

Models for Type Theory

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The ideas of Homotopy Type Theory have led to precise formulations of categorical models of Type Theory. As a result a model theory of Type Theory is beginning to emerge. I shall start by describing some general features. Then I shall describe a model construction based on what has come to be called polynomials. This gives a proof of the independence of the Axiom of Functional Extensionality. Iterating the construction gives a model which is a kind of Dialectica Interpretation for Type Theory. If there is time I shall describe some related constructions.