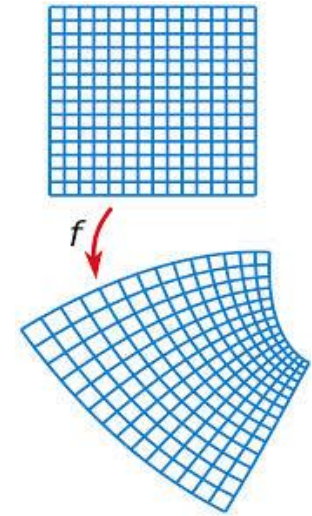


# Holographic Duality (AdS/CFT)

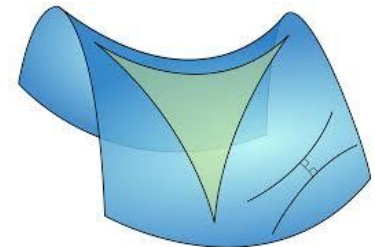
## Conformal Field Theory (CFT)

- Invariant physical laws under conformal transformations
- Critical phenomena (ex. 2<sup>nd</sup> order phase transition)

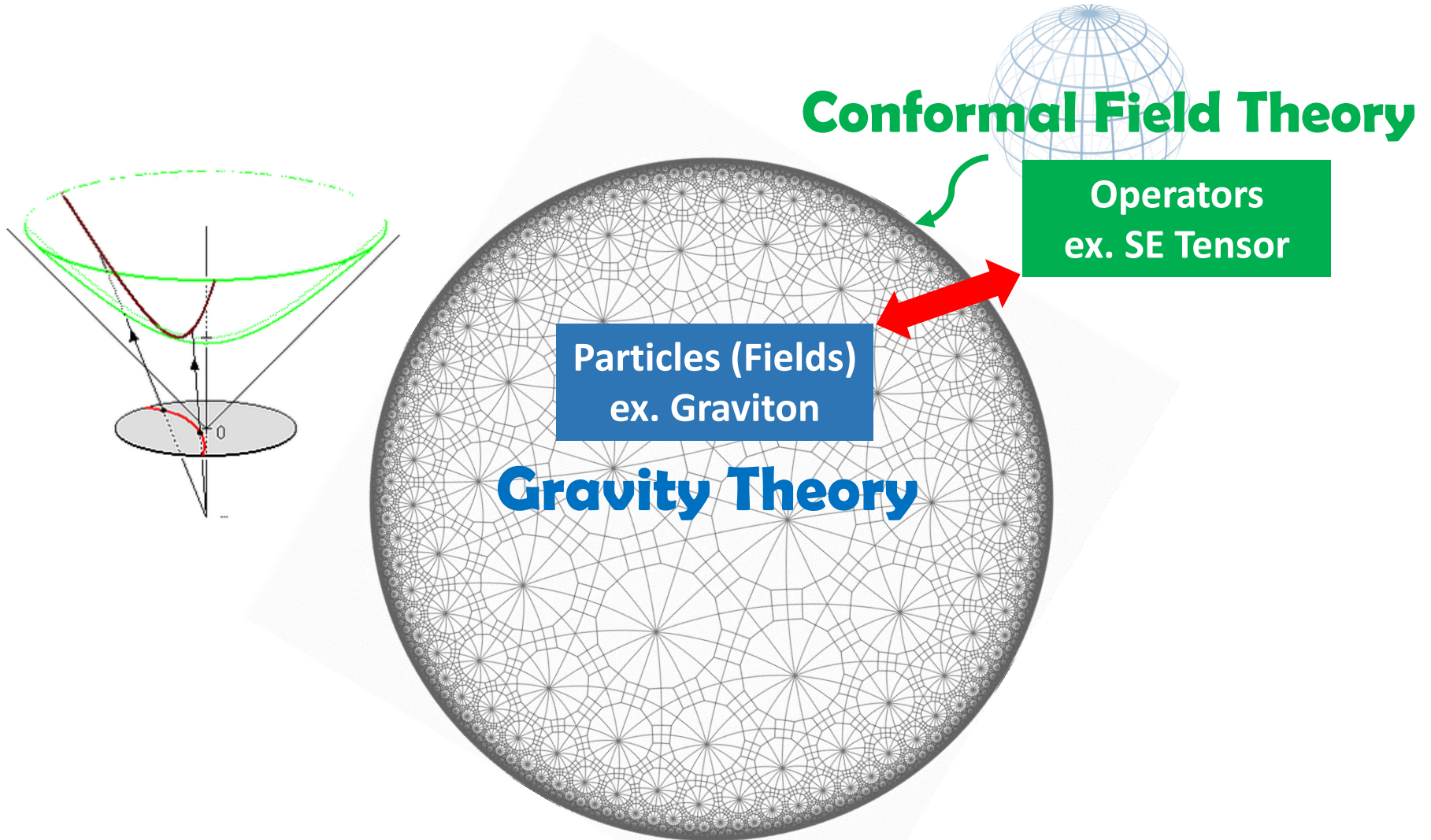


