

PROFESSOR CONJEEVARAM SRIRANGACHARI SESHADRI (29TH FEBRUARY 1932 – 17TH JULY 2020)

“The written word alone flouts destiny, revives the past and gives the lie to Death”

- Hrabanus Maurus

கலைமகள் வாழ்க்கை முகத்த தெனினும்

மலரவன் வண்டமிழோர்க் கொவ்வான்-மலரவன்செய்

வெற்றுடம்பு மாய்வனபோன் மாயா புகழ்கொண்டு

மற்றிவர் செய்யு முடம்பு

- Kumaraguruparar

A late night telephone call on 17th July 2020, from my friend Sripathy (registrar of CMI, who has been of wonderful help to all CMI members) informed me with great grief of the passing away of Prof. C.S. Seshadri. I have been ill during the past few weeks and could not attend the funeral ceremony of my very dear old colleague and friend. I knew Seshadri had been ill for quite a few months and I had been enquiring about his health from him and his family during this period. Seshadri and I both worked at the Tata Institute of Fundamental Research (TIFR), Bombay and in fact he is senior to me by 2 years. Seshadri in some sense was very much responsible though indirectly for my joining the TIFR. During my B.A. Honours course at Vivekananda College, Chennai, I was very much inspired by one of my teachers, Prof K. Subramanian, who convinced me that I should take up research in mathematics as a profession. He took pains to take me to Prof. C.T. Rajagopal, who discouraged me from joining TIFR. However, through a classmate of mine I was convinced that I should join the Tata Institute of Fundamental Research (TIFR) in Bombay. He in fact mentioned about Prof. Seshadri's name and pointed out that he was doing very significant research at TIFR. I applied to TIFR in 1955 for a research studentship and much to my surprise I was selected, on the basis of an interview. In TIFR, I met Seshadri, M.S.Narasimhan and a few other students of mathematics.

The very first time I met Seshadri, it was clear to me that he was an absolutely dedicated intellectual and a very gentle human being, always deeply interested in the pursuit of research in mathematics. Seshadri and M.S.Narasimhan both applied to TIFR on the

suggestion of Fr. Rev. Racine (a French mathematician working at Loyola College, Chennai) and joined TIFR in 1953 (2 years earlier than me). As a research student, under the supervision of Prof. Chandrasekaran, Seshadri was very seriously interested in a mathematical problem, which eventually was to lead to his Ph.D thesis titled “Generalized Multiplicative Meromorphic Functions on a Complex Analytic Manifold” to obtain a doctorate degree of the University of Bombay. In this piece of work, he was inspired to use a classical result of Garret Birkhoff. In fact this was just the beginning of Seshadri’s mathematical career, which eventually made him an international expert on ‘Algebraic Geometry’.

Prof. Chandrashekar had a unique idea of creating a very good School of Mathematics at TIFR. He invited renowned mathematicians such as Prof. Laurent Schwartz, Prof. Eilenberg and many others for a series of lectures at TIFR to inspire the young minds. These initiatives led Seshadri and Narasimhan to go to Paris and work with great French mathematicians like Prof. Chevalley, Prof. J.P. Serre and others. As an example of how this idea conceived by Prof. Chandrashekar became fruitful, I should mention that Seshadri, while in Paris, proved a very beautiful theorem, which settled a special case of the now called “Serre’s Conjecture on Projective Modules”. (Curiously, the proof uses a method of Birkhoff mentioned above).

As students we were terribly impressed by Seshadri’s tremendous achievement. In fact, this work of Seshadri has led to many important questions on which some of the students of TIFR and other mathematicians have contributed fruitfully. Indeed, Seshadri made substantial contributions in many aspects of Algebraic Geometry, which made him a mathematician of great repute. During his career in TIFR, he had quite a few students working with him. For instance, Pavaman Murthy, Lakshmibai, (who are in the U.S), C. Musili (unfortunately, who is no more) and many others obtained their doctorate degrees under Prof. Seshadri’s guidance and several like Vikram Mehta were influenced by him. Seshadri, M.S.Narasimhan and Ramanan under various collaborations worked in the theory of “Vector Bundles”.

