

Concrete Coalgebraic Modal Logic

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As introduced by Larry Moss, coalgebraic modal logic generalises modal logic and different approaches have been proposed so far, e.g. cover modality, predicate liftings, abstract logic to name but a few. Some of them have been studied in different categories rather than the category of sets, and the general framework based on a dual adjunction is now almost standard. However, a general study based on *concrete dualities* [1] has not yet been exploited. In this talk, I will introduce our ongoing project on concrete coalgebraic modal logic. Firstly I will formulate few basic notions concretely and show connections in different approaches, for examples objects of modalities and (generalised) predicate liftings.

References

- [1] H.-E. Porst and W. Tholen. Concrete Dualities. In *Category Theory at Work*, pages 111-136. Heldermann Verlag Berlin, 1991