

Toy Quark Embedding + CKM/PMNS Note

RS-like localization: bulk masses $c_{\{Q_i\}}$, $c_{\{u_i\}}$, $c_{\{d_i\}}$ set zero-mode profiles; hierarchical overlaps yield Yukawas.

Illustrative c-parameters (order-of-mag; to be tuned):

Up sector: (u) $c_Q \approx 0.67$, $c_u \approx 0.72$; (c) $c_Q \approx 0.60$, $c_u \approx 0.64$; (t) $c_Q \approx 0.45$, $c_u \approx 0.40$

Down sector: (d) $c_Q \approx 0.68$, $c_d \approx 0.73$; (s) $c_Q \approx 0.63$, $c_d \approx 0.66$; (b) $c_Q \approx 0.52$, $c_d \approx 0.50$

CKM (Wolfenstein-like): $\lambda_C \approx 0.225$, $A \approx 0.82$, $\bar{\rho} \approx 0.14$, $\bar{\eta} \approx 0.35$ (as targets).

PMNS: large mixing can arise from near-degenerate c_L in lepton doublets + seesaw (note only).

Task for full model: fit quark/lepton masses and mixings with precision constraints and anomaly checks.