1120-20-302    **Azer Akhmedov** and **Damiano Fulghesu\***, fulghesu@mnstate.edu. *Arithmetic sets in groups.* In this talk, we introduce the notion of arithmetic set for an arbitrary, finitely generated group. Every tile of a group is an arithmetic set, while arithmetic sets form a larger class of subsets. Arithmeticity strongly reflects the geometry of the group. For example, in negatively curved groups, such as free groups of rank at least two, being arithmetic is a loose condition on sets, while in groups at the other extreme, such as cyclic groups, it imposes very strong conditions with number-theoretic flavor. (Received February 23, 2016)