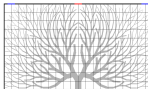


1. Set up domain

2. Generate tree structure



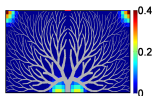
3. Define sampling grid



4. Fill sampling grid elements with terminal tissue blocks

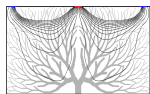


5. Fit κ field using sampling grid elements as data points



6. Predict maternal blood velocity field

a. Pressure distribution
b. Flow streamlines



7. Distribute O_2 uptake by tissue blocks or villous branches over oxygen transport mesh nodes

8. Predict O_2 distribution in IVS

a. O_2 uptake
b. Average IVS pO_2

