A Nobel Laureate at IITK
Life in the Girls Hostel
A Tribute to Prof M A Pai
International Arrivals at IITK Airport
Rainy Days on Campus
The Spark
August 2023

Contents

<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editorial</td>
<td>235</td>
</tr>
<tr>
<td>Your Letters, The Keating Visit</td>
<td></td>
</tr>
<tr>
<td>A Tribute to Professor M. A. Pai</td>
<td>244</td>
</tr>
<tr>
<td>Professor Pai was one of the pioneering architects of the engineering curricula at IITK</td>
<td></td>
</tr>
<tr>
<td>A Nobel Laureate at IITK</td>
<td>249</td>
</tr>
<tr>
<td>The story of Maria Goeppert Mayer and her visit to the campus</td>
<td></td>
</tr>
<tr>
<td>Life at the IIT Kanpur Girls’ Hostel, 1976-84</td>
<td>253</td>
</tr>
<tr>
<td>Amrita Tripathi Sheikh shares her memories of some fun times</td>
<td></td>
</tr>
<tr>
<td>Memories and Learnings from IITK</td>
<td>260</td>
</tr>
<tr>
<td>Distinguished Alumna Anjali Joshi on her years on the campus</td>
<td></td>
</tr>
<tr>
<td>APPROACH: Appreciation and Promotion of Arts and Cultural Heritage</td>
<td>265</td>
</tr>
<tr>
<td>An update on a new Initiative on the campus</td>
<td></td>
</tr>
<tr>
<td>‘International Arrivals’ at the IIT Kanpur Airport</td>
<td>268</td>
</tr>
<tr>
<td>The adventures of Professor Alve Erickson</td>
<td></td>
</tr>
<tr>
<td>Rainy Days on Campus</td>
<td>273</td>
</tr>
<tr>
<td>And when it rains, it pours!</td>
<td></td>
</tr>
</tbody>
</table>

* Pages 1-232 refer to the Spark Issues #1 - 6, available at [https://iitk.ac.in/dora/spark/](https://iitk.ac.in/dora/spark/)

Editors: Anuradha Jagannathan, Aseem Shukla, Chilukuri K. Mohan, Shirish Joshi


Special Thanks to Professors Alve Erickson and Srinivasa Prabhu, the Pai and Waghmare families, and DORA Kantesh Balani for their help with this issue.

Views and opinions expressed in The Spark are those of the Editors and Contributors and not those of the Indian Institute of Technology Kanpur, unless specified otherwise.
With this issue, the Spark begins a new series on the Women of IITK.

Women students and Faculty still constitute a minority on the campus, though this number has grown steadily over the past six decades. In this first selection of articles, several alumnae recount their experiences of being a student at IITK during the 70s and 80s.

The Girls Hostel (GH) was a diverse and closely-knit little community, and while the residents traditionally preferred to avoid the limelight, they have many stories to tell that their male comrades may find surprising, funny, or thought-provoking. More importantly, we hope that the lessons drawn from these narratives will help to make the campus a more welcoming place for the new generations of women at IITK.

The renowned nuclear physicist, Maria Goeppert-Mayer, received the Nobel Prize in 1963, and visited IITK shortly thereafter. She is an inspiring figure not only for the passion for science which kept her going during difficult times with minimally paying positions, but also for the warmth and humanity which led to her coming to IITK to keep a promise she had made to her young postdoctoral researcher.

The Spark pays tribute to Prof M A Pai, one of the pioneering architects of the engineering curricula at IIT Kanpur during its early years. Professor Pai passed away at his home in Irvine, California, earlier this year after a distinguished career, guiding many young professionals in the field of power engineering.

We also got an opportunity to catch up with Prof. Alve Erickson over dinner in the San Francisco Bay Area. Prof Erickson, one of the early KIAP participants on campus, has some amazing stories to share, some of which we recount here!

As always, we look forward to hearing back from you. Please write to us at: spark@iitk.ac.in
Memories of IITK, 1966-78

Rachel Oberai-Soltz spent 12 years on the campus in the 1960s and 70s. She was the spouse of the late Prof. M. M. Oberai and worked in the IITK Computer Centre. The Spark team reached out to Rachel in May. We share some of her memories here; the full discussion will follow in the Spark later this year.

Thank you for sharing the Spark interests with me. It brought back a flood of memories from my years at the IIT/Kanpur campus.

I joined IIT/Kanpur with experience at UCLA's Computer Center, with an IBM 7094 system at that time. I arrived at IIT/Kanpur before the computer center building was built. The IBM 7044 and 1620 were in a crowded room in WL, with exposed above floor cables, and had mouse traps everywhere because the cables were being damaged by mice/rats. The IBM cards were in a warehouse open storage and caused card-jams because of humidity. We got KIAP to agree to provide air conditioners for faculty offices and we stacked IBM card boxes against the walls in faculty offices and the entrance to the computer-room so they could be air conditioned and used without card-jams. We created schedules for student "open-shop" use of the 1620. Operators ran the scheduled queues on the 7044.

My biggest contribution to IIT/Kanpur was based on my experience at the UCLA Computer Center. We got IBM to ship tapes with software applications of the SHARE software library; through the KIAP via the US Embassy diplomatic pouch (didn't go through India customs). IBM tapes of the SHARE library that came to IIT/K included Linear Programming, GPSS, PERT/Cost, matrix inversion, and other software tools (that now may appear so primitive...)! These brought the Indian Railways research (RDSO), Tata Steel, BHU, Aligarh MU, and other industrial clients to use and pay for computer time. We created a “user ID” that identified the computer time used by each user as well as their card decks that were in a Queue and printed output. I issued the invoices to off-campus users, received the payment, and walked it to the accounting office for deposit.

I remember we had a terrible dust storm during the first year that I was at the Computer Center, a huge dust cloud blocked the horizon and advanced quickly, it penetrated everything and heavily damaged Prof Parasnis’ car that was parked near his lab. I believe these storms occur frequently in Rajasthan but were rare and a surprise in Kanpur.

At an IIT/Kanpur party with American and Indian guests I referenced the small garden that was below the entrance to WL and across from the KIAP offices. I referred to it as the depressed area outside. The Americans burst out laughing; it took me a while to understand.... These are anecdotes and memories. KIAP interactions were helpful and cooperative, advancing the objectives and achievements of IIT/K.

Rachel Oberai-Soltz
MIT Fellow, MIT Open Learning
(Previously Associate Director of MIT Corporate Relations)
The Keating Visit


The year was 1970. It was the first semester of our 1st year at IIT. Tensions between India and Pakistan were running high over the unrest in East Pakistan. This was the eve of the Bangladesh Liberation War. We stuck newspapers on the windows of our room in Hall 3 – to make the campus less visible to bombers from Pakistan.

Indira Gandhi was our Prime Minister. In the US, Richard Nixon was President. Nixon and his National Security Advisor and Secretary of State, Henry Kissinger, looked with contempt on India, Indians, and Mrs. Gandhi. The relationship between India and the US was strained. Kenneth Keating was the US Ambassador to India. The ten year Kanpur Indo-American Program (KIAP), under which IIT Kanpur was established was coming to an end. In the middle of this tense situation, it was announced that Ambassador Keating would visit our campus.

I remember mixed feelings on campus about the visit. There were highly polarized pro and anti US factions. A couple of days before the Ambassador’s visit, Mrs. Gandhi made a trip to the US to meet Nixon. Apparently, protocol called for the US Ambassador to go to Palam Airport to see Mrs. Gandhi off in the middle of the night. For some reason, Ambassador Keating was not at the airport. Given the tensions between the countries this was seen as an affront and was front page news. The ambassador, for his part, said it was a simple misunderstanding. His alarm clock had not gone off and he had overslept.
There were protests when the Ambassador visited the campus later that week. Someone came up with the idea of presenting him with an alarm clock. I am not sure whether the protesters were able to get close enough to the Ambassador to present the clock, but there were national news stories on the protest at IITK and the clock.

I did not see Ambassador Keating during his visit. Fortuitously, I met him later that year when I was home for the summer at my parents’ home in Trivandrum. The Ambassador and his bodyguard happened to be swimming at the beach in Kovalam right next to us. I recognized him from the newspaper articles and had a brief chat with him.

