
VaMPy Documentation

Release latest

Aug 18, 2023

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VaMPy - The Vascular Modeling Pypeline

The [Vascular Modeling Pypeline](<https://github.com/KVSlab/vampy>) (VaMPy) is a collection of automated scripts to prepare, run, and analyze vascular morphologies. This includes pre-processing scripts for generating a volumetric mesh, defining physiological boundary conditions, and inserting probes for sampling velocity and pressure. For the computational fluid dynamics (CFD) simulation, we have included two [Oasis](<https://github.com/mikaem/Oasis>) problem files for simulating flow in the [internal carotid artery](https://en.wikipedia.org/wiki/Internal_carotid_artery) and the [left atrium]([https://en.wikipedia.org/wiki/Atrium_\(heart\)](https://en.wikipedia.org/wiki/Atrium_(heart))). There are also a variety of post-processing scripts, which computes wall shear stress-based metrics, more advanced turbulence metrics, and a variety of geometric parameters.

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