
Zbl 685.10002

Erdős, Paul (Nicolas, J.L.)

Ramanujan and I. (Appendix: On composite numbers by J. L. Nicolas). (In English)

Number theory, Proc. Int. Ramanujan Cent. Conf., Madras/India 1987, Lect. Notes Math. 1395, 1-20 (1989).

[For the entire collection see Zbl 674.00006.]

In this interesting article, the author describes some of his own results and problems that were inspired by, or connected to, the work of Ramanujan, and relates them to long-standing and recent achievements of others, giving also a useful list of references. The questions discussed include ones from prime number theory, probabilistic number theory, partitions, and others concerning highly composite numbers, but it would be iniquitous to single out here one of these many intriguing problems above the rest. Among some fascinating historical anecdotes regaled is his own account of how the Erdős-Kac theorem came into being.

J. L. Nicolas has written an informative appendix on a manuscript of Ramanujan on highly composite numbers, unpublished until 1987, and he includes some recent related results.

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Classification:
11-03 Historical (number theory)
11N05 Distribution of primes
01A65 Development of contemporary mathematics
11K65 Arithmetic functions (probabilistic number theory)
11P81 Elementary theory of partitions

Keywords:
work of Ramanujan; prime number theory; probabilistic number theory; partitions; highly composite numbers