Preserver problems and graph homomorphisms
(Marko Orel)

Preserver problems represent an active research area in matrix theory, where a typical problem demands a characterization of all maps between some sets of matrices that preserve some function, relation, subset, etc. When matrices with coefficients from a finite field (or some other finite set) are considered, there exist some techniques to solve such problems, which are related to graph theory and finite geometry. In the talk I will present some of these techniques.