

Instrumentation, out of control

In my days, admission to engineering was handled in a peculiar way. There were less than 10 engineering colleges in all of Maharashtra. After passing the 12th grade, qualified students got admitted to a college linked with their own district. Since Kolhapur was linked with Walchand College of Engineering, Sangli, I was admitted there. The idea was, since the first year curriculum was pretty common across all specializations (civil, mechanical, etc.), it did not matter which college students attended. But then, after the first year they applied to other colleges depending on which major (specialization) they were interested in.

Nandu Teje:

I had great fun during my first year at Walchand College, about which I have written elsewhere. Even before starting my first year at Walchand, there were two options I was considering for my engineering major: Production Engineering at VJTI in Mumbai and Electronics at COEP in Pune, both highly competitive. Sometime during the year, a third option suddenly turned up on the horizon: Instrumentation and Control at COEP. This particular major was heretofore only available to B. Sc. graduates, and some wise people somewhere had decided to now treat it like all the other engineering degree programs and open it up to 12th standard students like me.

By this time, I had had the good fortune of being included in the good books of a gentleman named Sadanand Teje who, at the time, was pursuing a Diploma program at Walchand College. There is a lot that can be said about Nandu – that's what everyone called him – and I will do my bit in the following pages. To begin

with, let it be known that Nandu was “instrumental” in helping me choose my major. Other than spelling these different majors correctly, I had no real understanding of the ugly details of production, electronics, or instrumentation engineering. But Nandu happily proclaimed, “Instrumentation! That is the future!”

That forceful proclamation was enough for me to make up my mind. The word “instrumentation” also sounded nice to the ears, very lyrical, very musical. It almost felt as if I was going to learn about musical instruments!

And so, I ended up at the Department of Instrumentation and Control at COEP in the summer of 1981. My father chaperoned me to Pune, and I meekly followed him everywhere since I was a complete stranger to Pune city. Unfortunately, accommodation at the college hostel wasn’t available. I met with Prof. Shivajirao Bhosale at the Hostel office and later discovered that he was also my department chairman.

My father then arranged for me to stay as a paying guest with a childhood friend of his named Dr. Desai.

Nandu followed me to Pune a few months later and also joined the Instrumentation department.

If I had to describe Nandu in just one word, I would say he was the ultimate “network” man. Right from those college days, I have observed that Nandu knew *everyone* that mattered, and more importantly, those people who mattered also knew Nandu! Nandu’s connections were infinite and mutual. He also seemed to know *everything* that mattered. Note that those were the days of no Internet or smartphones. How Nandu got his hands on those valuable nuggets of information was always a mystery to us!

Nandu was generous: he did not use his connections and information for his selfish purpose but gave them away to anyone who needed them.

Nandu was without a doubt the liveliest member in our class. He was always in good spirits, laughing and making others laugh, and making light of any stressful situation. He was always ready to leave the classroom and go out and do something fun. But he was also committed to his own personal goals, which he never talked about. Nobody ever saw him study or prepare for exams seriously, but he always stayed on track of those goals. He was one of the first few who got a job after graduation – that too at a prestigious firm. He was also one of the first few who went abroad on an assignment. And he was one of the rare few who played the position of CEO or MD at multiple places in their careers.

I got to know Nandu's family too, and his brother Makarand and I became close friends. I stayed at Nandu's Haji Ali flat in Mumbai on multiple occasions including the time when I had to interview at the US consulate for a student visa. Nandu was one of my first visitors in the US after my marriage.

Although Nandu appeared most involved in his friends and their affairs, he was also detached in mysterious ways. For example, he understood politics at all levels, could explain its intricacies, and even give valuable advice to interested parties, but he himself was never "political". He remained an observer, an expert critic.

Nandu was a constant member at all our parties and late-night adventures, but he never got drunk or went out of control. He also never stayed overnight at a friend's place. A "sleepover" was out

of the question. No matter how late it was in the night, Nandu would take our leave and go to his own place to sleep.

Later in my “parental” life, I used to quote to my kids Nandu’s example and try to discourage their “sleepover” parties. They, of course, probably thought this “Nandu uncle” was a weirdo and ignored my advice!

