

# Logic

“Type theory as a language for homotopy theory”: what does it mean, really?

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Around ten years ago, the discovery of rich connections between type theory and homotopy-theoretic settings (by Hoffmann–Streicher, Voevodsky, Awodey–Warren, and others) sparked off the programme of work known as *homotopy type theory* or *univalent foundations*.

Since then, slogans like “type theory is the logic of homotopy theory” and “homotopy type theory is the internal language of infinity-toposes” have been widely bandied around; but their precise status has not always been clear.

I will survey the different things these could or should mean — some heuristic, some precise; some conjectural, some now established. This will include (among other things) recent work of Kapulkin, Shulman, Cisinski, and myself.