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Integrated Visualization and Analysis of a Pig's Cardiovascular System

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Integrated Visualization and Analysis of a Pig's Cardiovascular System

Joerg Meyer, Thomas Wischgoll, Elke Moritz

Coronary heart disease is the most common cause of deaths in most Westernized countries, outnumbering the next four causes in the statistics. Consequently, there is a need for a better understanding of the cardiovascular system of the heart. This system of macroscopic to microscopic (capillary) blood vessels provides a continuous supply of oxygenated blood to the myocardium.

We present an integrated visualization method that facilitates both a topological analysis with interactive navigation of the coronary vascular system combined with a blood flow simulation. The software will serve as a simulation tool for pathological conditions in animal and human hearts.