

Lo, Eddie H.

A polycyclic quotient algorithm. (English) Zbl 0930.20037
J. Symb. Comput. 25, No. 1, 61-97 (1998).

An algorithm to compute polycyclic quotients of a group given by a finite presentation is discussed. The algorithm is based on a generalization of the Gröbner basis method to the integral group ring of a polycyclic group. Most of this material can be found in the author's thesis (Rutgers Univ., 1996). A simplified version of this paper is also available [in DIMACS, Ser. Discrete Math. Theor. Comput. Sci. 28, 159-167 (1997; [Zbl 0874.20020](#))].

MSC:

- [20F14](#) Derived series, central series, and generalizations for groups
- [20-04](#) Software, source code, etc. for problems pertaining to group theory
- [20F05](#) Generators, relations, and presentations of groups
- [20C07](#) Group rings of infinite groups and their modules (group-theoretic aspects)
- [68W30](#) Symbolic computation and algebraic computation

Cited in **8** Documents

Keywords:

[algorithms](#); [polycyclic quotients](#); [finite presentations](#); [Gröbner bases](#); [integral group rings](#); [polycyclic groups](#)

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