Wolfram Physics Project | Visual Summary

**Rule (example)**

\[
\{|x, y, z| \rightarrow \{|x, z|, |x, w|, |y, w|, |z, w|\}
\]

Rule defines transformations for collections of abstract elements.

**Initial condition**

**Spatial hypergraph**

Space and matter are emergent features of the hypergraph.
Elementary particles are localized persistent structures in the hypergraph.

**Multiway states-causal graph**

**Multiway causal graph**

**Spacetime causal graph**

**Time-like hypersurface**

Energy is flux of causal edges through spacetime hypersurfaces.
Momentum is flux of causal edges through timeline hypersurfaces.

**Updating event**

**Branchial graph**

Connections are entanglements between quantum states.
Branchial graphs define quantum superpositions.

**10^40 steps**

Our universe??