I asked Nandu once about his strange insistence on “going home” and he said to me, “Look, you are most vulnerable and exposed when you wake up in the morning. Isn’t it better that you are in your own bed?”

Power of Kolhapuri chicken:

As mentioned earlier, I did not get rooms at the college hostel, and my father persuaded a childhood friend of his – Dr. Desai – who had a nice bungalow in Kothrud, to allow me to lodge with him until I found better accommodation. The Desais were a family of four – husband/wife and two sons – Amar and Abhijit. I ended up staying with them for almost a year and they treated me very kindly and affectionately. I of course did my best to stay out of their hair as far as possible. I used to get out of the house on my bicycle early in the morning and only return for the night.

I did manage to be of some use to my host family – Abhijit was doing his 12th standard and I helped him with his English and Mathematics courses. But my tutoring for Abhijit was not sufficiently effective, as I discovered soon.

For his final board examination, instead of staying in Pune, he chose Shirala as his exam center – a small town about 250 km from Pune. Shirala also happened to be the hometown of Dr. Desai and my father.

The plan was for Dr. Desai to drive Abhijit in his car to Shirala for the exams. He suddenly asked me if I wanted to accompany them just for a day or two. I was quite fond of Shirala, had friends there, and agreed immediately.

So, we all drove to Shirala and upon reaching, dropped off Abhijit at the exam center for his math paper. Then we returned to Dr. Desai's house, and since it was about lunchtime, were served with a very delicious meal that included my favorite Kolhapuri chicken. I was wondering why they were being so nice to me and was about to conclude that they all truly loved me for my great qualities. As I munched happily on a juicy piece of spicy chicken, a guy suddenly appeared out of nowhere. He approached me and handed me a sheaf of paper. He whispered, "This is today's Math paper. Write the answers on this blank sheet!"

A tube-light turned on in my head! So, that was why Abhijit had chosen Shirala as his exam center! And that was why they were treating me so nicely!!

With the chicken still in my mouth, I had no alternative but to comply with that guy's instructions and so, I dutifully solved some of the problems and wrote down the answers. With that little bit of help Abhijit did pass the dreaded math exam and also cleared his 12th.

I can't say for sure, but that particular experience might have been a factor in my decision eventually to give up chicken altogether and become a vegetarian!

Instrumentation:

I still vividly remember my first day in the Instrumentation department. It was an ancient-looking, rather uninspiring dark gray, stone building and our classroom was on the ground floor. There were a few other students in the classroom besides me. As per the admission process, there were 5 or 6 students each from different regions of the state, and so, there were a lot of strangers in the class. I vaguely remember Prof. Shivajirao's Bhosle's lecture in which he described the idea of basic control elements using the example of a metal spring.

COEP and Pune were a big change for me from Walchand College and Sangli. It took a while to get to know my new classmates. We were all from different parts of the state and were trying to settle down in this new city and figure out this new branch of engineering. The local Pune gang was obviously comfortable because they had already spent a year at COEP.

Things lightened up considerably after a few months when a whole new group of students joined the class. They were diploma holders from various colleges including Walchand and I was happily surprised to see Nandu Teje among them. These diploma guys were quite a different breed. They looked much more relaxed and not stressed about Instrumentation like the rest of us were.

I must include the honorable mention of Vijay Sanap, Sanjeev Mahalle, and Vilas Tawde who were also “cool dudes” and appeared as if they were here for a party.

Two years of partying:

The Instrumentation department was indeed a wonderful place to spend one's college years, if one did not care too much about rigorous learning. The curriculum itself was quite fascinating because we had a mix of courses from different engineering majors. There was some mechanical engineering, some electrical, some electronics, and some computer stuff as well. Course instruction was provided partly by department faculty and partly by visitors from industry. The lab equipment was ancient, and the instruments were mostly dysfunctional. Grading was extremely loose and liberal. Whatever may be the reason, I do not remember experiencing any stress from coursework or exams. A lot of our time used to be spent at the Boat Club, watching the river or munching on fresh bhaji.

