

1077-55-1866

Anna Marie Bohmann*, Department of Mathematics, Northwestern University, 2033 Sheridan Road, Evanston, IL 60208. *Global equivariant homotopy theory*.

Much recent work has shown that equivariant homotopy theory can give insight into the non-equivariant world. While concrete calculations focus on specific groups, many familiar objects in homotopy theory have (or we would like them to have) equivariant generalizations that feel “natural.” One way of stating such naturality is by asking how these generalizations fit together across different groups of equivariance. Global equivariant homotopy theory is the study of spectra that vary naturally in the group of equivariance. Change of groups is an important tool in existing calculations, and one might hope that some calculations work globally and not just one group at a time; it is also interesting to determine the precise functoriality of calculations such as the Segal conjecture or the Atiyah–Segal completion theorem that are already known to work globally. I will discuss the basic ideas of what we mean by “global” spectra and explain how these notions capture the naturalness we see in familiar spectra such as complex cobordism and K-theory, but don’t see for Eilenberg–MacLane spectra. (Received September 21, 2011)