



Indian Institute of Science Education and Research Tirupati  
भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान तिरुपति



# DHWANI 2019





Such is the power of thought that it yearns to be expressed – even through the most rudimentary languages.

On the cover of this magazine is an interpretation of the Warli painting style, an early art form created by the Warli tribe of Maharashtra. The technique involves using simple shapes to picture activities of daily life, including farming, hunting, and dancing. The Warlis spoke an unwritten language, and so this art style was the only way to convey their beliefs to the generations ahead. Unfazed by its simplicity, these paintings carry a plethora of thoughts and memories shared by the community. Look closer and you will notice that their thoughts are not very different from those of the IISER community – they don't just want to survive; they want to live. They feel the need to be rational, but also want to embrace the irrational. They don't want to be silenced. They want the freedom to feel. They want to bare their soul, be vulnerable and have their efforts appreciated. They want to express their opinions and let





# Editor's Note

their voice be loud enough so as to hear it over any noise. Warli art is their platform, and Dhwani is ours. And so, the fourth edition of this magazine brings to you – on every page – a bared soul and an unafraid voice.

Our undying gratitude lies with the Director, Dean, and our faculty coordinators, whose support, encouragement and critiques have been vital to our voyage through the world of magazine-making. We would also like to express our deepest appreciation to everyone that has contributed to the magazine – without you, this edition would remain but a whisper.

Finally, cheers to the team that has spent countless nights collecting articles, debating, editing, making and remaking every inch of this magazine to create this assemblage of ideas and thoughts that wouldn't dare remain unheard.

And thus, Dhwani 2019 – a roar.





# Director's note



I am delighted to know about the launch of the 4th edition of “Dhwani” – the magazine of the students of IISER Tirupati. This magazine showcases the writing talents of our students, entirely created and managed by them. Dhwani represents the cultural and creative diversity of students, expressed through writings and art form and embodies expression of their talents beyond the boundaries of classroom. Words and pictures when imaginatively put together, are the best form for expression of thought, and convey rich sense beyond the literal and visual meaning. I eagerly look forward to seeing this edition of Dhwani, exploring the timeless imagination of our students.

-KN Ganesh



# Dean's note



DHWANI resonates with the vibrations on the campus of IISER Tirupati. These vibrations are varied - from literary, artistic, and athletic, to scientific - and hence are of differing wavelengths. The mix of all these vibrations are sprayed across the pages of DHWANI, making them audible and visible to the world around.

The variety of such activities of students on campus makes their life colorful, and consolidating them into a single annual kindles the creativity of their minds, sharpens their intellects and shapes their outlooks.

I congratulate the entire team behind this yearly edition of IISER Tirupati and appreciate the creative talents of all the contributors to this year's DHWANI.

Best Wishes to DHWANI 2019!

-G. Ambika





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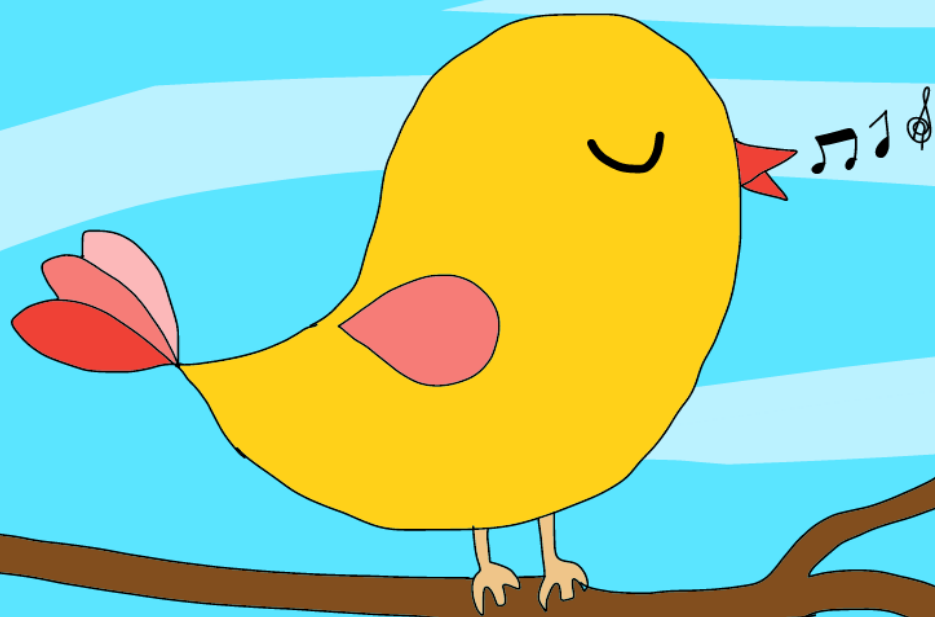


# “The Train Journey

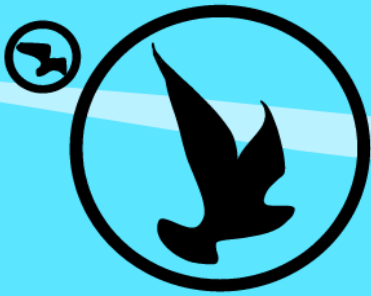
- Debashish | Windows 10 Device



# BIRDING CLUB







Birding and Trekking club is probably one of the largest clubs on campus and definitely one of the most active. Every weekend, many members go around the campus to spot and identify birds. Once in a while, we also go to some other birding hotspots in and around Tirupati. We have participated in many global birding events, such as the Great Backyard Bird Count.

In February 2018, we spotted more than 120 species of birds, and IISER Tirupati was ranked 4th amongst Indian campuses by number of species spotted. We have also organized full day trips to Pulicat lake during the last two years. We also have a collection of good photographs of various organisms in and around IISER.





IISER Tirupati is like our little world where the students, Faculty and everyone else are part of our Family. It's like our home

Along with studies, we must also have opportunities to celebrate and also to display our artistic sides. For this we have our...

# ARTS CLUB

The Arts club Functions as an open club, where students can contact the coordinators with their ideas

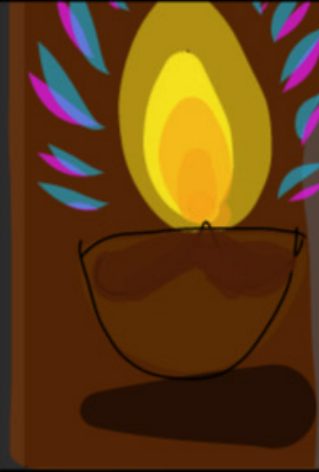


...and the club will help them to conduct the events. The arts club has held many events like...



**Diwali**

"The Festival of Lights"



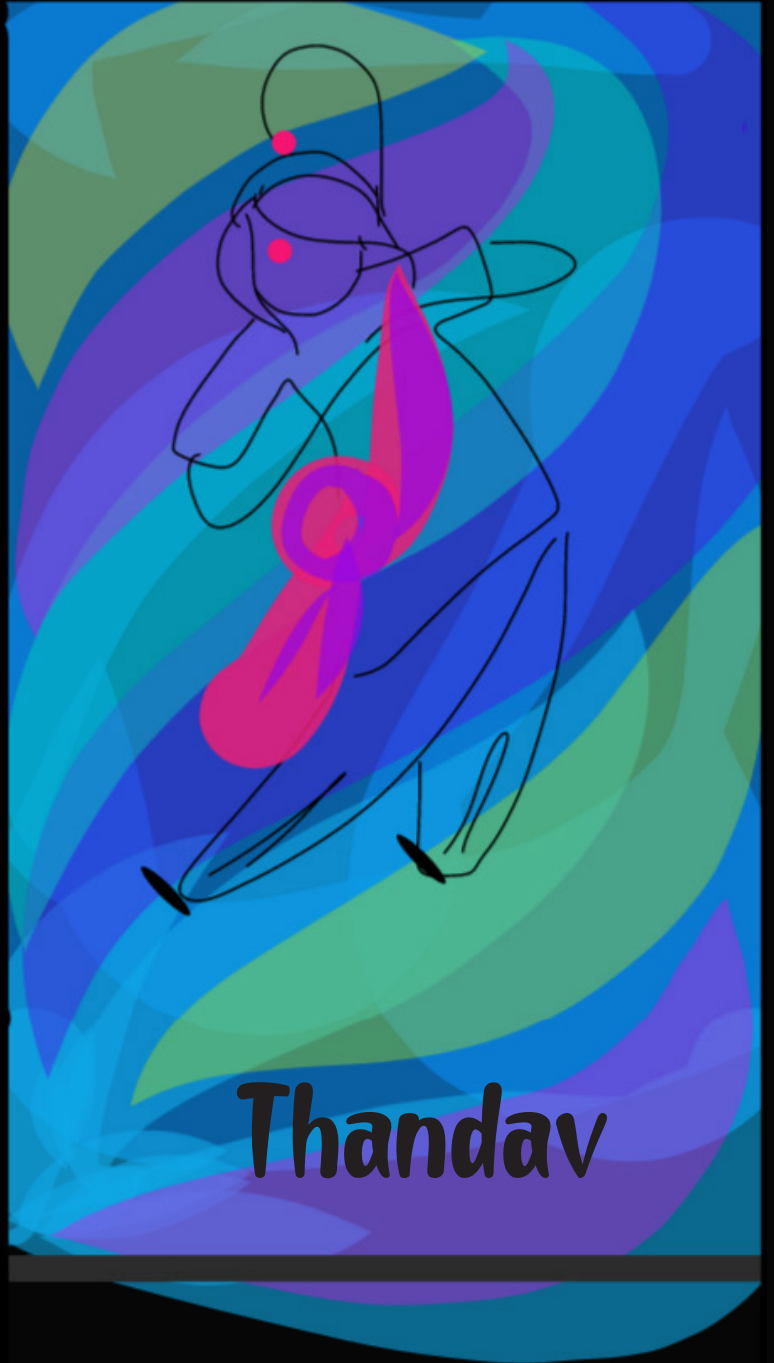
**ONAM**



**Halloween**



**Ethnic Day**



**Thandav**

Competitions such as Than  
dav are also conducted by the  
club to provide a competitive  
yet encouraging platform to  
showcase student's talents  
and we hope to hold even more  
exciting events in the future





