1150-13-311 **Ela Celikbas*** (ela.celikbas@math.wvu.edu), Department of Mathematics, 320 Armstrong Hall, P.O. Box 6310, Morgantown, WV 26506. *On Arf Rings.* Preliminary report.

Title: On 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 discuss some characterizations and examples of Arf rings, as well as a definition for higher dimensional Arf rings which has been recently proposed to us by Cătălin Ciupercă. (Received July 12, 2019)