In our third year, a departmental tour was arranged to South India. This trip was supposed to include industrial sites as well as touristy places. In reality, however, it was all tourism and fun. We visited places such as the beach at Kovalam, the hill station of Kodaikanal, Char Minar in Hyderabad, and so on.

At Kanyakumari, after taking in the breathtaking beauty of the three oceans coming together, we walked along the seashore for a while. And then, on someone's suggestion, we started playing "catch-catch". We made two teams, one facing the seashore and the other facing away almost standing in the water. I was in the latter team. The seashore was very uneven, rocky in fact. Someone threw the ball a little too far into the water and I ran to catch it. Suddenly, the solid ground below me disappeared and I went straight down into the water. Having no swimming skills, I started thrashing about. And then, I heard a distant voice – probably Ram Shetty's – telling me not to thrash about but just try

to stay afloat until the next wave came. Magically, a wave did come in just then and brought me back to solid ground!

They say traveling together is the best way to get to know people. Indeed, after that tour, my acquaintance with Vilas Tawde, Chandrakant Ragit, Atul Rohankar, Shrinivas Palande, and many others turned into close friendships.

The students in my class were all top-notch, having been toppers in their respective universities before getting admitted to Instrumentation. All of them did very well in their careers and it is great fun to recount the old days whenever we get the opportunity to meet.

Here is a brief rundown on some of these fascinating characters.

Sanjay Chitnis:

Sanjay, without a doubt, was the most brilliant student in our class. He was a tall, charming simpleton with scholarly spectacles and rode his bicycle every day from a place called Vitthal Wadi which was quite far from the department. Sanjay was no showman, and his brilliance showed through some surprising comments he would make, or when he answered some impossible question posed by the professor. He once politely pointed out that a computer program in our textbook had one line of code that was unnecessary and could be deleted.

The Rubik's cube was all the craze during our college days, and I remember Sanjay figured out how to solve it all by himself in some ridiculously short time. It was routine for Sanjay to discuss interesting logic or math puzzles and complex ideas in Physics such as the Möbius strip and event horizons. Once, he asked us, "When driving on a curve, why do we bend inwards?"

True to his scholarly nature, Sanjay was sometimes absent-minded. Once he was away in a different town and wrote a letter to another classmate of ours – Milind Joshi, whose initials were MS. Instead of writing MS Joshi on the envelope, Sanjay wrote MS Subbalaxmi! (A famous Carnatic vocalist). It's a tribute to the Indian Postal Service that the letter still reached Milind!

Sanjay was always the topper in our class, and he later became an accomplished academician, with a Ph.D. in Computer Science from IISc Bangalore followed by a series of teaching and administrative positions at renowned colleges and universities.

Shyam Marathe:

Shyam came through the diploma channel, like Nandu Teje. He was a slightly shy, goodlooking, soft-spoken, lanky gentleman with a goatee. With his sparkling green eyes and toothy smile, he endeared himself to all of us very quickly. He was a brilliant engineer and had an excellent understanding of things that we use every day but have no inkling of how they work. Nandu soon awarded Shyam with the title of “Doc” (doctor).

One day, we were working in the lab and trying to learn some basic ideas in electrical engineering. One of us pointed at a socket in the wall and wondered aloud, “What is the current of this thing?” Shyam laughed and replied immediately, “Why don’t you put your fingers in it and find out?”

Shyam was a musician without any formal training. He played the Tabla beautifully and we sometimes practiced together. Once some of us music-lovers such as Sanjay Chitnis and Milind Joshi went to listen to a music program which was part of an annual 3-day music festival called the “Sawai Gandharva Festival”. Shyam

was with us too. Just when the musicians would start tuning their tanpuras, or the harmonium guy would run his fingers gingerly, Shyam would correctly guess what Raga (composition) the artist was going to present! It was uncanny and amazing.

Shyam and I performed some music at the Pune University Youth Festival in Jalgaon, and although we did not win any awards, it was great fun. I remember the bus ride back to Pune in which we were with a large Modern College crowd, and they treated us with great respect just because we were from COEP!

