$$A = \textcolor{red}{\mathcal{P}^T} \textcolor{black}{\mathcal{E}^T} \textcolor{blue}{B^T} \textcolor{green}{D} \textcolor{blue}{B} \textcolor{black}{\mathcal{E}} \textcolor{red}{\mathcal{P}}$$

global domain
all (shared) dofs

sub-domains
device (local) dofs

elements
element dofs

quadrature
point values

$\mathcal{P}$

$\mathcal{P}^T$

$\mathcal{E}$

$\mathcal{E}^T$

B

B^T

D

T-vector

L-vector

E-vector

Q-vector

Element operations (dense)

libCEED Operator

Global problem