Simulator uncertain controllableTH System Code inputsInput Deck Conservation Equations $b(\mathbf{u}, \mathbf{x}_c, \{\mathcal{M}_i(\mathbf{x}_c, \mathbf{x}_m, \mathbf{u})\}) = 0$ Geometry $ightharpoonup \mathcal{U}(\mathbf{r},t)$ Selected sub-models uncertainOther fixed inputs Closure Laws, sub-models, etc. outputsuncertain

model parameters

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