

Let's analyze the EOM for the field

$$\mu^{1,1} \in \Omega^0(\mathbb{R}) \otimes \mathcal{PV}^{1,1}(\mathbb{C}^5).$$

Kinetic term $\int_{\mathbb{R} \times \mathbb{C}^5} \gamma (d\mu + \frac{1}{2} \sum \mu_{,1} \mu_{,2} \vee \Omega)$

$$\Rightarrow \mu^{1,1} \text{ pairs against the component of } \gamma \text{ in } \Omega^0(\mathbb{R}) \otimes \Omega^{1,2}(\mathbb{C}^5)$$

What components of γ can this interact w/?

Expanding $\gamma \partial \gamma \partial \gamma$, find

$$\gamma^{1,3} (\partial \gamma^{1,1} \partial \gamma^{1,1} + \partial \gamma^{1,0} \partial \gamma^{1,2})$$

$$\text{w/ } \gamma^{1,2} \in \Omega^1(\mathbb{R}) \otimes \Omega^{1,2}(\mathbb{C}^5)$$

second of these modes picks out odd ghost #.

$$\Rightarrow \text{EOM from varying } \gamma^{1,3} \text{ is}$$

$$(d\mu^{1,1} + \frac{1}{2} \sum \mu^{1,1}_{,1} \mu^{1,1}_{,2}) \vee \Omega + \partial \gamma^{1,0} \partial \gamma^{1,2} = 0.$$

Kern's suggestion

Consider the equation

$$(\bar{\partial} \mu + \frac{1}{2} \sum \mu_{,1} \mu_{,2}) \vee \Omega + B \wedge \eta = 0$$

$$\left(\begin{array}{l} \mu \in \mathcal{PV}^{1,1} \\ B \in \Omega^{2,0}_{\mathbb{C}^1} \\ \eta \in \Omega^{2,2} \end{array} \right)$$

Then $\text{Im}(B \wedge -)$ gives a Polarization.

(maybe need to divide by Ω ?) and eqn describes det of hol str transverse to it.