



UniMath project

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Context

**Constructivism,
Computability**

Type theory

1. Idea

UniMath is a library of [formalized mathematics](#) ([formal proof](#)) based on the [univalent foundations of mathematics](#) ([homotopy type theory](#) with the [univalence axiom](#)) and currently developed with the [Coq proof assistant](#). It is thus a particular [library of formalized homotopy type theory](#).

Current “coordinating committee” (according to the [home page](#)):

- [Benedikt Ahrens](#)
- [Daniel Grayson](#)
- [Michael Lindgren](#)
- [Peter LeFanu Lumsdaine](#)
- [Ralph Matthes](#)
- [Niels van der Weide](#)

Web resources:

- *Univalent Mathematics in [Coq](#)*
unimath.github.io/UniMath
 - [table of contents](#)
 - [index](#)
- *Univalent Mathematics in [Agda](#)*
unimath.github.io/agda-unimath

2. Further references

- [Benedikt Ahrens](#), *UniMath: its origins, present, and future* (2017) [[pdf](#), [pdf](#)]

3. Related projects

[proof assistants](#):

based on plain [type theory](#)/[set theory](#):

- [Metamath](#)
- [Mizar](#), [NuPRL](#), [Isabelle](#), [HOL](#)

based on [dependent type theory](#)/[homotopy type theory](#):

- [Coq](#), [Agda](#), [Lean](#), [Arend](#)

based on [cubical type theory](#):

- [cubicaltt](#)
- [redtt](#)
- [yacctt](#)
- [RedPRL](#)
- [Cubical Agda](#)
 - [library and demos](#)
 - [11lab](#) (cross-linked reference resource)

based on [modal type theory](#):

- [Agda-flat](#): [installation instructions](#)

based on [simplicial type theory](#):

- [Rzk](#)

For [monoidal category theory](#):

- [DisCoPy](#)

For [higher category theory](#):

- [opetopic type theory](#)
- [Globular](#), [homotopy.io](#)

projects for [formalization](#) of [mathematics](#) with proof assistants:

- [Archive of Formal Proofs](#) (using [Isabelle](#))
- [ForMath project](#) (using [Coq](#))
- [MathScheme](#)
- [UniMath project](#) (using [Coq](#) and [Agda](#))
- [Xena project](#) (using [Lean](#))

Other proof assistants

- [Andromeda](#)

Historical projects that died out:

- [The QED Project](#)

category: [reference](#)

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