

The Nobel man

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Science & Tech

N. M. Butt pays tribute to the great scientist Professor Abdus Salam, 'a Nobel Laureate with a difference'

Last year, the World Community of Scientists observed the first death anniversary of the only Pakistani Nobel Laureate in Physics, Professor Abdus Salam at Trieste, the beautiful city of Italy.

The participants at the session on November 21 paid tribute to the great scientist by renaming the International Centre for Theoretical Physics (ICTP) which Salam founded in 1964, as the 'Abdus Salam Centre of Theoretical Physics'. Lectures and specialised research seminars on various aspects of physics and mathematics were also a part of the function.

Professor Abdus Salam will be remembered for times to come. However, in Pakistan his contributions are often not understood in the right perspective. He is accused of living abroad and thus not directly contributing to his homeland. In reality it was the lack of scientific culture that kept him away from home. But his love for the country is reflected by the fact that he retained his Pakistani nationality all along — and did not accept citizenship of other countries offered to him.

Abroad, he met famous physicists whom he had begun to influence in no time. He was always helpful to his fellow countrymen, for example, by assisting in their admissions to higher degree programmes in other countries. Salam's international standing of repute made the government of other countries take his words seriously too.

It was wise of him to leave Pakistan. However, the decision, as so often expressed by him, was painful. It was probably this pain that culminated in the establishment of ICTP.

Dr. Salam's first preference was to set up the institute in Pakistan. The other options were Italy, Denmark and Poland. However, the Pakistani government did not show sufficient enthusiasm while Italy offered him the best facilities — including a good building for the centre and agreeing to cover expenses for utilities. Professor Salam became its founding director and Italian Professor P. Budini was appointed as his deputy. The duo worked together till the age of retirement. They stabilized ICTP and within a few years the centre became the hub of activity attracting famous scientists from the advanced world and youngsters from the third world.

A number of useful schemes were executed. One major scheme was a few weeks long lecture course, where about a dozen eminent lecturers from advanced countries would read papers to about a 100 participants from developing countries. Also through the scheme of research asso-

ciates, the institute selected young scientists from third world countries for three short visits of about three months each, over a five year period. The idea was to train scientists who would go back and continue researching, so that their countries benefitted from their newly gained knowledge.

Based on my personal experience (I have benefited from these schemes over a period of about 20 years), the scheme was a success. A large number of Pakistani physicists, particularly from PINSTECH, Quaid-i-Azam University (QAU), Government College Lahore, Karachi University, Punjab University, Gomal University and other scientific institutions benefitted from the centre. According to a recent account, about 60,000 scientists from over 80 countries have visited ICTP since its establishment.

I was particularly moved by the excellence of the centre when I visited during its three-week long silver jubilee celebrations in 1989. Some 200 physicists attended seminars and discussions by various scientists on physics and mathematics. The celebrations, which were inaugurated by the then Prime Minister of Italy, Mr Andriotti, were also attended by eminent scien-



Professor Abdus Salam: 'Our hats are off to you'. News photo.

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tists, including six Nobel Laureates. A ten-minute review by Nobel Laureate Professor Ting from MIT revealed that a week-old experimentation at CERN (Geneva) had confirmed the hypothesis presented by Professor Salam. This was indeed an emotional occasion for the great scientist.

Another emotional moment came on the last day of the celebrations, when Professor Schrieffer from USA — who won the 1957 Nobel award when he was only about 27 and was compering this occasion — said,

"Professor Salam, our hats are off to you (and he bowed to him). ICTP is not a centre of physics alone but a centre of science for the world as a whole."

Fred Reines, Nobel Prize winner in Physics in 1995, recited a moving poem, "Tribute to Abdus Salam":

*From out the East there came a man
who thought to divine the cosmic plan
To unify the hearts of man
And make whole, concepts deep and grand*

*From out of the West came Nobility
To grace the deep insight, the unity
Arising from diversity.*

*From out of the East there came such a man
Whose heart and mind did most nobly span
Man's highest hopes and dreams and plans
Transcendent with love and humility*

*From out of the depths of the human soul
Came this man so well crafted for his role
Came this man who would make
That which is fragmented whole*

Professor Abdul Salam didn't get the coveted Nobel award in one go. In fact, as many say, he missed it a number of times. For the first time, in 1956, when 'Parity violation in nuclear reactions' was discovered. However, two Chinese scientists Lee and Yang working in USA won the award. Again, on the discovery of practical Omega-Minus in 1964 the prize was granted to American physicist Murray Gellman. I think, unlike many laureates, Professor Salam set before himself the target of achieving it after the 1964 miss — and that is what makes him a scientist of a different kind.

To establish his calibre before the world community of scientists, he invited a large number of Nobel Prize winners to ICTP. Here, the professor convinced them of his eminence through discourses and academic exchanges of subtle scientific questions.

These discussions with physicists like Heisenberg, Oppenheimer, Bethe, Wigner, Dirac and Landau convinced me that he possessed immense potential for the Nobel Prize. Ultimately, in 1979, he succeeded in winning it for his theory of the unification of electro-weak forces.

Salam's vision did not end there. It is believed that he was striving to win another Nobel award.

Professor Salam was a Pakistani to the core of his heart. Pakistan should at least properly honour this rare national who has written the country's name on the "Golden Page of World History of Science". One way could be to name after him the road next to the Government College, Lahore and the National Physics Centre in Islamabad for which the President of Pakistan has already allocated ten acres of land at the QAU campus.

Progressive nations honour heroes with what is their due — irrespective of personal, political, religious or ethnic differences. And Pakistan needs to do just that.

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