

New representations for $\sigma(q)$ via reciprocity theorems

11.01 **Koustav Banerjee***(Research Institute for Symbolic Computation, Johannes Kepler University, Linz, Austria)***Time:** Monday 22.07., 10:30 - 11:00, Room HS 4

Abstract: In this talk, we will see two new representations for Ramanujan's function $\sigma(q)$. The proof of the first one uses the three-variable reciprocity theorem due to Soon-Yi Kang and a transformation due to R.P. Agarwal while that of the second uses the four-variable reciprocity theorem due to George Andrews and a generalization of a recent transformation of Andrews, Schultz, Yee and the second author. The advantage of these representations is that they involve free complex parameters - one in the first representation, and two in the second. The partition theoretic interpretation has been already made in the context of three variable representation by Atul Dixit and Bibekananda Maji.

This is a joint work with Prof. Atul Dixit.