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**Maranda Franke\*** (mfranke2@math.unl.edu), 203 Avery Hall, Lincoln, NE 68588. *Geodesic language complexity and group structure*. Preliminary report.

A finitely generated group has solvable word problem if its language of geodesics is computable; the complexity of this language has connections to algebraic and geometric properties of the group. Gilman, Hermiller, Holt and Rees showed that a group is virtually free if and only if there is a finite generating set which produces a locally excluding geodesic language. In this talk, I will discuss existence results that were motivated by the search for a group theoretic characterization of the related language restriction piecewise excluding. (Received February 16, 2016)