
ALEX SUCIU, Northeastern University

Polyhedral products, duality properties, and Cohen-Macaulay complexes

The polyhedral product is a functorial construction that assigns to each simplicial complex K on n vertices, and to each pair of topological spaces, (X, A) , a certain subspace, $\mathcal{Z}_K(X, A)$, of the cartesian product of n copies of X . I will discuss some of the relationships between the duality properties of these spaces and the Cohen-Macaulay property of the original simplicial complex. This is based on joint work with Graham Denham and Sergey Yuzvinsky.