

Reminiscences of my IIT Kanpur days (1967-74)

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These are some memorable events during my time at IIT Kanpur (IITK) that I remember. Naturally I am writing from memory about events which took place almost 50 years ago. Therefore, it is quite possible that with age my memory may be playing tricks. I request our classmates or other alumni who were my contemporary to verify these facts and offer suggestions for their improvement. Also I have sometimes avoided using the full names of the people involved for obvious reasons. My wife [Dr. Nandini Nimbkar](#) greatly assisted me in the editorial process.

Some photos are at the end of the chapter. Also included are the videos and podcasts on how IITK education has inspired and impacted me.

B.Tech (1967-72)

I entered into [IIT Kanpur \(IITK\)](#) in summer of 1967. My [Joint Entrance Examination \(JEE\)](#) position was 29 in north India and so I got my choice of branch - mechanical engineering and was allotted a room in Hall II. In those days hostel allotment was based on JEE ranking. The sequence was Hall II, III and V (a newly constructed hostel). Fourth-and fifth-year students stayed in Hall I and all post-graduates in Hall IV and V. In those days there were only two students per room in Hall II and III. Recently when I went to give a lecture in IITK, I found there were three students per room!

In those times, IITK had merit cum means scholarships. Those scholarships allowed for meritorious students with limited means to have their complete educational expenses taken care of. I applied for it but failed in the means

section since my mother's meager school-teacher's pay was above the limit of poverty!

I was very much aware of the financial situation of my parents. The household ran mostly on my [mother's](#) pay since my father had no job and so was heartbroken that I had to ask for money from my parents for my IIT education. After my B.Tech, I never asked them for any money since M.Tech provided scholarship and my U.S. education was covered by Government of India. I always wanted to be self-sufficient in funds no matter how meager.

Ragging

I was a headstrong kid and so did not heed the warning of my uncle (who worked in the accounts department of IIT Kanpur) that ragging of freshers takes place in 1st week or so and that for the first 10-15 days I should stay with him in his house in Kanpur to avoid ragging. Since he came every day to IIT Kanpur it would have been easy to come and go with him. Somehow, I never wanted to take anybody's obligation and besides I felt that I might miss some of the classes since they started at 8 a.m. and he would normally come to the office by 10:30 or 11 a.m.

So, if I remember correctly, on the second day during dinner three senior students, who were also the residents of Hall II, came and sat in front of me at the dining table.

They asked me my name and JEE rank and then started ragging me in real earnest. The experience was traumatic and hence till today I remember their names; Vishnu Varshney (who later became Chairman of GIDC venture fund), Nagpal and [Prabhu Goel](#) (who later became a big honcho in Silicon Valley). It was mostly verbal abuse and banter but not having been subjected to such a treatment in my life, I felt very uncomfortable. This ragging lasted for only an hour or so and later on we became good friends. A good outcome of this ragging was that later on when any senior came to rag me in my room, I would tell them that these three gentlemen have already

done the honors and they are now my mentors! They would then leave me alone.

Also in those days after ragging we had very little to do with our seniors. I am told nowadays that there are “bapus” and “dadas” (second and third year students respectively) who mentor the freshers!

Bull sessions!

One of the great things about IIT Kanpur in those days were bull sessions. With no distraction from internet, mobile phones or TV to watch the only way for young bright minds to be kept occupied were discussions during bull sessions.

These sessions generally started after evening dinner and went past midnight. Everything under the sun was discussed (though most of the time we hardly had any knowledge about the subject). We might start with a mundane subject of what was taught in the class and ended up talking about the sex life of Sharmila Tagore! These sessions also took place when there was no electricity at night (quite a regular affair in those times at IITK).

I developed a knack of keeping track of the thread of any bull session and so quite a number of times could trace back the sequence of complete discussion!

I feel these bull sessions were the greatest source of mind-expanding exercise and really helped us to learn articulation. I consider these bull sessions as important as my technical education in IIT Kanpur. Nowadays when I go to different IITs, I found that bull sessions have reduced drastically since students are immersed in their laptops, mobiles, etc. The lack of such physical interaction reduces their sociability and increases the sense of loneliness.

Food

The worst foods I have ever eaten in my life have been that in Hall II dining hall. Before coming to IIT Kanpur there were many times at home when I would leave food on my plate - either I was not hungry or did not like it. However after the experience of Hall II food, any time when I went home to Lucknow, I would polish everything put on my plate. My mother naturally was very pleased with my newfound love for her cooking!

The cooking in the mess was so bad that we used to bet on whether somebody could correctly tell which vegetable had been cooked. They were all black and had the same horrible taste. The rotis were burnt and dal was mostly water without too much taste. There was no way to improve the quality of food since all the mess workers and cooks were Institute employees and so could not be removed for their non-performance.

So when one of my classmates A.J. started bringing *ghee* to the mess we felt as though we were in heaven. AJ came from Meerut and his family would send him *ghee* regularly. In mid 1960s, all the photo films for camera came in small aluminum containers (15-20 ml size). During lunch and dinnertime, he would bring some *ghee* in these small containers.

We were a group of 8-10 who used to eat together. So those with the most muscles (who went to gym regularly) had the first go at the *ghee* (at that age might-is-right was practiced regularly and quite a number of times the arguments were settled by wrestling!) and I, who was a puny little guy, got the container last but even that one drop in the dal made the difference!

I mostly survived on egg fried rice and eating that with very sour curd was delicious and stomach filling. Naturally I was thin as a stick and so people who see me now have a hard time visualizing my being so thin in those days.

In those times on IITK campus there were no good places to eat and so we survived upon whatever was available in the mess. Now there are excellent eateries on the campus and in the nearby Kalyanpur village, there is a food court in the recently opened Mall! I am also told that the quality of food in the various halls of residence has drastically improved and some of the students told me that they enjoy the hostel food.

We were so starved for good food that any time any homemade food came to any of our friends' rooms it was raided. So almost all of them developed a method of hiding it. A classmate's (let us call him M) father had a sweet shop in his native Rajasthan. So regularly he would get boxes of sweets from his home by mail. Quite a few of our classmates used to eye those sweets but could not get them. So some of the enterprising ones hatched a plan to get them. For this they first bribed the postman who told them when the box had been delivered.

When M one day came to Hall II mess for lunch these enterprising classmates climbed to his second-floor room through the window and got the sweet box out. The sweets were duly distributed in the mess. Few were also given to M who commented on their great quality and enquired from where they came. The classmate told him helpfully that just consider it as yours! Only when M went to his room did he discover the theft.

Every Sunday morning we were served potato-stuffed parathas (*alu ka paratha*) with curd for breakfast. There was nothing about them to write home about and quite a number of times they were burnt but even then, they were delicacies. Obviously, it must have made a great impression on the minds of 16-17 years old kids that even now whenever there is a reunion of our batch there has to be an *alu ka paratha* meal!

The milk that was served to us used to be like water. Many complaints to the mess staff did not produce any result. One day around 6 a.m. in the morning some of my classmates caught a mess worker delivering cream to

the room of our classmate (one Mr. P) who happened to be the mess secretary. Mr. P was an older gentlemen (already married and with a kid) who used to regularly go to gym and in the morning used to consume milk and cream!

Mr. P was also very poor in his studies and so was very afraid of examinations. Anytime examinations approached, he would go to the IITK infirmary and try to get a fake medical certificate so he could be excused from taking the exam for time being. Most of the teachers saw through this and refused his request but one professor allowed him to take the examination after summer vacation.

P studied hard and tried to cover as much of the subject as was possible for him. So he wasted his summer vacation studying and worrying about the exam and when he came back the professor gave him the same test that was given to us for the end-semester and before summer vacation! P had studied everything else and never in his wildest imagination thought that he would be given the same test. Naturally he got a D in the subject!

Also on Sunday evening we were served special dinner. The food was slightly better and more edible than that served rest of the time, so this used to be an occasion when we invited some of our professors for dinner. There was one professor in Mechanical Engineering department (Dr. S) who was quite a bore and quite a number of times derided the students for not paying attention to his teaching. So some of the Hall II students decided to teach him a lesson. This professor used to drive a [Baby Morris](#) (a very small car). So when he was invited to Hall II for dinner on Sunday he and his wife came in their car.

