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Matthew Willyard* (mwillyar@math.fsu.edu), FSU Mathematics, 208 Love Building, 1017 Academic Way, Tallahassee, FL 32306, and **David A. Kopriva**, FSU Mathematics, 208 Love Building, 1017 Academic Way, Tallahassee, FL 32306. *An Adaptive Spectral Element Method to Price American Options*. Preliminary report.

We price American options using a new adaptive spectral element method. We develop an adjoint-based global error estimator that determines where (de)refinement is needed. Then we use a work estimator to decide between h and p -(de)refinement. The result is an approximation with an error within prescribed tolerances solved on meshes that use far fewer nodes than the uniform mesh required for the same error level. (Received September 22, 2010)