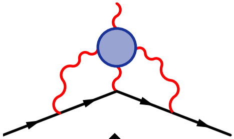
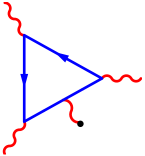
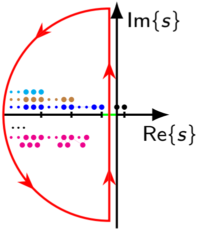
Short Distance Constraints on the HLbL contribution to the muon $g-2$

Daniel Melo-Porras, Edilson Reyes, Raffaele Fazio



$$\sum_i^{19} \Pi_i\, \partial^{\mu_5} T_i^{\mu_1\mu_2\mu_3\mu_4}\Big|_{q_4\to 0}$$





$$I^{(2)} \supset \left(\cdots\right) \times \sum_{l=0}^{\infty} \boxed{\left(-\frac{4m^2}{q^2}\right)^l} \frac{\Gamma(-2+2\nu+l)}{\Gamma(-\nu-l+\frac{5}{2})} \frac{1}{\Gamma(l+1)\Gamma(l+\nu-1)} \ln\left\{-\frac{q^2}{4m^2}\right\}$$