1014-54-1330   **W. Kulpa** and **A. Szymanski*** (`andrzej.szymanski@sru.edu`), Department of Mathematics, Slippery Rock University, Slippery Rock, PA 16057. *Some applications of signatures.* Preliminary report.

The main result of our talk is a series of theorems, called here Theorems on Signatures. As applications, we derive some well-known results such us Schauder-Tichonov-Kakutani fixed point theorem, Nash's equilibrium theorem, Maynard Smith Theorem on the existence of evolutionary stable strategies, and Gale-Nikaido theorem. Our study is based on and utilizes the technique of simplicial structures. This approach enables us to derive not only classical theorems but also stimulates new research. (Received September 27, 2005)