1145-34-1064   **John R Graef*** (`john-graef@utc.edu`), Department of Mathematics, University of Tennessee at Chattanooga, Chattanooga, TN 37403. *Boundary value problems for a fractional differential inclusion with a Hadamard type derivative.*

Sufficient conditions for the existence of solutions to boundary value problems for fractional differential inclusions involving the Hadamard type fractional derivative of order $\alpha \in (1,2]$ in Banach spaces are established. The approach uses Mönch's fixed point theorem and the Kuratowski measure of noncompacteness. (Received September 18, 2018)