学术报告

Computer Algebra Remarks on Ramanujan's Partition Congruences

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Time： 16:30--17:30, Dec 19 (Tuesday), 2017

Venue： Room 108, Center for Applied Mathematics

Abstract： During his lifetime only two papers on Ramanujan's partition congruences have been published: one by himself and one by Hardy based on Ramanujan's notes. Nevertheless, this made the beginning of a fascinating mathematical development. Its initial spark was provided by MacMahon who compiled a table of the first 200 partition numbers. For example, from this data Ramanujan extracted that the total number $p(n)$ of partitions of n is divisible by 5 when n in its decimal expansion is ending with 4 or 9. For instance, $p(4)=5$ because there are 5 partitions of 4: 4, 3+1, 2+2, 2+1+1, 1+1+1+1. The talk discusses various computational aspects connected to such congruences. In particular, new computer algebra tools are discussed which assist in proving and discovery of such identities. Most of the presented algorithmic material originates in recent joint work with Silviu Radu (RISC).

欢迎大家参加！