
Duk-Soon Oh
**A Smoother Based on Nonoverlapping Domain
Decomposition Methods for $H(\text{div})$ problems**

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A multigrid method for vector field problems discretized with Raviart-Thomas finite elements is developed and analyzed. The smoother is based on a modified nonoverlapping domain decomposition methods and provides the uniform convergence of W-cycle algorithms. Numerical experiments that support the theory are also presented. This is joint work with Susanne Brenner.