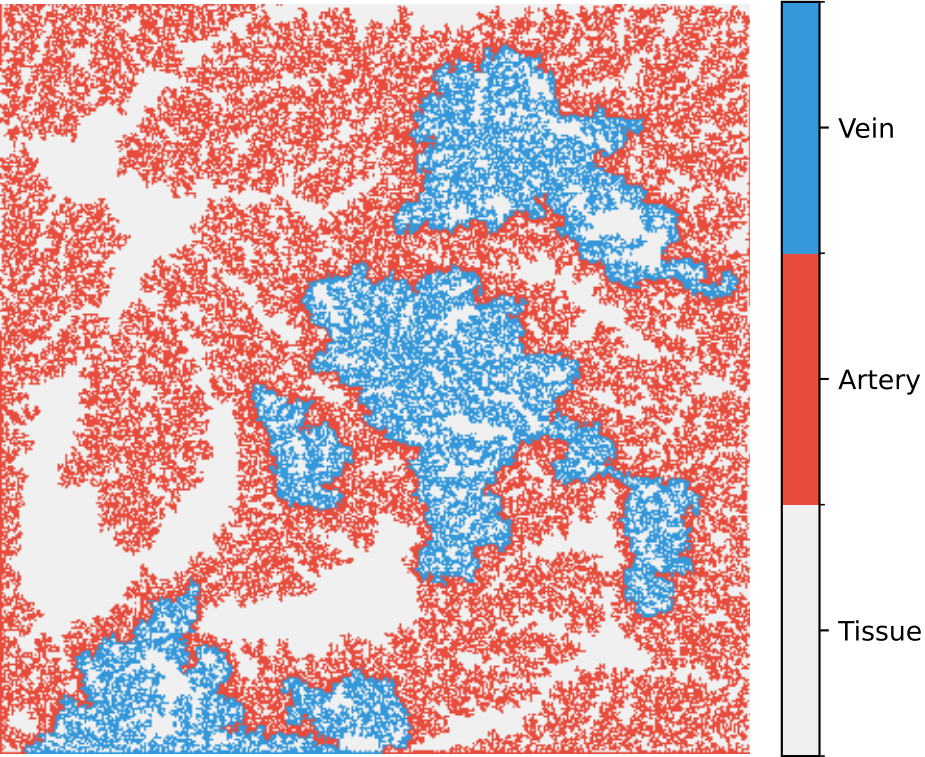
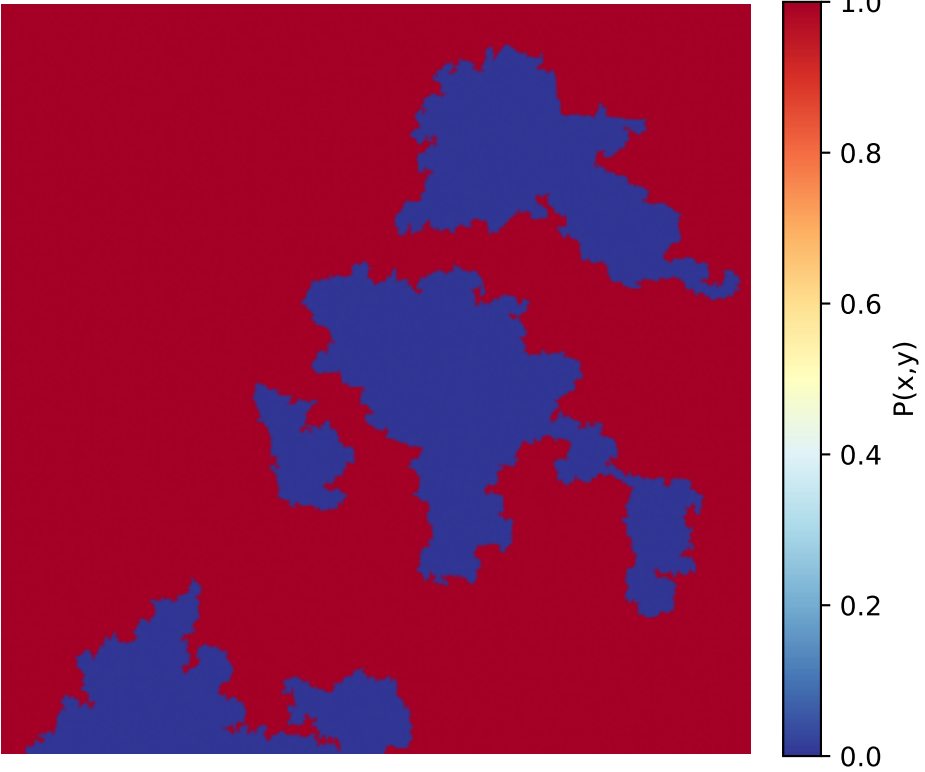


