

# Preconditioners for RBF-FD discretized fluid flow problems

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Recently, a new meshfree discretization technique for partial differential equations (PDEs) based on radial basis functions (RBF) has been introduced. Given a set of scattered nodes, RBF-interpolation is used to compute a (local) differentiation stencil (RBF-FD), leading to a sparse linear system of equations. We will develop and analyse rank-structured preconditioners for the linear systems of equations resulting from meshfree RBF-FD discretization of fluid flow problems.

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