universität wien

Fakultät für Mathematik

Mathematisches Kolloquium

EINLADUNG

Privatdozent Dr. Harald Grobner
(Institut für Mathematik, Universität Wien)

**“Generalizations of the ζ- function:
Our proof of a version of the Deligne-conjecture”**

”Generalizations of the ζ - function: Our proof of a version of the Deligne-conjecture”

It was in 1740 when Leonhard Euler published his seminal paper *De summis serierum reciprocarum*. In this work Euler was able to solve a century-old problem, namely to derive a precise formula for the values of the ζ-function at even positive integers $\zeta(2n)$: His formula expresses this number $\zeta(2n)$ as a *rational* multiple of the power π^{2n}.

More than 200 years later, in 1979, Pierre Deligne launched a far-reaching conjecture concerning particular values of what one calls *motivic L-functions*: These motivic *L*-functions are a very broad and at the same time very conceptual generalization of the ζ-function above, whereas Deligne's conjectured formula for their particular values is a direct conjectural extension of Euler's classical result for ζ^{2n}.

In this talk, after a tailored introduction to the problem, we will present the essence of our *proof of a version of Deligne's conjecture* for a large family of *L*-functions, hence presenting a generalization of Euler's classical formula for a broad class of *L*-values. (This is joint work with Michael Harris.)

Zeit: Mittwoch 20. April 2016
15.45 Uhr Kaffeejause,
16.15 Uhr Vortrag,
vinum cum pane im Anschluss

Ort: Fakultät für Mathematik,
Oskar-Morgenstern-Platz 1,
Sky Lounge

Joachim Schwermer
Harald Rindler