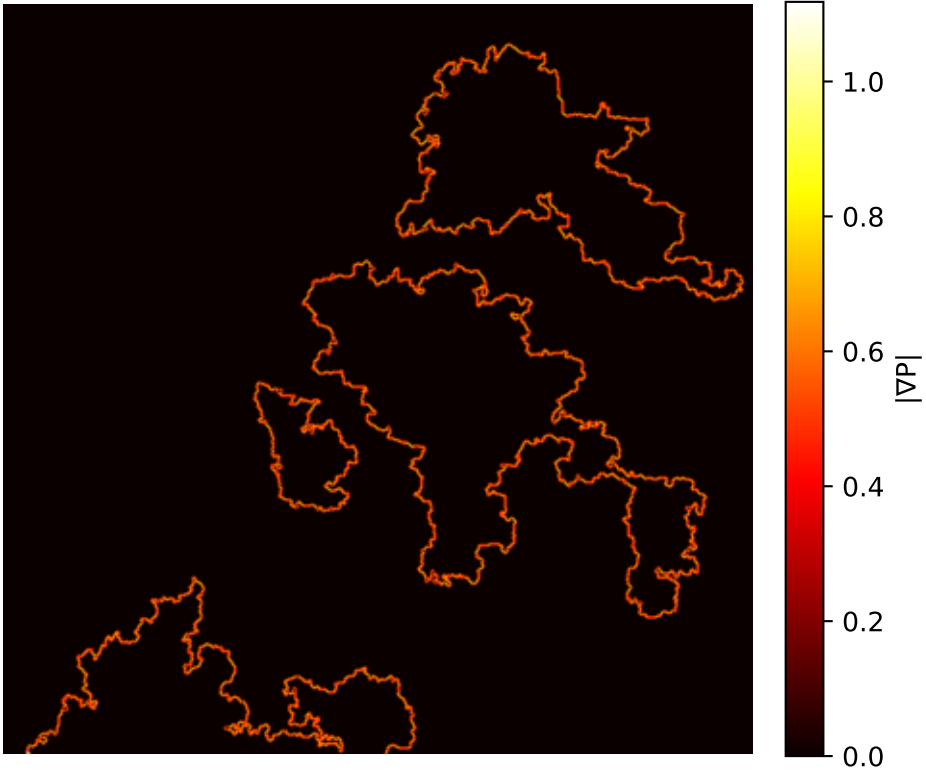
Final Vascular Structure
(Red: Artery, Blue: Vein)



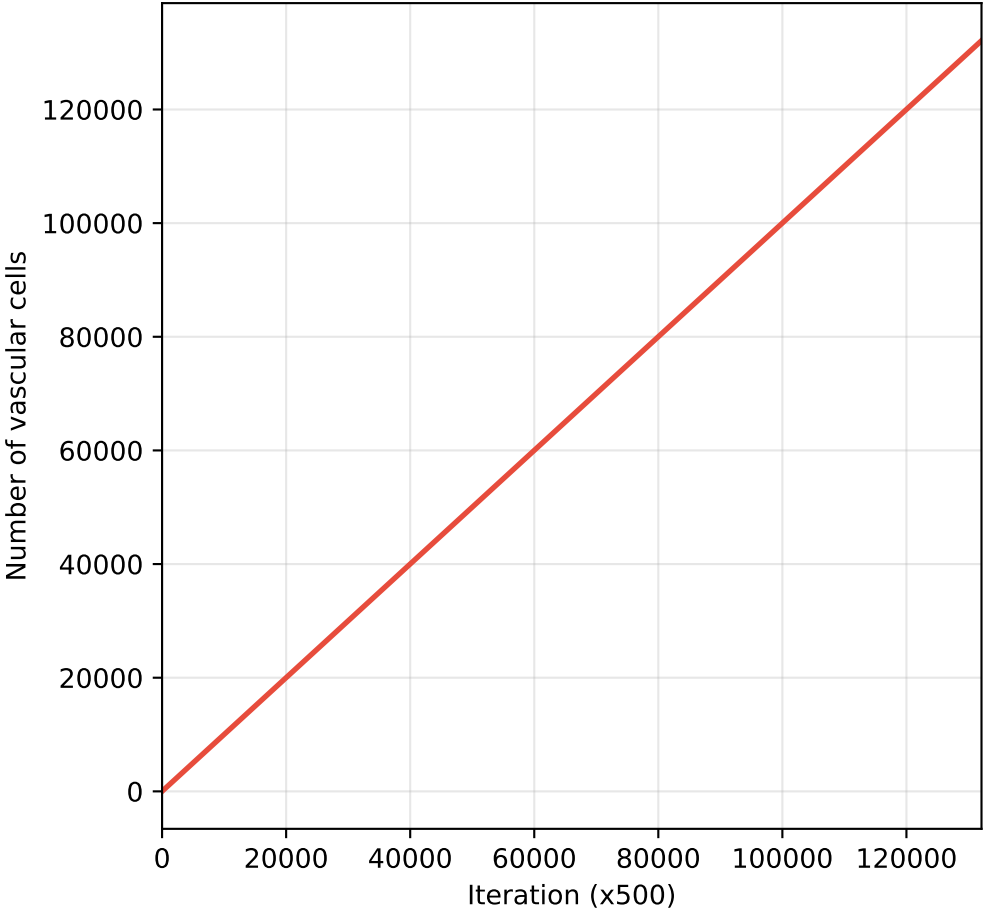
Final Pressure Field
($\nabla^2 P = 0$, BC: Neumann)



