

Centro de Investigação em Matemática e Aplicações  
Departamento de Matemática  
Programa de Doutoramento em Matemática

## Seminário

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### The representation theory of the unitriangular group and other related groups

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#### Abstract:

The representation theory of groups has been an important topic in the study of groups for many years. Many advances in this area have been made in order to find the irreducible representations of certain groups, which are the building blocks of all representations. In 1955, J.Green gave a complete description of the irreducible characters of the group of the invertible matrices over a finite field.

In this talk, I will talk about the recent advances in the topic of irreducible representations of the unitriangular group, and other matrix groups. The description of the irreducible representations of the unitriangular group is known to be a wild problem and very little is known. Such difficulty gave rise to the development of the supercharacter theory and (super)character sheaves on unipotent groups.

Joint work with C. Andre (FCUL)

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