# ON THE DOUBLE CATEGORY OF COALGEBRAS

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Classically, two states of coalgebras of the same functor are behaviourally equivalent whenever they are identifiable by morphisms of coalgebras that share the same codomain. However, for quantitative systems it is often more reasonable to consider states with "close behaviour" instead, which leads to the notion of *behavioural distance*. In this talk we will argue that a natural double category of coalgebras for a lax double functor provides a suitable context to reason coalgebraically about *indistinguishability*.

In this talk we report on joint work with Sergey Goncharov, Pedro Nora, Lutz Schröder and Paul Wild (Friedrich-Alexander-Universität Erlangen-Nürnberg).

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