One could keep on talking about the various achievements of Prof. Seshadri, but I think I would like to talk about some of his other aspects. I have been very close to Seshadri right from the time of my joining TIFR. One of the most impressive qualities of Seshadri is his total commitment to any idea, which he believed deserved his attention. I would like to say a few things about his devotion to music. He had a very deep knowledge of Indian classical music (both Carnatic and Hindustani) and was an expert to the extent where one of his CMI students was recently learning music from him. Indeed Seshadri comes from a distinguished family of musicians.

I have been keeping silent about my relationship with Seshadri so far, but I should say a few things, which are perhaps relevant. I went to USA in 1958 at the suggestion of Prof.Eilenberg to work for my doctorate degree and returned to India in 1960. After my

return, I fell very seriously ill with stomach problems. To help me recuperate, Seshadri very kindly suggested that I could brush up my Carnatic music skills through Pallavur Mani Iyer (a student of the well-known Chembai Vaidhyanatha Bhagavathar), with whom Seshadri also had learnt Carnatic music earlier. Following Seshadri's suggestion I used to visit and learn from Pallavur Mani Iyer (who lived in Khar Road, a suburb of Bombay) during weekends and this went on for a number of years.

Seshadri married Sundari in 1962 and lived in 'Rey House' in Colaba. I visited them quite often and Sundari was wonderfully kind and hospitable. She was a drama artist and a great singer both in Carnatic and Hindustani music. A misfortune of this gifted pair was the death of their first son Shyam Krishnan, who was born in 1963 and died in a year. This terrible loss affected Seshadri and Sundari very deeply, but remarkably both of them bore this great loss with much fortitude. In fact, Seshadri used to work in mathematics the same way as ever even during this period. Later the couple were blessed with two sons Narasimhan and Giridhar.

In 1984, Seshadri for personal reasons, decided to move to Chennai to work at the Institute of Mathematical Sciences (IMSc). He stayed with IMSc until 1989. In 1989, Seshadri and P.S.Thiagarajan (Computer Scientist) started a new institute called the SPIC Science Foundation for Mathematical Sciences, located in the fourth floor of a building in G.N. Chetty Road, and financially supported by A.C. Muthaiah. Most unfortunately, this funding stopped in 1999. Fortunately, at this stage the National Board for Higher Mathematics (NBHM) funded the Institute being aware of Seshadri's reputation.

Anil Kakodkar (Secretary of the DAE) and Sudha Bhawe (Joint Secretary of the DAE) visited the Institute and were very much impressed by it. They recommended to the central government that the Institute be funded and that a permanent building be built for the Institute. However this was not accepted and the Institute was in a predicament. At this crucial point, the remarkable R. Thyagarajan, Chairman of Shriram Chit funds who was ever an admirer of the ideals of CMI (Chennai Mathematical Institute was the new name given to the Institute in 1998), stepped in and funded the construction of a new building at Sipcot Siruseri and took care of the entire financial expenses needed. Madhava Sharma (unfortunately, who is no more) played a very active and decisive role in the construction. Thus a dream that Seshadri had been working very hard towards was made a reality.

After my retirement from TIFR, I came to CMI twenty years ago at the insistence of Seshadri. I had already heard before I left Bombay for Madras that Seshadri had had a heart attack and was recuperating. My first meeting with Seshadri in Madras was in a hospital. Even in the hospital he was worried about the future of the Institute and I promised him that I would try to do my best for the Institute. He recovered very fast and came back to the Institute in a few days. At CMI, I taught Algebra to the first batch of graduating B.Sc students. I have had the pleasure of teaching various topics to students at various levels.

I cannot still reconcile myself to the fact that Seshadri is no more. He has been one of my closest of friends. Seshadri used to live near where I live and used to drop me at my residence many a time, while we were coming back from CMI in the evenings and I still remember the warm conversations we had during these journeys from the Institute to my house. My wife Vasantha (who was very close to Sundari) and I used to visit Seshadri's house and we spent some wonderful times with Seshadri and Sundari, Giddu, Giddu's family and Vadivu. Sundari, who had been keeping indifferent health passed away quite suddenly in October 2019, which came as a shock to us. It was clear that her death affected Seshadri very immensely. Indeed all of us were very upset by Sundari's death. Both Seshadri and Sundari were wonderful persons and it is hard to accept that they are no more.

Acknowledgement: I am very grateful to Suresh Raghunathan who helped me bring this article to typed form. I am indebted to Sripathy for his immense help for the past twenty years of my stay at CMI. I thank Raja Sridharan who went through the article carefully and made a few suggestions.