

# Accessible model structures

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In this talk I will introduce a class of accessible model structures on locally presentable categories, which includes, but is more general than, combinatorial model structures. An accessible model structure is particularly good if one wants to left or right induce it along an adjunction - by a theorem of Burke and Garner [1] the induced weak factorization systems always exist, so one needs to check only a compatibility condition. If it holds then the resulting model structure is again accessible.

One example of an accessible model structure is the Hurewicz model structure on  $Ch_R$ , which can be induced to many categories of interest, like algebras, coalgebras, comodules, comodule algebras, coring comodules and bialgebras [2]. I will discuss ideas behind some of the proofs for induced model structures and give specific examples.

## REFERENCES

- [1] J. Bourke, R. Garner, *Algebraic weak factorisation systems I: accessible AWFS*, arXiv:1412.6559
- [2] K. Hess, M. Kedziorek, E. Riehl, B. Shipley, *Accessible model categories*, in preparation

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\*Joint work with Kathryn Hess, Emily Riehl and Brooke Shipley