Hall II and most of the older residents' halls in IIT Kanpur were designed on the pattern of U.S. University residence halls. These halls had three storey rooms encircling couple of quadrangles. The main quadrangle had the mess, games rooms and hall II canteen. All the quadrangles were surrounded by

corridors which were broad enough to either walk or bicycle. When the professor and his wife came out of the dining hall after dinner, they saw their Baby Morris in the middle of the quadrangle!

The professor was shocked and circled his car wondering how it got there. By that time quite a number of students had assembled in the corridors and were enjoying the spectacle. So after 15-20 minutes the professor offered Rs. 10 each to the students to take it back on the road. In those days Rs. 10 was a princely sum of money. Six students readily agreed to do the job. They just lifted the small car, tilted it a little bit and carried it through the corridor to the road!

This was harmless fun and showed the good quality of innovative thinking. Nowadays most of the students are too engaged in internet and mobile phones and thus it is difficult for them to produce such practical jokes. Besides such practical jokes will elicit harsh punishment from authorities!

Campus

IIT Kanpur in late 1960s was still a work in progress. So it was quite barren and with few trees. If I remember correctly, it used to be very hot during summer months and going from one building to another or to the halls in the summer afternoons was not pleasant exercise. Besides all our practicals and labs used to take place in the afternoon sessions in the Institute workshops. The hot weather together with the radiative heat from the asbestos corrugated roof of the workshop was unbearable.

Now the campus is very green and beautiful and most of the labs are air-conditioned. Whenever I go now to visit IITK for lectures I always marvel at the beauty of the campus with lots of trees and it is lovely to walk all over the place under huge trees and broad sidewalks. IITK campus nowadays resembles a US university campus.

One jarring note however is that now most of the buildings and Halls of residences are gated communities with boundary walls and security. In our times the whole campus was an open one where one could go from any building to another without checking with security. The walls came in late 1970s and security services in the campus and Halls of residences later on.

In those times, there were many nights when we had no electricity. We used that time to engage in bull sessions. Also in the morning, there would be no water in the bathrooms since the electric pumps could not work. So many times, we would take our buckets and fill the water from the taps used to water the lawns.

Also the facilities in hostels were bare minimum. In winter most of the time the electric water boilers were non-functional. This resulted in us taking baths in icy cold water. Many times I would take a Swedish bath! You rub your body very vigorously with towel and then the cold water does not feel that cold.

Also when one is young one gets used to these hardships. Thus throughout my 7 years stay in IITK I slept, during winters, covered only in a blanket, and two sheets. Kanpur winters in those times were really severe. It is difficult for me to think now how I did it.

I find now that the quality of facilities in hostels has improved drastically. Students have clean bathrooms; all the systems work nicely, and they even have washing machines! Besides quite a good number of students have desert coolers in their rooms during summer months. This really reduces the temperatures of the rooms during summers.

Nevertheless with lack of such facilities in hostels, IITK had wonderful and excellent facilities like computer center, TV center, airstrip, etc., which made it far ahead of its time.

However I would like to mention that one luxury that we had, it lasted for only one semester, was the supply of clean bed sheets, pillow covers and light bulbs in our rooms free of charge. In 1967 the US influence was still very much in IITK, and this was the result of that largesse. Similarly we were also given books (US editions) for Rs. 1 or 5/-. Both these facilities were withdrawn in first and second semester (1967).

Computer Center

The first computer of India came to IIT Kanpur in early 1960s. It was an IBM 1620 machine capable of doing rudimentary calculations and was housed in a huge computer center with excellent air conditioning (AC) system. By the time I entered IITK in 1967 the Computer Center (CC) was functional. Many times the AC environment of the center during summers provided us a solace against the horrendous heat of barren IIT Kanpur campus. Besides, CC was a big draw for visitors who came to IIT Kanpur campus from all over the country and gave us bragging opportunities to impress visiting girls and students from other colleges.

In our undergraduate classes we were all taught FORTRAN language for computer programming. In those days, programs were run using punched cards. These cards would be punched in noisy old clankety machines and then fed into the card reading system.

Each punched card formed a line of the program and generally 50-100 cards were needed in a sequence for the program or subroutine to run. Punching these cards in the machines took quite some time and so did their slow feeding system.

The output of the program came out in big, printed sheets. Most of the time there were errors in the program since even a coma or a semicolon misplaced would give an error message and the whole program had to be run again with new punched cards. Thus in those days running a computer program was a laborious and time-consuming process. For students

nowadays this process would be a nightmare since the input/output (I/O) process of modern PCs is very fast.

The computer stationery was recycled in an imaginative way. For example, the backside of computer output sheets was used as rough paper. In fact quite a number of times we used them in place of notebooks for class notes.

Similarly, the backside of used computer cards was used either for jottings or as missiles! Some imaginative engineers formed them into a plane and shot them with rubber bands as missiles during the cultural festivals. The pointed nose of these missiles launched at great speeds by rubber bands was capable of inflicting wound and many times the organizers would announce and request at the start of cultural functions not to use them. I guess these computer darts were the invention of IIT Kanpur so it can take credit for its origin!

During our bull sessions there used to be a healthy debate about which branch is better – mechanical or electrical engineering. In those times the other branches were considered not important enough and were generally looked down upon. Part of the reason was that both mechanical and electrical branches were most coveted and were filled first and then depending on JEE position the other branches were taken. Hence, civil and aerospace engineering always got the students with the lowest JEE score.

Quite a number of times the electrical engineering students would taunt the mechanical engineers saying that because of mechanical cards input/output system inefficiency it takes so much time to get a program running in the computer center!

The use of cards in computers was still prevalent in U.S. in late 1970s and I used them during my Ph.D. However, by that time the card feeding system had gotten really fast though the card punching machines were still very slow!

TV Center

IIT Kanpur was the first Institute in the country to have a closed-circuit TV center. In fact in early 1960s it was the first TV center in India. It was run by Dr. M. M. Choudhari who later on went to head NCERT in Delhi.

The TV broadcast was erratic and now and then showed some skits and interviews of famous people who visited IITK. Nevertheless it provided excellent opportunity for students to learn and operate the TV equipment and learn about TV programming-something that would later on become a major entertainment media both in India and the world. TV center was also a star attraction for visitors coming to IIT Kanpur.

Gliding club

Again IIT Kanpur was the first Institute in India in those times to have its own airstrip, few gliders, and a Cessna single propeller plane. Lots of students took training in gliding and it was one of the most sought-after activities for students. In those times when air travel was in infancy, observing IITK campus from the sky provided a great thrill to lots of students.

Another great facility at that time was the foreign language laboratory where we could learn different foreign languages in a state-of-the-art (at that time) facility. In 1975 when I went to U.S.A., I learnt German language in University of Florida (UF) and the facility at IITK matched what I saw at UF.

Thus in early 1960s and 70s we were exposed to world-class facilities in IIT Kanpur which really broadened our horizon. Even today some of the research and recreational facilities at IITK are world class. However it is up to the students to use them and benefit from them.

Communication

I stayed in IITK when the phone communication was nearly non-existent. This was the state of affairs of phones all over India and IITK was no exception.

In the hostels there used to be only one phone. When somebody called from outside then the peon would go to that person's room and it took so much time for the student to come to the phone that most of the time the caller simply hung up. Added to this was the fact that the caller had to go through the Institute telephone operator who took his/her own sweet time to connect the outside call through IITK exchange to various phones.

I experienced this phone problem firsthand. My maternal grandfather who was living with us in Lucknow died suddenly one day because of heart attack. My parents frantically called me at midnight, but I could get the call only at 7 a.m.! By the time I could reach Lucknow it was nearly 12 hours after his death. So the best means of communication was writing letters even to friends and relatives in Lucknow.

Similarly if we wanted to meet a faculty member, we just had to go to the faculty building and were lucky if he/she was in the room otherwise we had to wait till the faculty member came to their room. Most of the time I used this waiting time to visit the library which was close to the faculty building. I would periodically check whether the teacher had come or not. This entailed quite a few trips back and forth between library and faculty building. This process also helped us in keeping fit since lot of walking was involved in going and meeting somebody.

It is unthinkable for students in today's age when internet, phones, and other means of fast communication exists, that waiting patiently to meet somebody was practiced universally in those times.

