

ALGEBRA  
SEMINAR

*Harmonic Maass forms and periods*

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**Abstract:** The Fourier coefficients of automorphic forms often encode important arithmetic information, such as for instance representation numbers of quadratic forms, divisor sums, and numbers of points on elliptic curves over finite fields. In our talk we consider the coefficients of harmonic Maass forms of weight  $1/2$ . We show that their coefficients are given by the periods of certain algebraic differentials on modular curves. As an example we consider rational elliptic curves.

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MATHEMATICS AND COMPUTER SCIENCE  
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