

Obituary

Professor E. Sampathkumar

It is difficult to think that Professor E. Sampathkumar, affectionately called ES by his friends and admirers, is no longer with us. Apparently, ES developed some breathing problems on August 9, 2024. He was then at Mysore. He was rushed to the hospital by his friends on 10th August. But then, he was not responding to the treatment and he passed away the very next day, i.e., August 11, 2024. His body was then brought down to Bangalore and the last rites were performed on August 12, 2024, by his two sons at his Bangalore residence. Though ES is no longer with us, his academic involvement would keep haunting our minds for many more years to come.

ES was born in 1936 in Dodda Mallur village of Channapatna taluk, Ramanagara District in Karnataka State. He completed his Master's in the Central College, Bangalore in 1955 and his Ph.D. in 1965 at the Karnatak University, Dharwad under the guidance Prof. C.N. Srinivasa Iyengar who in turn had obtained his D.Sc. degree from Calcutta University. ES was working as Lecturer in this department since 1960 . In 1966, he was elevated as Professor in the same department and he continued in this position till 1988. He then shifted to the University of Mysore and finally retired from service during 1996.

Academic Works of ES

Graph Theory was the main area of research of ES. In fact, it is often said that he was the first to teach Graph Theory in India (at Karnatak University) in 1970. His main areas of his research in graph theory were: Domination in Graphs and Semigraphs. In Domination, he introduced several new parameters: connected, global, strong, weak domination numbers besides domination balance. In fact,

Dr. B.D. Acharya and Dr. H.B. Walikar who were co-workers of ES (besides others, of course) joined with ES and brought out the MRI (Mehta Research Institute,Allahabad) Lecture Notes # 1 in 1979 highlighting the major results in Graph Domination thus far available.

Yet another area of major interest of ES was Semigraphs. Here too, he had introduced several (semi)graph parameters: Degree Sequences, planarity, duals, complete and bipartite semigraphs, matchings, domination, coloring parameters, topological spaces associated with semigraphs/directed semigraphs. Again, a major part of the above concepts in semigraphs have been brought out by ES in book form as an ADMA publication in 2019 which he had edited jointly with Professors C.M. Deshpande, B.Y. Ram, L. Pushpalatha and V. Swaminathan.

My association with ES

My association with ES dates back to 1972 when Professors S.S. Shrikhande and C.R. Rao jointly organized an international conference relating to Graph Theory and Combinatorics at the INSA Building in New Delhi. We were both Invited Speakers at this conference. The contacts that we made at that conference brought us closer in the years to come to embark upon several joint ventures by way of organizing several conferences and workshops, both national and international in Discrete Mathematics and, in particular, in Graph Theory. One of the important workshops amongst these was the 8-day workshop on Graph Theory organized by me at the Annamalai University. ES was particularly happy about this workshop in that lecture notes were distributed on the first day of the workshop itself.

Birth of the Ramanujan Mathematical Society

The 50th annual conference of the Indian Mathematical Society (IMS) was held at Sardar Patel University , Anand, Gujarat State during December 1984. On the second day of the conference, during lunch break, Professor K.S. Padmanabhan (KSP) of the Institute for Advanced Study in Mathematics (RIM in brief) collected a few of the participants of the conference: Professors R. Balakrishnan (myself), ES, G. Rangan, M.S. Rangachari, M.A. Sundaram, T. Soundararajan and a few others (whose names I do not recall now) and projected his view that the country like India, with its size and stature, needed yet another good mathematics journal that aimed at both quality and regularity. Everyone seemed to agree to his suggestion. But then many opined that to start such a journal, there should be a base – a launching pad – and hence there was an imperative need for founding a new mathematics society. As the afternoon session of the conference was about to commence, the discussion was ended at that point and it was decided to continue it in the evening at the end of the afternoon session of the conference. But nearly half of those present in the lunch-break deliberations did not show up in the evening. But that did not deter KSP from his efforts. He continued with his deliberations in which myself, ES, Jayasankaran, M.A. Sundaram and a few others were present.

