1100-11-352   **Bruce C. Berndt**, **Atul Dixit** and **Arindam Roy***, Department of mathematics, 1409 West green street, Urbana, IL 61801, and **Alexandru Zaharescu**. *Generalization of Ramanujan's double Bessel function series identities.*

On page 335 in his Lost Notebook, S. Ramanujan claimed two identities involving finite trigonometric sums and doubly infinite series of Bessel functions. These two identities are closely connected with the classical divisor and circle problems. It was only recently that these identities were proved. In this talk, we present a generalization of these identities. One of these new identities is connected to the generalized divisor problem.

This talk is a continuation of the talk by A. Dixit in the 'Special Session on Complex Function Theory and Special Functions'. This is joint work with B.C. Berndt, A. Dixit and A. Zaharescu. (Received February 10, 2014)