

1132-55-206

Cary Malkiewich* (cmalkiewich1@gmail.com), Department of Mathematical Sciences,
Binghamton University, PO Box 6000, Binghamton, NY 13902. *The transfer map of free loop
spaces.*

To any fiber bundle $E \rightarrow B$ with finite CW-complex fibers F , there are classical wrong-way or “transfer” maps on the homology groups $H_*(B) \rightarrow H_*(E)$, and similarly on cohomology as well. If LE and LB denote the spaces of free loops in E and in B , respectively, then there is a second transfer map $H_*(LB) \rightarrow H_*(LE)$, whose very existence is surprising, because the fiber LF of $LE \rightarrow LB$ is no longer finite. This map is constructed so as to be compatible with classical transfers in Waldhausen K -theory, but this makes its definition mysterious. I will discuss a joint result with John Lind that relates this free loop transfer to a certain generalization of the Reidemeister trace. We end with a fairly concrete geometric model that can be used for calculations. (Received July 22, 2017)