In retrospect, we may have treated Ambassador Keating unfairly. The Ambassador was a big supporter of India. His secret cables to Washington during the Indo-Pakistan war argued that the Nixon Administration's justification for its pro-Pakistan policy detracted from American credibility and was inconsistent with his knowledge of events. Nixon for his part branded his envoy to India a traitor and removed him from his post because he refused to toe the line.

Paul Joseph, BT ME 1970-75
Editor Contour, This Bit of That India, 1975
Former CTO and President Asia-Pacific, Caterpillar, Inc.

Thanks Paul! Looking back, Ambassador Keating was eminently qualified. He was a Harvard Law graduate, a judge, a congressman, a senator, and ambassador to India and Israel. Also, he had previous India experience, having worked in India during WW2, as head of the U.S. office that managed the Lend-Lease Program for the China Burma India Theater.

Spare a thought for how he must have felt through this whole affair. He was probably ordered to not go to the airport and then was disparaged by the students on the campus. He passed away in 1975, not long after the episode in this write-up. Richard Nixon, though, met his own Watergate in 1974, becoming the only US President to be effectively removed from office. Unfortunately, that was too late for KIAP, which despite the love and interest shared by the participating schools and faculty, ended in 1972.

An earlier story on the Keating visit appears here: ‘The Eagle has Landed’, The Spark, April 2023, pg 225.

The link to the New York Times article about Ambassador Keating not being at the airport to see Mrs. Gandhi off on her trip to the US is here:
(Access might require a subscription)
Gio’s Contributions to the National Information Center

Thank you for including the tribute to Prof Wiederhold in your recent issue of Spark. Gio was passionate about spreading Computer Education around the world. In addition to the work he did at IITK, he had worked on several projects of national significance.

Professor Wiederhold was a true visionary and served as a role model for me and others. I had met him a few months after completing my BTech (EE) in 1974, when I joined the Department of Electronics (DOE), Government of India. My task was to help collect, consolidate, edit, and submit a proposal for the creation of a National Data Center. This proposal was supported by the UNDP consultant Professor Gio Wiederhold and the new center was renamed the National Informatics Center (NIC). Gio continued to take an interest in UNDP projects after his India assignment. He and I had many discussions when I was serving on other projects in the Dominican Republic and then in Brazil, the latter to get computers into every school in the country. He and I co-authored several papers and served as guest speakers in each other’s classes.

I am sharing a picture taken with Gio and Voy at their apartment in San Francisco in 2016.

On a separate note, the write-up on the History of the CC brought back additional memories from my years at DOE when I had coordinated the process for the arrival of the DEC-1090 at IITK. Half of the total cost of the DEC-1090 was covered by DOE; IITK was the only IIT whose mainframe computer was paid for by DOE at that time. DOE coordinated import of all computers into India costing over Rs 5 lakhs and also was involved in the creation of the Computer Maintenance Corporation (CMC), now a part of TCS. I had been extensively involved in both these tasks, leveraging the expertise that I had acquired at IITK.

Amar Gupta, B Tech, EE, 1969-74  
Former Professor, currently Research Scientist and Principal Investigator in CS, MIT, Cambridge, MA  
IEEE Life Fellow

Thank you Amar, for adding the additional details that we had missed in our original write-up. Indeed, Gio’s work will be remembered for ages to come. Thank you, also, for all the help you are providing Spark and IITK in restoring our archives from the documents available in the MIT Libraries

239
Spark, Outreach and Tripos

I went through the entire issue of Spark, April 2023. Sanjeev’s interview is very impressive and has come out superbly. Hats off to the Spark team for pulling this through.

The Hall-2 magazine launched sometime in our first year was called Outreach. The next batch (1987 entrants) continued it for some more time, till probably mid 1989. Obviously, Hall-3 was not to be left behind; they came out with their own magazine named Tripos (named after the Cambridge exams) a few weeks after we came out with Outreach. Every action had to have a reaction!!

Sudarshan Lakvalli  
BT, ChE, 1986-90  
Editor, Spark, 1987-89

Thanks for that little piece of history, Sudarshan. It is a part of the very large mosaic that is IITK’s history, bits of which come to light in the ongoing issues of the Spark.

Thank you for the Feedback!

Thank you very much for the latest issue of Spark.  
I was an MTech student, Mechanical Engineering, in 1964-1966.  
My brother HK Kesavan was the head of Computer Sciences and Electrical Engineering. I am wondering whether anything about his contributions to IITK have been written in the magazines. I would like to have a copy if it has been done so.

Regards,  
HK Narayan  
MT, ME, 1964-66

Thank you, Narayan for your note. Professor Rajaraman has written about Prof Kesavan’s contributions in his article on the Establishment of the CSE Academic Programs at IIT/Kanpur. Prof Kesavan’s focus on starting a post-graduate program as soon as possible led to the establishment of the MTech program in EE, which then led to the creation of the CSE specialization. Please see the Spark, Issue 3, April 2022, pages 79-83.

Also, refer to Issue 5, December 2022, pages 156-157, for pictures of Prof. Kesavan shared by Prof. EC Subbarao. All back issues of the Spark, with downloadable pdf copies are available at:

https://iitk.ac.in/dora/spark/

Thank you for sending me the excellent, interesting copy of the SPARK. Please keep me on the mailing list.  
EC Subbarao  
Professor MME (1963-84)  
Institute Fellow, 2005
Thank you so much for the tribute to Narsingh and for sending the link. I especially like the last anecdote. It was so much like him, always quoting an appropriate Sanskrit quote.

Karen Deo
Winter Park, Florida

Thank you for forwarding me a copy! It was a lot of fun reading it. We now have something that is multi-generational and geographically diverse! Congratulations to you guys, pulling this off can't be easy!

Best,

Debasish ‘Chutki’ Roy
BT, MME, 1971-76
Editor, Spark, 1975-76

Appreciate your note, Chutki Roy. You and your team set a pretty high bar for the Spark back then, so your words of appreciation mean much.

Here is a photo of you outside the Hall 2 canteen during the 1975 festival, watching Mukesh Anjaria on the Soapbox. A member of the current Spark editorial team is on ‘your’ left.

Chutki Roy, Editor, Spark, in 1975, Hall 2 Soap Box, Picture Credit: Shirish Joshi
The Mayers: Visiting KIAP Faculty 1966-67

Thank you for the latest Spark!
A minor story addition. The article on Dr Waghmare mentions that he worked with Nobel Laureate, Mrs. Maria Mayer. Dr Mayer and her husband spent a few months in late 1966 - early 1967 as Visiting KIAP Faculty at IIT Kanpur

From KIAP Final Report 1972:

MAYER, Joseph E., Department of Chemistry, University of California, San Diego, San Diego, California 92101, Service at IIT/Kanpur: 12/66 -3/67
While at IIT/Kanpur, Professor Joseph Mayer gave a series of lectures on Statistical Mechanics.

MAYER, Maria Goeppert Mayer, Department of Physics, University of California, San Diego, San Diego, California 92101, Service at IIT/Kanpur: 12/66 -3/67
In 1963 Dr. Maria Goeppert Mayer, a theoretical physicist, was awarded the Nobel Prize for her work on Nuclear Shell Structure. While at IITK, she lectured on nuclear physics and with her husband helped provide impressive assurance that IIT/Kanpur was developing international standards of scholarship.

Rakesh Pandey
BT, ME, 1973-78
President, IITK Alumni Association, Mar 2010 - Feb 2012

Thanks Rakesh for filling in the details about the Mayers and giving us the perfect lead-in story for our next series of issues!

The IITK Crest

The IITK crest was initially designed for the 1965 convocation based on some suggestions by Dr Sampuranand and given its final form by Mr. Khastgir of Lucknow Art School. The central ‘trinetra’ was chosen to symbolize the three eyes of Shiva from Hindu mythology, whereas the gear around it represented modern technology. The design was updated by Professor Vijay Stokes in 1967, with the trinetra curved, the number of gear teeth reduced from 30 to 24, and the profile for the gear teeth corrected. The bold lettering pattern was taken from ancient Roman columns. The number of circles or ‘wheels of progress’ was cut down from five to three. The result of all these changes was a simplified and a bolder, better crest.

-- The Spark, February 1967
IITK Distinguished Alumnus and former Chairman and CEO of Infosys, Mr. Narayana Murthy was the Chief Guest at IITK's 56th Convocation, held on July 3, 2023. After the ceremonies, he visited Hall V, checking out his old room (C-209), the mess (where a KIAP Professor had inspired him to switch from EE Control Theory to Computer Science), and the Reading Room (where he fell asleep in the middle of a Maharishi Mahesh Yogi meditation class)! He interacted with the current residents while recalling some of these memories.

