

$$q = \mathbb{F}_q$$

$U \in \mathcal{C}(q^n)$  quantum cube

$$\mathcal{C}(q^n) \subset \mathcal{C}(q^n) \triangleleft \mathbb{K} = \frac{\mathcal{C}(q^n) \times \mathcal{C}(q^n) \xrightarrow{\mathcal{U}} \mathbb{K}}{\mathcal{U}^V \neq 0 \curvearrowright U \subset V}$$

$$\mathcal{U} * \mathcal{V} \in \mathcal{C}(q^n) \subset \mathcal{C}(q^n) \triangleleft \mathbb{K} \xleftarrow[\text{bilin}]{*} \mathcal{C}(q^n) \subset \mathcal{C}(q^n) \triangleleft \mathbb{K} \otimes \mathcal{C}(q^n) \subset \mathcal{C}(q^n) \triangleleft \mathbb{K} \ni \mathcal{U} : \mathcal{V}$$

$$\mathcal{U} * \mathcal{V}^W = \sum_{U \subset V \subset W} \mathcal{U}^V \mathcal{V}^W$$