

Mild pro- p -extensions of number fields with restricted ramification

In this talk we introduce the notion of mild pro- p -groups which by work of J. Labute and A. Schmidt have become of importance in the study of tamely ramified pro- p -extensions of number fields. We show that mild pro- p -groups can be constructed using higher Massey products in group cohomology and give an arithmetic interpretation of the triple Massey product in the case $p = 2$. Finally we discuss a question by Serre on pro- p -groups defined by a single relation.