

Seminário CEADEL*

5 de maio – 15:00 - sala 6.2.38

Word problems of free inverse monoids

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Abstract:

In semigroups, y is an inverse of x if $xyx = x$ and $yxy = y$. An inverse monoid is a monoid (semigroup with identity) in which every element has a unique inverse. I will describe the free objects in the category of inverse monoids: for any set X , the free inverse monoid on X is denoted $FIM(X)$.

The word problem of a monoid is, informally, the problem of deciding whether two words over a given generating set represent the same element of the monoid. I will explain how this can be considered as a formal language, and discuss the language type (e.g. context-free, context-sensitive) of the word problem of $FIM(X)$ for a finite set X .

The talk will focus primarily on the rank 1 case, in which words over the standard generating set can be viewed as walks in one dimension.

*Seminário financiado por Fundos Nacionais através da
FCT – Fundação para a Ciência e Tecnologia
no âmbito do projeto UID/MAT/04721/2013*

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Edif. C6 – Piso 2 – sala 6.2.38