

TikZiT Quantum Template

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The standard way to use files produced by TikZiT is to place the `.tikz` files in the `figures` subdirectory, and include them via the `\tikzfig` macro provided by `tikzit.sty`. This is essentially a wrapper for `\input`. This macro expects the filename without an extension or `figures/`, so e.g. `\tikzfig{circ}` will input the file `figures/circ.tikz`. You can also use `\ctikzfig` as a shorthand for `\tikzfig` wrapped in the `center` environment. For everything else you ever wanted to know about TikZiT and `tikzit.sty`, check out:

<https://tikzit.github.io>.

Loading styles in TikZiT

Before you open one of the example figures in TikZiT, make sure you load the `.tikzstyles` file included in this directory. You can do that by clicking the icon that looks like a folder near the top-right of the main TikZiT window. This will give you a handful of styles to start with, and ensure that when you preview figures in TikZiT, they look the same as they do in this paper.

Using pre-built figures

By passing the `[draft]` option to `tikzit.sty`, figures can now be pre-built using the included `Rakefile`, or any other way you like. This can substantially reduce build time if you have lots of figures. With the `draft` option active, `\tikzfig{F00}` will first search for a file called `cache/F00.pdf` and include that before trying to build the `tikz` figure. To use the included build script, you'll need `rake` (<https://github.com/ruby/rake>). Then, you can pre-build simply by running `rake` in from the command line in the same directory as this paper. You can also listen for changes and rebuild figures on-demand with `rake listen`. If you change the name of the main file or add more tex files to your project, edit the appropriate options at the top of the included `Rakefile`.

The quantum template

This template contains styles for quantum circuits, ZX-calculus diagrams, and handy stuff like the Bloch sphere:

