QCDloop: A repository for one-loop scalar integrals

This is a repository of one-loop scalar Feynman integrals, evaluated close to four dimensions. For integrals with all massive internal lines the integrals are all known, both analytically and numerically. This website therefore concentrates on integrals with some internal masses vanishing; in general, these integrals contain infra-red and collinear singularities which are here regulated dimensionally. The integrals are described in a PDF file for every known integral. The general divergent box integral can be calculated using one of sixteen basis integrals which are given here. The general divergent triangle integral can be calculated using one of six triangle basis integrals which are also given here. The browser must be set to use hypertex-aware tool, such as Acrobat reader, and for best viewing, should open the pdf files in the browser. For general notation for the loop integrals click here

The results in this web-site are also available in the paper
arXiv:0712.1851 by R.K. Ellis and G. Zanderighi
The corresponding gfortran/fortran77 code which calculates an arbitrary one-loop scalar integral, finite or divergent can be downloaded, QCDLoop-1.95.tar.gz (version 1.95, date 2013-Feb-20). If you encounter any problems with the code, please notify the authors.

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Other associated tools for one-loop diagrams:-
Looptools
the FF package by G.J. van Oldenborgh

R. Keith Ellis
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