

1040-20-143

Aline G. S. Pinto* (alineg@mat.unb.br), Departamento de Matemática, Universidade de Brasília, Brasília, DF 70910-900, Brazil. *Normal subgroups of profinite groups of non-negative deficiency.*

A group G is called knot-like if

- (i) $G/[G, G]$ is infinite cyclic and
- (ii) the deficiency $def(G) = 1$, where $def(G)$ is the maximum of $n - r$ over all finite presentations of G with n generators and r relators.

It was conjectured by E. Rapaport Strasser in 1975 that if the commutator group G' of a knot-like group G is finitely generated then G' should be free. D.H. Kochloukova recently proved that the conjecture is true. This implies that knot-like groups with finitely generated commutator subgroup are residually finite, so their profinite completions give a family of groups satisfying properties (i) and (ii). Thus the E. Rapaport Strasser conjecture has sense also for profinite groups.

In a joint work with P. Zalesski, A. Jaikin-Zapirain and F. Grunewald, we prove that the conjecture also true for profinite groups. (Received January 30, 2008)