Witold Rosicki, *Gdansk University, Poland*

On the uniqueness of the decomposition of manifolds, polyhedra and continua

Generally the uniqueness of the decomposition of topological spaces into Cartesian product does not hold. We have very simple examples. The Cartesian product of a disc with two holes and na interval and the Cartesian product of a torus with one hole and an interval are homeomorphic.

However, the uniqueness of the decomposition holds in some cases. In 1938 K. Borsuk showed that the decomposition of a polyhedron into Cartesian product of 1-dimensional factors is unique.

I consider the uniqueness of the Cartesian products of 2-polyhedra and present some possitive results. In the world of continua such uniqueness resulds cannot be obtained.

Toghether with S. Kwasik we consider the Cartesian products of 3-manifolds and n-spheres. If n is even, then the product is unique, if n is odd it is not.