

- ▶ NICOLA GAMBINO, *Homotopy-theoretic aspects of Martin-Löf type theory*.  
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Over the past few years, there has been significant progress in making precise the tantalizing connections (originally suggested by Hoffman and Streicher in the '80s) between Martin-Löf type theory, Quillen's homotopical algebra and higher category theory. In particular, the analogy between identity types and path spaces can be explained by showing that the syntactic category of Martin-Löf type theory admits a weak factorisation system. Furthermore, it can be shown that, like topological spaces, types have a fundamental weak  $\omega$ -groupoid, in which the weakness of the associativity and unit laws corresponds to the intensional (rather than extensional) formulation of identity types. The aim of the talk is to give an accessible survey of these results.