



istanbul matematiksel bilimler merkezi
istanbul center for mathematical sciences

“ALGEBRAIC CYCLES AND VALUES OF GREEN’S FUNCTIONS” SEMINAR SERIES

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Abstract

We construct motivic cycles in the universal Abelian surface over a modular curve or Shimura curve. We then show how they can be used to prove that values of certain higher Green’s functions are logarithms of algebraic numbers. Gross-Kohnen-Zagier had made a conjecture about algebraicity of values of these functions and we show how our results fit into their conjecture.

Seminar 1 (10:00-11:00)

In the first talk we will introduce the background and describe the construction of the motivic cycles. The construction uses some classical results of Humbert which were generalised by Birkenhake and Wilhelm, as well as some results from enumerative geometry.

Seminar 2 (11:30-12:30)

In the second talk we will explain the link with the conjecture of Gross, Kohnen and Zagier and the recent work of Brunier-Ehlen-Yang on this conjecture.

Date : Friday, May 13, 2022

Place: Boğaziçi University, South Campus