

# Predictive electroweak gauge model with strong spontaneous-symmetry-breaking dynamics

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Higgs sector of the Standard model (SM) is replaced by the gauge  $SU(3)_f$  quantum flavor dynamics (QFD) with scale  $\Lambda$ . Anomaly freedom demands addition of three right-handed neutrinos  $\nu_R^f$ . The QFD Schwinger-Dyson equation for fermion self-energies  $\Sigma_f(p^2)$  **spontaneously** generates:

(I) three Majorana masses  $M_{fR}$  of  $\nu_R^f$  of order  $\Lambda$ ; (II) three Dirac masses  $m_f$  same for all SM fermion species in  $f$  exponentially small with respect to  $\Lambda$ . (I)  $M_{fR}$  give rise to masses of all flavor gluons  $C_a$  of order  $\Lambda$ . (II)  $m_f$  give rise: (1) to  $W, Z$  masses of order  $\sum m_f$ , **the effective Fermi scale**; (2) to extra masses of six  $C_a$  of order  $m_f$ . The symmetry partners of the composite 'would-be' NG bosons are: (I) three Higgses  $\chi_i$  with masses at  $\Lambda$ ; (II.1) the SM-like Higgs  $h$  with mass at Fermi scale; (II.2) **two new Higgses  $h_3$  and  $h_8$  with masses at Fermi scale**. Fermion mass splitting in  $f$  is due to  $\Sigma_f(p^2)$  dependent *vectorial* vertices of SM fermions with photon,  $W$  and  $Z$  enforced by WT identities.

## Secondary track (number)

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