

A 'warped conformal field theory' is a field theory in  $1+1$  dimensions invariant under a chiral scaling symmetry that acts only on right-movers. The symmetries differ from an ordinary CFT, but for some purposes provide equally powerful constraints. I will discuss their thermodynamics, purely within 2d field theory. Then, motivated by the fact that the near horizon geometry of every extremal black hole has the same symmetries as a warped conformal field theory, I will describe an application to the calculation of black hole entropy in quantum gravity.