1115-54-26 **Leonard R Rubin*** (lrubin@ou.edu), Department of Mathematics, University of Oklahoma, 601 Elm Ave., Rm. 423, Norman, OK 73019. *Universal Spaces in Dimension Theory.*

A universal object for a class $\mathcal{C}$ of topological spaces is an element X of $\mathcal{C}$ having the property that each element of $\mathcal{C}$ embeds in X. For covering dimension, dim, the existence of universal objects for the class of metrizable compacta with $\dim \leq n$, $n \geq 0$, the existence of universal spaces has been known since the 1930s. For compact Hausdorff spaces or metrizable spaces of infinite weight $\leq w$, this result is repeated.

For cohomological dimension $\dim_G$, G an abelian group, there is also some theory in this direction. According to a result of W. Olszewski from 1995, for each countable abelian group G and $n \geq 0$, the class of separable metrizable spaces of $\dim_G \leq n$ has a universal element. It is not known if this fact can be established for arbitrary G or with separable metrizable replaced by metrizable spaces of infinite weight $\leq w$. When it comes to the class of metrizable compacta with $\dim_G \leq n$, the situation is more enigmatic.

In this presentation we will explain to some extent the ideas behind proving the known results and indicate what might be done about the unsolved problems. (Received July 31, 2015)