



Contribution ID: 48

Type: **Oral**

Differential reduction of generalized hypergeometric functions in application to Feynman diagrams.

Tuesday, 2 September 2014 16:10 (25 minutes)

The differential reduction algorithm which allow one to express generalized hypergeometric functions with arbitrary values of parameters in terms of functions with fixed values of parameters differing from the original ones by integers is discussed in a context of evaluation of Feynman diagrams.

It is shown that the criterion of reducibility of multiloop Feynman integrals can be reformulated in terms of the criterion of reducibility of hypergeometric functions.

The HYPERDIRE - Mathematica based program, for differential reduction of hypergeometric functions of one and two variables with non-exceptional values of parameters to a set of basic functions is presented.

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Session Classification: Computations in Theoretical Physics: Techniques and Methods

Track Classification: Computations in Theoretical Physics: Techniques and Methods