Shyam was from Vasai, Mumbai, and once he took us to visit his place. It was a beautiful, green, rustic town and Shyam's cottage nestled among banana and other fruit trees.

Sujata Joshi/Tilak:

I sort of knew Sujata even before joining Instrumentation. I had seen her at the function organized by Raja Rani Travels at the Taj Hotel in Mumbai for 10th standard students who had somehow managed to come in the top 20 in western Maharashtra. When I joined the department in 1981, Sujata had grown into a tall girl with a pleasant smile and friendly demeanor. Although she was still a "Joshi" she was now engaged to a military man named Arvind Tilak. That bit of reality ruled out any awkwardness between her and the rest of the 29 guys in the class (she was the only girl!), and she became an honorable, beloved friend of all of us then and forever. Sujata was brilliant, as expected, and very active in class and departmental activities. She would speak up freely about any issues or needs of us students. She kind of became a symbol for all of us of the modern Indian woman. She was fearless, confident and ambitious but not cutthroat.

She was one of the few of us who stayed true to the creed of Instrumentation and started her own enterprise, which she continues to run even today while managing honorable positions on various technology forums.

Shashank Santpur:

While most Indians are docile and meek citizens who suffer endless injustice in their day-to-day lives without complaining, Shashank is an honorable exception. He is the “angry young man” among us. He came to Instrumentation with me from Walchand College where I knew him briefly for his strict health routine – he used to run and swim practically every day.

Shashank was the son of Prof. Santpur about whom I have written in a separate article. Looking back, I can certainly see the genetic correlation between father and son. Shashank definitely inherited from his dad the penchant for fighting injustice, insistence on not giving in to any kind of “shit”, and in general a trigger-happy temperament. Shashank was also suitably endowed with a good imposing physique and a deep, rumbling voice to go with his fighter’s nature.

The Indian roads are the starker example of the Indian ethos where it’s the law of the jungle and only the mighty rule. The road divider line which is meant to separate traffic in two directions is routinely violated by aggressive drivers who have nothing else in mind but to get ahead of the guy in front. Shashank, when he drove a car, kept his car exactly along this divider line and would not allow anyone in the oncoming traffic to even think about crossing that line. If necessary, he would stop his car and make the other guy stop too and stay there until the other guy moved in line, i.e. back inside the divider!

Behind that angry heart of his, Shashank also was a wonderful loving person, and he jelled with the rest of us very easily, even though probably none of us could match his uprightness.

I spent a year with three other classmates at a bungalow in the heart of Pune. It belonged to a guy called Khalap who also was a student at our college. I have no idea how we were able to get a room in that beautiful bungalow! I am sure Nandu had a hand in it!

Anyway, that bungalow became a favorite haunt for our Instrumentation gang to hang out in free time. Across the street, on the second floor, lived a beautiful girl who naturally became an attraction not only for us who stayed there but also for our visitors. Alas, one day, Shashank indicated that he liked that girl too, and hence, from that point on, for the rest of us, she had become a “Bhabhi” (in other words, a sister!). Of course, nobody wanted to cross swords with Shashank, and we gave up our rights readily!

Full disclosure (especially for Shashank’s family): that affair was no affair at all. Nothing came out of it, and that girl very soon decided that we (including Shashank) were not so interesting after all.

Shashank also stayed true to the creed of Instrumentation – in fact, of Biomedical Instrumentation (the specialization that was available in the final year) – and started his own venture of sales and service of medical instruments and hospital equipment.

Vaibhav Salunkhe:

Even the mention of Vaibhav’s name today causes a little flutter in my heart. Vaibhav is no more – he fell victim to a malignant brain

tumor several years ago. My last meeting with him was in unfortunate circumstances: he was at Bombay Hospital counting his last days, when doctors had given up all hope of recovery.

But Vaibhav continues to live in our hearts, and we have also instituted at the Instrumentation department, in Vaibhav's memory, a special annual monetary award to the student with outstanding achievement.

Vaibhav came to Instrumentation through the diploma route like Nandu, and he too was part of the Biomedical gang. He also shared space with me at the aforementioned Khalap bungalow. All this close association ensured that we became close friends.

