Obituary for Professor M. S. Rao

Professor Musti Someswara Rao (1941-2021)

Professor Musti Someswara Rao was born on 8th August, 1941 at Parvathipuram, a village in Andhra Pradesh. He did his B.Sc.(Hons.), Andhra University, 1960., M.Sc., IISc. Bangalore, 1963. and Ph.D., Waterloo, 1969, all in Chemical Engineering. He joined Department of Chemical Engineering at IIT Kanpur in July, 1971 and became a full professor in Feb, 1979. From 1983 to 1985, he was the Head, Department of Chemical Engineering. He retired from our institute in August, 2003. Professor M. S. Rao passed away on 18th June, 2021 at Bangalore. He is survived by his wife, his son and daughter.

Professor Rao worked in the areas of catalysis, process engineering and statistical modeling. He introduced a PG course titled Statistical Methods for Chemical Engineers; in addition, he taught also UG/PG Chemical Reaction Engineering courses, heterogeneous catalysis etc. Professor Rao guided 10 PhD students and 60 M. Tech. students. Many of his students were guided jointly with other colleagues within and outside the department. In fact, he collaborated with colleagues from Civil Engineering, Material Science, Chemistry, Mathematics, among others. His students were very well placed, some of them became faculty members, among whom was Professor Subhash Bhatia, who became a faculty in our department, an IAS topper, a VP of Bank of America, a senior engineer of a pharmaceutical company and many others. It is worth noting also that his
son Mr. Nikhil Rao graduated from our department in 1995. Professor Rao was a very kind hearted, broadminded and a warm person. He was very helpful to his colleagues, particularly to the new colleagues. In him, we have lost a person who was humble and who was knowledgeable and caring. We pray to the Almighty that He gives peace to the departed soul and strength to the bereaved family.

Comments (received in mail) from few colleagues and students:

Professor Subhash Bhatia:

Prof Musti Sommeswar Rao, my supervisor demise is sad news.

My sincere condolence to his wife Purnima and family members to bear his departure.

I learned from his devotion, commitment and dedication towards his work. He collaborated with Prof K Gokhle (Civil Engineering) and Prof Borwankar(Statistics, Mathematics). He always listened to every-one opinion before putting his opinion.

He was my supervisor and colleague to share his advice whenever I needed. He joined IITK when Prof. M. Gopala Rao (HOD) appointed him my co-supervisor.

I have not met him for a long time after leaving IITK.

I pray to almighty to place his soul in peace.OM SHANTI

Professor Sandeep Verma (Faculty member at Chemistry Department):

My sincere condolences to the family of Prof. M. S. Rao and to the ChE Dept for his sad demise. He was a very kind and profound colleague who advised me as a senior Professor soon after my joining the Institute in 1997. We co-guided an M.Tech. student in ChE together.

Professor K. S. Gandhi (Former colleague):

I and MS (as many of us called him) joined IITK in 1971. There were five of us who joined around the same time: H. Veeramani, myself, S. C. Mehta, M. S. Rao, and K. K Sirkar. We were a bunch struggling to learn to teach, and get our research programme kick started. We would often come to the department at night preparing for the next day class! Real hand to mouth existence. Of all of us, MS and Veeramani were the most calm and composed. MS distinguished himself by initiating research on analysis of data on chemical kinetics, planning of experiments, and synthesizing zeolite catalysts. His calm, composed and certain demeanor attracted students. His programme took off soon. Prof C. V. Seshadri chose him as his partner to teach a pioneering self paced instruction course on chemical reaction engineering. In this method, the whole course was divided into modules. There was a main text. Each module had pages assigned from the
book and also from other texts if the student wanted. There were no classes. Teachers were available for discussion. The student read the assigned material and came for a test, when he felt ready. If he passed the test, he moved to the next module. Students were reading it at their pace: self paced. Of course, it was a lot of work. The major burden was to make so many tests!! MS was a great asset to CVS in this effort. CVS was very friendly, affectionate but volatile. MS was as cool as a cucumber. They made a wonderful pair. I think CVS was the only one calling him Mushti, a euphemism for fist!!

Being a telugu speaking person, we became good friends. I was in contact with him. I spoke to him on the Saturday before he left us. He was recovering well from his hip surgery, and was beginning to stand up and walk. It was sudden and shocking when I heard that he was no more. My heartfelt condolences to Purnima, Nikhil and Rohin and their families.

**Professor Ajay Dalai (Former student)**

I met with Professor Rao in June 1982 when I came to IITK for interview for joining in my M.Tech. program. He was kind to recruit me where I learnt on research related to catalysis and catalytic applications. I published three papers from my M.Tech program with him and KVGK Gokgale (my joint supervisor from Civil Engineering). He was also instrumental in sending me to USask for PhD where I am currently employed as a faculty member. I have visited IITK numerous times until 2003 when he retired and then for a few times. I also visited him in Bangalore couple of times and I am in touch with his son and his family. I will also call Purnima madam soon.

**Professor Deepak Kunzru (Former Colleague)**

Was deeply grieved to hear about it. We had a long association. May his soul rest in peace.

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A condolence meeting was held at IIT Kanpur on 22\textsuperscript{nd} of June, 2021.

Colleagues and friends who attended the condolence meeting described Professor M. S. Rao as a humble, modest, unassuming and a hardworking person who was always calm and composed, who would always take everything easy, who would never complain about anything however difficult and uncomfortable may the situation be, and one who would never get tensed. He pioneered the work on applied statistics in the department. He purchased the first computer in the department to carry out his work. Colleagues and students also pointed out that Professor Rao was very caring for his students, he was a very affectionate person, interacting with him was quite reassuring.