Picture Credits: Girish Pant (Information Cell, IITK)
Mr. Murthy’s recollections of his H5 days are also available from his earlier conversation with the Spark, published in Issue 2, December 2021, pg 51-62, available at https://iitk.ac.in/dora/spark/.
Remembering Prof. M. A. Pai (1931-2023)

We are saddened to report that Prof. Mangalore Anantha Pai, former Electrical Engineering professor at IITK, passed away in Irvine, California on 2 March, 2023.

Prof. Pai was born in Mangalore, India on October 5, 1931. After his early education at the Canara High School in Mangalore, he earned his BE degree in Electrical Engineering (1953) from Madras University. He worked at the Bombay Electric and Transport System (BEST) in Mumbai (1953-57) in the Electric Supply Department. Thereafter, he went to the US and received his MS (Electrical Engineering) (1958) and PhD (Electrical Engineering) (1961) from the University of California, Berkeley, under the guidance of Dr. Eliahu Jury in the area of discrete time systems. He taught as Assistant Professor at UCLA until 1963. He had also worked in India at the Central Power Research Institute under the CSIR-UNDP program.

After returning to India in 1963, he joined the faculty of the department of Electrical Engineering, IIT Kanpur where he was a professor until 1979. He also served as Dean, R&D (1976-78). He is considered one of the pioneering architects of the engineering curricula at IIT Kanpur during its early years and brought the enthusiasm and broad knowledge necessary to steer the institution towards becoming the world-class engineering program that it is today.
A picture from the very early days of IITK shows Prof MA Pai with the EE students and faculty in late 1964. This picture was clicked at the EE department farewell for Prof Arthur Bergen (UC Berkeley). Prof Pai is standing in the center of the middle row, seventh from left (or right). Visible in the front row are Profs Hasan, Nandi, Sarma, Rajaraman, Director Kelkar, Prof Bergen, Mrs Jane Bergen, Jim Bergen, Profs Schreiber, Kesavan and Dr Muthana (Dy Director). Credit: The Pioneer Batch (1960-65) Golden Jubilee Collection, 2015

From 1979-1981 Professor Pai was a visiting professor at Iowa State University. He then joined the University of Illinois at Urbana-Champaign (1981) and continued to work there up to his retirement in 2004.

Professor Pai made notable contributions in the area of computer applications in power systems and started an active research group in the area. He initiated research in the area of power system stability using Lyapunov's method, which he later extended to include energy functions. He also initiated research in model reduction of large-scale power systems. He guided seventeen PhD students and wrote three books while working at IIT Kanpur. While at the University of Illinois, he conducted research in the Power area with control/computational emphasis, guided eight PhD students, and wrote three books on Power System Stability. After retirement, he wrote two books including a revised edition of his book written in India. He authored over 125 peer-reviewed scientific papers. Professor Pai was passionate about science and technology in India and had developed a website on this subject with his wife Nandini. The site was donated to the Center for the Advanced Study of India (CASI) at the University of Pennsylvania after several years under their guidance.

Professor Pai was a recipient of the Bhatnagar Award in Engineering Sciences (1974). He was elected Fellow of the Institute of Electronics and Electrical Engineers (IEEE), Indian Academy of Sciences, Bangalore, National Academy of Sciences (India), Allahabad and the Indian National Academy of Engineers.

Professor Pai mentored countless young professionals during the formative stages of their careers. He deeply valued the pursuit of education, as evidenced by his own substantial contributions as both a teacher and researcher in his field of study, as well as the unflinching encouragement he provided his grandchildren and younger generations to help them achieve their fullest potential. His significant professional accomplishments were exceeded only by his deep and abiding love to his extended family. He was the patriarch of the Pai clan, the last among five siblings and favourite uncle to many nieces and nephews in India and in the U.S.

The Esc 341 textbook from the 1970s, a copy of which is available in the PK Kelkar Library archives.
Picture Credit: Ishan Singh (BT, ChE, 2020-24)
IITK students from the 1980s are familiar with Prof Pai’s text used for the Esc 341 (Electrical Science) class. Many students have continued to benefit from text books authored by Prof. Pai; these titles are listed below:

- Computer Techniques in Power System Analysis (1979)
- Computational Techniques in Power Systems Analysis (2005)
- Power Circuits and Electromechanics (2010) [a second edition of this outstanding book was recently (2022) co-authored with K. R. Davis]
- Homi Bhabha and the Computer Revolution (2011) [co-edited with R. K. Shyamasundar]

Dr. Pai’s spouse, Mrs. Nandini Pai (1939-2023) was born on September 15, 1939, in Mangalore, Karnataka. She married early, and then embarked on a sixty-six year life’s journey with her beloved husband, Anantha Pai, who passed away just a little over two months before her demise on May 17, 2023. Nandini was a friend to many, many individuals – spanning her early years in Berkeley, to the IIT Kanpur days in India, to two and half years spent in Canada, to the Urbana years, and to her final thirteen years in Irvine, California. Nandini will be remembered for her warmth, grace, beauty, generosity of spirit and mind, and her wonderful personality that brightened the lives of those who knew her.

Professor Pai and wife, Nandini, are survived by daughters Sunanda Vittal, Sujata Dutt, and Shona Dave, son Gurudutt, sons-in-law, Vijay Vittal, Nikil Dutt, and Utpal Dave, seven grandchildren, and four great grandchildren.
From Toronto to Kanpur

It was in the summer of 1969 that I met Professor M A Pai. I was near the end of my PhD research work in the department of Electrical Engineering at the University of Toronto. Professor Pai was visiting the Memorial University, Newfoundland, Canada. He had dropped in at the EE department of UT for a casual professional visit. He discovered that I was from India, was completing my PhD work and would return to India thereafter. He was very friendly. He enquired into my background and details of my research. He told me about IIT Kanpur. He said it was developing as an outstanding place in India and that I should seriously think of applying for a faculty position there. He gave me a good amount of information about IITK and it was inspiring to listen to him talk about the campus.

I followed Pai’s advice. I secured a faculty position in IITK and spent the next 30 years of my life there. Pai returned to IITK a year or so after I joined. There was, for me, a lot of professional and social interaction with him. He was dynamic, full of ideas and enthused to work in interdisciplinary areas. He spent about 18 years at Kanpur. He was popular with students. His house was a meeting place for his graduate and research students and his wife Nandini was a great host. It was during this period, in 1974, that Pai won the prestigious Shanti Swarup Bhatnagar Award for his research contributions. He worked in leading administrative positions as well and contributed in a significant way to the development of the unique academic, research and administrative culture of IITK.

Their great lives have touched many in deep ways. May Anantha and Nandini Pai rest in eternal peace.

Srinivasa Prabhu
Professor EE, IITK, 1971-98; Emeritus Fellow, 1998-2001

The IITK EE Class of 1972-77 with faculty. Prof Pai is third from left and Prof Prabhu is on the far right in the seated row. Visible are: Professors Sahasrabuddhe (with daughter), Ramamoorthy, Pai, TR Vishwanathan, (Mrs) TL Vishwanathan, (Mrs) Paul, Paul, Subramanian, Arora, Doradla, and Prabhu; and in the second row: VP Sinha behind TRV and KR Sarma behind TLV. Picture shared by Prof Prabhu.
Maria Goeppert Mayer, 1906-72

Nobel Laureate, Physics, 1963
Visiting KIAP Professor, IIT Kanpur, 1966-67

Maria Goeppert Mayer was a German-born American theoretical physicist, who in 1963 became the second woman, after Marie Curie, to win a Nobel Prize in Physics for proposing the Nuclear Shell Model of the atomic nucleus.

Maria Goeppert was born on June 28, 1906, in Kattowitz, Prussia (now Katowice, Poland). In 1910, she moved with her family to Göttingen when her father was appointed as Professor of Pediatrics at the University of Göttingen. After attending private schools for girls, Maria joined the University of Göttingen to study Mathematics.

Upon completing her undergraduate studies, she chose to pursue a PhD in Theoretical Physics, and in her 1930 doctoral thesis worked out the theory of two-photon absorption by atoms. Her thesis advisor was Max Born (who, incidentally, had also been J. Robert Oppenheimer’s advisor a few years earlier). There were three Nobel Laureates on her doctoral committee: Max Born, James Franck and Adolf Otto Reinhold Windaus. The experimental verification of her theoretical predictions only became possible after the development of the laser in the 1960s. Today, the unit for the two-photon absorption cross section is named the Goeppert Mayer (GM) unit in her honor.