# Chess

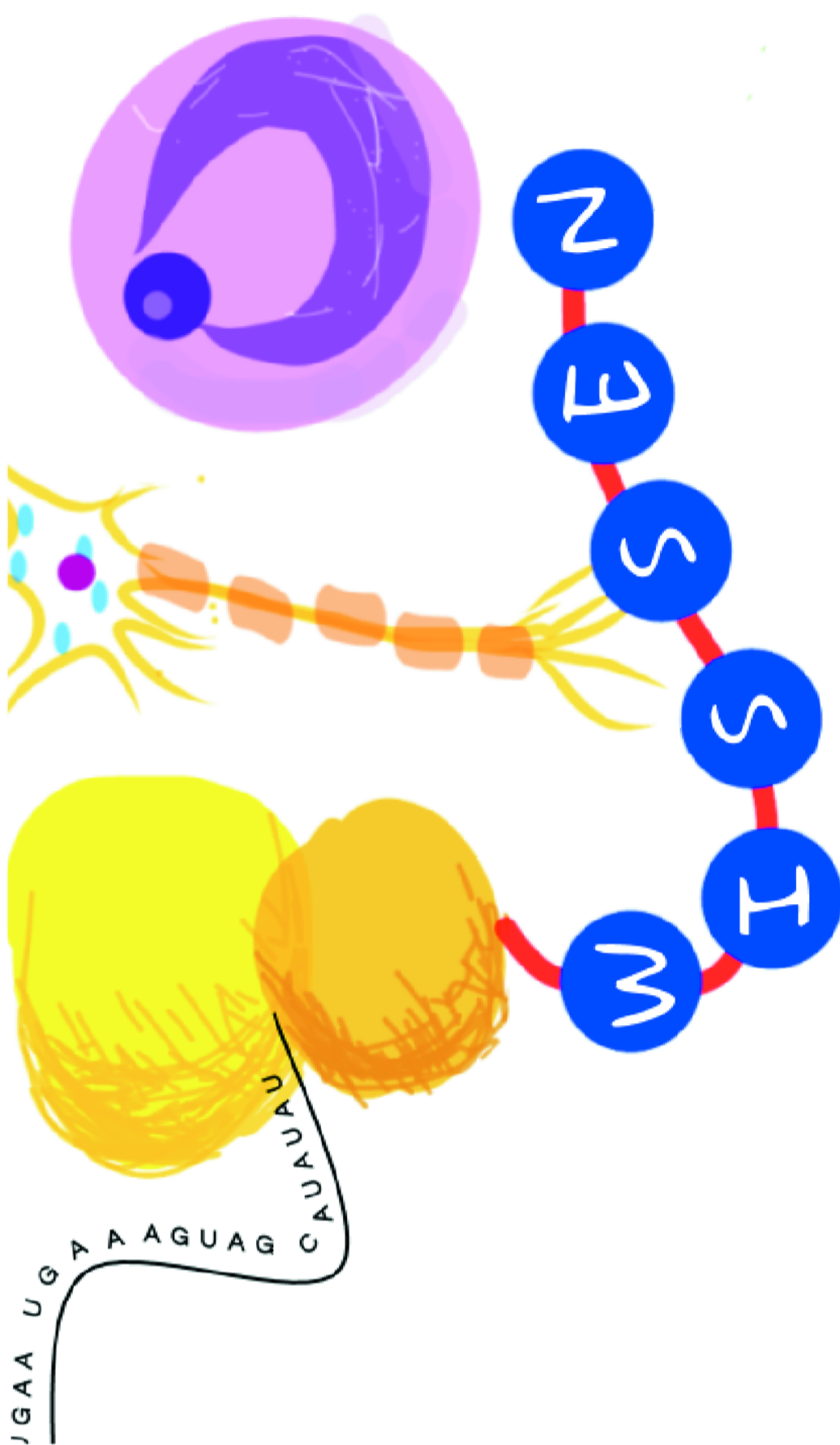




# Club

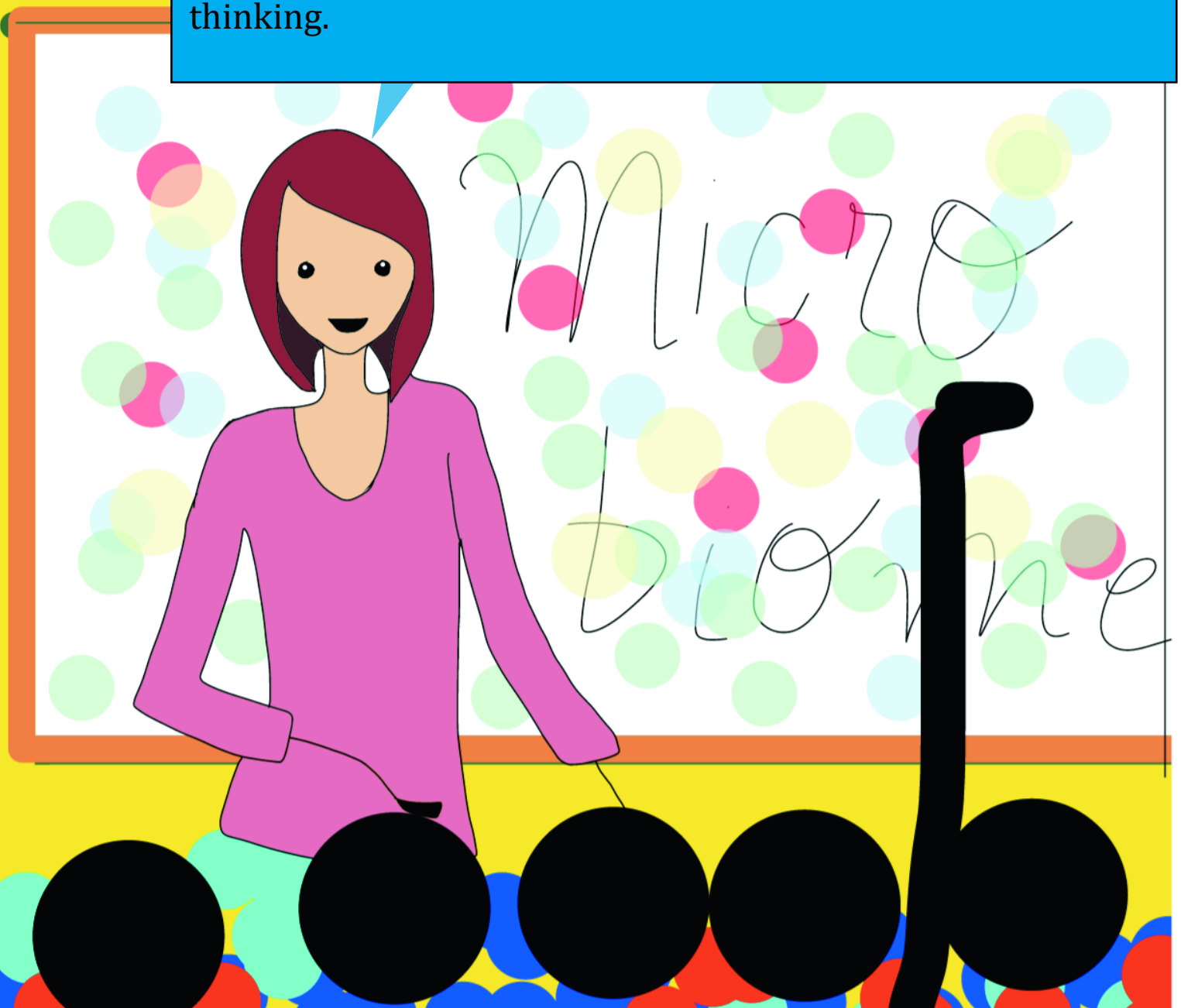
Chess is a sport that anyone can play. It develops cognitive ability, memory, and logic, which are the building blocks of personal growth. We encourage enthusiasts and prepare a team for the Inter IISER Sports Meet (IISM) held every year. Other activities of the club include friendly matches with IIT Tirupati and a Chess League held every monsoon semester.







This is a platform for bio enthusiasts- we meet twice a week for discussions and presentations on a range of topics. From research articles to novel ideas by the students themselves. Besides improving our presentation skills, these meetings introduce the members to cutting edge research and aid in developing their abilities of critical analysis and out-of-box thinking.





**S**hemushi, the quiz club of IISER Tirupati, has been active since 2015. Every Wednesday evening, students enthusiastically participate in the weekly quizzes. The quiz topics range from mythology, food, different cultures to movies, sports, music, etc. We start each academic year with a grand Independence Day quiz highlighting its national importance. We also conduct a purely science-based quiz on 28th February for Science Day. We wish to create a positive atmosphere for everyone to “Learn, Think and Explore!”

—Ishika Ghosh

# ASTRONOMY CLUB

WE ORGANIZE SKY WATCHING SESSIONS WITH OUR 6-INCH TELESCOPE!

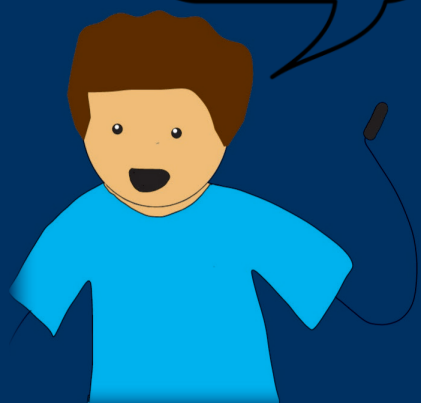


ASTRONOMICAL EVENTS SUCH AS THE LUNAR ECLIPSE, SUPERMOON AND METEOR SHOWERS HAVE BEEN OBSERVED.



TALKS ARE HELD THROUGHOUT THE SEMESTER, USUALLY ON FRIDAYS.

THE MIRROR GRINDING PROCESS WHICH WAS A PART OF THE TELESCOPE MAKING WORKSHOP HELD IN **2017** HAS BEEN CONCLUDED, COMPLETING THE FIRST STEP IN THE CONSTRUCTION OF A 6-INCH TELESCOPE.






# PHYSICS CLUB

The Physics club at IISER Tirupati meets twice a week to discuss interesting topics, lecture series, demonstrations, problems and solutions with different approaches. The club sessions are open to everyone.

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# MOVIE CLUB

Movie club of IISER Tirupati has been functioning since its first semester. We screen movies every weekend, with themes ranging from comic book movies to real-life stories. It is run by student co-ordinators with help from faculty and admin.



THIS IS A STUDENT-RUN CLUB, WHOSE PRIMARY GOAL IS TO PROMOTE INDIAN CLASSICAL ARTS AND EMPHASISE ITS IMPORTANCE IN OUR DAY-TO-DAY LIVES.

WITH THE HELP OF DR VENKATASUBRAMANIAN, DR VASUDHARANI AND SPIC MACAY...



