

On a Theorem of Halin

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The talk begins with a new, concise proof of a generalization of a theorem of Halin about locally finite, infinite graphs to graphs with unbounded degrees. Then it investigates when such graphs have finite set of vertices whose stabilizer is the identity automorphism. A bound on the size of such sets, which are called distinguishing, is also provided.

To put the theorem of Halin and its generalization into perspective, several related non-elementary, independent results and their methods of proof are also discussed.