Generalized Stallings' decomposition theorems for pro-*p* groups

MATTHEUS P. S. AGUIAR AND PAVEL A. ZALESSKII

Abstract. The celebrated Stallings' decomposition theorem states that the splitting of a finite-index subgroup H of a finitely generated group G as an amalgamated free product or an HNN-extension over a finite group implies the same for G. We generalize the pro-p version of it proved by Weigel and the second author in [25] to splittings over infinite pro-p groups. This generalization does not have abstract analogs. We also prove that generalized accessibility of finitely generated pro-p groups is closed for commensurability.