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The immense beauty of mathematics

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I am frequently asked, "Are there other mathematicians in your family?" and the surprising answer, perhaps, is "No".

My father was a professor of English and my mother a housewife. I grew up in an environment where academic performance was the highest priority. My father instilled in me the discipline to work towards excellence in whatever I took up. I studied at Sarada Vidyalaya Girls' High School and Stella Maris College, both in Chennai. I was fortunate to have excellent teachers, both in school and in college, who nurtured my interest in mathematics. When I was due to finish school, my father wanted to know what I wanted to study in college. He suggested medicine or English literature since a career in medicine or in teaching is most suited for girls. Realizing quickly that my interest was in mathematics, he promised to send me to the best possible institution for higher studies.

My ending up with a research career in mathematics was something of an accident. When I finished my M.Sc., I wanted to take up a teaching job at Stella Maris College – a standard career path for many of my seniors who were my role models. In retrospect, I feel that several of them would have been successful math-

ematicians, had they been given the opportunity. Miss Thangamani, one of the most revered professors in the college, specifically instructed the college management not to employ me as a lecturer since she felt that I was cut out for a research career! I came to know of this incident much later.

Though I had heard about the famous Tata Institute, I preferred to stay in Chennai to continue my studies. After considering various options, I decided to pursue research studies at the Ramanujan Institute, University of Madras. Professors like Bhanumurthy and Rama taught me mathematics with great enthusiasm. After a year, I moved to the Tata Institute to work with Professor Sridharan for my Ph.D. degree. My thesis title was 'Projective modules over polynomial rings over division rings'. When I finished writing up my thesis, I was diffident about continuing as a research mathematician. The presence of some of the greatest mathematicians of the world at the Institute as well as some brilliant youngsters emerging as shooting stars on the horizon was truly daunting.

At that point, I got married to Raman who was chief internal auditor with the Board of Internal Trade, Tanzania. I took leave from the Institute for a year and accompanied him to Dar-es-Salaam. I had no clear plan for my career. In a few months, Raman took an extraordinary decision. He quit his job to accompany me to E.T.H. Zurich so that I could do post-doctoral work. This critical decision enabled me to get back to mathematics. In Switzerland I met colleagues like M. Ojanguren and M.A. Knus with whom I have had fruitful mathematical interactions throughout my career. To complete my account of my family, my son, Sridhar, has a keen interest in mathematics, and keeps abreast of what I am doing, although he chose for himself a career in technology.

Tata Institute is one of the very few institutes in the world, dedicated to research - it is both a privilege and responsibility to work at such a place. The Institute provides a great environment for research with total academic freedom, an excellent library, and a vibrant visitor's program. Mathematicians from all over the world expose the latest developments through lecture series. I gained a

lot through interaction with visiting mathematicians. Professor Sridharan instilled in me the responsibility of dissemination of knowledge to youngsters. I have had the privilege to interact with students – working with each one of them led to my exposure to new areas. I am proud to say that some of my students have outperformed me.

To sum up, my becoming a career mathematician was a consequence of a series of accidents. Looking back, it has been a highly satisfying profession. I immensely enjoyed interactions with like-minded mathematicians the world over. It is a world of ‘make-believe’, with great excitement from time to time. I only wish I had the lucidity of my father to convey to the outside world the immense beauty of mathematics!