John R. Graef (john-graef@utc.edu), TN, and Xueyan Sherry Liu* (xueyan-liu@utc.edu), 615 McCallie Avenue, Dept. 6956, Chattanooga, TN 37343. Existence of Positive Solutions of Fractional Boundary Value Problems Involving Bounded Linear Operators.

This paper is concerned with boundary value problems for nonlinear fractional differential equations with a nonlinear term involving a bounded linear operator and satisfying boundary conditions containing a bounded linear functional. The explicit expression for an equivalent integral operator for the BVP is given. A recent fixed point theorem is used to obtain the existence of at least three positive solutions. The paper also provides an example as an application of the existence theorem. (Received August 04, 2014)