Title: An Introduction to Computational Group Theory

In this lecture, we will give a survey of the basic methods in computational group theory. We will first discuss the fundamental "data structures" namely the notions of a permutation group, a matrix group, and a finitely presented group. In the second part of the lecture, we will sketch some of the fundamental algorithms for these "types" of groups, for example "The Meataxe", and their implementation in the Computer Algebra system GAP.