Blood vessel modeling for interactive simulation of interventional neuroradiology procedures

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Highlights

- A new vasculature model in the form of a tree of local implicit functions.
- An original RANSAC-based blood vessel centerline tracking algorithm.
- An efficient algorithm to fit local contour points with implicit surfaces.
- An extensive validation on 3D Rotational Angiography data.
- The demonstration of how our model can benefit the simulation of IR procedures.