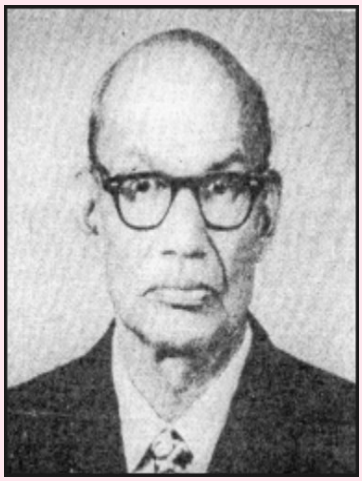
Professor Hansraj Gupta



Professor Hansraj Gupta, ex-honorary Professor of Mathematics, Panjab University, Chandigarh was born on the 9th October, 1902 at Rawalpindi. After a brilliant educational career at the Panjab University, Lahore with a first position in M.A. (Mathematics), he joined as lecturer at the Sadiq Egerton College, Bahawalpur in 1925 and was there till July 5, 1928. He then joined as lecturer at the Govt. College, Hosiarpur on the 9th July, 1928. Under the inspiration of Pt. Hemeraj (Principal, Dyal Singh College, Lahore), his teacher and Principal B. L. Bhatia, he engaged himself in research. His work in Number Theory attracted attention and references to his work started appearing in literature even before he got his Ph.D. in 1936 from the Panjab University. His thesis entitled. "Contributions to Theory of Numbers" was examined by Professors Hardy and Littlewood of Cambridge, England, both of whom praised his work very much. After India became free in 1947, the Govt. College, Hoshiarpur was taken over by the Panjab University and Dr. Gupta was appointed Professor of Mathematics and Head of the Department in 1954. In 1956, he was appointed Principal, Govt. College, Chandigarh. After a short stay there, he returned to his post in the university. He retired as Director of the Centre of Advanced Study in Mathematics in the end of July 1966, eight years after the University Department had shifted to Chandigarh. During this interval, he was invited as Visiting Professor by the University of Colorado, Boulder, Colorado, U.S.A. in 1962 and the University of Arizona, Tucson, Arizona in 1966. He was also invited by the University of Alberta, Edmonton, Alberta, Canada as Visiting Professor in 1969. In 1974 he represented the Indian National Science Academy, of which he had been elected a fellow in 1950, at the International Congress of Mathematicians at Vancouver.

Professor Gupta made outstanding contributions to Number Theory. He published 167 research papers in scientific journals of repute in India and abroad. He wrote four monographs one of which entitled "Tables of Partitions" was published by the Indian Mathematical Society in 1939, another one entitled "Symmetric Functions in the Theory of Integral Numbers", was published by the University of Lucknow in 1940, a third one entitled "Tables of Partitions" was published by the Royal Society of England in 1958 and reprinted in 1962, and the fourth one entitled "Representations of Primes by Quadratic Forms" was also published by the Royal Society of England in 1960. He was an authority on Partition

Theory. His tables of Partitions, which are the most extensive so far, showed that one of Ramanujan's conjectures was partly false. He gave a direct proof of a conjecture of Church house. He gave a remarkably simple proof of a Theorem of Erdos and Lehmer which has been reproduced in several books.

References to Professor Gupta's work appear in numerous books. Among them may be mentioned the Encyclopedia Britannica (Vol. 16,604), Encyclopedia of Mathematics and its Applications (article on Theory of Partitions by George E. Andrews), Theory of Numbers by G.H. Hardy and E.M. Wright, Ramanujan by G.H. Hardy, Additive Zahlentheorie by Hans Heinrich Ostmann, Topics in Analytic Number Theory by H. Rademacher, Combinatorial Theory by John Riordan, and Mehrgradi Gleichungen by A. Gloden.

For Professor Gupta, research was not a mere ritual. It was a way of life with him. Sitting quietly in one corner of the country at Hoshiarpur he kept on producing magnificent work for over three decades all by himself and without any aid. Those of us who often complain of the lack of facilities have to learn from his example. Even during the last years of his life, when he found it difficult to write, he was actively engaged in research. Is it not remarkable that he published ten research papers consisting of nearly one hundred pages in print in 1976, the seventy fourth year of his life. A long paper by him, covering more than thirty pages appeared in 1979. He initiated many young men into research.

