

The aim of this talk is to present bicategorical counterparts of the notions of a linear exponential comonad, as considered in the study of linear logic, and of a codereliction transformation, introduced in the study of differential linear logic via differential categories. As an application, the differential calculus of Joyal's analytic functors will be extended to analytic functors between presheaf categories, in a way that is analogous to how ordinary calculus extends from a single variable to many variables. This is joint work with Marcelo Fiore and Martin Hyland.

M. Fiore, N. Gambino, and M. Hyland, “Monoidal bicategories, differential linear logic, and analytic functors”, <https://arxiv.org/abs/2405.05774>, 2024.