

$$\begin{array}{ccccccc}
 0 & \rightarrow & \mathfrak{sl}(n) & \xrightarrow{\quad i \quad} & \mathfrak{gl}(n) & \xrightarrow{\quad \text{trace} \quad} & \mathbb{R} \rightarrow 0 \\
 & & & & & \nwarrow & \\
 & & & & & \lambda \mapsto \left(\frac{\lambda}{n}\right) \text{Id} & 
 \end{array}$$