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Homotopy theory and spectral sequences

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I will discuss hierarchies of homotopy theories related to spectral sequences. For a category admitting functorial spectral sequences one can consider the class of weak equivalences given by those morphisms inducing a quasi-isomorphism at a certain fixed page. For important examples such as filtered complexes, bicomplexes and generalisations, we set up and study the associated homotopy theory. And in on-going work we consider the category of spectral sequences directly.

The work is joint with subsets of: Joana Cirici, Daniela Egas Santander, Xin Fu, Ai Guan and Muriel Livernet.