Vaibhav's story was special because he grew up in a small village, in a farmer's family in which no one else did any serious schooling. Vaibhav, through his hard work and persistence, made it to the mainstream. His rural upbringing sometimes showed up through his Marathi accent or some special rustic words that he used. But he always made a conscious effort to don the "urban" dialect.

Vaibhav's handwriting was neat and beautiful. I know this because I was lucky to have a letter correspondence with him after we parted ways after college. I still have several of his letters.

Prof. Shekhar Gadgil:

In the final year of our degree program, we could select from two streams: Biomedical Instrumentation and Microprocessor-based Process Instrumentation. I always had a soft corner for anything "Biological" because I had been strongly tempted to go the medical route after my high school but had chosen engineering due to peer pressure.

When I was wondering which stream to pick for my final year, Nandu came to help once again! He assured me that Biomedical was the right way to go and that he would put in a good word for me with Prof. Shekhar Gadgil who was in charge of this particular stream.

That was my first indirect encounter with Prof. Gadgil. There had been no interaction thus far. I had seen him in the department occasionally and he seemed like a young, handsome fellow – almost as handsome as Gregory Peck in the movie “To Kill a Mockingbird”. He also looked like a serious professor, rarely smiling, with his head held high and with hints of deep intellectual capacity clearly visible in his eyes. He seemed aloof from the rest of the department, rarely seen chatting with other professors.

After getting admitted to the Biomedical Instrumentation stream (thanks to Nandu’s “good word”) I got to see Prof. Gadgil’s workspace. There was this separate classroom for Biomedical students. It was a large corner room of the department building, a rather dark one, with excellent audio-visual equipment. When Prof. Gadgil was nowhere to be seen, we used to play Boney M. or similar pop music at full volume on this audio system.

There were seven of us in the Biomedical stream, which was quite small compared to the other Microprocessor stream which took the rest of the ~23 students. But maybe that’s why we became a close-knit group of friends who started hanging out together, celebrated our birthdays together, and planned our futures together. For every birthday, we used to all go to the Shailaja Restaurant nearby for dinner and eat a variety of chicken dishes at the expense of the birthday boy. The idea was simple and fair: the

birthday boy would get back his money's worth after six additional such birthday feasts – which would be free!

When classes began, we witnessed the true power of Prof. Gadgil's scholarship. His lectures were spellbinding and loaded with amazing insights. He would stand there in front of us, his handsome face slightly lifted, his bright bespectacled eyes aligned with some abstract point in space above all our heads. Without any preliminaries such as hello or how are you, he would start talking in his slightly nasal voice, in flawless, polished English. His instruction would go non-stop like the smooth and deep current of a river. He spoke with a deep passion for the subject. He spoke with an urgency that commanded us to absorb everything that he threw at us. He questioned basic assumptions that we had been making all along. It was as if he was throwing his laser beam at factoids and nuggets of knowledge that we had been scraping together thus far by wandering in darkness.

It was the first time (since joining the department) I started feeling that I was truly learning something of substance. Confusing ideas in instrumentation such as accuracy and precision suddenly started making sense. Elementary devices such as diodes and transistors were brought down from the mumbo-jumbo of theoretical physics to practical use.

Prof. Gadgil showed us the urgent need to replace *assumptions* with *understanding*. He encouraged us to ask "why" and "how" to every principle or factoid thrown at us. He did this not through preaching or sermons. He did it by throwing puzzling questions at us. (What Nandu called "googlies"!)

A 1.5 V battery comes in different sizes from D all the way to the tiny AAAA (and beyond). What is the difference between them?

How do we hear when our ears are blocked with plugs? Is that ceiling fan above your head an example of a control system? How is it that we can locate exactly where our knee is even in pitch dark?

These were not simply puzzles thrown out for the sake of intellectual curiosity or entertainment. These were questions that a true engineer would and should ask. He wanted us all to be true to our profession of engineers and solve problems not by memorizing theorems and ideas, but with a correct understanding of how things worked in the real world.

