1067-05-1010　　　　**Craig Eric Larson*** (`clarson@vcu.edu`), Dept of Mathematics and Applied Mathematics, 4106 Grace E. Harris Hall, 1015 Floyd, Richmond, TX 23220, and **Ryan Pepper**. *The Independence and Annihilation Numbers.*

The *annihilation number* A of a graph is a polynomial-time computable upper bound of the independence number α of a graph. Given the degree sequence of a graph in non-decreasing order, A is the largest index such that the sum of the first A degrees is no more than the sum of the remaining degrees. We present here a characterization of graphs with equal independence and annihilation numbers, together with a polynomial-time algorithm for determining if a graph has this property. (Received September 17, 2010)