Towards the end of her thesis work she met Joseph Edward Mayer, an American theoretical chemist, who was on a Rockefeller International Fellowship in Göttingen to work with James Franck. Joseph and Maria got married in 1930 and moved to the US, where Joseph had been offered a faculty position at Johns Hopkins University. Maria, who could not obtain a faculty position due to the rules against nepotism, had a job as an assistant in the Physics department working with German correspondence. She however was allowed to teach courses and she continued to do research, notably publishing an important paper on double beta-decay during her first years in the US. The couple and their two children moved in 1939 to Columbia University, where Joseph Mayer took up an Associate
professorship. Maria, who did not have an official position, nevertheless collaborated with him on various topics in chemical physics, such as the colour of organic molecules.

A distinguished chemist who formulated the Mayer expansion in statistical field theory, Joseph Mayer would go on to be a member of the United States National Academy of Sciences (1946), the American Academy of Arts and Sciences (1958), and the American Philosophical Society (1970). He was president of the American Physical Society from 1973 to 1975.

In December 1941, Goeppert Mayer got her first paid professional position, teaching science part-time at Sarah Lawrence College, in Westchester County, north of New York City. In the spring of 1942, with the United States embroiled in World War II, she joined the Manhattan Project and accepted a part-time research post with Columbia University's Substitute Alloy Materials Laboratories.

In February 1946, after the conclusion of WW2, Joseph became a professor in the Chemistry Department and the new Institute for Nuclear Studies at the University of Chicago. This time, Maria received an enthusiastic welcome from the Physics department, which offered her an Associate Professorship. When the nearby Argonne National Laboratory was founded in July 1946, Maria was also offered a part-time job there as a senior physicist in the theoretical physics division.

It was during this time at Chicago and Argonne in the late 1940s, aided by unfailing support from Enrico Fermi, that Maria Goeppert Mayer developed a theoretical model for the structure of nuclear shells, which correctly predicted the magic numbers at which nuclei are stable. Three German scientists, Otto Haxel, J. Hans D. Jensen, and Hans Suess, who were also working on the nuclear shells problem had arrived at the same model independently, and their papers were submitted around the same time. In 1963, Goeppert Mayer, Jensen, and Wigner shared the Nobel Prize for Physics "for their discoveries concerning nuclear shell structure." She thus became the second female Nobel Laureate in Physics, after Marie Curie, and it would be over half a century before a third woman, Donna Strickland, was awarded this prize in 2018.
In 1960, Joseph and Maria Mayer moved to University of California San Diego (UCSD) as full professors of Chemistry and Physics, respectively. Although she suffered from a stroke shortly after arriving at UCSD, Maria continued to teach and conduct research for several years. She was elected a Fellow of the American Academy of Arts and Sciences, a member of the American Physical Society, and received the Golden Plate Award of the American Academy of Achievement in 1965.
The Kanpur Connection

Prof. Yeshwant Waghmare, after completing his Ph.D. in Nuclear Physics from the Physical Research Laboratory, Ahmedabad in 1962, worked as an assistant research scientist with Maria Mayer at UCSD. Before leaving for India in 1966, he got a promise from Maria that she would visit the IITK campus where he had joined as a faculty member.

Maria Goeppert Mayer kept that promise. Even though UCSD was not a participating KIAP school, Maria and Joseph Mayer were able to visit IITK as visiting professors in 1966-67 and teach courses in Nuclear Physics and Statistical Mechanics. Professors Goeppert Mayer and Yeshwant Waghmare together taught the Nuclear Physics course offered that semester, covering much of the material for which Maria had received the Nobel Prize a few years earlier.

While leaving IITK, Maria had some extra luggage that she could not take back with her to the US. She left behind one blue suitcase with the Waghmares, intending to come back and collect it on a later visit. She sadly did not return, passing away from a heart attack on February 20, 1972. The suitcase, and its contents, remained at IITK till the Waghmares left the campus in 1997.

Text compiled by the Editors of the Spark, with thanks to the Waghmare Family for their inputs.

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https://en.wikipedia.org/wiki/Maria_Goeppert_Mayer
Life at the IIT Kanpur Girls' Hostel
Amrita Tripathi Sheikh (MSc/PhD, Chemistry, 1976-84)

Amrita (Trips) at IITK, c. 1980. Picture Credit: Anjali Joshi

I was familiar with Kanpur since my grandparents lived there but IITK was well outside the city and different! During my school and undergraduate education, I had spent many years in boarding/hostels but the Girls’ Hostel (GH) at IIT Kanpur was a totally new experience. The IIT campus was self-sufficient and visits to the city either by the campus bus facility or by tempo were few. My elder sister and her family lived in the city — a visit to them was always refreshing, and a welcome change from the IIT Kanpur life which was a mix of experiences and emotions!

GH was a beautiful red-coloured building with just two floors — the architecture was not like that of a ‘hostel’. The entrance was flanked by two wings with broad corridors and open stairs. Each wing had its own lawns – six if I recall correctly. I joined IIT Kanpur in July 1976 for MSc in Chemistry, along with a friend from Lucknow, Vibha Maniktala (aka Vibsy), who had also graduated at the same time. I was fortunate -- in a strange, new place there is nothing like a friend from yester-years!

The IITK Girls Hostel, late 1970s. Picture Credit: Amrita
Within a day we realised that we were three girls in the MSc Chemistry course – Pushpita Mohanty (aka Monty) joined us from Cuttack. Over the next few days, the GH residents who were there prior to July 1976 saw many new faces in the corridors. Six girls had joined B.Tech – Anjali Joshi, Neera Tandon, Ratna Gupta, Rema Pedman, Renu Mittal and Vineeta Gupta – the largest number of girls in one batch, for sure! Apart from them, Natasha Dhesi (also from Lucknow and coincidentally Vibsy’s cousin) joined PhD Psychology. From the GH residents strength of about thirty we had touched forty.

A winter walk around the campus. L to R: Pushpanjali Baruah (PhD English), Amrita and Vibha Maniktala. Picture Credit: Shirish Joshi, c. 1977

GH rooms that had never been opened had to be assigned to us ‘Freshers’ – I was the first occupant of the B-block ground floor area which had the hostel office. My room (B 116) was close to Sri Ram Kumar’s office (B 118) - I stayed there throughout my eight years at IIT: July 1976 to June 1984. Ram Kumarji was not someone that everyone took very kindly to! He had an unusually loud and somewhat shrill voice, which fortunately we didn’t hear often, since most of us spent our entire day at the Institute. All said and done, he managed the office efficiently and ensured we paid our Mess Bills on time. He also managed the GH staff quite effectively.

Since many rooms in GH were empty, girl participants for the annual Cultural Festival stayed in the hostel. We had the opportunity of meeting Shubha Mudgal (nee Gupta) when she participated in the CulFest as a member of the Allahabad University team. Even in the mid-seventies, Shubha was extremely talented – she danced, she sang, she participated in debates and took IIT Kanpur by storm! GH residents didn’t have much participation in the Festivals those days but many like Vasu (Vasundhara Choudhury), Roli Garg, Monty, Jayathi Murthy and Ratna were active in theatre.
Shubha Gupta Mudgal (left) and Keka Guha Kar (right) collected a lot of awards during Festival 1979, with S N Hostel, Allahabad winning the trophy for the best visiting team. Pictures shared by Keka Kar, who now lives in Houston, TX and is very active in the Indian Music circles there.

For some reason, GH was the hostel furthest away from the academic area – we all needed to cycle to and fro for our classes, library, labs, Computer Centre, etc. Even the Shopping Centre was far away from us. Most of us could cycle and those that couldn’t needed to learn. I vividly recall Monty buying a new cycle and learning how to ride it – it took her a while but she was successful and she pedalled confidently!

Heading for class. In front, on the right, is Geeta Wattal and on the left is Rajeswari (both MT, EE). Picture: Shirish Joshi, c. 1976-77.

