Least-Squares Finite Element Method for Eigenvalue Problems

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The Least Squares method has been successfully applied to the numerical solution of partial differential equations in several contexts and in connection with various applications. Despite the popularity of the method, its use for the solution of eigenvalue problems arising from partial differential equations has not attracted so much attention so far. In this talk we recall the existing literature on this subject and we discuss various schemes for the approximation of the eigensolutions associated with the Laplace equation.