems

$$S_K : \mathbb{R}^3 \setminus \{0\} \rightarrow \mathbb{R}^{3 \times 3}$$

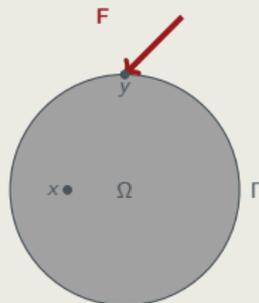
$$x \mapsto \left(\frac{1}{8\pi} \frac{1}{E} \frac{1+\nu}{1-\nu} \left[\frac{3-4\nu}{|x|} \delta_{ij} + \frac{x_i x_j}{|x|^3} \right] \right)_{ij}$$

Theorem

Blocks can be used to formulate theorems

$$S_K : \mathbb{R}^3 \setminus \{0\} \rightarrow \mathbb{R}^{3 \times 3}$$

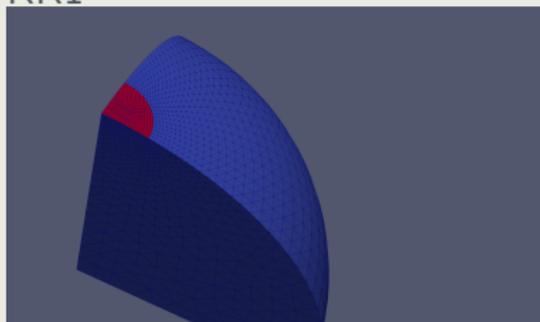
$$x \mapsto \left(\frac{1}{8\pi E} \frac{1+\nu}{1-\nu} \left[\frac{3-4\nu}{|x|} \delta_{ij} + \frac{x_i x_j}{|x|^3} \right] \right)_{ij}$$



1 Basics

2 Some Examples

KK1



KK2

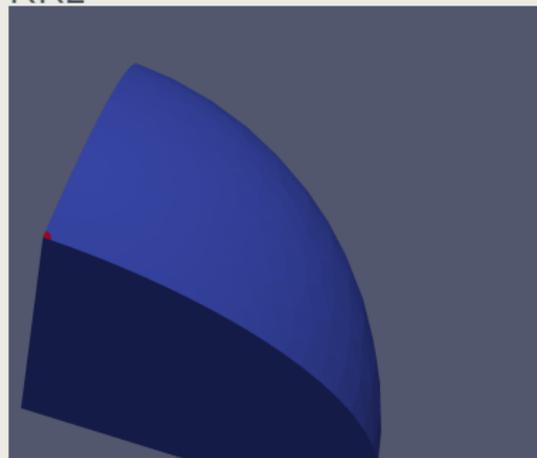


Table usage

Number of Iterations and time till convergence:

example	D& D		HC & D		HC & OeO	
	it.	time	it.	time	it.	time
KK1	157	25.7 s	146	24.0 s	92	21.7 s
KK2	2 051	619.1 s	360	111.7 s	140	217.0 s

Thank you for your attention
Any Questions?