Keeping in tune with the discussions, I was requested to call upon a 'Promoters' Meeting'. This I did in 1985 at the National College Campus, Tiruchirappalli in which Professors KSP, ES, G. Sankaranarayanan (GS), Jayasankaran, Ramabhadran and several others were present (besides myself, of course). RMS was officially launched at this meeting with GS as the first President, myself as the first Secretary ES as the first Academic Secretary and Jayasankaran as Treasurer. Soon I prepared the bye-laws of the Society with the assistance of Professor V. Thangaraj of RIM (who was then at REC, Trichy) and got the Society registered at Tiruchirappalli. I would also like to mention at this point that some people did not exhibit much interest in RMS in the earlier period of the Society as they thought that RMS had been founded as a rival to the Indian Mathematical Society (IMS). Prof. KSP belied that supposition by being the Honorary Librarian of the IMS Library at RIM not only during his

tenure as Director of RIM but also even after his retirement from RIM.

Ten years rolled on. In 1996, I organized an International Conference on Discrete Mathematics and Number Theory at Tiruchirappalli. The Number Theory part was organized by Professors Michel Waldschmidt of the University of Paris, Paris VI and Professor Kumar Murty (KM) of the University of Toronto, Canada. The Graph Theory part was organized by myself, Professors J.C. Bermond, Sophia Antipolis, France, M.S. Jacobson, University of Louisville, USA and P. Paulraja, Annamalai University.. ES somehow impressed upon KM and persuaded him to take up the post of Editor-in-Chief of the Journal of the Ramanujan Mathematical Society (JRMS). This KM did the next year, namely, 1997 and ES himself had taken up the Managing Editorship of JRMS. Since that time, the visibility of JRMS as a leading journal in mathematics was getting increased steadily. ES continued as the Managing Editor of JRMS almost till his death, and needless to state that today JRMS has become one of the leading math journals.

Birth of the Academy of Discrete Mathematics and Applications (ADMA)

With the activities in Discrete Mathematics, especially in Graph Theory, started growing, (the late) Dr. B.D. Acharya of the Department of Science and Technology, Government of India started spearheading the move, with the active support of Prof. H. B. Walikar, ES and many other leading discrete mathematicians of our country to establish a society for discrete mathematics . Finally, this came to fruition and the Academy of Discrete Mathematics and Applications (ADMA) was launched in the year 2005 at the time of the first Graph Theory Day, namely, June 10, 2005. Naturally ES was made its first President of ADMA. In fact, I had the privilege of inaugurating it at the Christ College (now Christ University) in Bengaluru with its Principal Rev. Dr. Thomas C., presiding over it, ably assisted by Dr. Medha H. Hoilgol of the mathematics department and in which many leading discrete mathematicians of our country were present. Just as RMS launched its journal JRMS, ADMA launched its journal, IJDM (The Indian Journal of Discrete Mathematics and Applications) in the year 2015. Prof ES and Prof. S. Arumugam were the Editors- in-Chief during the initial period, namely,

from 2015 to 2018. Like RMS, ADMA too started organizing conferences and workshops. Its annual conferences are usually held around June 10th (the birth day of ES) of every year and one full session of June10th is held in his honour. Apart from Invited Talks and Paper Presentations, many endowment lectures are also being delivered in the ADMA annual conferences. Incidentally, IJDM is now one of the journals under UGC CARE List. As we could all see, the impact of ES on both RMS and ADMA had been profound.

This is, so to say, a succinct summary of the academic life of a sublime personality, namely, ES. I am tempted to ask like Mark Antony in the Shakespeare's play 'Julius Caesar': Here was an ES. When comes such another?

R. Balakrishnan

**Adjunct Professor of Mathematics
Bharathidasan University**

Tiruchirappalli 620024

Email: mathrb13@gmail.com