

Abstract Submitted  
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**Experimental study of a flow in a saccular aneurysm**<sup>1</sup> WILLIAM TSAI, OMER SAVAS, University of California, Berkeley, DUNCAN MAITLAND, JASON ORTEGA, Lawrence Livermore National Laboratory, DAVID SALONER, University of California, San Francisco — Better understanding of cerebral aneurysms will lead to better techniques for their detection and treatment. Presently, a majority of patients who suffer hemorrhaging as a result of a ruptured cerebral aneurysm experience reduced quality of life, long term brain damage, or death. We will present research examining the underlying fluid dynamics of cerebral aneurysms. Experiments are conducted on a simplified model of a saccular cerebral tip aneurysm at a bifurcation. Flow visualization and PIV are used at steady physiological input flow conditions. The results show the formation of confined jets and vortical structures are observed within the aneurysm dome. The final goal of this research is to characterize the effects of laser-activated shape memory polymer devices on blood flow and the aneurysm.

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