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Numerical Evaluation of Iterated Integrals

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Iterated integrals provide a powerful language to express the solutions of Feynman integrals. We discuss a novel approach to evaluate iterated integrals numerically. This approach is based on the conversion of an iterated integral to a system of ordinary differential equations, which in turn is solved numerically. Further, we describe how in this numerical context the tangential base point regularisation can be performed algorithmically. Thus important classes of special functions like (elliptic) multiple polylogarithms can easily be evaluated.

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