I was certainly thoroughly inspired by Prof. Gadgil, and I am sure all the rest of us in the Biomedical stream were too. We learnt to eat the humble pie at every lecture of his when we would be unable to answer his questions but would be grateful to be sitting there listening to him elucidate some amazing ideas.

He was a one-man show; there was no other professor/lecturer for the Biomedical stream. So, he covered not only electronics and other technical topics, but also anatomy and physiology of the human body. He was especially charged up, I remember, during his physiology lectures, when he happily explained to us the magic of the various control systems in the human body. How the brain makes the heart beat by sending electric pulses to the heart muscle. How body temperature is maintained through two separate sensors placed at strategic places in the body and by sensing the difference between them. How an ECG/EKG (the electro-cardiogram) is even possible because the heart is not exactly at the center of our chests. All these insights created a new respect in our minds for the “engineer” who might have designed the human body.

Shekhar Gadgil – as he liked to sign all documents – became my new role model. He had certainly revitalized the fast-ebbing self-respect I had been feeling the last couple of years about being an “instrumentation engineer”. We all fell in love with Prof. Gadgil and started following him everywhere.

Prof. Gadgil had talents far beyond teaching. His handwriting was beautiful. It was almost like a font – pretty, symmetric, and precisely laid out. Later that year, when we organized a Biomedical Engineering Symposium at our department, he created pamphlets and flyers that were handwritten by him, and which looked prettier than any computer-printed document.

The above-mentioned Symposium brought us even closer together. It was a 3-day event where biomedical professionals and academicians from all over India were invited to Pune to participate and deliver their papers and speeches. There were workshops on various topics related to Biomedical Engineering. And we were the hosts! It was a major responsibility, which was made bearable and possible only because we had the able leadership of Prof. Gadgil. He was an efficient and systematic organizer. We started visiting his home to help out with various aspects of this preparation. Through these visits, I got a glimpse into Prof. Gadgil’s personal life – the place where he lived and the people he lived with.

Ushatai Gadgil:

When I first visited Prof. Gadgil’s house, I expected a scholarly, serious ambience at his house, knowing his own serious nature. At first glance, “Nagarkar Wada” – a beautiful, old-style, cottage-like place where Prof. Gadgil lived – indeed appeared mysterious and scholarly due to its numerous rooms, corridors, and stairs. We students were ushered upstairs, and we started working

quietly, whispering in low voices. But very soon, we heard a sudden loud burst of laughter from downstairs. All the pressure on our minds disappeared thanks to that hearty laughter. It was as if Nagarkar Wada was under dark clouds, and it had suddenly come alive with bright light.

That wonderful laughter belonged to Ushatai, Prof. Shekhar Gadgil's wife.

Soon thereafter we received plates of some marvelous, authentic Marathi snack prepared by Ushatai herself. With Ushatai's laughter and loving hospitality, we all became completely relaxed and the rest of our work was completed laughing, joking, as if we were simply playing cricket in the street.

Thanks to the Symposium work, I visited Nagarkar Wada a number of times and got to know Prof. Gadgil more closely. My respect for him grew, and so did my attraction and affection for Nagarkar Wada, the people there, and Ushatai herself. That place was always filled with so many people that for the longest time, I did not know who lived there and who was a visitor. It seemed as if everyone had free access there and they all seemed happy to be there. Prof. Gadgil's magnetic personality and generosity certainly were reasons for this traffic. But I suspect that Ushatai's loving and big-hearted nature was most likely their chief attraction.

Not knowing the who's who, I also had the difficulty of how to address people. I once addressed Ushatai as "Gadgil aunty". She first responded with a long, hearty laughter and then said, "*Gadgil aunty? Please! Just call me Ushatai!*"

When Indians living abroad visit Pune, they typically visit certain places without fail, such as the Vaishali restaurant, Parvati, etc.

For me, “Nagarkar Wada” became one such destination. I got to know and befriend other important figures living there – such as Malutai and Rohini – and my affection for the place grew exponentially.

My official interaction with Prof. Gadgil (as student-teacher) lasted about 9 months of the final year of my degree program. He continued to help me though, first by getting me a short internship at J. N. Marshall in Pune, then by putting in a good word with Dr. Sundarajan for a job at his startup “Datapro Electronics” in Pune, and later by writing recommendation letters for my MS applications to US universities.

