

## Flow Visualization in Biological Complex Geometries for Personalized Medicine

**Authors :** Carlos Escobar-del Pozo, César Ahumada-Monroy, Azael García-Rebolledo, Alberto Brambila-Solórzano, Gregorio Martínez-Sánchez, Luis Ortiz-Rincón

**Abstract :** Numerical simulations of flow in complex biological structures have gained considerable attention in the last years. However, the major issue is the validation of the results. The present work shows a Particle Image Velocimetry PIV flow visualization technique in complex biological structures, particularly in intracranial aneurysms. A methodology to reconstruct and generate a transparent model has been developed, as well as visualization and particle tracking techniques. The generated transparent models allow visualizing the flow patterns with a regular camera using the visualization techniques. The final goal is to use visualization as a tool to provide more information on the treatment and surgery decisions in aneurysms.

**Keywords :** aneurysms, PIV, flow visualization, particle tracking

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