

# Simulator

## Input Deck

Geometry  
Initial conditions  
Boundary conditions  
Material specifications  
Selected sub-models  
Other controllable inputs



## TH System Code

### Conservation Equations

$$b(\mathbf{u}, \mathbf{x}_c, \{\mathcal{M}_i(\mathbf{x}_c, \mathbf{x}_m, \mathbf{u})\}) = 0$$



Closure Laws, sub-models, etc.

$$\{\mathcal{M}_i(\mathbf{x}_c, \mathbf{x}_m, \mathbf{u}); i > 0\}$$



$\mathbf{u}(\mathbf{r}, t)$