Matukumalli Venkata Subbarao

The modern period in the history of Indian mathematics, and that of number theory in particular, starts with the legendary figure of Srinivasa Ramanujan. The influence of Ramanujan, particularly on the study of arithmetic functions and partition functions persisted for the next two generations. Notable mathematicians were S. S. Pillai, Ananda Rao, T. Vijayaraghavan, R. Vaidyanathaswamy, followed by S. D. Chowla, K. G. Ramanathan, Hans Raj Gupta, M. V. Subbarao and others. With the demise of M. V. Subbarao after a brief illness on 15 February 2006 in Canada, we have lost the last person from that era.

Matukumalli Venkata Subbarao was born on 4 May 1921 in Yazati, a small village near Bapatla, Guntur district, Andhra Pradesh. His parents were M. Narasimha Rao and Venkata Subbamma. After finishing his Masters at the Presidency College, Madras in 1941, he joined as a doctoral student in functional analysis with Vaidyanathaswamy.

After his doctorate, he worked at the Presidency College, Madras (with brief interludes in Government Arts Colleges in Rajahmundry and Cuddapah), the Venkateswara University, Tirupati and University of Missouri, Columbia, before permanently settling down at the University of Alberta, Edmonton, Canada in 1963. The initial work of Subbarao was in analysis and topology, and later he moved to number theory. His early results were on the congruences of the partition function. This was one of his favourite problems, to which he contributed immensely. (His first paper on the subject was in 1966 and his last paper in 2005). In this context, he made an important conjecture: 'on every arithmetic progression, the partition function assumes both even and odd values, infinitely often'. This conjecture has generated a lot of research work by many mathematicians. The concept of an exponential divisor, introduced by him is the subject matter of many publications thereafter.

Subbarao was interested in the development of number theory in India. I vividly recall those days in mid 80s when he found some time to spend with me during his personal visits to Mumbai. These meetings were arranged by K. Ramachandra, with whom I was working for my doctorate then. Even though I had just finished my doctorate at that time, he treated me as his equal and enjoyed discussing mathematics with me. This continued even after I moved over to Chennai in 1985, until early 2000. He made it a point to spend a day or two with me discussing mathematics. I always found the discussions enjoyable and stimulating.

An international conference was held in 2002 in the Institute of Mathematical Sciences, Chennai to felicitate Subbarao when he turned eighty. The proceedings appeared as a publication of the Ramanujan Mathematical Society. When he was invited for an international conference in 2003 in connection with the 70th birthday of K. Ramachandra, Subbarao expressed his inability to attend the same on health grounds, but contributed three papers towards the proceedings. He has collaborated with many mathematicians. His Erdös number is 1. For readers who are non-mathematicians, the term 'Erdös number' needs an explanation. Paul Erdös wrote around 1500 mathematical articles, mostly coauthored. The number of his collaborators is more than 500. His direct collaborators have Erdös number 1. Those who collaborated with the direct collaborators, but not with Erdös himself, have an Erdös number 2. (This list has around 7000 people. Those who have collaborated with people who have Erdös number 2, but not with Erdös himself nor with anyone having an Erdös number 1, have an Erdös number 3 and so on). The Indian collaborators of Subbarao includes K. G. Ramanathan, K. Ramachandra, D. Suryanarayana, R. Sitaramachandra Rao, V. Sivaramaprasad, V. Sitaramaiah, Arun Verma, A. K. Agarwal, V. V. Subramanya Sastry, M. Sugunamma, P. H. Diananda and myself.

Subbarao is survived by his wife Suseela, son and daughter, and their families.

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