Shobha Madan was the only GH resident who had a motorcycle – it was for the first time that I saw a red Rajdoot GTS Motorcycle! Shobha was kind enough to take me to Kanpur city on her ‘bike’ – I enjoyed the experience!
The GH residents were truly inspiring and very talented with a wide knowledge of things beyond academics. I enjoyed browsing through the collections of Liz (Elizabeth Chackachery), Vasu, PC (Pratibha Chopra), Shobha all of whom were in the PhD program. They had a huge variety of books: The Little Prince, Winnie-the-Pooh, Alice in Wonderland, The Prophet, Fountainhead, Catcher in the Rye, Old Man and the Sea, to name just a few.

The Central Library of course had an enormous collection of books – apart from Chemistry, I read many books from the Humanities and Social Sciences section on the first floor of the Library - poetry, books on the hills, books authored by Edward de Bono and many more. It was through my conversations with friends at GH, classmates and other friends at IIT Kanpur that I heard of some of these books and authors. Another daily routine for me at GH was reading the Times of India (Delhi Edition) in my room every night and trying to solve the Crossword, at which Vibsy was quite a ‘pro’. Selling the old newspapers to the ‘kabadiwala’ enabled us to get enough money to have a ‘chai and samosa’ treat with friends.

Together on the rooftop. From left: Natasha (PhD Psychology) in sari, Trips, Vibsy, Vineeta (Shankar, PhD Economics), and Monty - the two V’s sitting on the ledge! Picture Credit: Amrita
Music was another important part of my years at GH – my exposure to this had been very limited. At GH there was Vasu who had a *tanpura* in her room and we could hear her doing *riyaz*. Many times one would cross Anu Jagannathan, and Aparna Dhar in the GH corridors humming a tune to themselves! Thanks to cassettes and cassette recorders owned by friends we heard Vilayat Khan, Ravi Shankar, *Call of the Valley*, Bade Ghulam Ali Khan, D V Paluskar, Kumar Gandharva, Mehdhi Hasan, M S Subhalakshmi, Hemant Kumar, Talat Mahmood, Simon & Garfunkel, John Denver, Carpenters, Boney M, to name some of the artistes and albums.

The Cultural Festival also gave us an opportunity to hear many artists like Chitra and Jagjit Singh, Talat Mehmood, Hemant Kumar, Lalgudi Jayaraman, Ustad Amjad Ali Khan live and watch performances by Anand Shankar and his group. This fondness for music and the arts across the campus community was the fore-runner to the opening of the IIT Kanpur Chapter of SPIC MACAY around 1982-83 – I was happy to help in the organization! Leela Samson visited and so did Sonal Mansingh and Kishori Amonkar during this time.

The GH Mess was managed initially by Sri Puran Singh and later by our Mess Manager, Sri Girdhari Lal. I was used to hostel food and found the GH Mess food fine, but that was not the situation with most residents. Occasionally we would buy some add-ons for our meals from the vegetable and fruit vendors either near the Transport Section (Jaggu Market) or near the Main IIT Gate which was really far from all the hostels. Special dinner on Wednesdays, also parathas for breakfast on Sundays, fried rice/pulao and *cholla* for lunch on Sundays – these were fixed. The rest of the meals had the usual fare – very little changed on the menu. We had a Mess Committee that could decide the menu but the options were few! I too was a member for many years but couldn’t really do anything very different.

*The warmth of a home cooked meal! Malini Raghavan and Abha Varma cooking dinner on a winter evening. Check out the coalfired stove which also works as a room heater!*  
*Picture: Nandini Raghavan (1979-84)*

There were no elections for any committee or for the GH President – friends had to be persuaded to volunteer their services. While at GH, I recall Shobha and Liz persuading me to become the GH representative on the Students’ Senate. I remember that the Student Senate meetings held in the newly constructed Students Activity Centre (SAC) were a bit boring, but I had to attend. For one such meeting I carried an issue of Readers’ Digest to keep myself busy. Soon afterwards - Io and behold - there was a cartoon in one of the campus magazines of me reading and not listening to the proceedings of the meeting!

Since there were not too many residents in GH, we lived like one large family. Birthdays were celebrated at the stroke of the midnight hour! Occasionally, I would ‘issue’ butter, eggs, sugar and *maida* from the Mess and we would bake a cake in the oven in Vibsy’s lab at night. Many of us had heaters in our rooms – we enjoyed late night coffee sessions, and in the early eighties, Maggi too! Goodies coming from home were instantly shared. Jayathi’s *namkeen* mixture was a treat and so was the mango pickle her parents sent! I recall Jaishree Paul thoughtfully switching on the geyser in our wing every night for me during the
winter months at about 11 pm as she knew I would bathe when I returned from the lab close to midnight – friends that are family and continue to be that way!

Birthday Celebrations in the GH! (L to R); Anuja Mathur and Nandini Raghavan (both 1979-84), Amrita, Vineeta Gupta (1976-81). Picture Credit: Amrita

Then there were difficult moments when we got sick, but even then, the GH was a home away from home for many of us. Food being taken from the GH Mess to a resident’s room or ‘sick diet’ ordered at the GH Mess meant a friend was unwell – we stood by each other and looked after each other too. I recall Lovely Dutta sweetly sitting in my room right through the night as I had a high fever. The Health Center was the building next to our hostel and that was a good thing in an emergency. I remember Iqbal Kaur Gill getting asthma and we rushing her to the Health Centre, Sudha Bhardwaj running fever for many days and getting admitted to HC.

A few other incidents concerning the Health Centre still remain clear in my mind. During our MSc course, Vibsy fell off her cycle while returning back to GH in the afternoon. Initially we did not give the injury much thought, but by the evening felt she needed an Anti-tetanus injection, so we went to the Health Centre. The doctor on duty told us that since a couple of hours had lapsed, Vibsy would anyway get Tetanus if she has got the infection from the road. Not a very encouraging remark from the doctor to a patient and her friends!

Then in May 1978, just as we were completing our MSc course, Monty, Vibsy and I got food poisoning. The Mess had closed for the summer vacations so we were managing our own food. Not wanting to waste any food we ate leftovers of the previous night and that too in the summer heat of May! Sometime in the early eighties while we were doing PhD, Vibsy cut her palm – the glass tubing broke as she was trying to set up the apparatus in the lab, and she needed stitches. I am not sure if the local anaesthesia sprayed on her palm by the doctor at the Health Centre dulled her senses but it surely made me feel a bit queasy and dizzy. Vibsy claims she still can feel pieces of glass in her palm forty years later!

The Reading Room at the entry to GH was the place for GBM’s – I recall a few meetings with the Wardens of those days – Dr Usha Kumar, Dr Prabha Sharma, Dr Lilawati Krishnan. Unlike other women’s hostels across India, GH had no rules - we were free to come and go as we wanted and there were no rules for the guests too (that I was aware of). This did lead to discussions but we carried on very well. Our Reading Room got a colour TV in the early eighties – the first important event we watched together was the Republic Day Parade.
GH Wardens from the 1970s... Left: Dr. Prabha Sharma (Math), Right: Dr. Usha Kumar (HSS-Psychology).
Pictures: Shirish Joshi

Next to the Reading Room were our mailboxes – letters were important as they were our only connection with the outside world! Local phone calls could be received only on the phone line which was an extension number from the IIT Kanpur Telephone Exchange – the lone telephone instrument was kept near the GH entry door. Out-station calls (or Trunk Calls) could be made only from the Telephone Exchange that was in the basement of the Computer Centre.

I could go on – it is difficult to write all my thoughts and anecdotes over eight years in a few pages! Over the years that I was at GH, the resident strength increased to about eighty – our numbers were doubled!

Apart from associating friends with anecdotes, I would like to mention many friends that continue to be in touch over the years through visits and get-togethers as well virtually via email and WhatsApp: Anuradha (Anu), Leena, Abha, Pushpanjali, Preeti, Ratnamala, Geetha, Rajeswari, Timila, Premlata, Pramilla, Kiran, Shruti, Anshoo, Madhu, Nandini, Anuja, Malini, Uma, Lakshmi, Vidya, Padmashree, Neerja, Deepa, Geeta(Wattal), Geetikay, Renu (Khanna), Meenakshi, Renu (Singhania), Sangeeta, Vineeta (Shankar), Asha, Rita (Pandey), Rita (Singh), Anuradha (Misra), Manjusha, Kajoli, Nalini, Bashabi, Shantha, Nivedita, Jayanthi, Urmirena, Renu, Renu (Mittal), Rema, Anjali, Vinita (Gupta), Ratna, Vibha, Pushpita, Roli, Shibha, Vasundhara, Pratibha...