I also rarely went to my home to Lucknow. Only when we had long holidays did I go home. In those times it took nearly a day to reach Lucknow from IIT Kanpur (a distance of 100 km) since going from IITK to either bus stand or station took nearly 2 hours and then the bus/train again took 3 hours to reach Lucknow. There were hardly any taxis in those times so the best option was either a train or bus.

My brother who was also studying in Kanpur medical college would go very often to Lucknow since he had many friends in Lucknow. I guess the attraction of meeting his friends (quite a few of them female friends) was a good incentive.

Students' strike

The first strike of students in IIT Kanpur history took place in 1969. It was a flash strike which lasted for a day or two and was led by [Anil Agarwal](#) who was the President of Student Gymkhana at that time and later on became one of the leading environmentalists of India.

There were many reasons for the resentment of the students which led to the strike. Naturally Anil provided leadership according to the classical American saying. "A leader is one who identifies a crowd going someplace and then jumps in front of it and leads it".

The U.S. influence in IIT Kanpur was at its pinnacle in late 1960s and so there were lots of Kanpur Indo-American Program (KIAP) people and American professors with their wives and children on the campus. There was resentment brewing among some of the students against the U.S. since this was the period when U.S. was involved in Vietnam. Plus there was a general feeling among the students that the children of U.S. officials were given preferential treatment by IIT administration both in classes and on playing fields. Whether there was any truth in this perception was debatable.

Besides quite a number of postgraduate students who had started enrolling in various programs in IIT Kanpur had Naxalite sympathies. So some of them wrote slogans on the road like “Chairman Mao is our chairman”. Those were happy and simple times. Today such a thing would be unheard off and they would have been jailed for anti-India activities as happened recently in JNU.

Some senior Indian and American professors got very upset with such slogans and found out about the students who were responsible for them. They or the IITK management; one is not sure, made these students scrub the road to remove these slogans. The news of this event spread like wildfire on how the students were humiliated and made to do menial work of scrubbing the road.

All these events were continuously discussed and debated in the Hall I and II canteens leading to building up of resentment.

The last straw which led to the event was a scuffle between an undergraduate student one Kapoor and the accounts department. Kapoor, a local Kanpur resident, was not a good student since he had failed his courses many times and would have been thrown out of IIT Kanpur (as was the tradition in those times for failed students). He needed a reason to divert the attention from his shortcomings. So after the altercation, Kapoor went to Anil Agarwal and showed him his torn shirt and clean shoe marks on it and told him in a dramatic manner about how the IIT management treats the students. In the heat of moment nobody questioned how perfect shoe marks came on the shirt! It was as if the shirt was put on the ground, and somebody stepped on it with dirty shoes.

This was the trigger that Anil Agarwal was looking for and being a master organizer, produced the first student strike. He gave a fiery speech stating that he and his fellow students will destroy all the buildings of IITK (*eent se eent mila denge, etc.,etc.*). He also showed the torn shirt with shoe marks

and really aroused the students' emotions. I think for two days none of the students attended any classes.

Later on after my return from U.S., Anil Agarwal and I became very good friends and his [Down to Earth](#) magazine, published from Delhi, carried many stories on our work. I used to chide him about the drama of those few days, and he used to simply smile fully knowing that it was a drama.

A good outcome of this drama was that IITK management started taking seriously the student gymkhana and later on the Director consulted the gymkhana president on many occasions regarding the welfare of the Institute and students.

There was a similar type of revolt by the students during the summer of 1969. Dr. Zakir Hussain the President of India had died in May 1969 and Government of India had declared a national holiday for 7 days. Our last examination paper of mathematics was on the day of Dr. Hussain's death. So students wanted it to be postponed – not because they had great sympathy for Dr. Hussain but because they wanted more time to study.

Anyway there was great agitation, and the students were given a choice – either to take it on that day or after the summer vacation. Few of us opted for taking it at the scheduled time and I think we benefitted because the grading was done leniently. Those who took it after the summer vacation not only got a much tougher test, but it also ruined their summer vacation!

Quality of professors!

IIT Kanpur in late 1960s and early 1970s had some of the best faculty among all the engineering colleges in India. Not only were there great American professors, but also U.S.-trained Indian teachers who later on became the who's who of Indian Science and Technology scene. Yet there were also some very mediocre and useless professors.

One such professor taught me first year physics. The professor named Dr. S suffered from an inferiority complex because we always compared him with an American professor Fox who was a great physics teacher. Besides Dr. S did not know his physics, so he would come to the class and simply wrote big equations on the board. These equations were copied from the books and without any good explanation about them the lectures were very boring and dull. The lectures of Dr. S and Fox took place in adjacent lecture halls - L1 and L2. Most of the students would attend lectures given by Fox. In fact his lectures were so popular that students would be seated in the aisles and even standing in the hall.

Dr. S would get very upset by this and so he started taking attendance. After the attendance we would slip out of the lecture hall and go to Fox's class which infuriated Dr. S to no end.

Most of the time Dr. S would be telling us how we were wasting our parents' money and not studying etc. etc. Even if he had stuck to his normal pedantic teaching it would have been alright. But his penchant for wasting time in telling us how we were non-serious students was too much to bear for most of us. Such was the quality of some of the teachers!

Quite a number of professors also gave very boring and monotonous lectures, and it was very difficult to keep awake in their class.

One such professor was Dr. B of Mathematics department. Like a tour guide he would lecture in a monotonous flat tone about the obtuse subject of mathematics. His nasal voice together with his monotonous tone made almost all of us sleep in his class. So the best way to keep awake was to try to continuously write what he said.

In one of his lectures, he saw a student sleeping and so without any change in his monotonous delivery he came over to the sleeping student all the while talking "if we take a λ X ... and now I see a student sleeping and

he should be attentive in the class rather than sleeping etc. etc.” Since I was not looking up, I continued writing all this in my notes! Mathematics, which was a tough subject, was made even tougher and more boring by such useless teachers.

There was a mechanical engineering professor – Dr. Vijay Stokes who was a good teacher, but very strict. During one of his lectures one of our classmates got bored and left the lecture hall. Dr. Stokes saw him leaving the classroom and ran after him and caught the student just before Hall I - a distance of about 200-300 meters from the lecture hall and brought him back to the classroom dragging him by the scruff of his collar. I think Dr. Stokes wanted to teach him and the class a lesson so that nobody runs away from his lectures!

I visited Dr. Stokes about four years ago at his home in Schenectady in N.Y. State. He and his wife had cooked a sumptuous meal for us, and we talked about good old IITK days. Yet he was the same cocky Stokes and age somehow has not mellowed him! Probably that is also the reason for his still youthful looks!

There was another professor (Dr. A) of Mechanical Engineering who was completely useless in teaching but had good interpersonal relationship skills. He ruined our 4th year summer vacation. He had asked three of us Ashok K Gupta, Suresh Chand, and me to help him write a book on heat transfer and promised to pay each of us Rs. 200/month stipend for our services. He got us a room in the library and then vanished.

He rarely came to the library room to check what we were doing and never paid us any money. So our 2-3 months summer vacation was totally wasted and ruined. One good upshot of this was that this allowed me to explore and read lots of books in the library.

IIT Kanpur library was at that time one of the best libraries in India, not only for technical books but also for humanities. I somehow got the junoon of reading English classical literature so I read as many books of great authors like Dostoevsky, Tolstoy, Chekov, Jane Austen, Sinclair Lewis, Thomas Mann, etc. as I could lay my hands upon.

Also we started reading Mahabharata and it was really a revelation. All this reading was far more enjoyable than writing the non-existent book of Dr. A. However in all fairness I must give credit to Dr. A. for kindling in me the interest in solar energy. He had given a lecture on this subject in a seminar in IITK and hearing it I felt that this is the area which I should pursue. The lecture itself was quite useless and boring but somehow the subject caught hold my fancy. Later on I was told about the sad story of how Dr. A was murdered in some property dispute in Kanpur.

That episode of spending long hours in the library became a habit and I used this habit to the hilt during my M.Tech days and continued it in [University of Florida](#).

Then there was another professor in Mechanical Engineering, Dr. R., who had joined the IITK faculty in early 1970s after graduating from a UK university. He used to bring his attractive English girlfriend to the classes. Naturally, the attendance in his class shot up even though the lectures were not that great.