## Gravity Theory in Anti-de-Sitter Space (AdS)

- Negative cosmological constant
- Lorentzian hyperbolic space

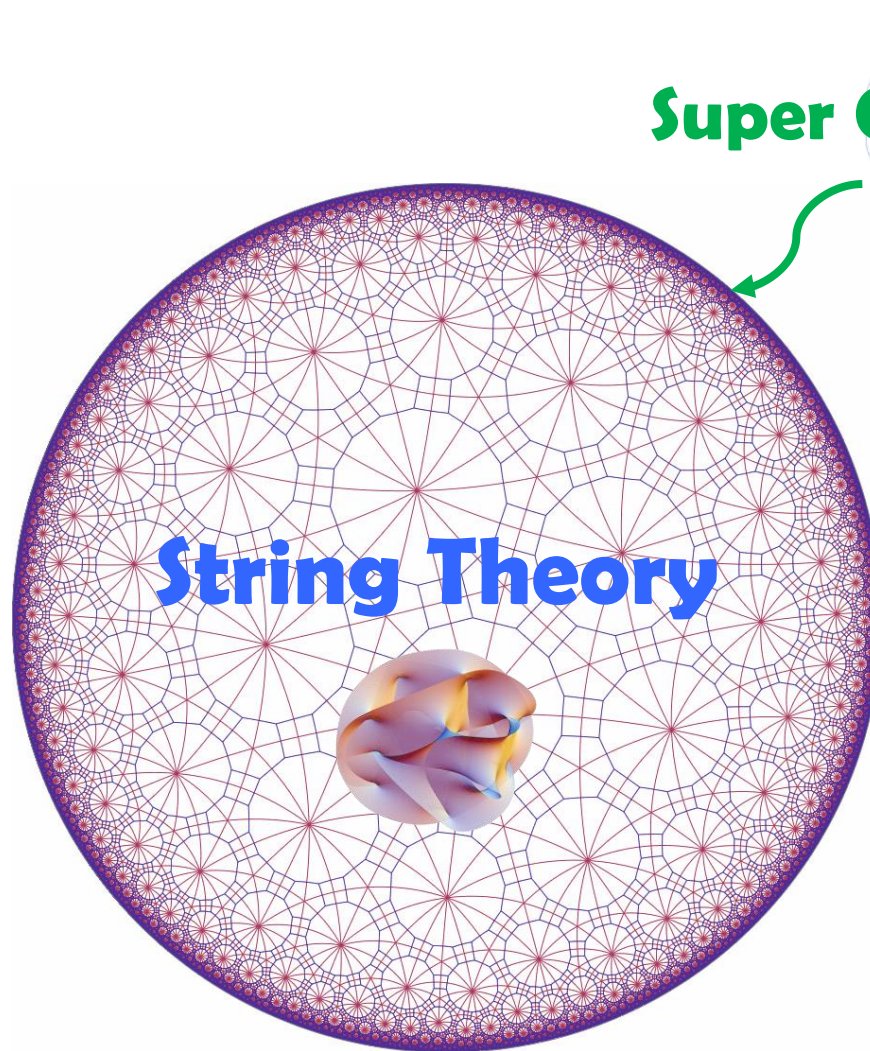


# Holographic Duality (AdS/CFT)



# Holographic Duality *with Higher Spin*

**Super Conformal FT**

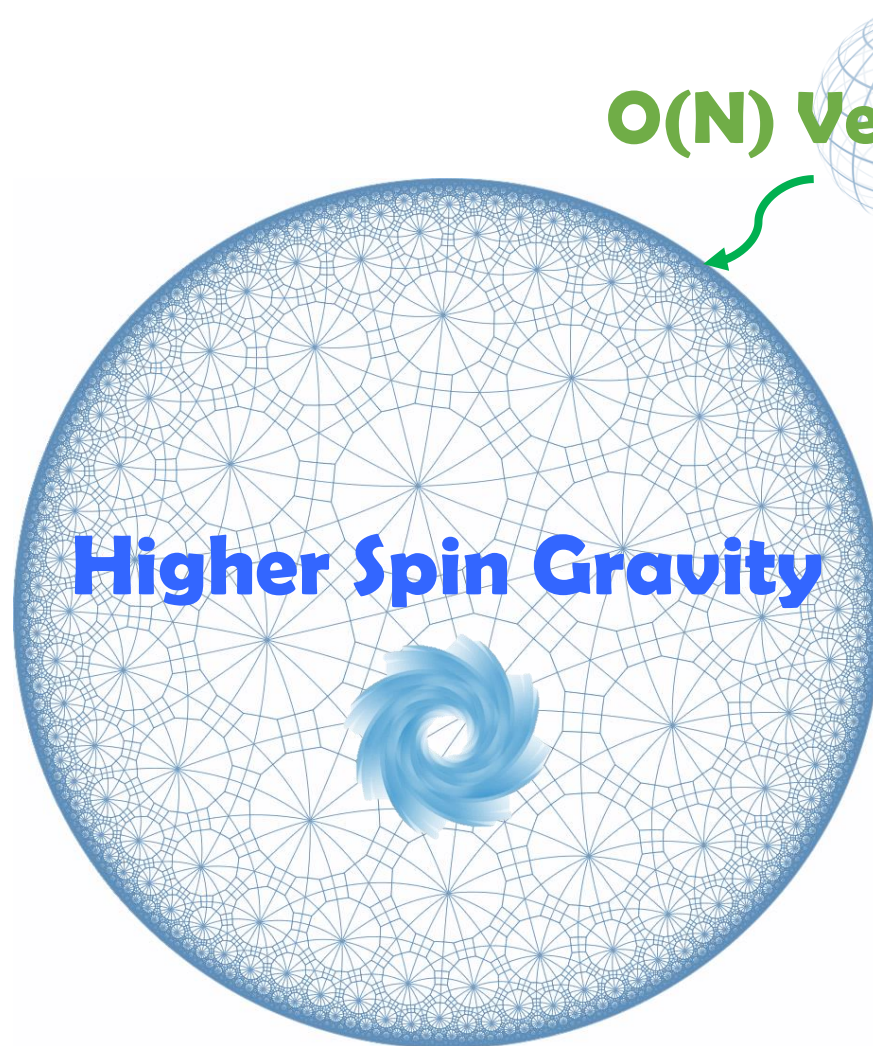


**String Theory**

**Tractable Model** of

Holographic Duality **with Higher Spin**

**$O(N)$  Vector Model**



**Higher Spin Gravity**

# *Tractable Model* of Holographic Duality *with Higher Spin*

## $O(N)$ Vector Model

- One of the most studied examples of CFT
- Without Supersymmetry
- $N=1 \rightarrow$  **3D Ising Model**
- $1/N$  expansion