Fond memories of those who are no more with us Geeta (Saxena), Kamu, Darshana, Liz, Alka – may God grant their families strength.

“Old friends cannot be created out of hand. Nothing can match the treasure of common memories, of trials endured together, of quarrels and reconciliations and generous emotions.” – Antoine de Saint-Exupery

About the author:

After graduating from IIT Kanpur with her PhD in 1984, Amrita joined the faculty of Miranda House, University of Delhi, as an Assistant Professor in Chemistry. She married a fellow IITian, Shahid Sheikh, (BTech 1974-79, Cul Secy 1978-79) in May 1985. She continued to teach at Miranda House till she superannuated from there on 1 October 2022. She enjoyed teaching and contributed towards many activities at the College. Thirty eight years at Miranda kept her more than busy but she always has had time to stay in touch with old friends. Since November 2022, she has been getting used to a different and relaxed routine of reading, walking, listening to music and travelling.
Memories and Learnings from IITK
Anjali Joshi (BT, EE, 1976-81)

Anjali Joshi received her B. Tech. in Electrical Engineering from IITK in 1981. She went on to get a Master’s degree in Computer Engineering from the State University of New York, and a second Master’s in Engineering Management from Stanford University. She also completed the Executive Education Program in Medicine at Harvard University.

In 1989, she joined AT&T Bell Laboratories and spent several years working in the areas of voice and high-speed data communications. Known for bringing exceptional digital products to market, she served as VP of Product Management at Google and managed several flagship products including Search, Maps, Translate, News, Finance, and Global Infrastructure. Prior to Google, Anjali was executive vice president of engineering for Covad Communications, a company providing voice and data communications products and services.

Anjali currently serves on the boards of Xero, a provider of cloud based accounting services, Alteryx, a provider of automated analytics solutions, and Loconav, a fleet management company. She is on the advisory board of the Markkula Center for Applied Ethics and an Executive in Residence at INSEAD in France. IIT Kanpur conferred upon her the prestigious Distinguished Alumna Award in 2017.

The Spark team reached out to Anjali to discuss her IITK years, her learnings from her stay at the campus and her subsequent career accomplishments.

The Years at IITK

I had done my JEE and interview at IIT Bombay but decided to go to IIT Kanpur for a couple of reasons - those days IIT Kanpur was regarded as the best among all the IITs and my brother, Shirish, who had joined three years earlier had regaled me with stories of his adventures and activities. It seemed such an interesting and exciting place that I too wanted to go there.
In July of 1976, my parents put me on the train from Bombay and after a long journey with a train change at Jhansi, a rickshaw to Bada Chauraha, and then a tempo ride to campus, I was dropped off at the Girls Hostel.

The Girls Hostel (GH) was very new at the time and had not even been fully built out. It was small with only 40 odd rooms but it was a very beautifully architected building. It had open staircases and lawns and there were no rooms adjacent to each other. We had badminton courts, a table tennis room and a common room with a TV connected to the Campus Television Center. The mess hall was in the middle where we ate all our meals. However, it was the furthest from the academic areas and we had to bike back and forth several times a day for classes and labs coming back for meals in between.

It was only when I got to campus, I learned that we were a batch of 6 girls, which was considered a very large number since the previous batches had 3, 2 and there was one batch with no girls at all. We were from all over the country - Rema Padman had traveled all the way from Cochin for over 2 days to get to Kanpur.

![Anjali Joshi, Vineeta Gupta and Ratna Gupta from the B. Tech batch of 1976-81. Picture: Shirish Joshi](image)

The girls at the Institute were extraordinary and each one had chosen to come to Kanpur for higher studies in science and engineering, in many cases, overcoming family objections. Everyone was talented, adventurous and ambitious. Because there were so few of us, we got to know each other well and had a great sense of community. Many of us are still in touch and remember our days together fondly.

The experience at IIT Kanpur was a big change for me on many levels: From being in a small girls' school to being in a college where there were very few girls, from being at the top of my class to being in the company of people who were all very smart, from living at home to being in a hostel with practically no communication with my parents. It was a bit intimidating at first but later, when I got my footing, it became very enjoyable.
IIT Kanpur was also a progressive campus, unlike the other IITs where the girls' hostels had all kinds of rules about visitors and curfews for the residents. We were free to go anywhere at any time and had the same resources as the boys. One time, a warden proposed some rules but we did not agree and made our opinion clear to the director - they were never implemented and we carried on with our lives as they were.

Anjali Joshi, Anurag Goel and Ashish Rawat talking with a faculty member. Picture: Shirish Joshi

The undergraduate engineering classes were very hard, the pace of teaching was fast, and the relative grading system was quite challenging. However, our professors were some of the most enthusiastic, passionate, and inspiring teachers I have ever met. They held us to very high standards and taught us to think from first principles. My classmates were just as remarkable - intelligent, creative, and fun-loving. They came from a variety of backgrounds and had many interests and talents. I learned a lot from both the professors and the other students.

At Kanpur I also got the opportunity to participate in several extracurricular activities - I operated the camera at the Television Centre where we created programs for the campus community, I took part in several drama productions, played badminton for the IIT Kanpur women’s team, and was a member of the film and music clubs. Those days many famous speakers and musicians would visit the campus and being on the front lines with them was an unforgettable experience.

We also had to do our duties as Girls’ hostel representatives at the various campus organizations - I served on the Student Senate and participated in the march when we had a strike. Even though I had no interest in food, and no knowledge of the various ingredients, I was on the mess committee at the Girls hostel and had to decide between all the bad options that were presented. The one I enjoyed most was the film society since we got to decide which movies would be shown in L7.
A march in Sept 1978 to protest the appointment of the Dean of Academic Affairs without student consultation. Leading the procession are (L to R): Sanjeev Bhargava, Suresh Lodha, Vijay Saraswat, Piyush Gupta, and Anjali Joshi. Picture: Shirish Joshi.

Of course, there were challenges: The climate in Kanpur was hot and sometimes we did not have electricity or water. The campus was far from the city and we rarely went there other than to take the train home. The courses were hard and relative grading made it very competitive. Our male classmates were uncomfortable working with us initially so finding project and study partners was difficult. However as we made friends and our classmates became familiar with us, and we got comfortable with life on campus, all of these issues became much easier.

Since there was not much to do on the campus, the boys sometimes would get up to tricks and play pranks on us. Most of us at one time or another were subjected to some mostly harmless antics. When visiting classmates in their halls, we would find our bikes with the air let out of the tires. Some mornings we would wake up to find our room doors bolted from the outside. We would also get invited to hall days and special dinners at the boys’ hostels and for most part the environment was friendly and amicable.

My years on campus were some of the best ever and the friendships I made and the memories of those days will stay with me forever.

**Impact of IIT education on my career**

One of the distinguishing features of the education at IIT Kanpur was the emphasis on hands-on work. Labs were an essential part of most classes and being able to see science and engineering principles working in real life was very exciting. In addition to the physics and chemistry labs, we also had a series of engineering science classes where we were taught everything from engineering drawing to working on lathes and milling machines, to programming microprocessors.
I enjoyed those classes and developed a love for designing and building products. As such, going to work in industry was a natural step for me after getting my degree. As my career progressed and I wanted to do bigger projects, I recognized the importance of working with teams and this led to my move to engineering management and leadership.

Technology has moved at an incredible pace over the last several decades. When I graduated I could not even have imagined the projects I have worked on over my career. One of the most important skills studying at IIT Kanpur gave me was an attitude of curiosity and the ability to continually learn new skills and technologies. This enabled me to work in many technical areas from semiconductors to consumer internet services and functional areas from engineering to product management and business.

**Giving back: the Women in Science and Engineering (WISE) Fellowship at IITK**

Opportunities for women and their participation in technology and academic careers has increased significantly over the last several decades but the numbers are still not at the level that they could be. It is important for institutions to create additional incentives, build a supportive environment and offer opportunities to women to encourage them to work on research areas of their interest.

