

Medical Image Processing for interventional applications SS2020

1. Typical combination of Gaussians with same sigma should result in $\sqrt{2} \cdot \sigma$
2. 3D Vesselness
 - Properties of good vessel
 - Measurement formulas, give all formulas or describe coefficients
 - What is the last step, when you have known s (\rightarrow maximization)
3. A. name top down model (\rightarrow active shape models)
B. What structure does Random Walker use, how is it splitted into 2 parts (\rightarrow graph with edges and nodes)
C. Calculate Laplacian Matrix, 2x2 matrix given
4. Camera parameters (name both, explain and give formula for Pp ($\rightarrow Pp=K \cdot P_{proj} \cdot D \cdot p$) \tilde{p})
5. f0 question with function like $f(x)^2 + 3 \cdot e^{2a} \cdot f'(x)$