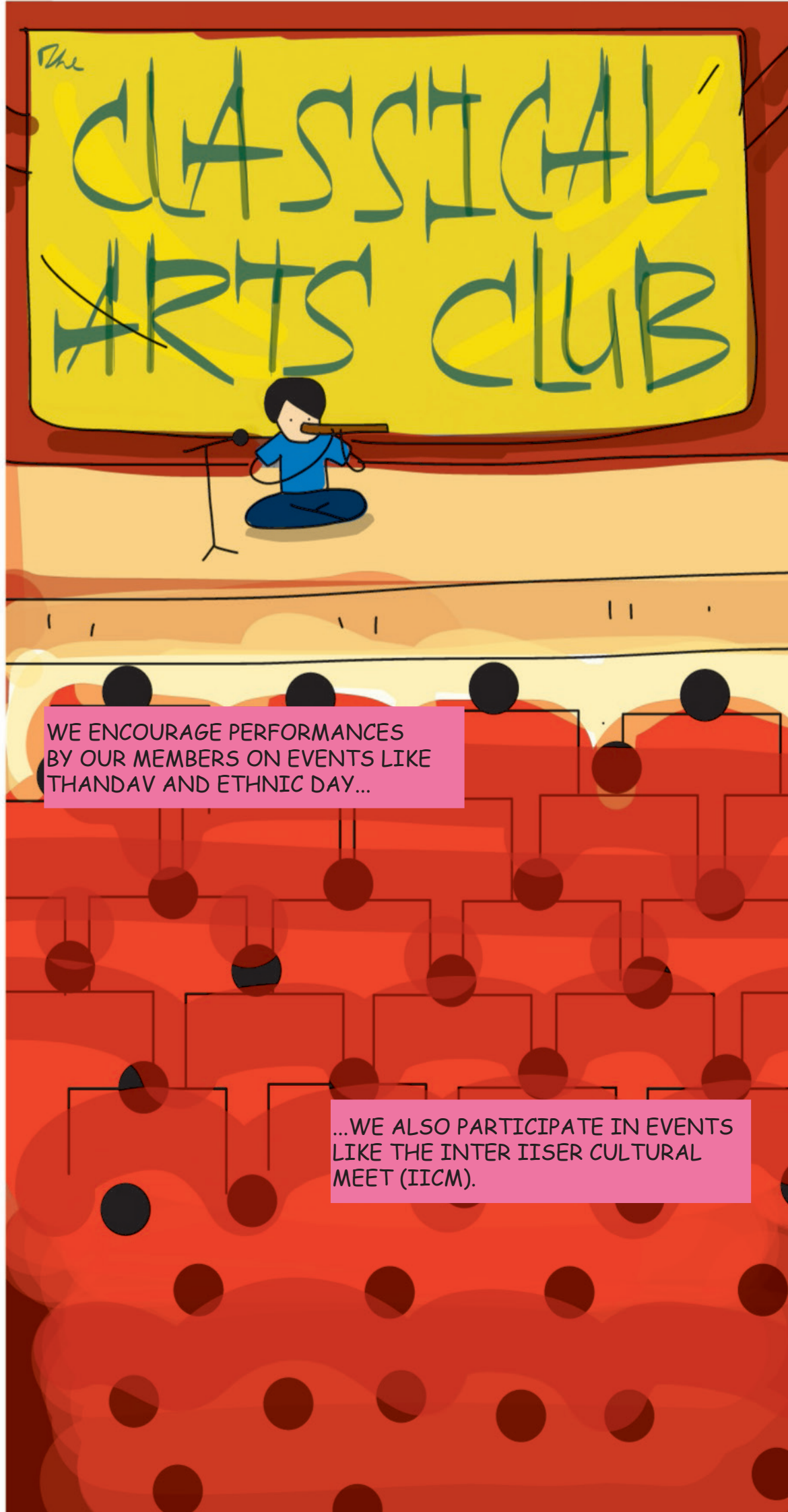


.....WE HAVE  
HOSTED EVENTS  
LIKE

SRI ARABINDA  
MONDAL ON  
SITAR  
(ACCOMPANIED  
BY SWAPNIL  
JOSHI ON  
TABLA)


A BHARATNATYAM  
PERFORMANCE  
BY MS. LAVANYA  
ANANTH

AND A  
CARNATIC CON-  
CERT CUM LEC-  
TURE DEMON-  
STRATION BY  
SRI SIKKIL  
GURUCHARAN.



WE ENCOURAGE PERFORMANCES  
BY OUR MEMBERS ON EVENTS LIKE  
THANDAV AND ETHNIC DAY...

...WE ALSO PARTICIPATE IN EVENTS  
LIKE THE INTER IISER CULTURAL  
MEET (IICM).

The background is a solid light orange color. It features several overlapping geometric shapes: a large yellow triangle on the left, a light green circle on the right, a light orange circle at the bottom left, and a light blue rectangle at the bottom right. These shapes overlap each other and the text blocks. The text is in a black, sans-serif, all-caps font.

THIS STUDENT-RUN MATH CLUB MEETS  
4 TIMES A WEEK TO INTRODUCE, LEARN  
AND UNDERSTAND VARIOUS TOPICS IN  
MATHEMATICS.

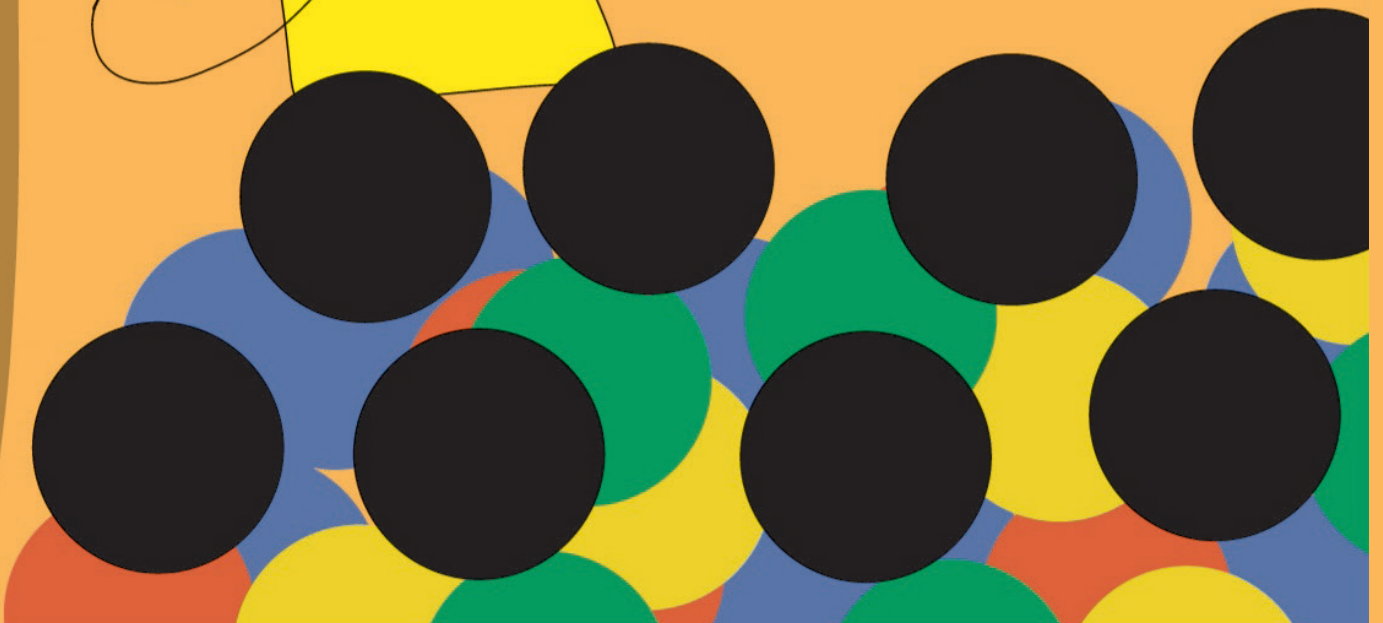
WE DISCUSS MATHEMATICAL CON-  
CEPTS THAT GENERALISE SEEMINGLY  
UNRELATED IDEAS AND AT THE SAME  
TIME, THOSE IDEAS WHICH BEAT OUR  
INTUITION WHEN APPLIED TO SPECIAL  
CASES



