

## Rengachary Parthasarathy (1939–2025): a life journey from Nagari to San Jose

S. Narasinga Rao<sup>a\*‡</sup> and Manuel Soriano Garcia<sup>b§</sup>

<sup>a</sup>University of Central Oklahoma, Edmond, Oklahoma, USA, and <sup>b</sup>National Autonomous University of Mexico, Mexico City, Mexico. \*Correspondence e-mail: azrao4507@gmail.com

‡ Narasinga Rao is Ex-CFO and Treasurer, ACA, Ex-member, Finance Committee, International Union of Crystallography (IUCr), Fellow of the ACA, Ex-Governing Board Member, American Institute of Physics and Dean Emeritus and Emeritus Professor of Physics, University of Central Oklahoma, Edmond, Oklahoma.

§ Manuel Soriano Garcia is a Mexican biophysicist, researcher, educator, recipient of the Manuel Andrés Del Río award in Chemistry, Chemistry Society of Mexico, 1990, Research Scientist Level III, Education Secretary Mexico, 1992 and Professor Emeritus, Autonomous University of Mexico (UNAM).

**Keywords:** Rengachary Parthasarathy; obituary.



Born in Nagari in Madras Presidency, India on 17 May 1939, studying in Trichy and Madras, moving to Buffalo, New York and resettling after retirement in San Jose, California, Parthasarathy, known as 'Partha', passed away at his home surrounded by all of his family members on 15 June 2025 at 9:26 a.m. on Father's Day at the age of 88. Funeral services were held at Alameda Family Funeral and Cremation Inc. in Saratoga, California on Wednesday 18 June. Memorial services began at 12:30 p.m., followed by final rites from 1:15 to 2:15 p.m. May his soul rest in peace!

Partha and his wife Prema immigrated to the United States in February 1963 so that Partha could join the Department of Crystallography at Roswell Park Memorial Institute (now known as Roswell Park Cancer Institute). He is survived by his wife, three sons (two married, one bachelor) and their wives, one daughter and her husband, and eight grandchildren.

He was caring, compassionate, dedicated, dependable, passionate, student-focused, humble, unfailingly kind, generous and empathetic, with a uniquely quick wit. His heart was most often turned toward the Divine. His loves spanned religion to research and he walked the path between sound and silence and between tradition and transformation.

He earned a second PhD in biophysics from the State University of New York at Buffalo in 1966 after his first PhD in physics from the University of Madras, Tamil Nadu, India in 1962, and Master of Science in physics from St Joseph's College, Trichy, University of Madras, Tamil Nadu, India in 1958. He worked with Dr G. N. Ramachandran in Madras and with Dr David Harker, one of the pioneers of crystallography, at the Center for Crystallographic Research, Roswell Park Memorial Institute in Buffalo, New York.

He was Emeritus Professor in the Biophysics Department, State University of New York, Buffalo from June 1996 until his death, Research Professor in Biophysics at State University of New York, Buffalo, New York from 1976 to 1996 and Director of Graduate

Studies, Biophysics Department, SUNY Buffalo, New York (Roswell Park Division) from 1978 to 1992.

Partha was a Co-editor of *Acta Crystallographica* from 1994 to 1997, the recipient of several research and equipment grants from national agencies between 1969 and 1996, a member of the peer-review and site-visit committees of NIH and NCI, and a consultant on the United Nations Development Program for Technology Transfer in Biophysics to India in 1985–1986. He was the recipient of several fellowships (including a NATO Fellowship, Advanced Study Institute on Direct Methods, Parma, Italy, 1970; CECAM Fellowship for visiting scientists,

University of Paris, Orsay, France, 1970; NSF Grant for the IXth IUCr meeting, Kyoto, Japan, 1972; and NIH Consultant for the International Symposium on Biomolecular Structure, University of Madras, India, 1978). He also received the Raman Research Gold Medal for the best PhD thesis, University of Madras, India (1965) and the Fr Sewell Gold Medal, St Joseph's College for First Rank in Physics Honors (1957).

