

**Harlander, Jens; Rosebrock, Stephan**

**On distinguishing virtual knot groups from knot groups.** (English) Zbl 1195.57007  
*J. Knot Theory Ramifications* 19, No. 5, 695-704 (2010).

The authors give many examples of virtual groups  $G$  which cannot be knot groups. For example by showing that  $H_2(G) \neq 0$ , or showing that the group comes from a non-positively, curved square complex, or showing that the group has torsion.

This is hardly surprising as many virtual knots are non-trivial but have trivial group.

Reviewer: [Roger Fenn \(Brighton\)](#)

**MSC:**

**57M05** Fundamental group, presentations, free differential calculus  
**57M50** General geometric structures on low-dimensional manifolds  
**20F65** Geometric group theory  
**20F67** Hyperbolic groups and nonpositively curved groups

Cited in 1 Document

**Keywords:**

virtual knots; Wirtinger presentation; knot groups; non-positively curved square-complex

**Full Text:** [DOI](#)

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