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Cartesian Fermat Categories

Cartesian differential categories provide a categorical framework for differential calculus. Another approach to the categorical foundations of differentiation are Fermat theories, which are Lawvere theories that have Hadamard's Lemma as an axiom. It is already known that every Fermat theory is a Cartesian differential category. In this talk, we will discuss Cartesian Fermat categories, the Fermat theory analogue of a Cartesian differential category, with the main result being that a Cartesian Fermat category is a Cartesian differential category. This talk is based on joint work with Carlos Pascual Miralles.