# MATH CLUB

$$I_3 = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$I_n = ?$$




$$\frac{\partial}{\partial x}(f(x))$$

SOME OF US SOLVE  
DIFFERENTIAL EQUATIONS



SOME STUDY  
THE STARS

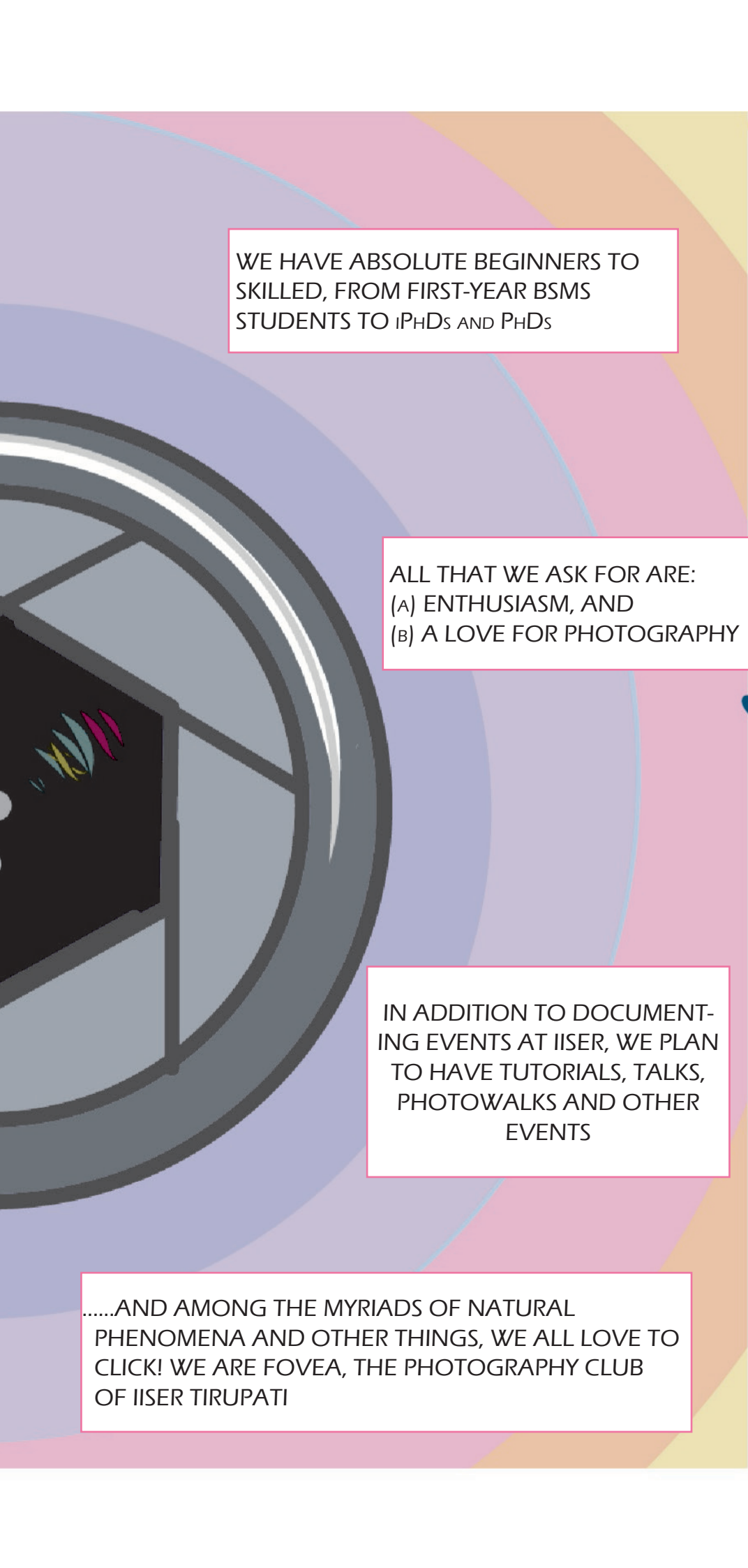


SOME STUDY BACTERIA



SOME SYNTHESISE  
NANOPARTICLES





WE HAVE ABSOLUTE BEGINNERS TO SKILLED, FROM FIRST-YEAR BSMS STUDENTS TO iPhDs AND PhDs

ALL THAT WE ASK FOR ARE:  
(A) ENTHUSIASM, AND  
(B) A LOVE FOR PHOTOGRAPHY

IN ADDITION TO DOCUMENT-  
ING EVENTS AT IISER, WE PLAN  
TO HAVE TUTORIALS, TALKS,  
PHOTOWALKS AND OTHER  
EVENTS

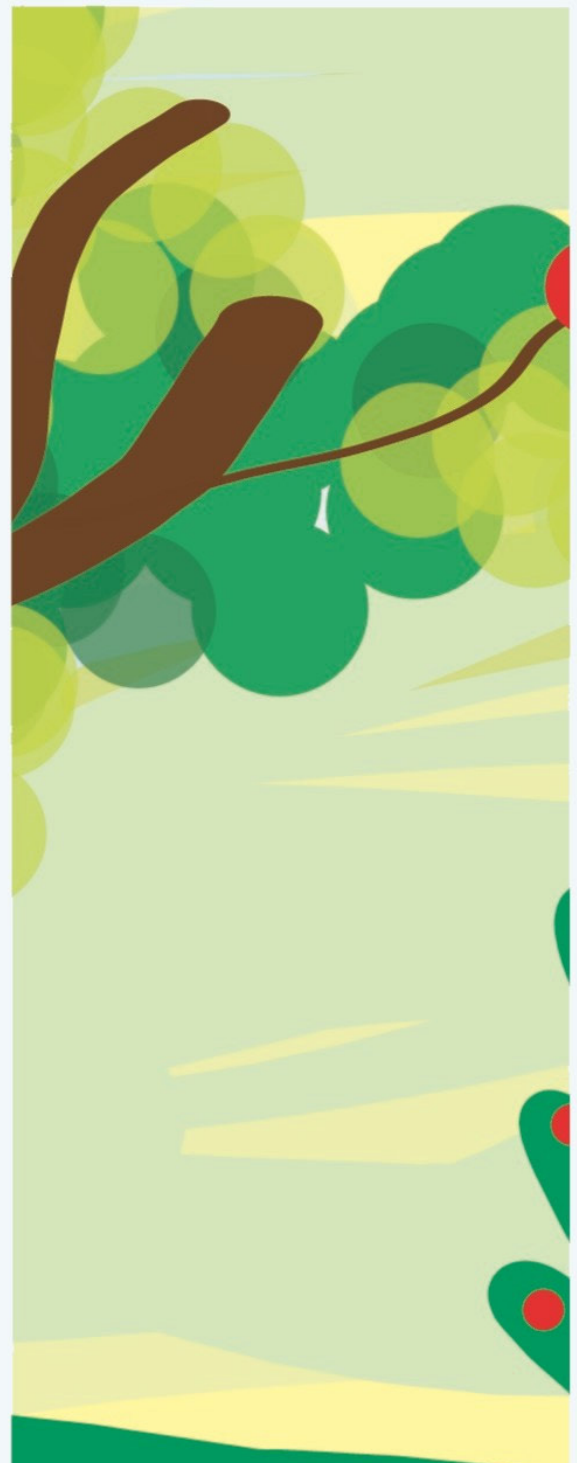
.....AND AMONG THE MYRIADS OF NATURAL  
PHENOMENA AND OTHER THINGS, WE ALL LOVE TO  
CLICK! WE ARE FOVEA, THE PHOTOGRAPHY CLUB  
OF IISER TIRUPATI

FOVEA.



The Fall of 2018 brought a semester full of experiences to our club members.


We focused on in-house activities, involving weekly sessions with students from nearby localities.



These sessions involved one-to-one interactions where each student was mentored by one club member, who was responsible for clearing their doubts on one of the topics taught in school.




# U N N A T I



This format also helped the students improve their communication skills.

The club is involved in extending as much help as possible to the students at Annawamipalli



School. As a first step towards this big responsibility we have disturbed over 160 notebooks and 300 biscuit packets.

We are pumped up with enthusiasm and positive energy to continue with these and other such activities in the coming semesters!



# **SPORTS CLUB**

**Sports has always been the integral part of life at IISER Tirupati.**

**The sports club in this regard has always been working to improve the quality of the sports that are being played.**

**The club consists of students' sports secretary and team captains along with faculty mentors.**



**Regular practice sessions, friendly matches with premier institutes like IIT, Sri Venkateswara Agricultural College etc., and Intra-IISER sports tournaments were held to bring the sense of competitiveness.**

**This training ultimately resulted in IISER Tirupati acquiring an overall 8th position in medal tally at the annual Inter-IISER sports meet within the span of three to four years.**



# Vivante 2019

Living it.

When I was asked to write a note on Vivante 2019, I had no idea where to start. All I remember was sitting on our basketball court with peers on an April evening being sad about the much-awaited fest getting cancelled at the last moment. Realizing it was upon us (batch 2016) to mend the break that has occurred we decided to form the core committee of the fest in the spring of 2018. Looking back on it today, that was the best decision our batch had taken regarding the fest. I believe we can't ever find a replacement for any of the members in the core committee to do the jobs that they have done, and also, this wouldn't have been possible without the support of the rest of the batch mates and the highly zestful juniors.

The zeal towards Vivante started to spread among the rest of the institute through the pre-Vivante events. Thandav, an inter-college dance festival conducted in association with the Arts club saw students participating in large numbers. The Arduino workshop conducted by Dr T.S Nataraj from IIT Tirupati and the DBT funded





Foldscope workshop witnessed the enthusiasm of students in and out of IISER towards science. The excitement stood at its epitome in the final weeks leading to the fest. The whole institute was preparing itself to welcome DJ Mark, and The Lost Triplets and the psychological illusionist Arjun Guru. Thanks to our photography club Fovea, we could capture every moment of this joy and cherish it.

Starting with a formal Opening ceremony addressed by the Dean of Academics, Prof. G. Ambika, the fest was held from 18th to 20th of January 2019 showcased numerous events like VivanteCon, Classical Disco, Pitch perfect, Turn Coat, and Hungry Bites that depicted the theme of 'Pop Culture and Contradiction' well. Gaming events like Chicken Dinner and Copa del Vivante satisfied the gamers around and the Showcase gave a chance for our students to showcase their hidden talents. The humongous stage that was hosted had our college bands performing on the eve of Pro-nite.

Talking about the Pro-nite, never have I witnessed such enthusiasm and vigour in our students before that very night. Standing alone in the crowd I could feel the ambience we were able to create across the institute. Yes, each and every person in the crowd was living those beautiful moments in high spirits. And all I was left with was a smile of thankfulness to all those who cooperated with full dedication to make the festival a big success.

- Aisha Shigna  
(BSMS 2016)





# Boo

I've always loved the concept of Halloween. Traditionally, it is a Gaelic/Celtic/Christian festival meant for remembering martyrs, saints and anyone dead. It is, however, celebrated in the modern world through costume parties, where people dress up as someone (or something) scary, a famous personality; basically, anyone but themselves. I think Halloween is a win-win for everyone. Anyone that feels that they need to hide a part of themselves (because the world is cruel) can showcase it on Halloween and be happy, and people who are their true selves on a daily basis can shake things up and be a completely different person. See, win-win!

With the same intentions, in October 2015, the Movie Club hosted the first Halloween bash, which was well received amongst the students. Ask anyone in the 2015 batch about the screening of the classic 1978 slasher film 'Halloween', and they'll tell you how much fun they had making impromptu costumes out of whatever they could find. They'll tell you about 'Aanakallan' and all the people in 'lungis' and the unexpected family that showed up to the screening. It was a great start to celebrating festivals that don't necessarily have an Indian origin.

Three years later, under the banner of the Arts Club, a Halloween party was celebrated, and it was epic. The celebration started with a Ramp Walk. Kudos to all the students who took the event in stride and showed up in amazing costumes! From the ghosts, Dracula and Marshmello, to Captain Jack Sparrow, Pennywise and the Nun, the range of costumes and the amount of dedication the students put into making these costumes was brilliant. Following the ramp walk was a Halloween-themed ball, which was also the first of its kind at IISER Tirupati. In the week leading to the ball, there was a lot of excitement amongst the students as they tried to find partners for the ball. The ball itself was fun. There were a few songs dedicated to dancing with partners, but like every other event related to dancing at IISER, the ball ended up being a DJ night where everyone had fun.

The night ended with hearts warm, lines long at the mess, tummies full of Fanta/Coke (this was not sponsored, I swear), and hostel beds hosting tired kids who probably dreamt about the guy/girl with whom they danced.

-Nandita Nair (BSMS - 2015)



# An event to remember

The first Inter-IISER Cultural Meet was hosted by IISER Kolkata from 21st to 23rd December 2018. The three-day cultural fiesta boasted of around 20 events including stage events like Light music, Group Dance and performances by various bands. The contingent from IISER Tirupati had 32 participants, meeting at IISER Kolkata as three different troupes coming from IISM-Bhubaneswar, Chennai and Tirupati. The metaphorical stage was set, and it was a pretty big one. The physical one was set too, and it could be compared to that of the stage of a concert. The first day of the meet had very few events, which happened only in the evening. One of the first events was Dvaita, where a team of two from each institute would give out a musical performance. The two teams from our institute were placed first and third. Simultaneously, the Group Dance event, the first stage event of the meet, was being held. Participants from our institute performed well in both events. Immediately after the end of Dvaita, the judges and all the participants came together for a jamming session based on a Bob Marley song. This brought a mildly eventful day one to an end.

The second day dawned. Kolkata was proving worthy of its climate record. The cold winter mornings made it difficult to perform in events related to talking or singing. Our quiz participants progressed up the ladder to bag the third place. Poetry slam and Rangmanch were part of the schedule as well. The movie making competition saw multiple teams participate, and a team from our institute did so as well. The final day began with the events Footloose and JAM (Just A Minute). All of our participants were not able to reach the finals of Footloose despite being good, while both of our participants in JAM reached the finals and one of them placed second. After the end of JAM, the debate event began, where our participants placed 3rd. Sand art was being hosted too. The final event was the battle of bands, where almost all institutes performed. Just like every other stage event, the excitement levels were very high. Immediately after the end of this last event, many high-profile artists like Anupam Roy and the band Antahin performed to a roaring audience. The valedictory ceremony began soon after, and our team bagged first place in a photography competition where our participants had to send their pictures and a paragraph related to it online. The fiesta ended with a DJ night.

The events of IICM 2018 had been thoroughly exciting and the climate of Kolkata was new to many, and offered a wonderful experience. I'm sure we're all eager to go for its second edition next year.

- Anirudh R  
(BSMS 2018)





# “ Horizon

- Mayur Bajaj | Moto G3









A series of vertical black lines of varying heights and widths on the left side of the page, creating a fence-like or architectural pattern.

# The Wait

“20 years, eh?” asked a distant voice coming from behind the iron gates. “20 years ‘tis been? And tomorrows the day. So you’ll finally be out. You got someone comin’ fer you?” He said nothing. “Cheer up boy. Or d’you like this better?” the voice slowly faded away laughing. “Not to sound cheesy, but I’m gonna miss you, pal,” said another comforting voice from above his shoulders, “but do you really expect your wife, I mean, your ex-wife, to be there tomorrow? ‘Tis been 20 years after all. She barely came to see you after the divorce. And your girl? What was she, one? One and a half? I bet your wife didn’t tell her ‘bout her dad, especially after you pushed them away from yourself. The poor lady cried her eyes out the day you asked her for the divorce.” He still didn’t speak, and instead kept staring into the fading moonlight that entered the room from a high window. The other man continued, “Old age might have really gotten to me, but I sure as hell remember the time I came here. I tell you,





these girls don't last. My wife dumped me after the first week I spent in prison and kicked me out of the house when I was convicted. My children came to visit me, but I know they only come here for the money I have back home. They don't love me. Who loves a murderer? 'Killed his own uncle.' Nobody cares if the uncle had been stealing your money, or your business, or even your wife..." "But you don't worry mate. I'm pretty sure your life ain't as sorry as this old man's. 'Tis a big day tomorrow, get some rest now," the man patted on his shoulder and stepped back to his bed.

