

$$\begin{array}{ccc}
 i\mathbb{L}^2_m \mathbb{C} & \xleftarrow{\text{hull}} & i\mathbb{L}^2_\infty \mathbb{C} \\
 \downarrow \cong & & \downarrow \cong \\
 \mathbb{C}^2_m \mathbb{L}^\# & \xleftarrow{\text{hull}} & \mathbb{C}^2_\infty \mathbb{L}^\#
 \end{array}$$

$$\gamma^\#_\xi = \int_{dx/(2\pi)^d}^{\mathbb{L}} e^{-ix\xi} {}^{ix}\gamma = e^{|\xi|} \star \gamma = \underbrace{\gamma \star \bar{e}}_\xi$$

$$\gamma = \underbrace{\gamma^\#}_\#$$

$${}^{ix}\gamma = e^{ix\xi} \gamma^\#_\xi \int_{d\xi}^{\mathbb{L}^\#} = \underbrace{{}^{ix}\gamma^\#}_\#$$

$$\begin{array}{ccc}
 i\mathbb{R}^d_m \mathbb{C} & & \\
 & \searrow \cong & \\
 & & \mathbb{C}^2_m \mathbb{R}^d
 \end{array}$$

$$\gamma^\#_\gamma = \int_{dL/(2\pi)^d}^{\mathbb{R}^d} e^{-iL \cdot \gamma} {}^{iL}\gamma$$

$$\gamma^\#_\xi = \int_{dix/(2\pi i)^d}^{i\mathbb{R}^d} e^{-ix\xi} {}^{ix}\gamma = \int_{dx/(2\pi)^d}^{\mathbb{R}^d} e^{-ix\xi} {}^{ix}\gamma$$

$$\gamma = \underbrace{\gamma}_{\#}$$

$$iL \cdot \gamma = \underbrace{\gamma}_{\#} e^{iL \cdot \gamma} \int_{d \cdot \gamma}^{d \cdot \mathbb{R}} = \underbrace{\gamma}_{\#}$$

$${}^x \delta_y = \frac{1}{(2\pi)^d} \int_{d \cdot \mathbb{R}}^{d \cdot \mathbb{R}} x - y e^{i \xi} d\xi$$

$$\# \gamma_{\xi} = \frac{1}{(2\pi)^d} \int_{dx}^{\mathbb{R}^d} x e^{-i x \gamma}$$

$${}^x \mathcal{L}_{\#} = x e^{i \xi} \mathcal{L}_{\xi} \int_{d \cdot \mathbb{R}}^{d \cdot \mathbb{R}} d\xi$$

$${}^x \gamma = \underbrace{\gamma}_{\#} = x e^{i \xi} \# \gamma_{\xi} \int_{d \cdot \mathbb{R}}^{d \cdot \mathbb{R}} d\xi = x e^{i \xi} \frac{1}{(2\pi)^d} \int_{dy}^{\mathbb{R}^d} y e^{-i y \gamma} \int_{d \cdot \mathbb{R}}^{d \cdot \mathbb{R}} d\xi = \frac{1}{(2\pi)^d} \int_{dy}^{\mathbb{R}^d} x - y e^{i \xi} y \gamma \int_{d \cdot \mathbb{R}}^{d \cdot \mathbb{R}} d\xi$$

$${}^z \delta_w = \frac{1}{\pi^{2d}} \int_{d \cdot \mathbb{C}}^{d \cdot \mathbb{C}} z e_{\zeta} w e_{\zeta}^{-1} \zeta e_z^{-1} \zeta e_w \int_{d \cdot \mathbb{C}}^{d \cdot \mathbb{C}} d\zeta$$

$$(2\pi)^{2d} {}^z \delta_w = z - w e_{\zeta}^{i/2} \zeta e_{z-w}^{i/2} \int_{d \cdot \mathbb{C}}^{d \cdot \mathbb{C}} d\zeta = z - w e_{\zeta}^{i/2} \zeta e_{w-z}^{-i/2} \int_{\zeta = -i\zeta/2}^{d \cdot \mathbb{C}} d\zeta = z - w e_{\zeta} \zeta e_{w-z} \int_{d \cdot \mathbb{C}}^{d \cdot \mathbb{C}} 2^{2d} d\zeta = z e_{\zeta} w e_{\zeta}^{-1} \zeta e_w \zeta e_z^{-1} \int_{d \cdot \mathbb{C}}^{d \cdot \mathbb{C}} 2^{2d} d\zeta$$