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Quarkonial decompositions and hp-type partition of unity methods

Function space decompositions using quarks have been extensively used and promoted by H. Triebel. They appeal to the numerical analyst since they provide a framework for hp-type partition of unity methods. We are particularly intrigued by the frame property of quarkonial systems in Besov-Sobolev spaces, and give an alternative proof for it with better scaling factors than in Triebel's original constructions. Joint work with Dahlke and Raasch.