He was a lifelong teacher in whichever subject fascinated him. He taught graduate science classes at SUNY Buffalo, undergraduate classes at San Jose State University, lectured at the Sri Sathya Sai Institute of Higher Learning in India and



Dr G. N. Ramachandran, Dr David Harker and Dr Gopinath Kartha

Dr R. Parthasarathy



Dr Parthasarathy with his mother and the Rao family, at a social picnic and with Manuel's family



Dr R. Parthasarathy, his first graduate student Dr S. Narasinga Rao, Partha's office and his student Dr Manuel Soriano Garcia



Dr R. Parthasarathy with French crystallographer Dr George Tsoucaris



American Crystallographic Association Meeting

**Figure 1**  
Photo gallery: personal, family and professional connections.

enjoyed tutoring high-school students in physics, chemistry and maths. He was a guide, friend and philosopher to all of his students. Just as Lord Krishna (Sarathy) guided Arjuna (Partha) the warrior to win the war of righteousness in the Hindu epic *Mahabharatha*, Dr Parthasarathy's guidance and advice led all of his students to success in their lives true to his name. We all owe him a sense of gratitude for what we are today.

Partha loved God. He spoke on the Bhagavad Gita, was an ardent devotee of Sri Sathya Sai Baba and hosted the Sai Center in his home in Buffalo for many years. Partha and Prema were pivotal in nurturing the Hindu Cultural Society of Western New York, helping it grow into a vibrant community that ultimately built a Hindu temple in Buffalo.

A gallery of photographs from Professor Parthasarathy's personal, family and professional life is shown in Fig. 1.

*Some personal recollections from Narasinga Rao.*

For our part, our life in the USA began on June 1 1970 in their home at Williamsville, New York. We stayed with them for a few weeks before moving into an apartment in Buffalo. Dr Parthasarathy was my guide, mentor and thesis advisor. I was the first graduate student to earn a PhD under his supervision. In 1989, when Partha was a member of the nominating committee of the American Crystallographic Association (ACA), he nominated me for the position of treasurer. I was elected and served as treasurer for six years and as Chief Financial Officer for 25 years before I retired in 2020. I thank the ACA and Partha for this opportunity.

When I was working as a postdoctoral fellow at Oklahoma Medical Research Foundation, Partha offered me a job at Roswell Park Memorial Institute when a vacancy arose. There were only 24 hours to fill the position and as I was under an obligation to give two weeks' notice in Oklahoma, I could not join the group led by Dr Harker, Dr Gopinath Kartha and Dr Parthasarathy. This was unfortunate and I thank Partha for thinking of me first. This shows how much he cared for his students even after they left. He always kept in personal touch with our family.

Before I joined the Center for Crystallographic Research as a graduate student, Dr David Harker was the chair of the Biophysics Department at Roswell Park. He asked me in the interview: 'I have one Indian, Kartha, who eats meat and does not drink. I have another one, Partha, who drinks but does not

eat meat. What kind of an Indian are you?' I replied that I do not drink and do not eat meat. Harker laughed and I was admitted to work with Partha. This was the turning point in my career, and I have been very fortunate to be mentored and guided by Parthasarathy. We have been ever-grateful to Partha and Prema throughout my life.

*Manuel Soriano Garcia writes.*

Today, on the afternoon of 15 June 2025, I received a phone call from Professor Narasinga Rao, in which he informed me that Professor Rengachary Parthasarathy had passed away earlier that morning.

The news had two sides: one good and the other very sad. The good side is that Professor Parthasarathy had been suffering from severe lung and bone cancer for a long time and had endured a great deal. His passing now allows a release from pain, both for him and for his family.

The sad side is that we have lost a person with great scientific expertise. During his time as a research professor at the Center for Crystallographic Research at Roswell Park Memorial Institute in Buffalo, New York, he made significant contributions to the development of the isomorphous replacement technique used to solve the phase problem and determine the crystal structure of proteins. He also contributed to the experimental determination of the imaginary part of the anomalous dispersion factor for the chlorine atom.

Additionally, he supported me in gaining in-depth knowledge of the experimental aspects of collecting diffraction patterns from biologically important molecules and solving the phase problem to obtain the three-dimensional positions of atoms that make up the molecule; in other words, the three-dimensional structure of molecules in the crystalline solid state.

Professor Parthasarathy supported me as my advisor in the PhD program at the Department of Biophysics at the State University of New York at Buffalo. He also turned out to be an excellent friend. In December of 1975, I returned to Mexico with my academic degree and, using the experience that I had gained in X-ray crystallography, I established this discipline in my country. At that time, X-ray crystallography was unknown in Mexico, and there was not a single X-ray diffractometer in the country. Professor Parthasarathy supported me with access to laboratory equipment and provided financial support for research stays in his laboratory. This allowed me to continue publishing my research work. Thank you!