

# Quark Sector (Toy) — CKM/PMNS Sketch (ASCII-safe)

Toy quark sector note (qualitative):

- Bulk masses ( $c_Q$ ,  $c_u$ ,  $c_d$ ) localize zero-mode profiles; effective 4D Yukawas  $\sim \text{overlap}(H, Q, u/d)$ .
- With  $O(1)$  5D Yukawas and modest spread in  $c$ -parameters, realize  $m_u \ll m_c \ll m_t$  and  $m_d \ll m_s \ll m_b$ .
- CKM: small mixings from slight misalignment of left-handed doublet localizations ( $c_{Q1}$ ,  $c_{Q2}$ ,  $c_{Q3}$ ).
- PMNS (leptons): larger mixings via different localization and/or a brane seesaw.
- Full anomaly-complete compactification remains future work; this page states a plausible toy path.

## **Appendix: LISA variants**

LISA CSVs not found; please re-generate or re-upload.