SFB–Seminar

Am Montag, den 27.1.1997 findet folgender Vortrag statt:

Finite machinery for infinite groups

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Der Vortrag beginnt um 16:00 Uhr c.t. im Raum V2-205.

Abstract

This talk will present an overview of the theory of automatic groups, and briefly describe work in progress to extend current theory and practice.
Automatic groups were defined as a class of finitely presented groups by Thurston, in an attempt to abstract certain properties of the fundamental groups of compact hyperbolic manifolds. A 'language' of words in the generators defined by a finite state automaton (essentially a finite graph) covers the group; a 'fellow traveller' condition ensures that two words in that language representing closely related group elements are also close as words. The class of automatic groups includes finite groups, free groups, free abelian groups and Coxeter groups, as well as all word-hyperbolic groups.
Using the associated automata, computation with an automatic group is feasible; in particular, the word problem is solvable and growth functions are computable. However, many groups of interest to topologists can be proved to have some but not all of the defining properties of automatic groups; for these a wider class of groups is necessary.

Es gibt Kaffee und Tee im Blauen Salon schon um 15:30 Uhr.

G. Röhrle