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Symmetric H(Divdiv) Conforming Finite Elements and Their Applications

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This talk will introduce symmetric H(divdiv)$\cap$H(div) conforming tensor-valued finite elements on tetrahedral and cuboid meshes. In addition, this talk will present the implementation and the applications in fourth order elliptic problems as well as in the linear Einstein-Bianchi system.

References:

[1] J. Hu, Y. Liang, R. Ma, M. Zhang. A family of conforming finite element divdiv complexes on cuboid meshes, Numer. Math. 2024

[2] J. Hu, R. Ma, M. Zhang. A family of mixed finite elements for the biharmonic equations on triangular and tetrahedral grids. Sci. China Math. 2021