Title: Algebra, writing, right R-modules, left R-modules, G-groups.

Abstract:

Mathematics is born as a very natural mental activity, and as such it is strictly related to our elementary mental activities. Thus Geometry is strictly related to visualisation, mainly visualisation of static figures, Calculus is related to visualisation of dynamic situations, and Algebra is related to writing. In Algebra, we manipulate symbols, bring them to the other side of an equation changing the sign or putting them under the fraction bar, move parentheses,...

In this talk, we will begin with a quick presentation of the history of Algebra, emphasising the relations with writing (hence, indirectly, with alphabets and language). We will then pass to talk of right R-modules and left R-modules, and the distinction between them. Here R is a ring. We will consider categories and G-groups, where G is a group. We will conclude with some results concerning the Krull-Schmidt-Remak Theorem and uniqueness of decompositions.