1116-54-1048 **W. Kulpa** and **A. Szymanski*** (andrzej.szymanski@sru.edu), Department of Mathematics, Slippery Rock University, Slippery Rock, PA 16057, and **M. Turzanski** and **D. Zagrodny**.
L^*-operators and fixed-point theorems. Preliminary report.

An L*-operator on a topological space X is a function Λ satisfying the following condition: If A is a finite subset of X and $\{U_x : x \in A\}$ is an open cover of X, then there exists $\varnothing \neq B \subseteq A$ such that $\Lambda(B) \cap \bigcap\{U_x : x \in B\} \neq \varnothing$. The convex hull operator restricted to any convex subset of a topological vector space is an L*-operator. The family of all sets closed under an L*-operator is a convexity structure that generalizes L-structures due to Ben-El-Mechaiekh, et. al., and, independently, Park, 1998. Several types of fixed point theorems (e.g., Schauder-Tychonoff, Kakutani) and equilibrium type theorems (e.g., Nash, ESS) hold true for spaces endowed with continuous L*-operators. We are going to review some of the older results and report on the most recent progress. (Received September 17, 2015)