



Contribution ID: 70

Type: **not specified**

Six loop beta function in ϕ^4 model

Thursday, 23 July 2015 16:20 (30 minutes)

Using R^* operation, IBP and integration of hyperlogarithms (HyperInt) we perform 6 loop calculation of beta function in ϕ^4 model.

One of the remarkable features of this result is that 6 loop term contains multiple zeta values. We discuss different aspects of this calculations as well as series resummation and predictions for 6 loop term based on Kazakov/Shirkov/Tarasov (1979) paper

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Session Classification: CALC2015 Workshop