THE DEPARTMENT OF MATHEMATICS

$\mathfrak{F}_P(P) = \mathfrak{F}_P(G)$ $P \in Syl_p(G)$ $N = N_G(Z(J(P)))$, $\mathfrak{F}_P(N) = \mathfrak{F}_P(G)$

Algebra Seminar

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Monday - October 15, 2018

at 4pm, in the Alavi Commons, Everett Tower

pro-finite groups, the p-adic integers, and the cyclic pro-finite groups

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In this talk, we will introduce the category of pro-finite groups. Our first example will be the p-adic integers, p a prime, an example of both a pro-finite ring and a pro-finite group. We will consider the completion of the integers as the inverse limit of $(\mathbb{Z}/m\mathbb{Z} \mid m \in \mathbb{N})$; its Sylow subgroups; and its action on a pro-finite group. Finally, we will conclude with a discussion of all of the pro-finite cyclic groups up to isomorphism All are welcomed.

$1 \to C \to G \to G/C \to 1$ $P \in Syl_p(G/C)$ $1 \to C \to G \to G/C \to 1$

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