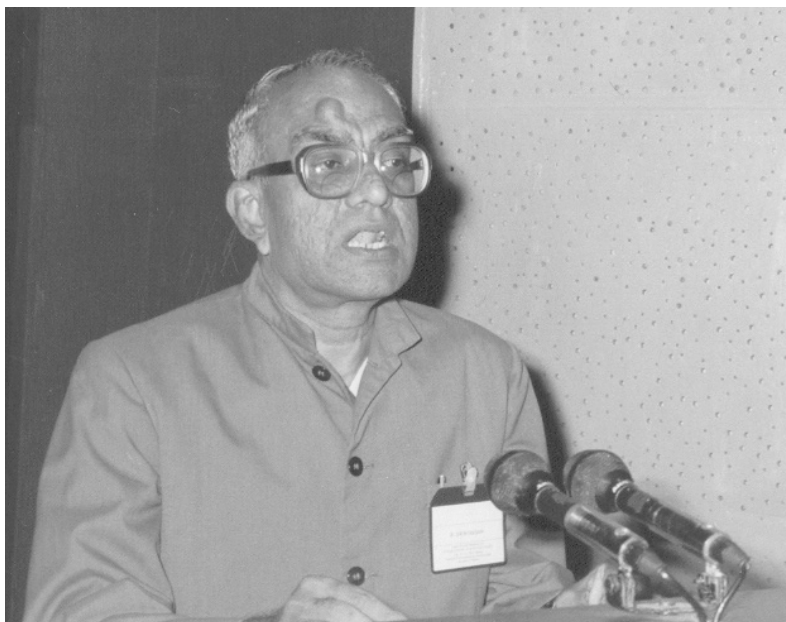


Obituary – Professor Ramachandran Srinivasan, 1933-2004



Ramachandran Srinivasan was born on 5 July 1933. After his early education, he joined the then Physics department of the University of Madras in 1956 to work in the area of X-ray crystallography under the guidance of GNR. After obtaining his Ph.D. in 1958, he was appointed as Lecturer in the department. Subsequently, he spent a few years at the Cavendish Laboratory in Cambridge UK. He was appointed Professor by the age of 31, one of the youngest ever Professors of the University of Madras. He continued to work on X-ray crystallography. He also developed an interest in conformational analysis of biological molecules. He became the head of the department in 1969, and continued in this position until his retirement in 1994. He was elected to the fellowship of the Indian Academy of Sciences, as well as the Indian National Science Academy. He has published over 200 scientific articles, and has written or edited nine books and monographs.

The scientific contributions of Professor Srinivasan may be divided into two broad areas – X-ray crystallography and Structural Biophysics. Perhaps his best known work in crystallography is the explication of Fourier techniques to solve crystal structures. The book ‘Fourier Methods in Crystallography’ that he co-authored with GNR is regarded a classic text on the subject. Similarly, his enormous contributions to the applications of statistics in crystallography have been collected together in an extensively quoted book ‘Statistical Applications in Crystallography’ that he wrote together with S. Parthasarathy. He made important contributions to the theory of anomalous scattering. Long years before the advent of synchrotron radiation sources, he was the first to recognize the possibility of using single-wavelength anomalous differences to determine phases, a technique that is now in widespread use in macromolecular crystallography.

In the area of structural biophysics, his most important contributions include systematic characterization of protein secondary structures using the ‘virtual bond’ concept, and a single angular parameter. These analyses lead to the identification from protein crystal structures of a new type of helix.

Professor Srinivasan was widely respected in the country and abroad. His services to the crystallographic and biophysics communities include organizing many of the early National Seminars on Crystallography, that are now an annual feature of the scientific calendar of the country. He also organized two enormously successful international symposia in the area of Biophysics, which were attended by some of the greatest names in the field. For a long time he was the Director of the National Information Centre for Crystallography, then the sole Indian custodian of the Cambridge Crystallographic Database. Though he faced great financial and administrative obstacles in this activity, he bravely soldiered on, supplying the Indian crystallographic community with the data it needed, until circumstances and technology made the service unnecessary. His stewardship of the department during hard times has resulted in continuing support for its activities even after he was no longer formally associated with it.

Professor Srinivasan retired from service in 1993. He had long been a diabetic, and the complications set in rather severely in the last few months. He battled bravely against them, engaging himself in scientific activity till the very end. His last 'public' activity was to testify about his mentor Professor G.N. Ramachandran (GNR) in the film 'The Immortal Coils' made on the latter by CSIR and Vigyan Prasara. Professor R. Srinivasan passed away on morning of 19th September 2004. He leaves behind a wife and a daughter, besides several students, colleagues and friends, whose lives he has guided and enriched over the last 3 decades. He will continue to inspire all his associates, within the country and abroad.