

Abstract Submitted
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Distribution of WSS on the Internal Carotid Artery with an Aneurysm¹ HYOUNGSU BAEK, Div. of Applied Math. Brown University, MAHESH JAYARAMAN², Department of Diagnostic Imaging, Warren Apler School of Medicine, GEORGE KARNIADAKIS³, Div. of Applied Math. Brown University — The effect of the feeding vessel geometry and its length on the wall shear stress (WSS) in the internal carotid artery (ICA) aneurysms has been investigated. Comparisons between geometric models with different inlet length were made for two patient-specific data sets. The WSS on a fusiform aneurysm with sharp turns is very sensitive and demonstrates significant and remarkable differences both qualitatively and quantitatively. The short inlet model overestimates the magnitudes of the WSS peak spots and changes impinging angle of the jet into the aneurysm. However, the WSS on a saccular aneurysm demonstrates very stable and robust results even for a short inlet model, which includes only one upstream turn.

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