In 2021 I helped to set up the WISE Fellowship Program at the Institute. The fellowship is a grant that is awarded to new women faculty. These early career fellowships will enable them to focus on scholarly work which will help them advance their careers. Women faculty will bring diverse perspectives to the academic community and they will serve as role models for the women students who want to pursue academic careers. I hope that these grants will motivate more women faculty to join IIT Kanpur and that other alumni will donate to the program and add more fellowships in the areas they want to help advance.
A New Initiative at IIT Kanpur - APPROACH: Appreciation and Promotion of Arts and Cultural Heritage

Sameer Khandekar
Sir M Visvesvaraya Chair Professor, Mechanical Engineering, IIT Kanpur

Our times

Two hours to get ready, then six hours of school, four hours of coaching classes, two hours of homework, eight hours of sleep, some television, some social media, chatting, gaming... and the day is over. No time left for art, culture, sports, or for connecting to roots...

Today, getting into an IIT requires going to a coaching class for the vast majority of students. For the ones who qualify, what the child ‘achieves’ is well amplified and brazenly advertised. However, what the child has lost in the process, and at what cost he or she has become an ‘achiever’, is never discussed. We, the teachers, are daily witnessing the seamy side of the output of the coaching industry, which happens to be our input material! Society expects these students to be transformed by an IIT into ‘super-humans’ in four years...

Is something taking a toll on these young minds? Is this the future we envisage for our next generation?

Approach: Aims and Objectives

According to the recently introduced National Education Policy (as well as a lot of common sense), a holistic approach to education should aim at developing all capacities - intellectual, aesthetic, social, physical, emotional, and moral, in an integrated manner. Such education develops competent individuals with well-rounded hard and soft skills, who have an appreciation for the arts as well as hard sciences. The journey towards becoming specialists should be accompanied with simultaneous appreciation of art, culture, and our heritage.

The Approach Cell Building, near the Academic Area Gate #2
IIT Kanpur has always believed in these objectives and its curriculum has strived to achieve holistic development. Multi-faceted creativity is increasingly recognized as a crucial component of a person’s, as well as a country’s success. There is clear evidence of a relationship between creativity, science, art, academic and professional achievements. This synergy must be bolstered via systematic programs in appreciation of art and cultural heritage.

Developing and supporting creative talents must be an integral part of any academic institute to enhance the scientific temperament and outlook of students. While IIT Kanpur has always provided adequate momentum to such activities, there was no dedicated cell for the cohesive, systematic promotion of creative and performing arts and appreciation of our cultural heritage among students and the larger campus community. To bolster this vision of the National Education Policy and augment the ongoing activities, a dedicated Cell for Promotion and Appreciation of Art, Culture and Heritage (APPROACH-IITK) was recently established, under the aegis of the Office of Dean of Students Affairs. It was inaugurated in November 2022 and has now started its activities in its allocated space near Academic Area Gate #2. The first art appreciation course on Hindustani Music commenced on May 15, 2023 (www.iitk.ac.in/approach).

Proposed Activities

In comparison with other metropolitan cities, the city of Kanpur offers limited bandwidth to participate in, experience and learn about the various forms of art. Unless we develop and nurture talent and provide outlets for young minds, we cannot claim to be providing a holistic education eco-system. While many activities are currently ongoing, the APPROACH-IITK Cell will provide a single platform and umbrella towards embracing an eco-system for all round development of our campus community.

The APPROACH Cell will provide agile training and creativity development platforms for institute students, with the aim to further their skills in creative and performing art forms and a deeper understanding of our heritage. The cell will work towards creating an intellectually stimulating environment for all the stakeholders. It will work closely with the Office of DOSA, and Student and Staff Gymkhanas to achieve its objectives. It will also help and conduct joint activities with the Womens’ Association and Faculty Club. Proposed activities include musical ‘baithaks’, art and theater workshops, training sessions, lecture-demonstrations, art appreciation sessions, and inviting artists under the Artist in Residence Program of the institute. The cell will develop a schedule for resident scholars to engage them in learning art forms such as sculpture, pottery, classical music and dance, theater, painting, and photography, to name a few. It will conduct programs on art and heritage appreciation, heritage tours in and around Kanpur and adjoining areas, and conduct sessions on enhancing the cultural value-system and awareness among participants.

For any query, information, or specific donations to sustain the activities of Approach, please contact the Office of Dean of Resources and Alumni or Prof. Sameer Khandekar, Coordinator, Approach Cell at approach@iitk.ac.in.
During the inauguration of the Approach Cell, a cultural program ‘Antarang’ was organized at the Outreach Auditorium in which Chairperson, Board of Governors, Dr. K. Radhakrishnan performed in Carnatic Vocal style, accompanied by Prof. P. Venkitanarayanan on violin and Mr. Shankar Raman on Mridangam. The campus group ‘Bodhi’ led by Dr. Mohua Banerjee presented Rabindra Sangeet. Hindustani vocal recital was presented by Mrs. Amrabati Biswas and Mrs. Pradnya Khandekar, accompanied by Dr. Devanand Pathak and Mr. Harish Jha.
‘International Arrivals’ at the IIT Kanpur Airport

Professor Alve Erickson (MIT) is best known for his Velcro innovations, for developing the plastic as we use it today. He has also been an avid flyer, always ready to fly to any corner of the world.

Arriving on the campus as a part of the KIAP team in 1963, he saw the airstrip become available in 1964, and once that happened, he figured he could simply fly into Kanpur from his return visits to the US! Initially, crossing the oceans posed a bit of a challenge, so he shipped his plane to Germany and flew the rest of the way to IITK making pit stops in between, and clearing Immigration and Customs at Palam Airport (now Indira Gandhi International, Delhi).

His Cessna was the first airplane to operate on the campus, before the establishment of the Flight Lab and the arrival of the Rohini and the Piper. In Jan 1965 seven members of the Aero Dept became the first students to fly over IITK in it.

Like all KIAP faculty, Professor Erickson was tremendously attached to IITK. He was part of the ME faculty through Jan 1966, and he would return to the campus several times... in 1974, 1979 and 1991. These return visits were flights from the US in his private Cessna, now modified with extra fuel tanks, to allow ocean crossings and fewer pit stops.

This picture shows the Cessna (with its US registration) on the IITK campus in 1965. Standing beside it is the flamboyant Dave Montenegro, who provided technical support to the EE Dept., including setting up the labs and the TV Center. We were also able to locate a few other pictures of Alve from his IITK days; he is seen getting a classic Indian haircut and shave, and with Prof. Bob Archer, at a Republic Day celebration on campus.
Alve Erickson getting a haircut and shave, IITK, 1964. Picture Credit: Prof. Irving Rabinowitz

Professors Alve Erickson and Bob Archer (Case Western) at IITK, Jan1965. Picture: Dave Montenegro
Alve's most recent visit to the campus was in 2015, to meet his students, who were now convening for their 50th year reunion. He had a very interesting discussion with Prof TV Prabhakar (CSE) and a news report also appeared in TOI. More details on these to follow later.

In June this year, we caught up with Alve in the Bay Area, and had a great conversation over dinner. Alve had stories to share with IITK, some of which have never been told before.

**Arrival at Palam on New Year’s Eve**

Everyone at IITK knew about Alve’s flights to the campus, but what was not so well known was his adventure at New Delhi even before he arrived at Kanpur.

Backstory: Alve was learning to fly when he decided to go to IITK. To get a solo pilot license, you have to put in a certain number of hours under instruction. So he figured what better way than to fly to India with his instructor while getting some instruction and adding up his hours, plus completing his trip to Kanpur.

He got his plane shipped to West Germany, from where he and his instructor, John W Olcott (*also a KIAP participant, AE, Princeton*), took off. This was in December, and they had timed their arrival right before the New Year. They had heard that New Year’s parties in the US Embassy in Delhi were quite something, and it was their intention not to miss them.

All went well. Their little aircraft wasn’t a long-haul plane, so they had been stopping along the way to refuel. Before Delhi, they stopped at Lahore to refuel, updated their flight plan, and landed at New Delhi’s Palam airport (now called IGI) in the afternoon.

Their arrival was dramatic. Shortly after their plane rolled to a stop, they were surrounded by police, all carrying guns, and were ordered into a waiting van, to be taken straight to the nearest police station. Befuddled beyond belief, for they never expected this sort of welcome, Alve and John didn’t know what had hit them. Yes, they had come from Lahore. No, they were not carrying ammunition. No, John wasn’t a smuggler. No, Alve was a professor.

No matter, these guys were detained while the police got busy. And Alve and John could see their merry parties vanishing into the night. They had no idea what they had done to cause this most unusual welcome.

