Isomorphism problem for Cayley combinatorial objects

M. Muzychuk
Department of Computer Sciences, Netanya Academic College, Netanya, Israel
muzy@netanya.ac.il

A Cayley object over a finite group H is any relational structure $\mathcal{R}$ with point set H which is invariant under the group of right translations H_R. The well-known examples of Cayley objects include Cayley graphs, Cayley maps, group codes etc. The isomorphism problem for Cayley objects may be formulated as follows: Given two combinatorial objects over the group H, find whether they are isomorphic or not.

In may talk I'll present the old and the new results which solves the above problem for different classes of objects.