

Learning with Abdus Salam

Perhaps this most especial honour, the Abdus Salam Medal, was bestowed upon me in view of my great passion for TWAS, designed by its founder Abdus Salam to carry on the building up of Science all over the world, with much focus on developing countries, to the benefit of their Societies.

I first heard of Salam as the founder of the International Centre of Theoretical Physics (ICTP), created by the Italian Government in 1964, in Trieste, about 20 years before TWAS, and similarly very devoted to the dream of expanding good Science in the developing world.

The pursue of such Salam most audacious dream was fully embodied by all TWAS Presidents following him: Israel Vargas, C.N.R. Rao, myself and now Chunli Bai.

Going back in time, I “discovered” Abdus Salam in my late 30’s when I visited ICTP in the late 1970’s. I am still astonished by the fact that I wasn’t acquainted with either Salam or the ICTP until I was rather well established in my career. After all, ICTP is not only a Center for Physics, but also a Mathematical Center, much reflecting the scientific standards of his creator.

For scientists from the developing world, coming to ICTP was an important step towards the realization of Salam’s dream applied to their own countries. As they engaged with others in Trieste who shared the same view, it also confirmed their faith in their own talents and the importance of the work they were doing.

For them, Salam was an iconic figure in science and ICTP was a revered place of learning. To journey to Trieste and to meet Salam in person was an unforgettable experience – a once-in-a-lifetime event and certification that one was a worthy researcher in his or her field of study.

Intellectually, my ideas about the role of science in society had been shaped by the great French mathematician and philosopher, Henri Poincaré, whose writings inspired me. Working at the turn of the late 19th and early 20th centuries, Poincaré ranks among the world’s greatest scientists. Mathematically, I was very influenced by him. I was also much motivated by my PhD advisor at University California – Berkeley, Stephen Smale.

I found Poincaré’s focus on the value of science, instilled in his writings, to be closely akin to Salam’s ideals. Yet, Salam’s expressions of these ideals ultimately proved to be equally captivating to me. Indeed, when I first met Salam, he was not yet a great historic figure that he is today but a living example of an individual seeking to advance virtuous goals in today’s world. His work, moreover, proved instrumental in helping to move discussions from the realm of intellectual abstraction to real progress on the ground both for scientists and societies in the developing world.

I am very pleased to say that at the very beginning of Prof. Rao’s TWAS Presidency we have created, in Salam’s spirit, the TWAS PhD Fellowship Program that now offers more than 460 PhD Fellowships for applicants of developing countries to study

at some of the most especial institutes in the developing world. These Fellowships are now hosted in Brazil, China, India, Kenya, Malaysia, Mexico and Pakistan. We hope, not too far in the future, to achieve as much as one thousand fellowships. We also hope to achieve the goal we have dreamed of 25 million Endowment Fund, launched at the TWAS 25th Anniversary in 2008.

Salam was certainly very influential in my own career: I have chosen to work in Brazil in a relatively small Mathematical Institute at the time and to dream to help building up a high level scientific community, not only in Rio de Janeiro and Brazil at large and beyond Latin America. I am very happy to have supervised 42 PhD thesis of students originally of 11 different countries, having so far more than 200 PhD descendants.

I wish to heartily thank all the TWAS Council Members, particularly President Chunli Bai, the Secretary General Ajay Sood, the Treasurer Mohamed Hassan and my great friend Past President C.N.R. Rao. It is a pleasure also to thank Romain Murenzi and the whole staff of TWAS.

Thank you all for this especial honour, the Abdus Salam Medal.