Clausen, Tim; Tent, Katrin
Some model theory of profinite groups. (English) [Zbl 1433.03087]

Summary: The main purpose of these notes is to give more background and details for the results obtained in [D. Macpherson and K. Tent, Bull. Lond. Math. Soc. 48, No. 6, 1037–1049 (2016; Zbl 1430.03054)] which rely heavily on deep results by Lazard, Lubotzky, Mann, du Sautoy and others. At the center is M. Lazard’s purely group theoretic characterization of \( p \)-adic analytic groups given in [Publ. Math., Inst. Hautes Étud. Sci. 26, 389–603 (1965; Zbl 0139.02302)] (see Section 4.2 below). By Lazard’s result a compact topological group is a \( p \)-adic analytic group if and only if it has an open uniformly powerful pro-\( p \) subgroup (see Section 3).

For the entire collection see [Zbl 1390.03007].

MSC:

- 03C60 Model-theoretic algebra
- 03C45 Classification theory, stability, and related concepts in model theory
- 20E18 Limits, profinite groups

Full Text: DOI arXiv