1067-40-1231   **Flavia Stan*** (`fstan@risc.jku.at`). *A symbolic summation approach to Feynman integral calculus.*

We discuss new algorithmic strategies for multisums arising in the computation of Feynman parameter integrals and present examples of typical computations coming from the two-loop integrals.

Our procedure relies on rewriting Feynman parameter integrals as multisums over hypergeometric terms which fit the input class of summation algorithms. For these nested sums, WZ-summation methods deliver inhomogeneous recurrence relations. Recursively computing recurrences for the sums appearing in the inhomogeneous parts, we get recurrences which have only hypergeometric terms on their right hand sides.

For the next step of the method we use procedures from C. Schneider's Sigma package which solve these last inhomogeneous difference equations. Plugging in the answers into the recurrences from the previous level, we can recursively compute all solutions. At last we find alternative representations for the Feynman integrals with which we started, in terms of to harmonic sums.

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