

On profinite groups with commutators covered by countably many subgroups or cosets

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Let w be a group-word. Suppose that the set of all w -values in a profinite group G is contained in a union of countably many subgroups or cosets of subgroups. It is natural to expect that the properties of the subgroups have an influence on the structure of the subgroup $w(G)$ generated by the w -values. I will discuss in particular the case where w is a multilinear commutator word and \mathcal{C} is a class of groups closed under taking subgroups, quotients, and such that in any group the product of finitely many normal \mathcal{C} -subgroups is again a \mathcal{C} -subgroup.