He didn't turn towards his comforter, nor did he respond to this pat. Instead, he continued to stare at the moon-lit wall until he finally dozed off, like every other day in the last twenty years. The following afternoon arrived. He was all prepared to leave. He wore his old clothes which he wore to the prison twenty years ago, collected the money he had earned there, and finally stepped out of the little iron gate. It was a midsummer afternoon. The heat rays of the sun almost burned his eyes when he looked up at the sky. Freedom never felt sweeter. The smell of fresh air filled his lungs. He

didn't realise that he had taken off his shoes and was walking barefoot on the soft green grass. He closed his eyes and let the feeling seep into him. This happiness was suddenly broken by the awful realisation of the truth. He turned around to check again. His fear had come true, no one from his family had turned up to receive him. But how would they know? He never had many visitors. Nobody from his family knew he was being released today. He didn't even let his wife contact him in prison. How could she have come anyway?

He shrugged the feeling off. He had to go meet his family. He had to tell them that he was finally free. Oh, how happy his wife would be! She would forgive him. His daughter, she must have grown by now. She'll meet her father after a long time. Oh, how wonderful they'd feel to have him back! How happy he felt to even think about it! He had to meet them! Without waiting for another second, he hurried to the train station. The next train was in 15 minutes. He took a ticket and stood at the platform, waiting for the train. He could feel butterflies in his stomach, or so he thought. Soon he realised that they weren't butterflies, but his hungry stomach rumbling. He went to a nearby stall and bought a sandwich and a bottle of water, and boarded the train. It was a two-hour ride to the city, but it seemed like decades. The twenty years of waiting seemed so much smaller than this two-hour train ride. His life flashed in front of his eyes. He had so much to tell his wife, his childhood love. He already had a speech prepared. He had to explain to her why he had pushed her away. She would definitely take him back. She loved him as much as he did.

He would do anything to win her trust again.

They had been in love for almost seven years when he finally gathered the courage to ask her to marry him. They had ten beautiful years of being married to each other. His life was wonderful. He had a loving wife who had just given birth to a beautiful baby girl. Everything was perfect before that dreadful day came. Even then, his wife believed in him. She knew he was innocent, and she did everything to save him. But he couldn't let her struggle so much. He knew she was suffering a lot during his trials, and so was his little daughter. No matter how much his wife tried to hide it, he could see right through her faded smile. He tried to stop her from working so hard to save him, but she wouldn't listen. She loved him so much. But so did he. He had to break her heart. He had to do this, for her, for his daughter. They had to be set free from this tormenting pain they suffered every day. He could still remember her teary eyes when he asked for the divorce. But he had to do it.

There was no other way.

And his baby girl? Not a baby anymore. She would be overwhelmed to meet her father. He had to ask her for forgiveness too. He doesn't remember her face that well, but she had her mother's smile. The most beautiful smile on earth. He had to tell them he loved them and missed them every day. He would spend the whole evening telling them everything he had in mind for the last twenty years. He would explain everything to them.

There was so much to do, but the destination didn't seem to arrive any sooner. As soon as the train reached the station, he dashed out of the train, pushing everyone on the platform, and hurried outside. It read 4:00 pm in the clock at the railway station. The whole city seemed to have changed.

It was nothing like he remembered. Twenty years sure was a long time. But he had no patience to explore the changing environment. He scurried down the streets, vaguely remembering the twists and turns leading to his wife's house when suddenly a gazing man slowed his pace. He was a man in his mid-40s or 50s, unwashed, with unkempt hair, and was very ugly. He was probably an old beggar; he didn't fit into his polished surroundings at all. But why was an old beggar staring at him? Did he know the man? It seemed like he did. Should he go talk to him?

He had just moved a step or two towards the beggar when he realised he was no beggar at all, nor was he someone he knew. No, it was his reflection on the glass door of a shop. Is that how he looked now? He could not go to his family looking like this. What would his daughter think of him? He had to tidy himself up. He hurried to a nearby shop, got himself new clothes, and also fixed his hair and beard. He started to look like someone who belonged to the city and to this time. As soon as he was satisfied with his appearance, he used the remaining money to buy his wife and daughter some flowers and chocolates. He was finally ready to meet them. His heart was racing when he left the florist's. He could hear his heart pounding inside his body when he took the final turn to his wife's house. He took a moment to take a deep breath and then entered the gate. It was almost dusk. He gathered all his emotions, lifted his arm and rang the doorbell. He could now literally hear his heart beat like a hammer in his head. The moment was finally here. He tried to concentrate his thoughts.

Finally, the doorknob clicked, and someone



opened the door. She was a beautiful young girl, around 20-22 years of age. He recognised his daughter. How beautifully she had grown. He was just about to talk to her when the young lady turned back and yelled, "Dad, there is someone at the door for you. I think it's someone from your work..." the voice faded away as the girl left to get her dad.

The world fell silent for a moment. He had been building this scene in his mind for the last twenty years, thinking and re-thinking every situation. He knew what he would reply to his wife's grievances against him, he knew exactly how he would respond to his daughter's complaints, but not for once did he imagine that something like this could happen. He had been waiting desperately to hear the word 'dad' from her daughter's mouth, but he never thought it would be for someone else. His pounding heart had seemed to stop; it fell dead silent inside. He couldn't stay there anymore. He left the flowers, walked away from the doorstep and walked out of the gate.

All the thoughts in his head seemed to have ceased. His whole world slipped right out of his hands. The glimmering lights of the city almost blinded him. He didn't care when the old lady cursed at him for pushing her on the street. He didn't bother when the teenage boy almost crashed his bike into him. He didn't notice his rumbling stomach. He kept on walking silently, as far as his old feet could take him. He passed the florists' shop, and he left the place where he bought the chocolates. He didn't remember where he dropped them. He walked and walked, till he reached his old apartment. It looked as broken and torn down as he was. He opened the door and entered. It was empty and dark inside.

It seemed like no one had entered the apartment since he left. There was an unusual creaking in the ceiling. The couch seemed to have been emptied by rats. The door hinges squeaked with the slightest breeze. He entered his dusty room. The only source of light in the room was the moonlight from the broken window beside the bed. With everything that seemed to have changed in the last twenty years, only his bed seemed to remain the same. He took his shoes off at the corner of the bed. He dusted the sheet a little and lay down on it facing the broken window. He didn't scream, nor did he cry, nor did he say anything. Instead, he continued to stare at the fading moonlight on the bedroom floor till he fell asleep – just like every other day in the last twenty years.

# An Indian Intern in America: Solo Adventure.

"FINally!" I exclaimed as I exited Chicago O'Hare International Airport. All my efforts, starting with the application for the Khorana fellowship, finding a host University, and completing all the overwhelming visa procedures paid off as I set foot in the land of opportunities. Orientation program for Khorana-Bose scholars, 2018, was arranged at the University of Chicago. Spending a weekend in the windy city just before the start of an internship was an amazing way to lay the foundation stone to a fantastic summer adventure. After the orientation, I boarded my flight to Washington, D.C. University of Maryland, College Park is located 8.3 miles away from Washington, D.C. The residents of College Park are mainly University staff and

students. I had sublet an apartment close to the University, from where shuttle bus services are available to my lab building. I was a confused Desi in the first week and struggled to manage everything on my own. From grocery shopping to cooking and financial management, I learned from each experience.

My host professor Dr Yiping Qi warmly welcomed me to the campus. There is a vast diversity of people at the University. Trustworthy and friendly interactions with the people around me made my stay feel comfortable and safe. My task was to construct CRISPR/Cas9 T-DNA vectors for improving CRISPR

Cas9 toolbox in plants. I dealt with around 100 samples every day which eventually became fun and easy with the help of my fellow labmates. The pleasing scenery on my way to the lab in the morning was truly refreshing. University covers 1250 acres, with admirable red-brick Georgian buildings decorated with white columns, a large central lawn, and McKeldin Mall- the largest academic mall in the United States. Chapel Hill and the surrounding meadows, M-square, and the Stamp building courtyard were my favourite spots to hang around in the evenings.

D.C, the nation's capital is the place where I spent most of my weekends. Visiting all the monuments- the Capitol building, the White House, Lincoln memorial, museums (especially the Smithsonian museum), National Zoological Park, and the botanical garden- would take more than one day.



University of Maryland Campus View



US Capitol building





Washington Monument, DC

Walking along the National Harbour and gazing upon the giant Capital Wheel was a different feeling. I was also grateful to be at D.C. for the 4th of July celebrations, where I witnessed a two-hour long parade marking peace, pride and cultural richness of the States, tasted a variety of food from around the world and waited at the National Mall for the midnight fireworks that crowned the Washington monument.

Baltimore is a major city of Maryland. My co-scholars were interning at John Hopkins School of Medicine, with whom I explored Baltimore city. It is a splendid city with excellent cityscape and many tourist spots like the Inner Harbour and National Aquarium. My stay in the U.S. was not satisfying

until I visited New York City. Two of my friends and I travelled to the city and stayed there over the weekend. We booked an apartment in Washington Ave. (upper Manhattan) via Airbnb. On the first day at NYC, we sailed to Liberty Island and Ellis Island to visit the Statue of Liberty and Immigration Museum. In the afternoon, we walked along Wall Street (the symbol of US financial market), visited the One World Trade Centre, Oculus: WTC Transportation hub and spent a glittering evening at Brooklyn bridge appreciating the cityscape. Next day we started with a visit to Madame Tussauds, took a bus tour to Times Square, Hell's Kitchen, Chinatown and Little Italy. The third day we roamed around Central Park and visited the Metropolitan Museum

of Art and the National Museum of Natural History. New York is a populous city with a lot of places to explore and amazing things to do if you have enough money to enjoy the stay.

Trekking to Great Falls Park was another adventurous trip. It is located along the border of Virginia and Maryland. I went with my friends to the Virginia side of the park. Climbing the huge rocks, walking along the cliff, having lunch at potholes made the day fun until we got lost in the forest. We mind mapped the geography of the park with the help of a mini-map in the entry card and the direction of flow of the Potomac River. Coming to the park was easy by taxi, but for getting out, we had neither coverage nor WiFi availability.



Capital wheel at National Harbour.



Statue of Liberty .

Luckily a forest guard at the checkpoint helped us get an Uber back to where we started.

Being born and brought up in a village I never even fantasized about travelling across the sea or visiting monumental places. Enjoying the banks of Potomac River, tasting the famous Georgetown cupcakes, visiting Greenbelt National Park, NASA Goddard space flight centre, partying with University friends at Silver Spring were some of the special moments I had in the summer of 2018. Most importantly, I learned many life skills like budgeting, cooking, and planning and organising trips. I tried to utilise the limited time I had to explore America and experience their culture and lifestyle as much as I could within the constraints of time and money. These American memories are close to my heart and will stay there forever.



Times Square, NYC



Cityscape view from Brooklyn Bridge.

- Dibin Baby (BSMS 2015).



