The Elementary Goldstone Higgs

The Higgs as a pseudo Goldstone Boson is not only possible in a composite scenario but also possible in an elementary scenario. In the elementary scenario the theory is both renormalizable and perturbative, which means that the quantum corrections can be calculated using the Coleman-Weinberg potential while permitting to explore the underlying parameter space. By characterising the available parameter space of the extended Higgs sector we discover that the preferred electroweak alignment angle is centred around $\theta \simeq 0.02$, corresponding to the Higgs chiral symmetry breaking scale $f \simeq 14$ TeV.