Yet there were also some very good teachers in various subjects which made the subject very interesting and naturally their lectures were jam-packed.

I took an excellent course on biological systems given by [Dr. Balasubramanian \(Balu\)](#) - a chemistry professor. It opened a whole world of biology for me and my long love for using biomimicry as a means of engineering systems design started from his course. Dr. Balu, as he was called, was not only a great teacher but also very active in social scene on

the campus. He was instrumental in starting the classical music and movie clubs. He and I have [remained in constant touch](#) and anytime I go to Hyderabad I meet him.

Another great teacher I vividly remember was an Electrical Engineering professor (whose name I have forgotten now) telling us to write all the ways in which a transistor could be burned. He said that when we write this then we will use them properly in our experiments so as not to burn them. We had an Electrical engineering practical class where costly transistors (they were all imported from U.S. in those days) were used in our experiments. This was a real eye opener for me and was very different from what we were told in schools where we were not allowed to touch costly equipment (which was mostly locked in cupboards) and reprimanded if anything went wrong with the equipment.

Similarly, another professor I remember very fondly was [Dr. Ali Ashraf](#) who taught us political science. In IITK curriculum in those days we took around 8-9 humanities courses consisting of subjects such as philosophy, English literature, economics, psychology, political science, sociology, etc. To my mind the study of humanities was as important as technical education since it provided an all-rounded education to us. *Thus I have always considered IITK education as one of the best I ever got, and I think whatever I am today is because of the humanities courses I that took.*

I took two courses under Dr. Ashraf and aced them. I wrote a term paper on the election results and ramifications of Indira Gandhi's victory in Chikmangalur, Karnataka in 1971. My thesis was that with that victory Indira Gandhi wave had started and she would win hands down in General elections – which she eventually did in 1972. The basis of the thesis was my interviews with a large number of ordinary people including rickshaw pullers in Lucknow. I got a general feeling that they all wanted Indira Gandhi. Dr. Ashraf was so impressed with that term paper that he wanted to convert it into a Journal paper. He told me that I was wasting my life in

Mechanical Engineering, and he will give me a Ph.D. in Political Science in 4 years!

There were few American professors who in some courses gave the same test to IIT Kanpur and MIT students. Being Americans, I think they wanted to show how MIT students were smarter than IITians. To their surprise IITK students always got the highest marks though the average score of MIT students was better than that of IITians. This showed the high quality of IITK students and also the level of teaching.

There was one professor in humanities (Dr. K) who used to teach psychology and was very well known for her hip movements while walking. So quite a number of times the students would walk at a safe distance behind her admiring her hip movements. I think most of the time she knew about it and so the hip movement was further enhanced!

A classmate of mine told me that she would invite good-looking students (all boys) of her class to her house for tea. The table in the living room of her house would be stacked with books and quite a few Playboy magazines. In late 1960's Playboy was a prized item for any adolescent boy.

She would then go to the kitchen to make tea and all these boys would start looking at nude photos in Playboy! Very innocently she would pop her head out of the kitchen to enquire about how much sugar they would like to have in their tea. Naturally the boys would put down the magazine hurriedly. Seeing that Dr. K would tell them that it was O.K. to read the magazine!

Since leaving IITK I have [kept in contact with some of my professors](#) and whenever we meet, we talk about good old IITK days.

Travelling to and from IITK

In mid-60's reaching IITK or going into Kanpur was a horrendous affair. There was no viable transport system, only few IITK buses which ran either

in the morning or evening to town. Since IITK was about 16 kms from the Kanpur Central Railway Station, no cycle rickshaw puller (the only other mode of transport) was willing to go such a distance during and especially at night. The maximum distance they would come to was to Rawatpur Railway Station which was still 8 km away from IIT Kanpur.

So couple of times at night a few of us after watching a night show of movie would force the rickshaw puller to take us all the way to IIT Kanpur and as an incentive to him drove the rickshaw part of the way ourselves. Only later on around 1969-70 there were 3-wheeler diesel tempos which started plying between IIT Kanpur and the city and greatly eased the travel from IITK to town.

Also sometimes when I would be coming from Lucknow to Kanpur by train, we would get off at Kalyanpur station and come walking to our hostel; a good 3 km walk. Once I remember coming this way at night with my roommate. We had a big metal trunk and a hold-all as our luggage. We got off around 10 p.m. at Kalyanpur Railway Station. There was neither a coolie nor a rickshaw in sight at the railway station. It was completely deserted. So after waiting for some time for a rickshaw puller to come we thought of carrying the luggage ourselves. We put the hold-all over the trunk, lifted the trunk by its handle and hand-carried the luggage. We would stop very 5-10 minutes, put the heavy luggage down and then proceed again. The 3 km distance was covered in about 1 hour. It was one of the most strenuous exercises I had undertaken, and thus never came again by train to Kalyanpur.

Nevertheless quite a number of times after seeing the movie (night show) in town some of our classmates took the train from Kanpur Central to Kalyanpur. Since they did not have any luggage, this was the best way to come to IITK. One day a classmate took the train at night and fell asleep. When he woke up in the morning, he found himself in Farrukhabad, a distance of about 150 km from IIT Kanpur! He took the return train which

reached the next day. There were obviously quite a few anxious moments for his friends who registered a police complaint, and he was finally traced to Farrukhabad station.

Girls

IITK was like a desert in terms of girl population in early and late 1960s. The situation today is much better with a couple of girls' hostels and lots of them studying in various departments.

In our class of 1967 there were only two female students. In those times all our basic subject lectures used to be in L7. So it was a hilarious scene of about 250 odd boys bunched together in one section of L7 and the two poor girls sitting alone in the other section of the hall. This seating formation existed irrespective of where the two girls sat in the hall!

Thus very little interaction took place among the girls and the boys and one of the female student felt very lonely and did not do well in her studies and she had to leave the B.Tech program after the second year.

The other girl was very plain looking but to some of my classmates appeared to be quite attractive. Hormones together with the dearth of female company can play wonderful tricks on the sense of perception!

There were however few attractive American girls (daughters of American professors and KIAP staff) who also studied with us for a few semesters. Most of them were not very good looking but being white attracted a lot of male attention. Coming from a liberal society, they also mixed very freely with IITK students. They went out with extrovert students who were active in sports and had motorcycles (a rarity in those days at IITK). Naturally these students were a source of envy for lots of us.

So anytime any girl or groups of girls came to IITK it was a major occasion and students would dress up and be on their best behavior. Also we all used

to look forward to cultural and sports festivals where hordes of girls from all over India came to participate. Quite a number of romances developed during such events.

Many a love blossomed between my classmates and the resident female students. Eventually two of my classmates got married to them but unfortunately both the marriages ended in bitter divorces.

Few of my enterprising classmates had gone for one summer vacation to Brazil and had befriended some girls there. If I remember correctly one of the Brazilian girl followed these boys to IITK and we heard that she had a gala time staying in Hall V for quite some time.

Art Scene

One of the happiest memories I have of IITK is related to the art scene. I don't think at that time any other Institute in India had so many great artists coming and giving performances as at IITK.

The prime movers for these events were Drs. Jay Borwankar, Arvind Kudchadkar and D. Balasubramanian (Balu) who had organized a classical music club. We had to pay a small yearly fee for its membership and got to hear the great classical singers, instrumentalists and see the performance of Indian classical dancers.

If I remember correctly all great names of Indian classical scene came to play at IITK. Whether it was Pandit Ravishankar, Bismillah Khan, Nikhil Banerjee, Pandit Jasraj, Pandit Chourasia etc. all played in IITK. Amjad Ali Khan, the famous sarod player would be a regular visitor (came almost every semester) and would play for hours together late into the night. All these concerts took place in L7 lecture Hall.

IIT Kanpur was a very well-known Institute at that time, and I have a feeling that all these players considered it as an honor to come and play. Most of

them did not even take much money. Only Pandit Ravishankar charged a princely sum of Rs. 5,000/- in 1971 (if I remember correctly).

These concerts exposed me to the great tradition of north Indian classical music, and I imbibed a love for it, which till today remains my favorite music.