Fortunately for me, the connection forged between us during that one year at the Instrumentation department persisted later, and in a way, it became stronger when Prof. Gadgil retired completely from his academic career. I visited him at his home in Pune, frequently alone, sometimes with a friend. He was always very kind, loving, and receptive at every meeting. Of course, his professorial style of diving into deep intellectual discussions was always manifest in our conversation. It could hardly be called a “conversation” because I rarely had anything intelligent to say or a sensible answer to offer to his questions.

Although it was never Prof. Gadgil’s intention to do so, through these conversations it would be confirmed again how unworthy we were to be called “engineers”. But Ushatai would come out to our rescue just at the right moment and relieve the awkwardness by making inquiries about our families. We would then happily shrug off the cloud of embarrassment and proceed happily to partake in the various food items prepared by Ushatai – the names of which would heretofore be unknown to us.

Thanks to Prof. Gadgil's and Ushatai's loving nature – in fact of everyone who lived there – I started to visit Nagarkar Wada freely and also roam around its various mysterious rooms – the kitchen, living room, the office, the open space in the rear, anywhere.

Ushatai had a mysterious mixture of many wonderful qualities. Her core nature was to be joyous. I never saw her in a sullen, introverted, long-faced mood. And her happiness was contagious – it made people around her forget their sorrows and hardships. She was also very enterprising, very active. She was always engaged in one culinary experiment or the other. But in doing so there was no pretense of “entrepreneurship”. The product of every such experiment was distributed freely to friends and relatives.

Nagarkar Wada was soaked in simplicity and beauty. There was plenty of space, but the cozy feeling of home too. Everyone had free access to the place, but that didn't make it chaotic or unruly.

It was easy to fall in love with Nagarkar Wada and I was no exception.

Later, after I was married and had a family, I started taking my wife Tanuja and kids along to meet Prof. Gadgil. Tanuja was slightly better at responding to his comments and questions and so, I started delegating happily the conversations with Prof. Gadgil to her while engaging myself in a light banter with Ushatai or Rohini about topics such as the weather in Seattle.

Prof. Gadgil (post-retirement):

After retiring from the Instrumentation Department, Prof. Gadgil started spending more time in a small village called Welaneshwar

(वेळणेश्वर) in Konkan, with the intent of conducting projects to bring about some development in that underdeveloped area. He was always the inveterate, true-blue engineer, coming up with innovative ideas and equally efficient solutions. I have never seen anyone who had such a firm grip on theory (ideas, innovation, creativity etc.) while also having a formidable command on implementation (engineering, efficiency, effectiveness, sustainability, and so on). He showed the village people in and around Welaneshwar how to harness solar energy and light up their streets. He showed them how to harvest rainwater in large storage tanks to quench their thirst during the drought months of summer. The villagers were happy and quick to applaud his brains and his experiments, but sadly, they never tried to adopt his powerful ideas to help themselves.

Prof. Gadgil also undertook the task of redefining how mathematics was taught in schools in that area and developed detailed curriculum and teaching materials. One such course involved learning geometry purely by playing with pieces of paper. He took the trouble to conduct training workshops for teachers. Sadly, once again the village folk showed no interest in picking up this wonderful material (which was also “free of charge”!) and running these programs themselves.

For the last several years (as of this writing), Prof. Gadgil has practically settled in Welaneshwar. He has built for himself a beautiful cottage-like bungalow – all through his own design – and has become a full-time farmer/gardener. Once again, the engineer in him is etched in boldface all over his work. He uses modern ideas, adds to them his own innovation, develops tools when necessary, and produces the most amazing variety of farm products as well as garden plants. I am one of the lucky recipients

of photos and videos of his work, which are nothing short of astonishing. Once I replied with a short Marathi verse:

मूळ मुळा मेथी आणि नाचणीची मळणी
अंबाडीची दोरी मिरीचे लोंगर ज्वारीची पेरणी

गांडूळ खत त्यात सिंचनाचे पाणी थेंवे गळे
वरीच्या लोंब्या उनात, मिठात भिजती आवळे

हे नव्हे कोषातले शब्द कोण्या पुस्तकातली माहिती
ही तर एका भूत इंजिनियरची अपूर्व शेतीभाती

In closing:

My three years at COEP were largely absorbed by the Instrumentation department and my colleagues. I had very little interaction with the rest of the college, with just one exception.

