

Fluid-structure interaction and heart valves

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Capturing the interaction between structural bodies and fluids inside the human body is a topic of recent research that is still ongoing. Different computational modelling strategies have been developed for these so-called fluid-structure interaction problems each with its benefits and drawbacks. Some FSI strategies will be discussed and compared.

One of the major application areas is heart valves. The large rotational motions, coaptation of the leaflets and pulsatility of the flow make heart valve modelling challenging. Some valve models will be presented alongside a short overview of those areas, for which heart valve modelling could be useful.