The Mapping Cylender

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Abstract

Given an arrow $f : X \to Y$ in the category of CW complexes, we know how to define Mapping Cylinder of $f$ namely $MCyl(f)$. We also know how to define the Mapping Cylinder of an arrow in the category of ‘chain complexes of abelian groups’. If $Ch$ denote the functor from the category of CW complexes to the category of ‘chain complexes of abelian groups’, we shall prove $MCyl(Ch(f)) \simeq Ch(MCyl(f))$. 