# “Border Roads Org. flag

- Tejas Borkar | Asus zenfone Max pro M1





# RAINBOWS OF IISER TIRUPATI

Sexuality and gender is something which is not generally discussed in Indian families. While the country is taking progressive steps like the recent decriminalization of same-sex relationships (partial reading down of IPC Section 377), the task of educating citizens about these issues has still not been properly achieved. This online space (which started out as an Instagram page and later got a Facebook counterpart) aims to sensitize the people in and around the campus about various issues regarding the LGBTQIA+ community. Not only will it help the students grappling with such issues find some support, but will also help them stand up against discrimination in all walks of life. It feels liberating to be yourself without any restraints and in this regard, the page often posts poems, stories, and anecdotes shared by queer and straight allies on campus. In the future, we hope to have regular activities like movie screenings, open-mic sessions, exploring queer literature, arranging dance and dramas to express one's true self, an IISER Tirupati Pride Walk, spreading awareness about sexual hygiene and safe sex practices, and inviting influential speakers belonging to the community to get a better perspective on many prevailing concerns. Everyone deserves to live with dignity and to be themselves. Rainbows of IISER Tirupati is determined to work for equality and against discrimination of any sort.





# Parody

Saari umra hum,  
Bio padhke jee liye,  
Ek pal to ab hume,  
Griffith to padhne do.

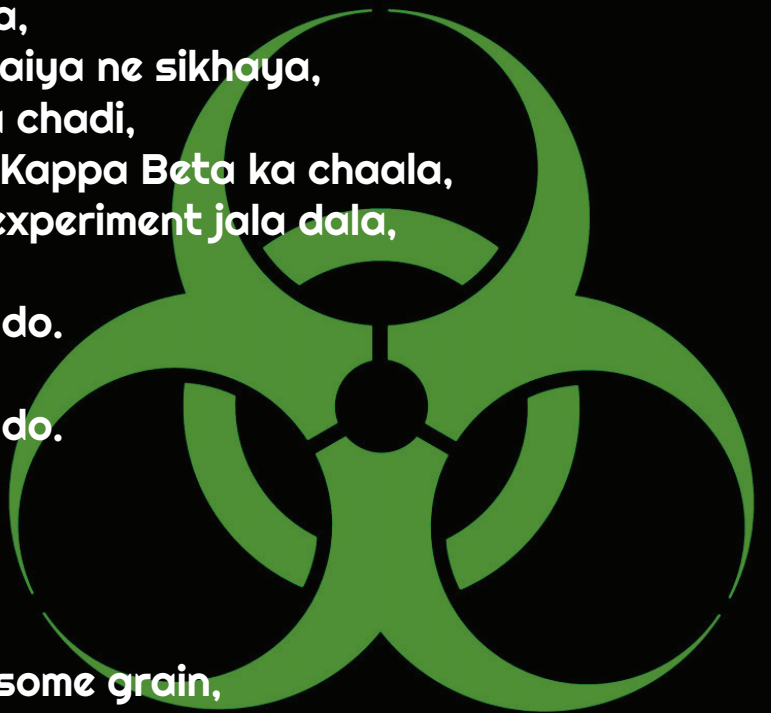
Saari umra hum,  
Bio padhke jee liye,  
Ek pal to ab hume,  
Verma to padhne do.

Give me some moonshine, give me some grain,  
Give me another chance I wanna brew it once again.  
Give me some moonshine, give me some grain,  
Give me another chance I wanna brew it once again.

Dimmag ko eco ke bojh ne dukhaya,  
Chuna lagana toh khud darwin bhaiya ne sikhaya,  
99% purity laaoge to ghadi warna chadi,  
Likh likh ke padha haathon pe NF Kappa Beta ka chaala,  
Aur concentrated dnase ne pura experiment jala dala,  
Eco to gaya, micro bhi gaya,  
Ek pal to ab hume, calculus karne do.  
Eco to gaya, micro bhi gaya,  
Ek pal to ab hume, calculus karne do.

Saari umra hum,  
Bio padhke jee liye,  
Ek pal to ab hume,  
Griffith to padhne do.

Give me some moonshine, give me some grain,  
Give me another chance I wanna brew it once again.  
Give me some moonshine, give me some grain,  
Give me another chance I wanna brew it once again.



# Meloncholy

This is the story of Melon Brando, a watermelon. He was a melon. He was just a melon. There's nothing else he could have done. He shunned that thought from his mind and concentrated on escaping the place. Running as fast as his tendril-like legs could take him, memories of his life started flashing through his mind.

His mother called him Brando. Mel-on Brando. As far as he knew, 'Melon Brando' was inspired by the name of a famous human actor. He couldn't care less. Melon Brando was never a fan of the human race - the dominant species on the planet. Like all melons, Brando had been taught of hell, the one place most human-raised melons went to. The stories about hell were gruesome. On the way to hell, one passed through purgatory first. Purgatory was hellish in its own right. Thirty white horses on a red hill stomped down upon

the poor melon while the melon was constantly bombarded by a plethora of various chemicals. Purgatory reduced a melon to pieces small enough to not be seen.

And this was just a taste of what would come.

In hell itself, the purged melon would be attacked by scalding chemicals powerful enough to disintegrate one's very soul. Melons who had to go to hell came out in a form vastly different from the one they had when they entered.

Anyway, going to hell was only the second worst thing that could happen to a melon. The first, of course, was listening to human poetry. Not all poetry was bad though. But Brando did not care for those cryptic poems that did not rhyme. Nor did most melons. But for melons, the worst poetry came from the somehow acclaimed human poet Sylvia Plath. Plath's poetry had a nuclear bomb scale impact on the biology of melons. During a recitation of Plath's poem 'Metaphors', four melons in the audience died of internal haemorrhaging, and the president of Melonical Arts Council barely survived by gnawing off one of his own tendril legs.





To save the melon community from such Guantanamo-level torture, their head sorceress, aptly titled Melonie Standless (as she did not have her tendrils and moved about by shutting her eyes and rolling in the general direction of where she wanted to go. As such, she could not travel uphill and hence, her life had constantly been both figuratively and literally a downhill journey), sprang to action.

Melonie had somehow astonishingly figured out that the source of the poison was Sylvia's brain, and subsequently cursed her brain. An almost Newtonian mental achievement for melons. Melonie had imbedded Sylvia's brain with the emotions and suffering of all the melons killed by Sylvia's poetry. Such bombardment of suffering drove Sylvia crazy, who subsequently took her own life. And then both figuratively and literally, Melonie's life's uphill journey began. Melonie became a hero amongst the melon community. Among other benefits, other melons volunteered to carry her uphill whenever she needed. Melonie died a few years later when she mistakenly laid eyes on a Sylvia Plath poem. By the time she died, she had reached a height of 503 metres, a net gain of 2 metres since her birth. She died, at least satisfied in the fact that her life had totally been worth it. After that, calculating elevation gained in one's lifetime became the chief way for melons to figure out if their life was worth it.

Melon Brando was but a young boy when Melonie had died. He had only barely survived the recitation of the poem. His mother, however, had not been so lucky. He remembered the seven days after Melonie's death when he, like everyone else, ceased the use of

their legs and just rolled about as a form of respect for the late great Melonie. So, after Melonie's death, both figuratively and literally the melon community went downhill.

Enough of melon history for now. Let's get back to the present.

Brando was now huffing, he had run for that long. The friction between his legs and the ground had generated so much heat that his bodily water was evaporating at a dangerous pace. Brando jumped over a bottle laying on the floor, careful to not make noise and attract human attention. If the humans got to know that melons had life, it would effectively result in the end of all life as melons knew it. Brando stopped. He could no longer hear the frustrated ramblings of the man who could not find his freshly bought melon. Lying dead silent on the ground, Brando retracted his legs and went back to the normal melon mode that the humans were accustomed to. He kept his ears and eyes open.

"What's taking so long, honey?" a female voice said from within the house.

"Can't remember where I put the damn melons, only found one of them," said the man who had bought Brando from his previous human. Brando rolled once to get a better view of the couple. The man entered the room the lady was in. Brando noticed that the lady was pregnant. The huge lump near her belly seemed odd on her thin legs. The entire picture looked eerily melonesque, like a melon on two tendrils.

Brando understood now. The third line on the melon-killing Plath poem called 'Metaphors' ("as if that's a real word," Brando thought).

melon was she referring to? Did Plath know that melons had life? What would humans do to melons now that they knew melons had life? The very thought was devastating for melons.

It was at that time that Melon Brando had thought too much. Too much for his melon brain to process. The poem began flashing in his mind

“I’m a riddle in nine syllables”

Spasms racked Brando’s body. It was worse than Brando had remembered.

“An elephant, a ponderous house”

Lumps of pain thumped through Brando’s body. He clenched his teeth.

“A melon strolling on two tendrils” continued the flashback.

“Aaargh!” cried Brando and threw one final spasm. His head wrenched back and as a result, Brando ended up fracturing his melon body. He went limp, lifeless. He had no time to figure out if he had gained elevation in his lifetime to know if it was worth it. He had in fact lost 5 metres. Totally not worth it.

The sound attracted the man’s attention, who was beyond delighted at finally finding his melon, but slightly dismayed to find out it was cracked. Did not matter to him. He cut up the melon, put it in the blender and got himself a nice big glass of watermelon juice to sip on while he read his newly bought collection of Sylvia Plath’s poems.

– Abhinaba Mazumder (BSMS 2017)

This article was first displayed in the literary club



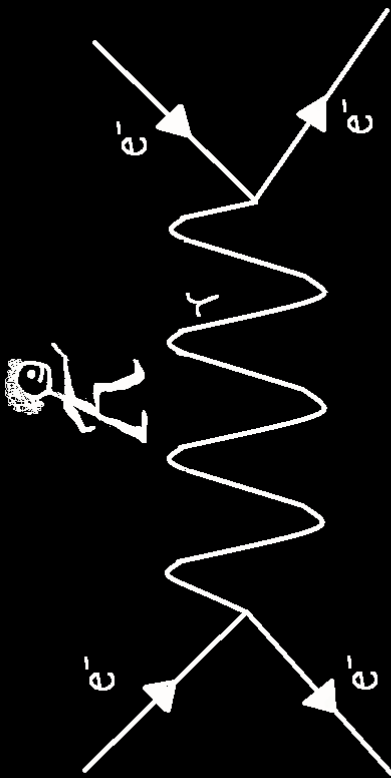
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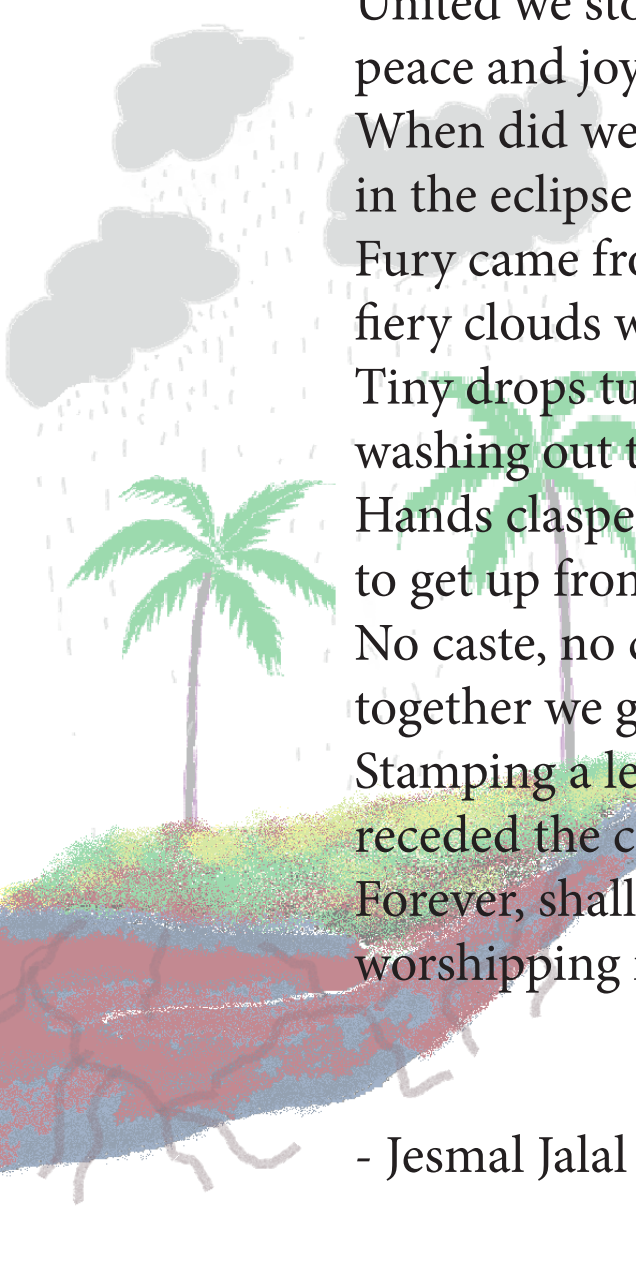
# PASSING BY THE FIELD

The equations are dark, scary, and deep  
But I have my grades to keep  
And signs to fix before I sleep  
And signs to fix before I sleep.

