

Model structures and spectral sequences

Friday, October 29, 2021 11:10 AM (50 minutes)

Model categories give an abstract setting for homotopy theory, allowing study of different notions of equivalence. I'll discuss various categories with associated functorial spectral sequences. In such settings, one can consider a hierarchy of notions of equivalence, given by morphisms inducing an isomorphism at a fixed stage of the associated spectral sequence. I'll discuss model structures with these weak equivalences for filtered complexes, for bicomplexes and for multicomplexes. I will talk about joint work with subsets of: Joana Cirici, Daniela Egas Santander, Xin Fu, Ai Guan, Muriel Livernet and Stephanie Ziegenhagen, as well as reporting on some work of my student James Brotherston.

Presenter: WHITEHOUSE, Sarah (University of Sheffield)