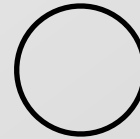


more extra dimensions

What if there is more than one extra dimension ?

one (compact) extra dimension:

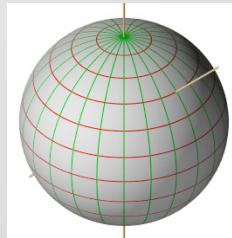


several (compact) extra dimensions:



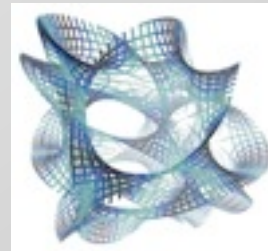
torus

or



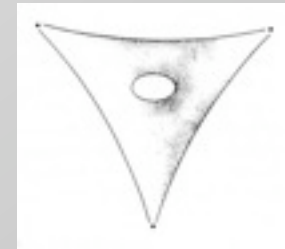
sphere

or



Calabi-Yau

or



orbifolds

or

higher-dimensional
geometry

$$g_{\mu\nu} = \begin{array}{|c|c|} \hline \begin{array}{cccc} g_{00} & g_{01} & g_{02} & g_{03} \\ g_{10} & g_{11} & g_{12} & g_{13} \\ g_{20} & g_{21} & g_{22} & g_{23} \\ g_{30} & g_{31} & g_{32} & g_{33} \end{array} & \begin{array}{cccc} g_{04} & g_{05} & g_{06} & g_{07} \\ g_{14} & g_{15} & g_{16} & g_{17} \\ g_{24} & g_{25} & g_{26} & g_{27} \\ g_{34} & g_{35} & g_{36} & g_{37} \end{array} \\ \hline \begin{array}{cccc} g_{40} & g_{41} & g_{42} & g_{43} \\ g_{50} & g_{51} & g_{52} & g_{53} \\ g_{60} & g_{61} & g_{62} & g_{63} \\ g_{70} & g_{71} & g_{72} & g_{73} \end{array} & \begin{array}{cccc} g_{44} & g_{45} & g_{46} & g_{47} \\ g_{54} & g_{55} & g_{56} & g_{57} \\ g_{64} & g_{65} & g_{66} & g_{67} \\ g_{74} & g_{75} & g_{76} & g_{77} \end{array} \\ \hline \end{array}$$

compactification



various particles
& interactions
e.g. weak, strong
interactions