One of the earliest performers in the music club was [Sonal ManSingh](#), the great Odissi dancer. She was a beautiful woman and a great dancer and so when her performance took place in L7 there were quite a lot of catcalls and whistling. She got really affronted by it, stopped her dance and was about to leave when everybody begged and persuaded her to continue her performance. I think the youthful exuberance of seeing a beautiful woman dancing on stage (especially in the sex-starved campus of IITK) made some of us whistle at her. Also I felt that Sonal Mansingh was very snooty and took herself very seriously.

The upshot of this event was a big lecture given the next day by [Dr. M. M. Anandakrishnan](#), a professor of civil engineering, on how we should look to such female performers as mothers! It was really a strange experience that such a small incident was blown out of all proportions. But that was India of 1960s!

A similar thing happened during the performance of great Kathak dancer [Pandit Birju Maharaj](#). I think he came to IIT Kanpur sometime in 1972. As he started dancing some of the students whistled. He stopped immediately. So his tabla player (if I remember correctly, it was Kishan Maharaj) told him to consider this whistling as dogs barking and that he should not be perturbed by them! After that Birju Maharaj continued his performance uninterrupted.

Later on in the late 1990s I had an occasion to meet Birju Maharaj in IIT Bombay. I had gone to give lectures at IIT Bombay and Birju Maharaj had

come with his troupe to perform at IITB. We were staying in adjacent rooms in IITB guest house. He was very happy to meet a person from Lucknow and so we chatted for some time in his room.

In my recent visits to IITK, I have found that such classical music activities have reduced drastically. Spic-May festivals do provide an occasion to have classical musicians to come, but it is once a year activity as compared to monthly events that were organized in the music club.

[M. F. Hussain](#), the great Indian painter used to be a constant visitor to IIT Kanpur. Invariably he used to screen his movie “Through the eyes of a painter” and acted as a judge to students’ painting exhibitions. He was not so well known in late 1960s and so we did not care much about him. Besides we hardly had any idea about the art world. I vividly remember standing close to him when he was judging the students’ paintings. He gave the first prize to a painting which had a yellow circle. On being asked why he gave the first prize to it, he remarked “It is a bold circle”! Another thing I member about him, besides his flowing beard and hair, was that he went everywhere without any shoes or chappals !

Another great feature of campus life was the film club started by Dr. M. M. Choudhry and other faculty members. Lots of movies from various embassies were screened in L7. Besides we were exposed to great film makers like Satyajit Ray, Bergman, Kurosawa, Fellini, etc. Such films were not screened in town and hence for masala films we would go to Kanpur and watch them. All these art films had a great impact on me and made me aware of this wonderful art form. Later on [during my Ph.D. work in University of Florida \(UF\)](#), I took a full course in film appreciation.

Important visitors to IITK

[Maharishi Mahesh Yogi](#), the Beatle guru visited IITK campus in 1968. There used to be hardly any cars plying on IITK campus in those days; only a few American cars that KIAP people used besides a few old Fiats driven by

faculty members. So when a cavalcade of American cars came on the campus, we knew that a VIP had arrived.

His lecture was held in the lawns of main IIT campus (near the lecture hall complex). Most people sat on the ground and all the front rows were taken by Americans and other foreigners. We students had to sit at the back and quite a number of us stood at the back of the audience. If I remember correctly there may not have been more than a few hundred people in the audience.

I was not impressed either by his demeanor or his speech. He said those things that I had already read in books of Vivekanand and Ramakrishna and other spiritual material. And so after his short lecture of about half an hour came the question/answer session.

Immediately one of my seniors asked him his age. And then for the next 5-10 minutes the dialogue ran on the existentialist lines :

Student (S): How old are you?

Mahesh Yogi (MaYo) : I am ageless.

Student (S) : How old is your body ?

MaYo : Body does not matter. It is the spirit which is me and it is ageless.

S : When were you born in this world ?

MaYo : I have always been here!

And so on and so forth and MaYo never divulged his age. Lots of foreigners started getting angry with the student for asking such questions, but I thought the student had great guts and showed the smallness of MaYo. After listening to this banter for a while, I got bored and left; and wondered why Mahesh Yogi was invited to IITK.

Another regular visitor to IITK campus used to be [Swami Chinmayananda](#). I never attended his classes (he used to regularly hold classes in various Halls of residence) but saw him a couple of times in the meeting rooms with a few

students. He was not so popular in those days, but some students would tell me he tried to explain some spiritual themes through science.

I am now told that there is a Vivekananda Samiti in the IITK campus which regularly invites spiritual speakers. In fact they had organized [one of my lectures in 2005](#).

IIT Kanpur in those days, because of its rising eminence and American influence, attracted a whole range of great speakers and names. This was one of the great ways for us to be exposed to the world of ideas, especially in the absence of TV, internet, or other means of communication.

Thus we had lectures by [Gunnar Myrdal](#) (of Asian Drama fame), [Dr. John K Galbraith](#) (former US ambassador to India), [Dr. Vikram Sarabhai](#) (the space pioneer), Dr. [C. V. Raman](#) (the Nobel Laureate) among others.

Dr. Galbraith came to IITK in 1969 and was a part of the secret mission sent by Richard Nixon to start a dialogue with Mao in China. He had met Mao who told him that he had read lots of books of Mahatma Gandhi and that his Long March was influenced by Gandhiji's Dandi March. This was the time when the Naxalite movement was at its peak and lots of young intellectuals looked to China and Mao for leadership. John Galbraith reminded us that Gandhi is what we should be looking up to and not Mao.

Similarly the lecture of Dr. Vikram Sarabhai was very inspiring. I still remember vividly a handsome fair man with a very big head, clad in a bush shirt, pants and Kolhapuri chappals. He gave a lucid lecture on the future of space program in India. Unfortunately, shortly after his visit to IITK he passed away.

[Dr. C. V. Raman's](#) lecture was completely jam-packed. I had never seen so much crowd in L7. He gave a lucid lecture on the colour of sea, but I found him to be very arrogant and full of himself.

One vivid memory I had of a VIP visiting IIT Kanpur was India's Prime Minister Indira Gandhi. I think this was sometime in the summer of 1972 when Dr. M.S. Muthanna was the Director. I forget now why Indira Gandhi had come but remembered very vividly the scene when Dr. Muthanna was giving a longish speech about the achievements of IITK, when suddenly Yash Pal Kapoor the hitman of Mrs. Indira Gandhi caught hold of Muthanna either by his collar or shoulder and forced him to sit down. Indira Gandhi rose and spoke as if nothing had happened. This episode, which showed that Mrs. Gandhi's henchman had no regards for an IIT Kanpur director, spoke a lot about her mafia tactics.

Dr. Muthanna was the Deputy Director when I entered IITK. He had a reputation of being a hard taskmaster. Invariably whenever he met a student in the corridors, he would immediately ask him his CPI (Cumulative Performance Index) and never bothered to ask him his name or his wellbeing. If the CPI was low, he would lecture the student to no end. Therefore, the moment we saw him coming into the corridors we would all try to run away and generally avoid him.

South India Tour

During our 4th year winter vacation in December 1970 a South India industrial tour was organized. These types of trips were regularly arranged in IITK during those times. Thus around 70 of us students mostly from Mechanical and Electrical Engineering Department together with 2 faculty members visited Hyderabad, Madras (now Chennai), Bangalore, Mysore, Ooty, Pune and Bombay. Though this was supposed to be a tour ostensibly for seeing the industries in south - it was really a South India darshan tour.

A three-tier railway bogey was hired and that became our house for next 21 days. The bogey was attached to different trains taking us to our destination cities and when we reached there it was detached and shunted to the yard for the duration of our visit to that city. We took bath in the water that was used to clean the bogies and used the filthy station toilets. Our breakfast

normally used to be in the station restaurant and other meals we ate in the town.

Despite such living conditions, the tour was fun, and it helped us develop great camaraderie with our fellow batchmates.

The two professors who accompanied us were Dr. Biswas of Electrical Engineering and his beautiful wife and Dr. Runchal of Mechanical Engineering Department. In fact Dr. Runchal taught me how to read road maps. He had apparently got road maps of few cities and so on our bus journey in the city he would show me the names of the roads etc. on the map. This map reading came very handy during my first [All-America trip in early 1975.](#)

The general routine during the trip used to be our visit to the factory on the first day and then 1-2 days were spent sightseeing the city.

