Adaptive discretization of HJB equations with Cordes coefficients

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The talk discusses mixed finite element methods of elliptic problems in nondivergence form with coefficients satisfying the Cordes condition. The main focus is on operators of Hamilton–Jacobi–Bellman (HJB) structure. The Cordes condition guarantees that solutions possess a square-integrable Hessian. It is shown that the finite element error in the H^2 norm is proportional to (strong) residuals and that an adaptive mesh-refining algorithm steered by these residuals is convergent.

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