Dissertation Defense

Maass forms and quantum modular forms

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Abstract: This thesis describes several new results in the theory of harmonic Maass forms and related objects. Maass forms have recently led to a flood of applications throughout number theory and combinatorics, especially following their development by the work of Bruinier and Funke and the interpretation of Ramanujan's mock theta functions in this framework by Zwegers. Here, we will prove results on integrality of singular moduli and we will revisit Ramanujan's original definition of a mock theat function. Furthermore, we will construct a new example of a quantum modular form using "strange" series and sums of tails formulas.

Wednesday, June 26, 2013, 1:00 pm
Mathematics and Science Center: W304

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