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JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



THEP Journal Club

June 6, 2014 at 12:30 p.m.
Sozialraum der WA THEP

Pizza & Physics at Lunchtime

Robert Schabinger
MITP, PRISMA

A Novel Approach To Integration By Parts Reduction

Integration by parts reduction is a standard component of most modern multi-loop calculations in quantum field theory.

We present a novel integration by parts reduction strategy constructed to overcome limitations of currently available reduction programs based on Laporta's algorithm. As a specific feature, the method allows for the effective usage of large computer clusters.

Our expectation is that the method will facilitate the evaluation of previously inaccessible higher-order corrections by simultaneously improving both the run-time and the memory requirements of the reduction procedure.

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