Univalent foundations of mathematics

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Abstract

Today's mathematics is using foundations which have been developed in the late 19thearly 20th century. Since these foundations had been completed mathematics has grown from a field advanced by a few outstanding minds to a large enterprise involving tens of thousands of mathematicians. On this new scale of existence it is becoming impossible for mathematics to rely entirely on the old peer-review model of ensuring the correctness of the results. Univalent Foundations are new foundations of mathematics invented with the intention of being usable for the development of computer proof assistants that will facilitate the crafting and verification of complex mathematical constructions.

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