

## Block structured mesh refinement for linear advection equation

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This thesis is about Multischeme for linear advection equation on Cartesian grid. For calculation of flux function used finite volume method with first and high order scheme. For calculation of flux function used slope and flux limiters. There is constructed uniform and Block structured refined mesh, which is moving. First order and second order is combined together with Multischeme algorithm. For integration in time the thesis includes several classical methods: Euler and 4-th order SSP methods. The thesis also covers software implementation and test results.