



GENERAL SEMINAR

SPEAKER

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TITLE

Complete Rewriting Systems of Some Group and Monoid Constructions

ABSTRACT

A The origin of Combinatorial Group Theory can be traced back to 1911 when Max Dehn posed three questions concerning groups defined by finite presentations: the word, conjugacy and isomorphism problems [1]. These questions prompted the idea of using algorithms to solve problems related to Group Theory. In general, the word problem for finitely groups is not solvable; that is, given two words in the generators of the group, there may be no algorithm to decide whether the words in fact represent the same element of the group. So it is important to know which groups/group constructions (or monoids) have solvable word problem. The method of complete rewriting system gives an algorithm to get normal forms of elements of groups (monoids), and so we get solvable word problem [2].

In this talk, firstly, I will give some information about complete rewriting systems (noetherian and confluent systems). Then I will present some results related to complete rewriting systems of some group and monoid constructions.

REFERENCES

[1] Adyan, S., Durnev, V., Decision problems for groups and semigroups, Russian Mathematical Surveys. 55(10), (2007).

[2] Book, R.V., Otto, F., String-Rewriting Systems. Springer-Verlag, New York (1993).



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