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Lianwen Wang* (lwang@ucmo.edu), Dept. of Mathematics and Computer Science, University of Central Missouri, Warrensburg, MO 64093. *Optimal Control of Neutral Functional Differential Inclusions.*

This paper deals with optimal control of neutral functional differential inclusions. First, a sequence of discrete optimization problems is constructed using discrete approximation. Then discrete necessary optimality conditions are obtained by means of variational analysis. After that, necessary optimality conditions for the original problem are derived from the discrete necessary optimality conditions. The necessary optimality conditions are expressed in terms of normal cones, subgradients, and coderivatives of nonconvex sets and set-valued mappings. (Received September 16, 2012)