

My Recollections of Professor B. M. Udgaonkar

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It was some time in the second half of the 1960s, and I was a student enrolled in the B.Sc. course in Physics at St. Xavier's College, Mumbai. Several of my classmates and I had recently bought the bright red 3-volume 'Lectures in Physics' by Richard Feynman. We would make sporadic attempts at trying to really understand what Feynman says --- a task that proved quite difficult, despite the deceptively informal and chatty style of the author.

It was some time in our penultimate year in college, I think, that we learned about an informal study group being formed at the Tata Institute of Fundamental Research, for interested students to come and discuss the Feynman lectures and accompanying exercises, on Saturdays. We had heard that the discussions would be organized by a couple of professors at TIFR, and a bunch of us students, from various colleges, showed up. This was the first time I met Prof. Udgaonkar, who, along with Prof. Yash Pal, conducted the discussions (most ably assisted by Kailash Rustagi and P. K. Babu, who were then graduate students at TIFR). I did not explicitly recognize it then, but I was a beneficiary of Prof. Udgaonkar's long-standing engagement with physics education and pedagogy.

The discussions went well, and we students (who included Adi Bulsara from St. Xavier's, Madhav Marathe from Ruia College, and Abhay Ashtekar from the Institute of Science) got a lot out of it. Prof. Udgaonkar made sure that all of us participated. I remember that I was sent up to the blackboard by him, and was asked to make a binomial expansion with a small parameter x . I was very nervous, but managed to write down the first couple of terms, under the firm but friendly gaze of Prof. Udgaonkar. The strongest impression that remains in my memory of these discussions, four decades later, is that Prof. Udgaonkar would always guide the discussion towards trying to get to the essence of the phenomenon under discussion, behind the mathematical formalism. In retrospect, these discussions were very important for me --- not only from the point of view of solving the exercises that go with the Feynman lectures, but also, more importantly, to get a glimpse of how physics works, and how a physicist thinks.

My next encounter with Prof. Udgaonkar happened about a decade later, towards the end of 1976, when I first joined TIFR as a postdoctoral fellow. I joined the Theoretical Physics Group at the

Institute, which was headed by Prof. Udgaonkar. An important activity of the group was the Theoretical Physics Seminar, held every Friday at 4 p.m., and Prof. Udgaonkar was always present, seated in the front row. During this time, his engagement with physics education continued, and I remember refresher courses for college teachers organized by him, held in the ground floor lecture halls of the Institute. Within TIFR, he initiated several new programmes. These included the Visiting Students' Research Programme (VSRP) in which students from all over the country visit TIFR for several weeks during summer, and get a hands-on idea of research by doing projects, in addition to attending lectures. This programme has been a great success, and continues till today. He also initiated a joint teaching programme in collaboration with the University of Poona. Although this programme did not continue for many years, it did produce some outstanding students who have gone on to make a mark.

During these years, I came to know Prof. Udgaonkar rather well, through the following circumstance. I lived off-campus, and would wait every morning to catch the TIFR bus from the stop near the Naval Canteen. Very often, Prof. Udgaonkar (who lived further away) would be driving in to work, and would honk, stop and pick me up on the way. In the 10 minute ride that followed, we would talk about various subjects. I learned a lot during these drives --- as the subjects ranged over a large number of topics, including new developments in physics, students and education, Pugwash conferences and more.

Another capacity in which I, and many other academics at TIFR, benefited from Prof. Udgaonkar's perspicacity, was in the establishment of a co-operative housing society in Vashi, in Navi Mumbai. Prof. Udgaonkar was the driving force behind the founding of the society in the early nineteen eighties, where many ex-TIFR members now live. He was the first chairman, and his guidance was invaluable, both in the formative stages and in the years that followed.

Prof. Udgaonkar's interest in physics education continues unabated even today. Earlier this year, I met him at the Homi Bhabha Centre for Science Education at a function organized at the end of a camp organized by the centre to train and select students for the International Physics Olympiads. Over the years, all of us in the TIFR family have benefited enormously from Prof. Udgaonkar's clear thinking, commitment and wisdom. Personally, I greatly value my association with him over the past four decades starting from my college days, and would like to wish him all the very best on the occasion of his eightieth birthday.