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**David Sprunger\***, 2102 W Vernal Pike, Bloomington, IN 47404. *Behavioural equivalence in coalgebras of finitary functors*. Preliminary report.

Behavioural equivalence is a fundamental notion in the theory of coalgebras expressing when two states in a coalgebra have the same behaviour. This notion can be used, for example, in determining the minimization of various kinds of automata. Often times behavioural equivalence coincides with bisimilarity, most famously when the functor expressing the system type for the coalgebra preserves weak pullbacks. In this talk we present an alternative to bisimulation for coalgebras of finitary functors which coincide with behavioural equivalence even for functors which do not preserve weak pullbacks. Additionally we present an axiomatization of this notion which is sound and complete. Joint work with Larry Moss. (Received February 07, 2017)