

High Order Schemes for Networks of PDEs and their Application to Blood Flow

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Abstract

In the modelling of fluid related problems, networks of conservation laws naturally arise, for instance water and wastewater piping, rivers, traffic- or bloodflow. In this talk, the construction of high order schemes for such networks of conservation laws, the advantages, difficulties and their solutions are discussed. Furthermore we show several numerical examples including the the simulation of blood flow in a human being.