

Computational Cerebrovascular Hemodynamics: Recent Advances and Current Trends

Invited Lecture for ICATAS2019

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ABSTRACT

Computational Fluid Dynamics (CFD) plays a prominent role in exploring the complex pathophysiological, physical and mechanobiological interactions in cerebrovascular diseases. A number of disease models for cerebral aneurysm, stenosis and stroke were essentially based on CFD models of cerebrovascular hemodynamics. This lecture reviews the recent advances and current trends in this field and sheds the light on the eminent challenges in such multidisciplinary area of research. The lecture focuses on the cerebral aneurysm disease model and the role of CFD in establishing such model.