

1077-55-675

Vera Tonic* (verat@nipissingu.ca). *Proof of Edwards-Walsh resolution theorem without Edwards-Walsh complexes.*

In 1981, Robert Edwards and John Walsh proved the cell-like resolution theorem, which states that every compact metrizable space X can be resolved by a cell-like map from a compact metrizable space Z , having the property that $\dim Z \leq \dim_{\mathbb{Z}} X$. This means that there is a surjective map $\pi : Z \rightarrow X$ whose point preimages are cell-like, i.e., have the shape of a point.

We will look at how a certain type of CW-complexes, called Edwards-Walsh complexes, were used in the proof of this theorem, as an algebraic topology tool. Then we will see how the proof could have been done without using Edwards-Walsh complexes.

We will compare the two approaches, and discuss how omitting Edwards-Walsh complexes, or using a simpler version of them, can simplify the proof of Edwards-Walsh resolution theorem, as well as other resolution theorems and their consequences. (Received September 09, 2011)