Self-similar groups and problems of modern mathematics

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Abstract

Self-similar groups were introduced in the 80th in works of S.Sidki, N.Gupta and speaker. At the beginning they were used to solve several difficult problems in group theory. Then, later it started to be evident that they are related to the numerous branches of mathematics.: from dynamical systems and operator algebras to graph theory and computer science.

In my talk I will give an overview of the results, connections and applications of this remarkable class of groups.