1163-13-593 **Ela Celikbas*** (ela.celikbas@math.wvu.edu), Morgantown, WV 26506. *Weakly Arf Rings.*
In 1971, Lipman proved that, if $(R, \mathfrak{m})$ is a complete, one-dimensional local domain with an algebraically closed field of characteristic zero, and R is saturated, then R has minimal multiplicity, that is, the embedding dimension of R is equal to the multiplicity of R. In the proof, Lipman used the fact that such a ring R is an Arf ring, i.e., R satisfies a certain condition that was studied by Arf in 1949 pertaining to a certain classification of curve singularities. The defining condition of an Arf ring is easy to state: if R is as above, then R is Arf provided, whenever $0 \neq x \in \mathfrak{m}$ and y/x, $z/x \in \mathrm{Frac}(R)$ are integral over R, one has that $yz/x \in R$.

In this talk, we introduce weakly Arf rings, which is a generalization of Arf rings. We give characterizations of weakly Arf rings and explore the relation between weakly Arf and Arf rings. We also give several examples. This talk is based on the recent joint work with O. Celikbas, C. Ciupercă, N. Endo, S. Goto, R. Isobe, and N. Matsuoka. (Received September 10, 2020)