

1112-11-39

Bruce C Berndt* (berndt@illinois.edu). *Not-So-Well-Known Influences of Ramanujan and Hardy on Each Other.*

The joint work of Hardy and Ramanujan on the circle method, partitions, and probabilistic number theory are well-known, and we shall not dwell on these monumental collaborations in this talk. Instead, we concentrate on interactions that have received less attention. Many are connected with entries in either Ramanujan's earlier notebooks or his lost notebook. Topics to be discussed are: Ramanujan's knowledge of the residue theorem, the classical circle problem of Gauss, Ramanujan's knowledge (or lack of knowledge) of the Riemann Hypothesis, integrals involving the Ξ -function of Riemann, self-reciprocal Fourier cosine transforms, modular integral identities and L -functions, the Rogers-Ramanujan continued fraction, diophantine approximation, and comments of Hardy and Gertrude Stanley on pages in Ramanujan's lost notebook. (Received June 29, 2015)