COEP had a very talented group of musicians and theater artists, and they always won top awards at the inter-college competitions of Pune University. One of those years, they put together a Marathi play based on the famous book “Jonathan Livingston Seagull.” The music group that composed the background score was looking for a violinist and Milind Joshi introduced me to them. It was quite fascinating to watch the creative work of these guys, some of whom – like Vijay Koparkar – became famous, full-time musicians later in life.

Instrumentation Class of 1984

COLLEGE OF ENGINEERING, PUNE 5
Association Instrumentation and Control Engineering Students
B. E. (Instrumentation)
1983-84



Right—In Chairs :— (1) Mrs. Sujata Arvind Tilak [Joshi]. (2) Prof. S. B. Pharkute. (3) Prof. A. V. Mungi. (4) Prof. M. G. Dhadphale [Head of the Dept.]. (5) Mr. Y. H. Gharpure [Chief Guest, M. D. Hindusthan Antibiotics]. (6) Prin. H. M. Ganeshrao. (7) Mr. Sanjay R. Chitnis [Secretary]. (8) Prof. S. M. Saraf. (9) Prof. K. K. Rathod. (10) Prof. C. P. Gadgil.

Standing 1st Row :— (1) Shrinivas A. Palande. (2) Rajiv H. Dharmadhikari. (3) Chandrakant N. Lodhi. (4) Shashank S. Santpur. (5) Vinod S. Mirajkar. (6) Narendra H. Kulkarni. (7) Sanjeev S. Mahalli. (8) Chandrakant B. Bende. (9) Vijay J. Savla. (10) Abhay Apte. (11) M. V. Ram Murthy. (12) Milid P. Budukh. (13) Atul W. Robankar.

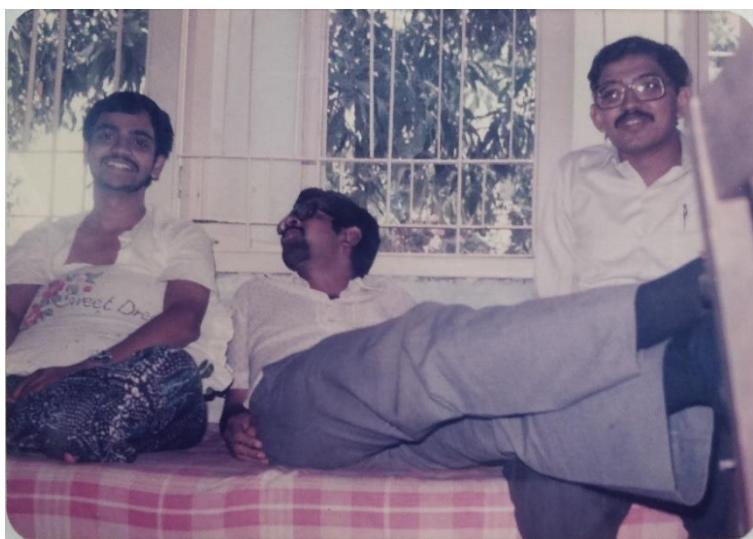
Standing 2nd Row :— (1) Abhay B. Joshi. (2) Sadanand V. Teje. (3) Shyam B. Marathe. (4) Vilas S. Tawade. (5) Upendra M. Kulkarni. (6) Sanjay M. Godsay. (7) Ramprasad A. Shetty. (8) Elvis Adamsam. (9) Jaysinha S. Deshmukh. (10) Vijay V. Sanap. (11) Shri. B. D. Bhosale. (12) Shri. E. B. Sonawane.

[N. S. Date Photo Studio, Pune 30.]

South India tour:



Khalap bungalow



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