

**Speaker:** Atul Dixit

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**Date:** January 19 2021

**Time:** 4:30 PM - 5:30 PM

**Title:** *On generalizations of the third order mock theta functions  $\omega(q)$  and  $\nu(q)$*

**Abstract:** Let  $\omega(q)$  and  $\nu(q)$  denote the third order mock theta functions of Ramanujan and Watson. In 2015, George E. Andrews, Ae Ja Yee, and the speaker showed that  $\omega(q)$  generates the number of partitions of  $n$  such that all of its odd parts are less than twice the smallest part whereas  $\nu(-q)$  generates the number of partitions of  $n$  into distinct non-negative parts such that all of its odd parts are less than twice the smallest part. Very recently, Andrews and Yee gave beautiful generalizations of the identities in their work with the speaker which involve two-variable generalizations of  $\omega(q)$  and  $\nu(q)$ . In this talk, we give further generalizations of their identities. Many interesting new as well as well-known results are deduced as special cases of our identities. This is joint work with Bruce C. Berndt and Rajat Gupta.