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Topological observables in many-flavour QCD

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SU(3) gauge theory with eight massless flavours is believed to be walking, while the corresponding twelve- and four-flavour appear IR-conformal and confining respectively. Looking at the simulations performed by the LatKMI collaboration of these theories, we use the topological susceptibility as an additional probe of the IR dynamics. By drawing a comparison with SU(3) pure gauge theory, we see a dynamical quenching effect emerge at larger number of flavours, which is suggestive of emerging near-conformal and conformal behaviour.

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