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David V. Cruz-Uribe* (david.cruzuribe@trincoll.edu), Department of Mathematics, Trinity College, 300 Summit St., Hartford, CT 06106, and José María Martell and Carlos Pérez. Sharp weighted norm inequalities for classical operators.

Over the past decade there has been great interest in finding the sharp constant (in terms of the A_p constant) for weighted norm inequalities for singular integrals. I will describe joint work C. Pérez and J.M. Martell where we gave an elementary proof of the sharp constant for singular integrals that can be approximated by dyadic Haar shift operators. (These include the Hilbert transform, Riesz transforms, and the Beurling-Ahlfors operator.) Our approach also yields sharp one-weight results for commutators of these singular integrals and other operators such as the dyadic square function and the vector-valued maximal operator, and also sharp two-weight results. (Received September 22, 2010)