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Dialectica Categories, Linear Logic, and the Structure of Modalities

Valeria de Paiva
Topos Institute, USA.
valeria@topos.institute

Resumo

Categorical models based on Gödel's Dialectica interpretation have played an important role in the semantics of linear logic. In this talk we revisit two related constructions: the original Gödel-inspired Dialectica construction and the Dialectica category construction suggested by Girard and developed by de Paiva. We present both in a modern and explicit style, clarifying the definitions of objects, morphisms, and the monoidal, additive, and exponential structures that interpret linear logic. Special attention is given to the exponential modalities governing duplication and discarding of resources. Examples illustrate how these models capture linear dependencies between proofs. The goal is to make the relationship between these two Dialectica-style constructions clearer and more accessible to contemporary audiences.

keywords:: Gödel's Dialectica interpretation, Linear Logic, Categorical Semantics

Apoio:

