## **BATOG** - Bicocca Afternoon Talks On Groups

Università Milano-Bicocca, Dipartimento di Matematica e Applicazioni Ed. U5, Aula 3014

## Ilaria Castellano – Tue. 5/02/19, 14:00

(Università di Udine)

## Finiteness properties for totally disconnected locally compact groups

Abstract: For a totally disconnected locally compact (= TDLC) group finiteness properties like type  $FP_n$  and type  $F_n$  can be introduced by analogy with the discrete case. In a joint paper with G. Corob Cook we investigate these finiteness properties for general commutative rings R, in particular for  $R = \mathbb{Z}$  and  $R = \mathbb{Q}$ .

The aim of the talk is to show that many well-known properties that hold for abstract groups satisfying some finiteness properties can be transferred to the context of TDLC groups and some can be even improved. In addition, various famous criteria for finiteness properties — such as Bieri's criterion and Brown's criteria — and an analogue in the context of TDLC groups as well. Finally, we give some applications of these criteria.