**Daniel Walcott, Tihar Jail and the Great Escape**

Some time earlier, some powers-that-be in Delhi had decided to have a New Year’s Party with a bang. They wanted a shooting party. Go out to Bharatpur, drink, and hunt some game-birds. They had organized the transport, the booze, and the shotguns, but ammo in India was highly regulated. So they had enlisted the services of a small private air-freight company operating in the Middle-East/India/SE Asia sector to smuggle in large quantities of shotgun shells. Unfortunately, someone spilled the beans, and the pilot was caught right at the airport, the ammo confiscated, and pilot locked up. His name was Daniel H. Walcott.
Daniel Walcott was a broad-shouldered, persuasive Texan whose profile was known to readers of Interpol circulars the world over. A suave operator, he had at least four aliases and had been charged in half a dozen countries with a variety of violations, from running an illegal transatlantic passenger airline to swindling and espionage.

Arrested on the ammo smuggling charge, Walcott languished in the Delhi jail for half a year until his bail was posted by Air-India's chairman, J. R. D. Tata. (Walcott officially had an Air-India contract to haul freight from Afghanistan to Indian rail centers, which he had been using as a cover for his smuggling operations). Upon release from Tihar, he dutifully returned a few months later for the trial. He was found guilty, fined, but the prison sentence was commuted to the time he had already spent in jail. Walcott was free but not his Piper, which had been seized for unsettled debts. No one, however, seemed to mind that he continued to care for the plane, pouring a few litres of fuel into its tanks each day, in order to run up the engines for a few minutes.

He ran them up, all right, especially on that day, weeks later, when he finally had enough fuel on board for an escape. Five airport guards tried to stop him by hanging on to the tail. He blew them off with a blast of prop wash and headed for Pakistan, but not before circling over Tihar Jail to drop cigarettes and cookies to his former fellow inmates. Flying low, he eluded the Indian Air Force jets that were scrambled to bring him back. (Time, The Good Bad Man, February 11, 1966)

The legend of Daniel Walcott. Credits: This Picture is an internet download, and is a collage of several pictures from different websites.
Just Alve’s Luck

By a coincidence beyond imagination, Alve’s instructor’s name was John W Olcott. (And when handwritten, W Olcott looked and sounded suspiciously like Walcott).

When Alve and John’s flight plan was received, the airport police couldn’t believe their eyes. They had just seen Walcott escape with an impounded plane, and here was another Walcott, that too, coming from Pakistan, that too, in a small private plane, once again on New Year’s Eve. Did they think Delhi Police were stupid? Thus, the heavily armed welcoming party, taking them into custody, and a flurry of phone calls to the US Embassy where the revelers were too busy to deal with the problem until the next day.

So it was well into the next morning when the matter was finally sorted out, and our two IITK adventurers were released.

Almost sixty years later, Alve Erickson regaled us with his story with a twinkle in his eye, while we were rolling with laughter.

Following the dinner with Alve, we caught up with John Olcott in New Jersey. A flight research specialist, John Olcott (Princeton University) was associated with the Department of Aeronautical Engineering at IITK from Nov 64 – May 65, and again from Oct 66 – Jan 68. John is well known in the flying world: he headed the flying magazine AvBuyer, served on many organizations, and was Chairman, ACJ Business Aviation Advisory Board North America. He too has memorable recollections of ‘that Walcott’ incident.

Shirish Joshi with Alve Erickson, San Francisco Bay Area, June 2023

Credits: Text written by Shirish Joshi (BT, ChE, 1973-78) and Aseem Shukla (BT, ChE, 1978-83). The KIAP era pictures are from the collection of the late Prof. Gio Wiederhold

Some interesting links:
Times of India: US Professor Recalls First ‘Flying’ Visit
Prof Erickson’s Interview at IITK, 2015
Time: The Good Bad Man, Feb 1966
India Times: 50 Years Ago, A Man Flew Over Tihar Jail And Dropped Cigarettes And Cookies!
LA Times: The Real Daniel Walcott, March 2001
Rainy Days on Campus

Festival ‘80: Power outages and four days of pouring rain left behind a blacked-out campus with a collapsed pandal. The Festival carried on... in Lecture Halls powered by diesel generators, in dining halls lit with Petromax lanterns, and with the professional programmes moved to the airstrip hangar. Credits: Sukanta Kundu (1980-85) and Aseem Shukla (1978-83), Festival Souvenir, 1983.

The monsoons, anda parathas and endsem exams: at IITK, all are inevitable. What makes the difference is who you are with, what’s happening, and of course, your attitude.

Had it been the archetypical 1970’s Hindi movie, the answer would be obvious – dancing in the rain, wet romantic songs, the catchy call of a koel, followed by hot tea and pakoras in the canteen. Other than minor iterations - the choice of the song or the style of dance, that largely sums up that scene.

The Kanpur story has some differences. The rains aren’t gentle patterings on your windowpane... they are big, fat, warm raindrops, exploding like mini-bombs as they hit the pavement. Drops that transform the hot dusty air into waves of pure, dust-free delight. Running in rapid rivulets from the tin roofs of the fruit vendors, gurgling down waterspouts from tall buildings and washing off their grime, erasing memories of the hot, sticky summer days.
Rain at IITK comes in two or three flavors. The first one, where one is doing the dance-in-the-rain thing (mentally, perhaps). All is well with the world, homework has been submitted, classes and quizzes are going nicely, and one can sit back and dream of good things.

Then there is the small matter of going to the classes, labs and tutorials. That was never an issue during the days of ‘attendance not compulsory’, but now, it’s not so easy. And with monsoon rain, off you go, squelching your rubber slippers through the puddles, hoping against hope that there is a power failure, or that the prof’s mother-in-law has suddenly arrived, and other such pleasant thoughts of deliverance.

Unlikely to happen, but still. You can’t stop hoping, right?

Then there are the unexpected outcomes, sometimes unpleasant. Months of preparations for four days of Festival bliss are drained out as the flimsy pandal collapses, only for new memories to take hold at the airstrip hangar and then last a lifetime.

Still, there is rain. And it is a good thing. And it sets the right mood. Walk around the campus and look at the glorious gifts we enjoy. A protected island of green, freedom to roam as you wish, free to get drenched - so evocative of that poem: Where the mind is without fear...

Whether you sit secure in your room, or walk down the hallways to enjoy a multi-hued sunset streaking its rays through the dark clouds, or stroll to the football ground that is now a lake. Or return from your lab late at night past the beautifully architected lecture halls, the rain competing with the fountains at the PKK Library, or stop for a moment at Park 67 to sit on a damp bench and contemplate deeper things.

Soak it in and commit it to your memory, in vivid, indelible transience.

*Contributed by Shirish Joshi (BT, ChE, 1973-78)*

*The LHC on a Rainy Day. Picture: Jasjot Singh (BT, CSE, 2020-24)*
The New Core Labs. Picture: Jiya Yadav (BT, EE, 2019-23)

A walk to the flooded Football Ground. Picture: Harishwar Raman (Research Scholar, ChE)
Fountains compete with the raindrops at the PKK Library. Picture: Adarsh Singh (Research Scholar, CE)

Reflections, L-20. Picture: Archit Gupta (MT, CSE, 2021-23)
A Bench to Contemplate On, Park 67. Picture: Sunny Saumya (Research Scholar, AE)

A Rainy Night on the Main Drive. Picture: Shakti Chaturvedi (Research Scholar, IME)
The View from a Window, Hall-12. Picture: Yash Srivastava (BT/MT, AE, 2018-23)

Rushing to catch the hues, Hall-13 after the rain. Picture: Archit Gupta (MT, CSE, 2021-23)
On duty at Kargil Heights, the main crossroads of IITK, at the old ShopC – SAC intersection. Picture Credit: Krishnendu Paul (Research Scholar, Earth Sciences), clicked July 2022.

The pictures for this photo feature were shared by members of the Facebook group ‘This Bit of That IITK’. We welcome new members to the group: Students, Alumni, Faculty, Technical Staff, and all others with valid IITK connections, and do ask that you respond to the three screening questions, so that we can validate your membership.

Cover Pictures:
Rajasthani / Gujarati bedspreads were a part of life at GH, draping most beds in the Hostel. They form the cover theme for this set of Spark issues.

Front: The road near the swimming pool with the Amaltas in full bloom. Picture shared by Ishan Singh (BT, ChE, 2020-24).
Cover Design by Utkarsh Gupta, Outreach Cell, IITK