

January - April 2018

$$A_n = \sum_{k=0}^n \binom{n}{k}^2 \binom{n+k}{k}^2$$

$$\frac{\eta(2\tau)^7 \eta(3\tau)^7}{\eta(\tau)^5 \eta(6\tau)^5} = \sum_{n=0}^{\infty} A_n \left(\frac{\eta(\tau) \eta(6\tau)}{\eta(2\tau) \eta(3\tau)} \right)^{12n}$$

Hausdorff Trimester Program

Periods in Number Theory, Algebraic Geometry and Physics

Organizers: Spencer Bloch, Herbert Gangl, Vasily Golyshev, Fernando Rodriguez Villegas, Don Zagier

The word “period” is used to designate any number represented by the integral of an algebraic differential form over a cycle in an algebraic variety over \mathbb{Q} (or $\overline{\mathbb{Q}}$). These include many numbers of interest in number theory and mathematical physics (multiple zeta values, Mahler measures, superstring amplitudes, ...), and also have deep connections with special values of motivic L -functions.

The trimester will be divided into five “activities”, each concentrating on one topic and including one or several introductory courses, and also three one-week workshops featuring lectures on current work:

- Motives and Periods (Jan 3 - Jan 14)
Workshop: Periods and Regulators (Jan 15 - Jan 19)
- Regulators (Jan 20 - Feb 4)
- Amplitudes (Feb 5 - Feb 25)
Workshop: Amplitudes and Periods (Feb 26 - Mar 2)
- Picard-Fuchs Equations and Geometry (Mar 3 - Mar 25)
Workshop: Picard-Fuchs Equations and Hypergeometric Motives (Mar 26 - Mar 30)
- Hypergeometric Motives (Mar 31 - Apr 20)

Expected Participants:

Yves André	Henri Cohen	Annette Huber-Klawitter	Dinakar Ramakrishnan
Joseph Ayoub	Christopher Deninger	Matt Kerr	David Roberts
Alexander Beilinson	Javier Fresán	Dirk Kreimer	Jan Stienstra
David Broadhurst	Alexander Goncharov	Marc Levine	Tomohide Terasoma
Francis Brown	Benedict Gross	Steve Lichtenbaum	Pierre Vanhove
José Burgos Gil	Richard Hain	Madhav Nori	Wadim Zudilin



Call for participation: The Hausdorff Research Institute offers visiting positions for the whole period of the trimester program (for senior scientists, postdocs and PhD students). The deadline for applications is **April 30, 2017**. Please send applications (including CV and, for postdocs and PhD students, a letter of recommendation) using our online application form at www.him.uni-bonn.de/periods-2018/. In addition numerous fellowships for shorter periods are available.