1003-65-1084   **Paul E Castillo*** (`castillo@math.uprm.edu`), Dept of Mathematics, University of Puerto Rico, PO Box 9018, Mayaguez, PR 00681. *An* a posteriori *error estimate for the Local Discontinuous Galerkin method.*

In this work an *a posteriori* global error estimate for the Local Discontinuous Galerkin (LDG) applied to a linear second order elliptic problem is analyzed. Using a mixed formulation, an upper bound of the error in the primal variable is derived from explicit computations. Finally, a local adaptive scheme based on explicit error estimators is studied numerically.