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Optimality of an adaptive finite element method for the p -Laplacian equation

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Review text:

The authors consider the nonlinear Laplacian and its standard adaptive finite element method (AFEM) with polynomial degree one. The method selects elements for refinement with Drfler marking exclusively according to the error indicators. It performs minimal refinement in that no interior node condition is needed. For the sum of quasinorm error and oscillation, an error reduction rate is proved. In combination with almost minimal Drfler marking this yields an optimal decay rate in terms of degrees of freedom. A number of experiments confirm the optimal decay rates of the AFEM.

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