

Seminar on Semigroups, Automata and Languages

On the complements and rank of the subgroups of the free group

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Abstract: The idea of using geometric objects to represent subgroups of the free group goes back to the last quarter of the twentieth century with the work of Serre and especially Stallings. It soon became clear that the original (topological) approach admitted a neat and appealing reformulation in terms of automata (now called Stallings automata). This theory has become the main modern tool for solving algorithmic questions on subgroups of the free group and has provided insightful proofs to innumerable results, both classical and new.

In this talk I shall review this construction together with some of its many applications, including some new results on complements of subgroups of the free group, which are joint work with Pedro V. Silva.

Date: Friday, 29 November 2019, 14:30

Place: Room FC1 030, DMat-FCUP