
Seminar des SFB/TRR 326 GAUS

Freitag, 07.06.2024

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spricht über das Thema

Zagier's conjecture on polylogarithms: from function fields to number fields

Zagier's conjecture is a certain formulation of the following slogan: linear relations among polylogarithms evaluated at algebraic numbers arise from relations between K-theory symbols. By identifying the different attributes of this conjecture, one can state and prove a similar version in arithmetic of function fields. Classical polylogarithms are then replaced by those of Carlitz. The proof, very different from the techniques developed so far, uses ingredients from the theory of difference equations. It involves deformations of Carlitz polylogarithms where a new variable t appears. This results from a joint work with A. Maurischat.

While we currently lack the technology to reproduce this argument in number theory, it is amusing to speculate on a hypothetical transcription. q -deformations of polylogarithms then replace these « t -deformations». With T. Bouis, we recently encountered versions of q -polylogarithms in the syntomic Chern class introduced by Bhatt-Lurie. This is encouraging...! I will mention these works in a second part of the presentation.

Ort: **INF 205, SR A**

Beginn: **13:30 Uhr**

Alle Interessenten sind herzlich eingeladen.

Dr. Oğuz Gezmiş