- 412 Survivor  
(I apologise to the course instructor  
and Robert Frost.)



# THE UPLIFT

An illustration of a tropical island with two palm trees. The island is depicted with a red and blue base, possibly representing water or a specific terrain. Above the island, there are grey clouds and rain falling. The text is positioned to the right of the island, partially overlapping the rain clouds.

Once, God made his own country,  
grand in rich, divine diversity.  
United we stood once, then  
peace and joy brimmed, hence.  
When did we sunder I wonder,  
in the eclipse of caste and cumber?  
Fury came from up above,  
fiery clouds with heavy rainstorms.  
Tiny drops turning to tragic tears,  
washing out the slime from frozen souls.  
Hands clasped for the ultimate uplift,  
to get up from the sore calamity.  
No caste, no creed, the whole humanity  
together we got up from nature's adversity.  
Stamping a lesson forever to recall,  
receded the course of castigation, for all.  
Forever, shall we remain rational,  
worshipping nature, the only grandmaster.

- Jesmal Jalal (BSMS 2018)



# THE STORY OF A BIRD AND THE MOUNTAIN

She always wondered what was she doing there in that forest. Why was she there? She looked nothing like her siblings because, well, they weren't related by blood. Mrs Peacock found her when she was very young and from then she has been living with the Peacock family. They took care of her as they would their own child. Her siblings were very loving, her foster father Mr Peacock was very kind towards her and she loved them as well. Everything was perfect! But she never felt at home there. She was a dark brown bird with golden plumage on her nape. Who was she? She was always bewildered by this question. The only thing which she enjoyed in her life was looking at the misty mountain through the gaps amongst the trees. But she could never see the peak; it was always covered in clouds. She was always fascinated by the mystery beyond those clouds. Since her young days, she dreamed of exploring the peak but her mother always tried to change her mind saying that mountain is beyond their potential and she will truly be happy only with her family. Mrs Peacock was protective of her. She knew that if she left her family, she wouldn't last a day in the wild.

But Mrs Peacock's words could not stop her now. She was all grown up. And one day she flew towards the mountain. She could hardly believe that she was doing it! It was her dream after all. She smoothly flew up to some height but the problem started when the branches of the trees started getting denser. She managed to reach the top of trees. Her wings had been injured because of the branches and she was panting. She decided to rest there for some time. When she reached the top of the trees, she saw a flock of cranes already resting there. One of them saw her and called out to her. She knew that cranes were friendly and peaceful creatures, and so she went towards them.

"Heading south, mate? Join us, we are also migrating to the south," the crane said. "No, no sir, I'm going in the opposite direction. To the top of that mountain," bird replied. "Wait, wait, wait, what? We are birds; we are supposed to be migrating away from winter. Don't you know that the mountains are the coldest places on earth? No bird can survive there and most of us can't even reach there, our wings don't have that potential. Only the wings of a Golden eagle possess such tremendous strength. Only they can cover those heights. I've just heard stories of them, never actually seen one. And I'm quite doubtful about the existence of such a bird." Crane said. "Did I just hear a new voice? Who's here to visit us?" Mike asked. Mike was the oldest crane there. He was a huge beautiful crane. His kindness resonated through his gentle voice. He was very protective of his flock and had been listening in on their conversation. He said, "Sister, there is no point of going to that mountain. It is beyond our capabilities and even if you reach there what is the guarantee that you will find good food and shelter there? Better join us in the journey towards the south. Nutritious food and warm weather are waiting there for us."

She declined Mike's offer respectfully. She was determined to reach her goal. She thanked him and soared towards the mountain. She flew continuously for hours. As time passed, Mike's words seemed to be coming true. She was losing her strength. She decided to take halts in between. During one such halt when she was sitting on a rock, she realized that a huge muscular animal was standing behind her. It was a White Mountain goat with short but thick horns. She was well heard about the selfishness of mountain goats from her mother and decided to keep the distance from him. "What are you doing in such high place? Are you planning to die? You are not allowed to die in here. It's my place," Mountain goat said. "I won't be staying here for long sir, after taking some rest I'll start my journey towards the peak," Bird replied politely. "Journey towards what? Do you really think that a weakling like you can reach beyond those clouds?" Mountain goat asked mockingly. "I can try, right? You look muscular and strong, why don't you go to those heights?" bird asked. "I've no business there. Food, water and females –whatever I want– I get it here. Why on earth should I go there?" Mountain goat replied. The bird was amused by his thinking. He had the potential to climb the mountain but he was happy in his comfort zone.

Without listening to another word she flew towards the peak. The air was getting colder and colder as she was getting closer to the peak. But she didn't want to stop because she was too close now! Finally, after hours of flying, she entered the clouds. She could not see anything except white clouds but she knew that her destiny was waiting for her beyond those clouds and that was driving her upwards. She never felt so happy in her life. She was so close to her goal that she could taste it. Every event that happened during this journey, every creature she met was flashing in front of her eyes and Alas! She soared out of the clouds like an arrow. What she saw there made her eyes beam with joy! There was a colony of birds dark brown in colour and having golden plumage. They were exactly like her! She was trying to capture everything she could in her eyes. Finally, she had found her place.

The words of the crane were true. Only a Golden Eagle possesses the ability to reach such heights.

She was a Golden Eagle.

- Gyges





# THE ALIENS HAD LANDED

The aliens had landed. But, unlike many mainstream Hollywood movies, they did not land in Washington, D.C. and start attacking the White House. In fact, they did not land in America at all. They had landed in Spain. Military experts know that invasions rarely begin with an all-out attack on the opponent's capital. This, however, does not suggest that America is the world's capital. To those of us in the know, the capital of the world is underwater and its name rhymes with mantis. Anyway, the aliens had landed, and a thoroughly bewildered Spanish farmer had called the cops about strange vehicles in his fields. Now the Spanish government was trying to find out more about these strange occurrences while trying to keep it a secret from the rest of the world. The military, some secret agency folks, and a bunch of linguists had gathered around the spaceship. A really important guy was screaming into a megaphone in different languages. The king of Spain was waiting in a car further down the road. Suddenly the door to the spaceship opened. Everyone grew quiet. They were all watching with bated breaths, except for Juan, who had an asthma attack right then. To hell with Juan. And the being that stepped out of the spaceship was... a watermelon. It was walking, rather crawling with the help of its tendrils, and it spoke, "We come in peace!". "It speaks Spanish!" exclaimed a secret agent. "Or maybe we speak Melonese," mused a linguist. The melon explained that they were from a planet that had been destroyed, and they were looking for refuge. Some scouts had come ahead while the rest of the population was hiding on Saturn. This information was conveyed to the king, who scratched his head and said, "Hmm, I have an idea." The melons were granted refuge in Spain but were told to be utterly secretive as the other countries could not be trusted. The melons agreed, and all of them moved from Saturn to Spain. And now, whenever you go to Spain, you will not see these melons strolling about. On an unrelated note, Spain is the largest exporter of watermelons in the world.

- Kaushal Pillay (BSMS 2015)



Wordsmiths' legerdemain

All of us have come across things that have mesmerized us, compelled our minds into contemplating their entrancing magnificence, or forced us to sigh with sheer pleasure; Ah what beauty! It may have been a painting, a sculpture, a structure, a performance of music or dance, or anything natural. For me, it was words. This is an account of my experience with a type of wordplay. For as long as I can remember I was a voracious reader, with a passion for attempting ambitious works of literature - sadly, not too successfully. However, I do have some ability to identify and appreciate certain forms of wordplay. When I started studying Sanskrit, I came across a quirk of the language: words could be arranged very flexibly without affecting the overall meaning so long as the cases were proper. It was also possible to create new words by using word roots and playing with the rules of grammar. It was great fun to make seemingly incomprehensible words and trying to guess the meaning. It was then that I got my first taste of the so-called “adhamakavyas” (अधमकाव्याः) [lit. Poems of a low standard], so called because of the complex and sometimes unexpected applications of grammar rules, which make them quite difficult to understand. Here is a compilation of those which attracted my amateur interest.

This is a shloka using a स्थानचित्र and a वर्णचित्र where both the consonant and the vowel are fixed:

यायायायायायायायायायायायायायाया । यायायायायायायायायायायायायायाया ।

The अन्वय, or the arrangement of the words of the verse, in their proper prose order: यायाया (yâyâya), आय (âya), आयाय (âyâya), अयाय (ayâya), अयाय (ayâya), अयाय (ayâya), अयाय (ayâya), अयाया (ayâyâ), यायाय (yâyâya), आयायाय (âyâyâya), आयाया (âyâyâ), या (yâ), या (yâ), या (yâ), या (yâ), या (yâ), या (yâ), या (yâ), या (yâ). It means: “The sandals which adorn the Lord, which help in the attainment of all that is good and auspicious, which give knowledge, which cause the desire (of having the Lord as one’s own), which remove all that is hostile, which have attained the Lord, which are used for going and coming from one place to another, by which all places of the world can be reached, these sandals are of Lord Vishnu.” [Source: *The wonder that is Sanskrit*] [Originally: *Padukasahasram* by Vedanta Desika]

Here is a वर्णचित्र which is made up of all the 33 consonants of the Devanagari script in proper order:

कः खगौघाडचिच्छौजा झाञ्जोऽटौठीडडण्डणः । तथोदधीन् पफर्बाभीरमयोऽरिलेवाशिषां सहः ।।

It means: “Who is he, the lover of birds, pure in intelligence, an expert in stealing the strength of others, a leader among the destroyers of the enemies, the steadfast, the fearless, the one who filled the ocean? He is the king Maya, the repository of the blessings that can destroy the foes.”  
[Source: *The wonder that is Sanskrit*]

This shloka by the great poet Bhâravi is made of only one consonant:

न नोननुनो नुनोनो नाना नानानना ननु ।

नुन् नोऽननुन् नो ननुन्नेनो नानेना नुन्ननुन्ननुत् ।।



Meaning: “O ye many-faced ones (nānānā), he indeed (nanu) is not a man (na nā) who is defeated by an inferior (ūna-nunno), and that man is no man (nā-anā) who persecutes one weaker than himself (nunnono). He whose leader is not defeated (na-nunnenno) though overcome is not vanquished (nunno’nunno); he who persecutes the completely vanquished (nun-na-nunna-nut) is not without sin (nānenā).” [Source: Kiratarjuniya by Bharavi. Translation: Sir Monier-Williams]

So is this one by the great Māgha:

दाददो दुददुहुददादी दादादो दूददीददोः । दुददार्द दददे दुददे ददाऽददददोऽददः ॥

[Source: Shishupalavadha by Magha]

Another form is called गतिचित्र or palindromes in English. For example:

वारणागगभीरा सा साराभीगगणारवा । कारितारिवधा सेना नासेधावरितारिका ॥

It means: “It is very difficult to face this army which is endowed with elephants as big as mountains. This is a very great army, and the shouting of frightened people is heard. It has slain its enemies.”

