

# NUMBER THEORY SEMINAR

## *Mock $\vartheta$ -Functions of Order Three*

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ABSTRACT: In his last letter to Hardy, Ramanujan gave a list of 17 mock  $\vartheta$ -functions together with some identities that these functions satisfy. Of these seventeen, he described 4 as “order three”, 10 as “order five”, and 3 of “order seven”. As part of his Ph.D thesis, Sander Zwegers relates 3 of the third order mock  $\vartheta$ -functions to real analytic vector-valued modular forms of weight  $\frac{1}{2}$ . For this talk, I’ll discuss Zwegers’ work and the relation he gives between vector-valued forms and mock  $\vartheta$ -functions.

WEDNESDAY, FEBRUARY 20, 2013  
2:40 - 4:00 PM  
ROOM 527 WACHMAN HALL  
DEPARTMENT OF MATHEMATICS