

$$Ru_h^0 : u_h^{n+1} = u_h^n - S(A_h u_h^n - b_h) \quad n = 0, \dots, \alpha - 1$$

$u_h^0 = \text{initial guess}$

$$u_h^\alpha \leftarrow Ru_h^0$$

$$r_h = b_h - A_h u_h^\alpha$$

h

$$u_{2h}^0 = 0$$

$$b_{2h} = I_h^{2h} r_h$$

$$u_{2h}^\alpha \leftarrow Ru_{2h}^0$$

$$r_{2h} = b_{2h} - A_{2h} u_{2h}^\alpha$$

$2h$

$$u_{4h}^0 = 0$$

$$b_{4h} = I_{2h}^{4h} r_{2h}$$

$4h$

jh

e_{jh}

$$e_H = A_H^{-1} b_H$$

$$u_h \leftarrow Ru_h^0$$

$$u_h^0 = u_h^\alpha + e_h$$

h

$$e_h = I_{2h}^h u_{2h}^\alpha$$

$2h$

$$e_{2h} = I_{4h}^{2h} u_{4h}^\alpha$$

$4h$

jh

$$e_{jh} = I_H^{jh} e_H$$

$$j = 2^k, \quad k \in \mathbb{N}$$

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$$u_{2h}^0 = u_{2h}^\alpha + e_{2h}$$

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$$j = 2^k, \quad k \in \mathbb{N}$$