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Enlargeability of local groups according to Malcev and Cartan-Smith. (English)

[Zbl 0657.22007](#)

Actions hamiltoniennes de groupes. Troisième théorème de Lie, Sémin. Sud-Rhodan. Géom. VIII, Lyon/France 1986, Trav. Cours 27, 97-127 (1988).

[For the entire collection see [Zbl 0634.00019](#).]

This paper is a very useful source of reference for the theory of extension of local groups to global ones. This theory is vital for topological and Lie groups, but the basic theory is algebraic, combinatorial, and homological. The historic roots go back to A. I. Mal'cev who introduced partial groups and gave examples of partial groups which cannot be enlarged to global groups. The present paper however gives a complete and careful presentation of Mal'cev's ideas and supplements it by an alternative version of the enlargeability theory going back to P. A. Smith. It is shown in the process that the Cartan- Smith criterion and the Mal'cev criterion are in fact equivalent.

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MSC:

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[08A55](#) Partial algebras
[57S99](#) Topological transformation groups

Cited in **1** Review
Cited in **2** Documents

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extension of local groups; partial groups; global groups; enlargeability theory; Cartan-Smith criterion; Mal'cev criterion