Professor Gupta was President of the Indian Mathematical Society in 1963 and President of Mathematics Section of the Indian Science Congress in 1964. He had been a reviewer of the Mathematical Reviews since 1940 since its inception and also of the Zentralblatt fur Mathematik. He had been a member of the editorial board of the Indian Journal of Pure and Applied Mathematics. He was a member of the Indian, American and Edinburgh Mathematical Societies. He was awarded a Certificate of Honour and a medal by the British Empire Exhibition held at Wembley (U.K.) in 1924. In view of his outstanding contributions to Mathematics Education and Research, the Mathematical Association of India (Delhi Chapter) felicitated him in 1979.

Professor Gupta had been deeply interested in Astronomy. In his younger years he used to spend night after night on rooftops watching the stars and studying their movements. Many years ago he devised a PERPETUAL CALENDER.

To serve the ailing humanity professor Gupta practiced Homeopathy for the poor and needy as free service. He was held in high esteem as a physician by his patients.

Professor Gupta was known to be an excellent teacher. Throughout his life he practiced the cherished ideal of conveying sound mathematical knowledge to his students in the fervent hope that they would not only retain the ideas conveyed to them, but at least some of them would ultimately advance the cause of knowledge. He is remembered by his students with a deep sense of admiration. Many of them recall with pleasure how he used to sit on the floor on Sundays and holidays with is devoted children around him for the solution of their problems. His Students celebrated his Silver Jubilee in 1953 on his completing 25 years of service at the Government College, Hosiarpur. The organization of such a function is ample testimony of the great affection of is students towards him.

Professor Gupta had a fine sense of humour. At any party that he attended, he invariably

turned out to be the life of the party. He would make some innocent remark, such as calling somebody the Duke of Edinburgh (meaningfully of course) and everybody would roar out with laughter breaking the monotony that might have prevailed a moment earlier. When Professor Gupta was at Hoshiarpur, one of his students being rather weak in Mathematics was often pulled up by him. On being asked to write essay on "Our Dream" in the English class, this particular student wrote that in his dream he had been thrown into fire by Professor Gupta. When this matter was narrated to him, he naturally got a bit upset, for, being kind and noble soul, he could not think that such an act could be attributed to him even in a dream. How ever, in his characteristic witty style he dismissed the matter by nicknaming the student a "ghost".

Professor Gupta was law-abiding to the core. Once he, along with his cousin and two students went to a picnic to Bankhandi (a place where in the Shivalik hills, near Hoshiarpur). From there the foursome went further off to Una. They had planned to return back to Hoshiarpur by the last bus but they got delayed and missed the bus. Professor Gupta insisted that since he had not taken station leave, they ought to return at all costs. Since no other means of conveyance was available, he forced everybody to come back on foot reaching Hoshiarpur around 2 am. Professor Gupta had always been held in high esteem by his colleagues and members of the administrative staff at Hoshiarpur, Chandigarh and elsewhere too. He was good company at all times and places. He had the ability to mix with people of all age groups at their level. He was affectionately called "Papaji" by everybody. Anyone who came in contact with him was deeply impressed by his divine simplicity, sincerity, straight forwardness, methodical ways and extra ordinary promptness. If you wrote to him you were sure of a reply within a week. He could not tolerate any mistakes. His insistence on accuracy and precision was a model for anyone to follow. Even at the age of eighty, he used to type out all his research papers and personal correspondence with meticulous care. He used to say that in his work he drew inspiration from a verse of Bhaskara which means:

"A little instruction and guidance in Science is sufficient for the intelligent student, for this alone will help him develop his knowledge of his own accord. Science instilled into the intelligent mind has sufficient vitality in it to grow and expand by its own force even as a drop of oil on a sheet of water, a piece of a secret confined to a villain, or a little act of charity to the deserving person."

By his achievements over a period of nearly five decades he amply demonstrated the truth contained in the above lines.

He passed away on 23rd November, 1988. Today, the whole mathematical community remembers him with great love and respect.