During the tour I started having low grade fever, so I used to feel very tired and yet enjoyed the experience. Some memorable events that come to mind were:

1. In Madras I and Ashok Jain wanted to come back to the Railway Station to our bogey (I do not remember now why) and so left the others in the factory and hitched a ride. A smartly dressed driver in a white ambassador car picked us up and started chatting. If I remember correctly the gentleman was a senior editor of HINDU paper and naturally was interested in talking to IIT Kanpur students. Very graciously he dropped us at the station but we neither asked him his name nor anything else (such were our social graces in those times).

As North Indians we were also wearing sweaters since it was December though Madras was quite hot. As we got out of the car Ashok Jain pointed out that the gentleman's tie was attached to my

sweater. The HINDU man had put his tie together with the tiepin on the top of the seat and the tiepin somehow stuck to my sweater. The moment we realized our mistake we ran after the car waving but by that time he had already left. We felt really bad, and I felt that he would always consider IITK students as thieves!

2. We got so fed up with everyday eating *idli*, *sambar*, *dosa* that we would walk miles and miles searching for Shere Punjab where we could get good north Indian food. So in some places our sightseeing trip was nothing else but an exercise to locate Shere Punjab restaurants in those cities!
3. I still remember Bangalore, Mysore and Ooty were lovely cities in 1970 and it is really sad to see what they have become today. We wanted to buy a film for our camera and so we went to a photography shop on Mahatma Gandhi (MG) Road in Bangalore. The shopkeeper obviously knew that we were tourists and asked us about our impressions of their beautiful city of Bangalore. I was very touched by this gesture because it was wonderful to see somebody take so much pride in their city. Never in Lucknow did I hear anything like that.
4. I still remember Pune being a very quiet, green, and cool city. We travelled to most places in Pune by bus. Now it has become a huge city with tremendous heat and pollution-both air and noise. I guess all cities in India have become useless.
5. Generally on our trip we used to be a group of 5-6 who travelled together for sightseeing. Every day we would nominate one of us to be a treasurer and each one of us would contribute Rs. 10 towards our share for daily expenditure. This helped us in keeping tab on the expenditure and in the evening, we would sit down and calculate the amount that was spent.

In Mumbai it was my turn to be the treasurer. We went to Kanheri Caves in the morning by local train and while returning by local in the evening my pockets were picked, so I lost all the money which naturally I had to make up. We got down at Church gate station and were very tired, not in good

mood, and hungry and so went looking for a cheap restaurant since that day's money supply was reduced.

We saw the Purohit vegetarian restaurant near the Church gate station and entered it. It was an air-conditioned (A.C.) restaurant and so we immediately knew that we have come to the wrong place because generally such AC restaurants were costly. In any case either because of our pride or because we were famished and tired that we decided not to go elsewhere but to eat there.

The waiter immediately sensed that we were all poor students and so he very helpfully told us to order certain dishes. When we asked him why – he said that they were the cheapest !

He also brought the plates and put them at the end of the table and told us to take them ourselves. He figured out that we would probably not pay him a good tip. During our meal he hardly paid any attention to us, so it was quite a humiliating experience overall.

Both the events of my pocket being picked and the humiliating experience at the restaurant made me take a vow that I will never come and stay in Mumbai. Little did I know how wrong I was since I have been staying in Maharashtra since 1981 and come to Mumbai often.

Nevertheless the South India trip opened our eyes to a different India where people stood in lines patiently waiting for buses, their general behavior was much more civil than that of north Indians and their cities were neat and clean. This was very different from the north Indian cities we were used to.

After I came back from the trip I was diagnosed with typhoid, and it took me about 3 weeks to recover. The constant fever, poor drinking water and walking really took its toll.

Competitive spirit of students

Entering IIT through the tough JEE is a very competitive process. Hence almost all the students who enter IIT are primed for competition. Together with the fact that all the subject exams are internal and grading system is relative makes the atmosphere even more competitive.

So in our days (and so must be now) every student was trying to outsmart the other. There were many instances where if we asked some bright students about how to solve some problems either they showed ignorance or misled us and even told us the wrong solutions ! However there were a few noble souls who were always helpful.

Naturally this competitive spirit allowed some of our enterprising classmates to make an art form of getting their B grades converted into A grades. I remember in particular two of my classmates (AS and KS) who after every examination would go and meet the professors and had detailed discussions with them about the question paper and what they thought was asked for, etc. etc. Since very few students went to the professors in those days these students were in the vision field of those professors, which somehow translated into better grades for them. So invariably they were termed as suckers by rest of us.

One of our batchmates (AKG) used to be very peeved by this behavior and so one day at night he put a big banner (on used computer sheets) on the entrance of Hall I dining hall announcing that these two gentlemen (AS and KS) have been chosen for Param Chooshak Chakra (Biggest suckers!) and just like the Padma bravery awards given by Government of India, there was a whole list of our classmates who were given Maha Chooshak Chakra, Chooshak Chakra etc. depending upon how AKG felt they sucked up to the professors.

As can be imagined it created a big *hungama* and those batchmates affected tried their best to find out who made the list but could not and so for few days we all had great fun.

Despite and in spite of this competitive spirit I got an excellent education in IITK. Part of the reason was that in those days it was a 5-year course and we had to do projects in every year. For example in the first year we had to make a project from wood; in the second and third year it was from metal and in the final year it was almost like a mini thesis. Under the guidance of Dr. AG, a mechanical engineering professor, four of us developed a lathe attachment for machining long rods. After the attachment was made, we did a detailed study on its machining capability and presented our work before the committee as if we were defending our M.Tech. thesis!

This allowed us to work with our hands, showed us what research is all about, and helped develop in us the ability to deal with the reluctant workshop staff! In those socialist days, the workshop staff was a part of strong worker's union, and it was difficult to get anything done there.

Also in those days most of the courses (especially humanities ones) had term papers. Thus these lengthy term papers developed in us the ability to write and explore in depth the subject matter. I consider that my ability to write was greatly helped by these term papers.

I have always believed that a person's personality is fully made up by the age of 16-17. Later on in life this personality either gets enhanced or reduced depending on the circumstances, but the basic nature of a person remains same. Thus even fifty years after graduation that nature (selfishness, the jealousies, the competitive spirit) in our classmates is very much evident in reunions and social media exchange.

Summer vacations

The summer vacations in IIT Kanpur used to be almost two months long and quite a number of times we used these vacations to travel to the hills.

After the first year, I used the vacation to learn swimming in polluted Gomati River in Lucknow. Either the exhaustion due to swimming or the

pollution of Gomati simply zapped my energy. I still remember that I would sleep the whole day; would get up to eat and then again went back to sleep. I still do not know why I slept so much but the whole vacation was spent sleeping!

After the second year we all went to the congested [Nainital](#). Nainital even in those days used to be crowded but was a neat little town and I used to spend quite a number of hours in the public library. I have not been to Nainital since 1973 but am told that it is now overcrowded and quite a dirty town.

After the third year in summer of 1970 we went to Kashmir. The 15-20 days' Kashmir vacation was wonderful and showed me the beauty of the Himalayas. In those days Kashmir was a peaceful region and so we travelled all over the state; Sonmarg, Gulmarg, Khilanmarg, Pehelgam, etc. In Srinagar we stayed in a hotel close to Dal Lake. Though outwardly Kashmir was peaceful, the undercurrents of the militancy were visible even at that time.

I remember clearly that on reaching Srinagar we took a taxi from the bus stand to our hotel. My father felt that the taxi driver was taking us for a ride, so he objected. Immediately the taxi driver said that this is Kashmir and not India where taxi drivers always cheat the passengers!

Also whenever we went for a horse-ride we would talk to the horse owner, and he would invariably tell us that he likes India very much, but his horse finds the grass on Pakistan side tastier! And then used to add innocently that wherever his horse goes he has to go.

In Srinagar we regularly ate in dhabas run by Sardarjis. The dhaba owners used to tell us that the Government should remove [section 370](#) and the moment it happens they can make Kashmir a very prosperous state by

bringing lots of business. Section 370 has been removed now and so we have to see how it has helped India.

During this trip we also saw the ugly face of the Muslim fundamentalism in Kashmir. Every day we used to take a tourist bus from Srinagar to visit nearby places. The whole day trip was like a picnic. On one day in the tourist bus there was a group of 25-30 girls from a College in Punjab travelling with us. On the way we saw Rajesh Khanna and Asha Parekh shooting for a film.

