

ADAPTIVE FRAME METHODS FOR ELLIPTIC OPERATOR EQUATIONS

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Abstract. During the last twenty years novel approaches emerged to solve elliptic PDEs numerically by using tools from harmonic analysis (especially frames). In contrast to many classical schemes, one is now able to prove convergence to the solution of the PDE. I will present the theoretical basics of this topic as well as some numerical implications, showing its future potential for the vast area of PDEs.