1139-90-304 Eugene A Feinberg* (eugene.feinberg@stonybrook.edu), Department of Applied Mathematics and Statist, Stony Brook University, Stony Brook, NY 11794-3600, Pavlo O Kasyanov, Institute for Applied System Analysis, National Technical University of Ukraine, "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine, and Michael Z Zgurovsky, National Technical University of Ukraine, "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine. Continuity of solutions to minimax equations for decision making under uncertainty.

This talk describes extensions of Berge's maximum theorem for possibly noncompact action sets and unbounded cost functions to minimax problems modeling decision making under uncertainty. The talk presents natural sufficient conditions for certain continuity properties of value functions and solution multifunctions. In particular, we introduce the notion of the A-lower semi-continuity of the multifunction that defines uncertainty sets. This notion is stronger than lower semi-continuity, but it coincides with lower semi-continuity in the following two classic cases: (i) the decision sets are defined by an upper semi-continuous compact-valued multifunction, and (ii) the uncertainty sets do not depend on actions of the decision maker. In general, A-lower semi-continuity of the multifunction, that defines uncertainty sets, cannot be relaxed to lower semi-continuity in the sufficient conditions for lower semi-continuity of the value function and for upper semi-continuity of the solution multifunction. (Received February 14, 2018)