In [1970 Rajesh Khanna was a superhero](#). The girls forced the driver to stop the bus and ran to Rajesh Khanna, hugged, and kissed him and then got a number of group photos taken. The Muslim bus driver was simply aghast and shouted at the girls that this is no way to behave and in a threatening tone told some of them that had they been Kashmiri girls he would have gotten each one of them beheaded !

Yet we soaked up the natural beauty of Kashmir, which was unsurpassable, and in those times with less tourist traffic it was a heaven for vacation goers.

The summer vacation after the fourth year was ruined by Dr. A and is already written up elsewhere.

After the fifth year I used the summer vacation to travel and meet my extended family and to plan for the future since I was not sure what I wanted to do after B.Tech. But then decided to do M.Tech.

M.Tech (1972-74)

Doing M.Tech was an enjoyable experience. I always wanted to go to the US for higher studies and since I did not get any US scholarship after my B.Tech I decided to pursue M.Tech in IITK itself. In those days there were

very few B.Tech students from IITK who joined M.Tech. Nevertheless quite a number of our batch mates joined M.Tech. with me.

In fact, an interesting event took place regarding this. There were 4-5 of our batch mates in Mechanical Engineering who after doing their B.Tech had joined some government organizations like DRDO, HAL, etc. Within a couple of months they found it very boring to work in those government organizations. So they wanted to come back to IITK and do M.Tech. By that time the M.Tech admissions were over. In those times there were no GATE examinations for postgraduate entrance and each IIT used to administer individual admission tests.

I knew about the plight of our batch mates so I went and pleaded (almost fought) with the concerned officials in Mechanical Engineering department, telling them that they are our students and if we do not take them then it will show that IITK itself does not believe that they are suitable for higher studies. Just to be fair to the already selected M.Tech students I also suggested that our batch mates should be given a very tough entrance examination. The concerned officials relented and naturally our batch mates passed the examinations and were admitted to M.Tech program.

I had totally forgotten about this episode until I met [Dr. M. M. Oberai](#) in IIT Bombay in late 1980s where I had gone to give lectures in Mechanical Engineering department. Dr. Oberai used to be the Dean of Student Affairs in IITK during our times and he reminded me about it telling me how I fought on behalf of our batch mates!

The smaller number of courses in M.Tech. plus less competitive pressure from the peers allowed one to have more time for other activities. So I became a senator in the [student gymkhana](#) and won the elections by third highest votes ! Also the better food of Hall IV (at that time it served the best food among all the halls) added to the M.Tech. experience.

All postgraduates (PGs) in IIT Kanpur were looked down upon by the undergraduates (UGs). Thus names like *Mendhak* (toads), *phuds*, etc. were commonly used for PGs indicating that they were in IITK only to study and were uninteresting and not very intelligent.

When I became a PG myself, I realized how wrong this perception was because in those days, IITK being the best Institute in India, attracted extraordinary students from all over the country who not only were toppers in academic area from their colleges but were also very good in extracurricular activities. Thus this perception of PG students as toads was a myth. However nowadays, the quality of PG students in IITs has deteriorated quite a lot since the rank holders from other colleges have other interesting outlets to apply to and only those students who cannot get any jobs apply to IITs as PGs.

In any case in those times at every opportunity the UGs tried to play mischief with PGs. One hilarious, though slightly tragic incident was an outcome of such a behavior.

A Ph.D. student during summer had the habit of sleeping at night in the Hall IV lawns on a cot with mosquito net attached to it. He used to be a regular gym goer and apparently had a tiff with few UGs in the gym. So those UGs decided to teach him a lesson. For quite a few nights the UG students, who had altercation with him, came to Hall IV canteen for night tea and observed his sleeping arrangements. They then decided to have some fun.

So one night 4 or 5 of them very quietly lifted the whole cot together with the student and put it in the center of the road. Most of the time the road in front of Hall IV used to be deserted at night but somehow a car came late at night and honked. The PG student woke up and could not understand how the car came so close and got out of his cot very disoriented. Naturally the UG students had a great laugh.

The next few days the PG student was cautious and so the UGs could not play the trick but after few more days he again found himself in the center of the road.

The UGs by this time had become little bolder and so they threw caution against the wind and tried the trick again one day. On that day the PG student was prepared and the moment his cot was lifted he attacked them with a big stick and broke one student's arm. In the ensuing melee all the UGs ran, and one student tripped on something and broke his leg.

Both the students were hospitalized, and a big row erupted between UG and PG students and for few days there was a war cry between UGs and PGs. The matter was raised in the Gymkhana senate (for which a special session was called), big speeches were given and finally the UG students apologized to the concerned PG student.

Such childish activities were fun, though sometimes irritating, but were a part of the education process during simpler times. Nowadays there would have been a long legal process, events blown out of proportion with news all over the place, etc. etc.

Since the course workload in M.Tech was less, it allowed me enough time to indulge in extracurricular activities. I used to play table-tennis (TT) occasionally during undergraduate days but during M.Tech days I started playing 2-3 hours daily in the evening. This TT playing continued during my U.S. days, and I almost made it into the team at University of Florida.

A fellow M.Tech student taught me Hath Yoga, so I used to do daily yogic exercises for 45 minutes including 5 minutes of *Shirshasana* (headstand). Also quite a few times, with some of our friends, we used to bicycle to [Bithoor](#) for picnic to river Ganges - a good 12-13 km one way drive.

All these vigorous physical activities were very enjoyable and kept the body well-tuned and mind sharp.

M. Tech also allowed me to explore the wonderful facilities available for research at IITK. It had an excellent library and with latest books, journals, and other research materials available it was a treasure trove for research minded. Besides I also discovered the range of equipment available for research.

I was doing the M.Tech thesis work on Solar Energy so needed a strip chart recorder to record temperatures from my experiment. My professor Dr. K (who was the head of department of Mechanical Engineering in 1973) was a very theoretical person and did not have a clue about anything experimental and so could not help. So after a great deal of searching (and help by technicians of refrigeration lab), I located a box which was unopened and probably came in early 1960s as a part of USAID donation to IITK. It was a brand-new strip chart recorder of 1950s vintage and worked like magic. I read the instructions and ran it for almost one year.

This incident also made me aware of huge amount of equipment (still in original boxes after 10 years of IITK existence) that was available and lying in various labs in IITK and nobody seemed to know of their existence, cared about them or knew how to use them. It showed that if somebody wanted, IITK system provided enough opportunity to use facilities for research. And yet the faculty and researchers in those times always lamented the lack of facilities. So it was not the lack of facilities but the attitude of researchers that prevented them from doing good research.

Another learning experience happened when I volunteered to help organize Second National Heat and Mass Transfer Conference. Since we were graduate students in the thermal science group, we were roped in to help the conference organizers. Though this was the national conference but

because of the stature of IIT Kanpur in those days, quite a number of well-known researchers in heat transfer from U.S., USSR and Europe attended it.

One of our jobs was to bring the guests from Railway Station to IIT Kanpur and lodge them in the Institute guesthouse. IIT Kanpur in those days was very poorly connected to Delhi. There was only one Indian Airlines flight to Lucknow and the road from Lucknow to Kanpur was not very good. So the best way to come to Kanpur from Delhi was by train. Train connections in those times to Kanpur were not very good and so most of the trains from Delhi arrived at unearthly hours between midnight to 4 a.m. We used to bring the guests to the campus either in IITK bus or in rickety Ambassador taxis.

This opportunity nevertheless gave us some feeling about how a major conference is organized and allowed me personally to listen and interact with well-known international names in Heat Transfer. Two professors' one from University of California, Berkeley and other from University of Michigan, Ann Arbor, who were attending the conference, even offered me fellowships to do Ph.D. in their Universities. However I got the [Government of India National Scholarship, so chose to study Solar Energy at University of Florida.](#)

The decade of 1970 nevertheless were horrible years for IITK with general confidence very low, good teachers leaving the campus in hordes and general atmosphere vitiated by campus strikes and [J. P. Narayan](#) movement. In such an environment it was difficult to see how good research could be done.

