1125-11-1010 **Atul Dixit*** (adixit@iitgn.ac.in), 5/340, Department of Mathematics, Indian Institute of Technology Gandhinagar, Palaj, Gandhinagar, Gujarat 382355, India, and **Koustav Banerjee** (banerjeekoustav98@gmail.com), Department of Mathematics, Ramkrishna Mission Vivekananda University, PO Belur Math, Howrah, W. Bengal 711202, India. *New representations for $\sigma(q)$ via reciprocity theorems.*

In 1986 George E. Andrews proved two results involving "sums of tails" on page 14 of Ramanujan's Lost Notebook using a reciprocity theorem of Ramanujan. These identities can be thought of as representations for the function $\sigma(q) = \sum_{n=0}^{\infty} \frac{q^{n(n+1)/2}}{(-q)_n}$. In this talk, we give two new representations for Ramanujan's function $\sigma(q)$ derived using more general reciprocity theorems of Soon-Yi Kang, and Andrews. The advantage of these representations is that they involve free complex parameters - one in the first representation, and two in the second. This is joint work with Koustav Banerjee. (Received September 16, 2016)