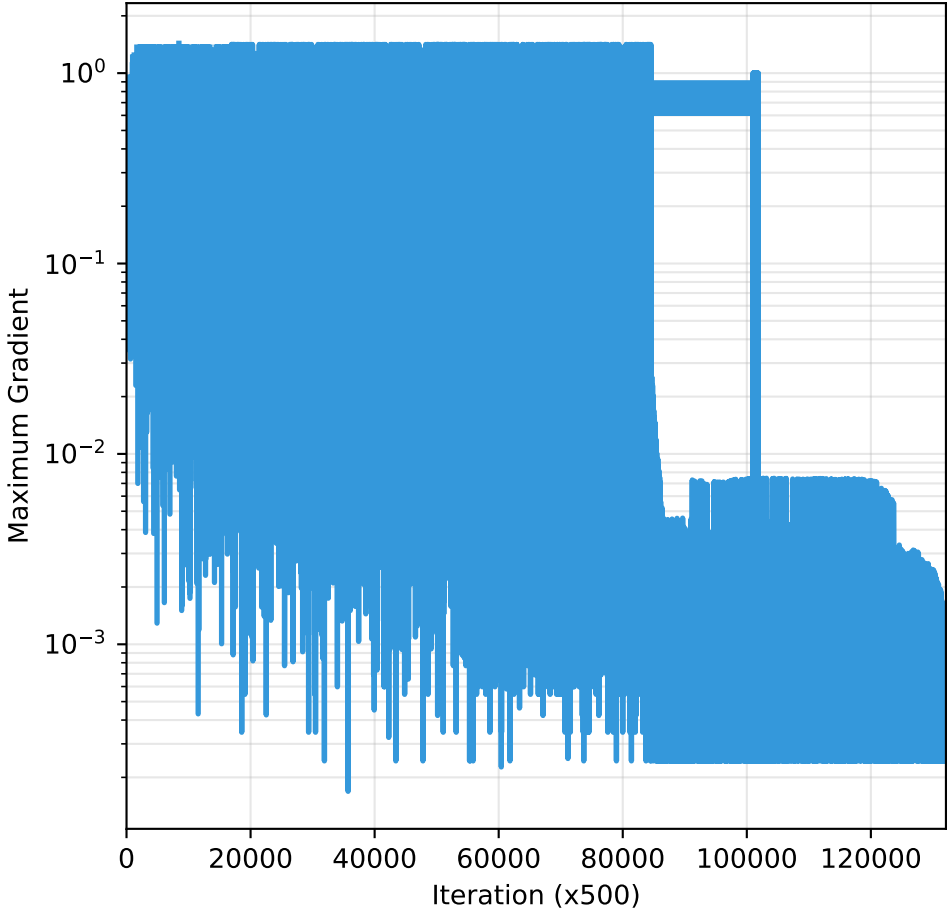
Magnitude $|\nabla P|$
(shear stress)



Vascular Network Growth



Pressure Field Dynamics



MODEL CONFIGURATION

Grid: 512x512

Backend: CUDA (GPU)

Equation: $\nabla^2 P = 0$ (Laplace)

Boundary Conditions:

- $P = 1.0$ (arteries)

- $P = 0.0$ (veins)

- $\nabla P \cdot n = 0$ (Neumann)

Growth Prob.:

$p_i \propto |\nabla P|^{1.0}$

Statistics:

Iterations: 132102

Vessels: 132112

Fraction: 50.40%

Time: 2481.32s

Speed: 53 iter/s

References:

- Niemeyer et al. (1984)

- Fleury & Schwartz (1999)