So in the summer of 1973 to get away from such an atmosphere five of us; myself, my younger brother Alok who was a student of Kanpur Medical College; my batchmates Suresh Chand and Anil Jain who were also doing their M.Tech with me; and R. Rajagopalan a freshly recruited young faculty member of Mechanical Engineering decided to visit the cooler environs of

[Kausani-a beautiful hill station in Himalayas](#). Kausani was the place where in the Anashakti Ashram, in the early 1930s, Gandhiji wrote his commentary on Gita.

In those days to get accommodation in the Government rest house anywhere in the state required that one had to do the booking in Lucknow. So I got one room booked for 3-4 days in the Government Rest House which was adjacent to Anashakti Ashram. The idea was to spend 3-4 days in Kausani and a few days in Nainital and the whole trip was to last for about 10 days.

All of us were professionals but none of us knew how to cook. In those days there was no provision of food in the Government Rest House, no dhabas nearby, and we reached Kausani late (I now forget what the exact reason was), so we decided to cook ourselves. Though we were all engineers, we forgot that at such altitudes water boils much below 100°C, and that dal takes forever to cook without the pressure cooker. So after putting the dal with water on the stove we dozed off since it was taking a long time to cook.

Sometime late at night we all woke up with the room full of thick smoke (we had closed all the doors and windows since it was cold) and the dal had become charcoal ! So we all slept hungry. Chastened, next day we requested the caretaker to make the food for us.

On the second day in the evening a newly married major with his wife came for their honeymoon. They stayed in the room next to us and the whole night we were subjected to their lovemaking sounds ! In the morning when we woke up and came out in the garden of the Rest House the talkative major started telling us about the beautiful places nearby to visit and he showed in a distance, a town downhill, that we should trek to and told us that it is not too far so that we can easily come back by evening.

So we started the trek at about 9:30 a.m. and reached the place (I forget the name now), which was good 10 km downhill, by 1:30 or 2 p.m. We were

extremely tired, had not carried any water and as we came downhill, it became hot so we would stop at any stream, wash our faces, put our feet in the water and start again.

When we reached the village, we were extremely hungry, and the only point of focus was to eat. So we found a dhaba which charged us Rs. 2.50/thali. Very soon the dhaba owner realized that we were as hungry as demons and in a short time we finished all his rations. He complained bitterly to us that if he had known that we were so hungry he would have charged us more money. Suresh Chand was so hungry that he bought a kilo of tomatoes from a nearby vendor and ate all of them raw !

Naturally after this journey we were too tired to do any sightseeing and took the bus to return back to Kasuani all the time the cursing the major.

The cool environment of Kasuani and sometimes the glimpses of snow-clad peaks through the clouds made this trip really enjoyable. The visit later on to crowded and polluted Nainital was therefore a complete letdown.

I completed my M.Tech in August 1974 and then went to US to do my Ph.D. in solar energy at University of Florida, Gainesville. The story of how I went to US and my experiences there has been written in a book entitled ["1970s America – An Indian student's journey"](#).

So in short these have been some of my memories of 7 years' stay at IIT Kanpur. Naturally I was there almost 50 years ago and so the memories of lots of other events have faded away.

In retrospect some of the [best education I ever got was at IIT Kanpur](#) because it opened up the horizons and exposed me to lots of new ideas on what was happening not only in India, but around the world. This was helped by discussions with students from all over India, talks by great

people and through the excellent library where the journals, magazine and books exposed us to the wonderful world beyond IITK boundaries.

Above all the [IITK education was a training of the mind](#). It taught me to think analytically, debate and discuss issues and basically get to the bottom of them. This training came in handy in whatever I have done both in the US and [at NARI](#). Thus whatever I have achieved in life, IITK education has a lot to do with it.

Campus and other Photos



IITK Lecture Hall complex as seen from top of Faculty building. 1970



IITK Computer center. 1970
Photo taken from the top of faculty building.

South India trip photos (Dec 1970)



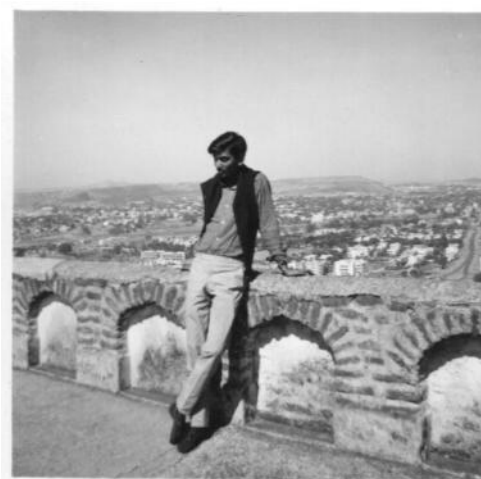
A.K.Rajvanshi, Suresh Chand and P. Sharda. Ooty gardens



M.K.Khattar, S.C.Khanna, V.K.Kapoor, Ashok Jain, S.Sood. Atop Golconda Fort, Hyderabad



Ashok Gupta, S.K.Bhatnagar, R.K.Khare, Suresh Chand. Lal Bagh, Bangalore



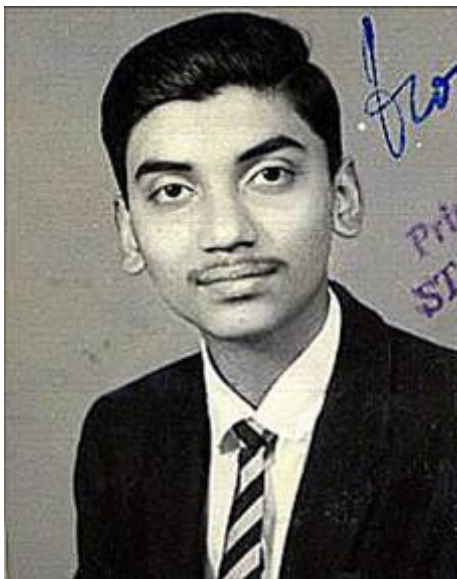
A.K.Rajvanshi on Parvati, Pune 1970



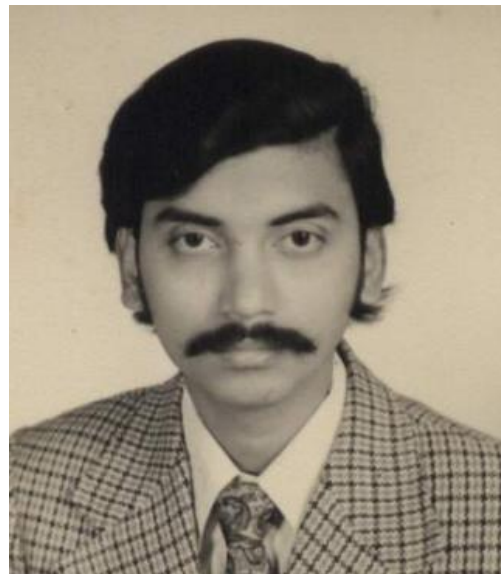
S.K.jain, M.K.Khattar, R.C.Bansal,
V.K.Kapoor; Charminar, Hyderabad



Sharad Srivastava, Raghuvansh Mathur,
Umesh Jindal, Ashok Jain. On the way to Ooty.



AKR photo for IITK entrance, 1966



AKR 1974



Photo taken after convocation (1973) in AKR's Hall IV room.
L-R: Suresh Chand, Anil Jain, Arun Dube, AKR, N.C. Agarwal,
Pravin Kumar, Ashok Jain

Videos/Podcasts associated with IITK

1. <https://www.youtube.com/watch?v=sNpaNwmGWxc&t=31s> IITK Dora interview after getting Padma award. 2022.
2. <https://www.youtube.com/watch?v=EK7ZDSRAXYg&t=21s> What IITK education meant to me. Interview for the 50th year IITK celebration movie. 2009
3. <https://www.youtube.com/watch?v=KCWhE1euJdo> Dora office video. 2022.
4. <https://www.podbean.com/media/share/dir-4gzrp-1cb0bed6> Podcast of How IITK education has helped me. Interview on IITK community radio. 2018
5. <https://www.youtube.com/watch?v=2txOJxI9Z4M> Interview by IITK media Cell 2023.
6. <https://www.linkedin.com/feed/update/urn:li:activity:7006645902295617536/> Legends of IITK. 2022.

[Next chapter \(My US experience\)](#)

[HOME](#)

Modified January 2024.