# Small Gravity

Get gravity to work nicely with quantum mechanics.

$$\nabla A^\mu = J^\mu \xrightarrow[\text{invert by picking a gauge}]{} A^\mu = e^{ikx}\ldots$$

Field eqs — propagator — gauge dep. stuff

$$\mathcal{L} = \text{simple} + A^\mu \ldots \text{perturbation}$$

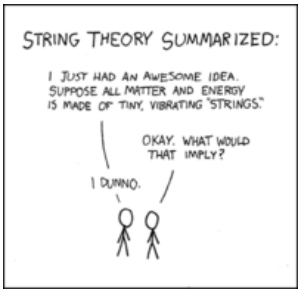
The issue: does the perturbation converge in a scattering calculation?
"Yes" for 4 linear EM eqs,
"no" for 10 nonlinear GR eqs.

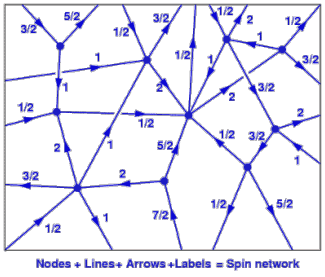
**History**

1916+ Force laws the same, so quantization the same, no?

**Current Efforts**

Work with strings
Loop quantum gravity




**My Effort**

Make a 1 nonlinear gravity field theory.
It changes measurements of all quanta.