[Source: The wonder that is Sanskrit]

In the above shloka, each sentence is a palindrome.

Below is a shloka where the second line is the reverse of the first one:

निशितासिरतोऽभीको न्येजतेऽमरणा रुचा । चारुणा रमते जन्ये को भीतो रसिताशिनि ॥

It means: “O immortals, indeed, the lover of sharp swords, the fearless man does not tremble like a frightened man in this battle full of beautiful chariots and demons who are devourers of men.”

[Source: The wonder that is Sanskrit]

I must mention here that Raaghavayadaveeyam by Venkatadhvari, perhaps the most well-known poem constructed entirely of palindromes (विलोमकाव्य), though it is by no means unique in this distinction. There is also Chidambara Sumati’s Raghava-Yadaviya-Pandaviyam and Suryadasa’s Ramakrishna Vilomakavya.

Then there is also the चित्रबन्ध in which a verse is transformed into a different verse when read according to a geometric pattern. Perhaps the most famous example is this तुरगपाद (steps of a horse) verse by Vedanta Desika:

सिथरागसां सदारघ्या विहृताकततामता । सत्पादुके सरसा मा रङ्गराजपदं नय ॥

In this order, the verse means, “Oh, the sacred sandals of the Brahman, you are always adorned by those who have committed unpardonable sins; you remove all that is sorrowful and unwanted; you create a musical sound; (be pleased) and lead me to the feet of Lord Rangaraja (Rama)”.

But when we place each letter on a chess board and pick them out according to the path travelled by a horse beginning on the first square, such that it does not land on the same square twice, (see the Knight tour problem) we get the following verse:

सिथता समयराजत्पागतता मादके गवि । दुरंहसां सन्नतादा साघ्यातापकरासरा ॥

This gives the meaning: “The sandals which protect those who shine by their right attitude, whose place is in the centre of the blissful rays, which destroy the melancholy of the distressed, whose radiance brings peach to those who take refuge in them, which move everywhere— may those golden and radiating sandals of the Brahman lead me to the feet of the Lord Rangaraja (Rama)”



As an ending, I would like to present the one which is considered perfect (सर्वतोभद्र) – a shloka which is a complicated mixture of syllabic palindromes and acrostics and can be read in any direction to give the same verse:

देवाकानिनि कावादे

वाहिकास्वस्वकाहि वा ।।

काकारेभभरेऽकाका

निस्वभव्यभस्वनि ।।

It means: “O man who desires war! This is that battlefield which excites even the gods, where the battle is not of words. Here people fight and stake their lives not for themselves but for others. This field is full of herds of maddened elephants. Here those who are eager for battle and even those who are not very eager, have to fight.”

[Source: *Kiratarjuniya* by Bharavi.]

Read each letter from top to bottom and bottom to top, column-wise and we get the same verse. It is impossible for me to do justice to this article because I have barely scratched the surface of wonderful literature, and this is just a portion of what I have come across. The chitrakavyas alone are said to consist of more than two hundred varieties (as stated by Bhojaraja).

I like such works mainly because of the challenges they present, and the mental gymnastics involved in trying to understand them. I, for one, feel that one has not truly enjoyed a language if one cannot use it to create or appreciate such exquisite wordplays, and these works show the existence of such devotees of creativity who laboured to create these gems for posterity. Language must not just be a thing of necessity, meant to help us in navigating in the society, but also be something we can grok, appreciate and enhance.

I would like to end with a translated quote by Magha, “Oh! Like music that has just seven notes, language, although it comprises of only a few letters, is infinite in possibility!”

-Kartikeya Avadhani (BSMS 2017)





# A GRITTY COMEBACK

We lost the ball on the left flank. The striker was through on goal, although quite a long way out. He realized this and took a hopeful shot from range as our defenders raced to close him down. It should have been a routine save but the ball somehow slipped in through the goalkeeper's legs, and we were suddenly facing an unexpected 1-0 deficit against IISER Berhampur. As it stood, we were not going to qualify for the next round. I felt a sudden rage and urgency that was not there a moment before. The conditions had turned against us and my mind was racing. We cannot lose this. We have to win. We have to turn this around.

Our group was the most interesting with all four teams having a good chance to make it through to the next round. IISER BPR shocked NISER with a 1-0 win and we triumphed over CEBS with a 2-0 margin. CEBS downed IISER BPR



with a late flourish of goals by a 3-0 scoreline. NISER got the better of us in a rain-struck affair with a single goal deciding the points. The stage was set with all the teams tied and it was all going to come down to goal difference, with FIFA rules being applied to break a tied point-tally.

We kept the attacking pressure on, looking to equalize in the first half. Our efforts bore fruit when Shinoj made a brilliant piercing run coming inside from the left and cutting the ball back to me. It was an easy chance but I messed it up and had to agonizingly watch my shot curl in the wrong direction, away from the right goalpost. I cursed myself in anger, but I knew there was no time for regret and that we had to keep prying, and so we did. After a mix-up in the penalty area and good closing down by Fardeen, Adithya sweetly struck a volley that ricocheted off the right post into the back of the net. That was 1-1. We had more to do and there was more to come. Half time arrived with the scores level. Due to

the tight nature of the race in our group, we needed to make sure that we win with a good margin; which would boost our goal difference to make it unattainable for the rest of the horses in the race.

With this in mind, we came out for the second half with increased energy and urgency. The defence line led by Gokul and Ashish did an excellent job with Usman and Tushar strongly holding the flanks of the fort. It was just a matter of time, and we broke through again when I made a late Frank Lampard style run towards the 18-yard box and luckily, had the clearance from the defender coming right at me. I don't know if it was years of practice or just dumb luck that with my first touch, I managed to both control the ball and take it past the oncoming rushing defender. I struck through the ball with power and it squeezed into the near post past the goalkeeper and into the back of the net. I barely remember how, but I think the shot deflected off of a defender's hand which probably left the goalkeeper with little chance.

The score was 2-1 and I was happy and thrilled, but the urgency had not left me. Our job was still not done. We needed to score more goals to be sure; so we kept at it. Shinoj produced a beautiful curling shot headed into the top-right corner of the frame. But, the goalkeeper reciprocated with his own



moment of brilliance and denied Shinoj a dream goal.

The full-time whistle could be blown anytime now and we were still looking for that elusive 3rd goal. In the final moments, we got a free-kick in our half and I stood over it. “Two more minutes, Anubhav,” Viswanath both screamed and whispered to me in a clear, urgent tone. Upon hearing this, I fizzed the ball up-field towards Adithya with all the strength I could muster. The defender cleared the ball and it fell to Fardeen’s feet. He showed an incredible presence of mind and chipped the ball over the goalie, who was off his line, with stunning precision into the open goal. The full-time whistle blew moments after and the score was 3-1. We had won and turned the game around. It was an amazing feeling and it was time to celebrate with all the beaming faces around.

Right after our match concluded, NISER vs CEBS kicked off and we looked on from the sidelines, full of anxiety and nervous energy. The game ended, after what seemed to have been the longest hour of our lives, with a 1-0 victory for CEBS. It was done and sealed. We topped our pool through a higher goal difference than CEBS. We eventually played IISER Bhopal and IISc in the next round in a super league format and had to settle for

a bronze medal as we finished in the 3rd spot. After three years of playing in IISM, we had finally made our mark –and it felt great. This really was a team effort and everybody contributed to this little success. We are keen on going back next year and making an even bigger impact.

Until then.



- Anubhav Dhar (BS-MS 2015)

# माझी आई

- Tejas Borkar (BSMS 2015)



तू माझ जग ग आई,  
तुझ्या कुशीत मला छान गाई...  
तुझ्या चेहर्यावर राहो निरंतर हसू  
तुझ्या डोळ्यात न येओ अश्रू  
आई तुझ्यातच आहे ग माझ जग...  
तुला आहे मी एकुलता एक नग...  
माझ्या विषयी सांगताना तुला विसरणे शक्य नाही...  
तुझ्या उल्लेखा शिवाय माझी ओळख पूर्ण नाही...  
रागात घेतो डोक्यावर मी घर,  
काही चुकलं असेल तर या चिमुकल्याला माफ कर...  
तू पूर्ण करतेस माझ्या सर्व इच्छा...  
तू आयुष्य भर सोबत राहो हीच माझी इच्छा...



# नजर

एक नजर भिडलेली  
पण तिची व्यथा न कधी उलगडलेली  
एक नजर दुसऱ्या नजरेच्या  
नकळत प्रेमात पडलेली

एक नजर केविलवाणी  
चुकीचा खुलासा देणारी  
एक नजर सहानुभूतीची  
नकळत दिलासा देणारी !

क्षिप्तजापलीकडे पाहू इच्छिता  
हृदय बनली ती एक नजर  
बोलणे शक्य नसतांना  
शब्द बनली एक नजर

- Atharva Phanse  
(BS MS 2018)



# Oceans

Drowning is fun.

The loss of control over your own life is strangely liberating. The saltwater fills up your mouth, your nose and your ears. You stop flailing around, and in perfect calmness, begin your slow descent into the underwater abyss. The water around you is crystal clear, giving you an unclouded view of the watery heaven. Spread-eagled like some mythical persona, you give in. And you give up.

It is so easy, not doing anything. You lie there, waiting for the end, waiting to hit the ocean floor. But you know you probably never will. Once your heart stops beating, your body will rise again. At least, that's what popular culture has told you. But you wish it doesn't. All you want is to disappear completely, and vanish without a trace.

After all, that is inevitable. You are but mere molecules held together by chemical reactions and molecular forces. Every single thought in your mind, every decision you take, everything that makes you, is just a biochemical process. One day, maybe not now, maybe not for a thousand years, but somewhere down the line, every single human will have been wiped out, and there will be nothing left of the entire species. You are not even an ant on this great tree of humanity.

So how do you matter, anyway?

You don't. You have realised that a long time ago. You have made your peace with it. Nothing you do is of any consequence and is hence immaterial. But then why are you suddenly holding your breath?

You see the aquatic organisms around you. Colourful fish that you once could have named, in various shapes and sizes, corals of different types, sponges, molluscs, anemones. Vibrant organisms of multiple hues. All of them stay



clear of you because clearly, you are the fish out of water here. Unexpectedly, survival instinct kicks in and you rise towards the light. Your head breaks the water, and you spit out all the water. You hungrily gasp in large amounts of air, and tears leak out of your eyes. You still remember the water in your sinuses, your lungs and the discomfort in your ears. It would have been so easy, you tell yourself, so easy. And yet you know you can't –won't– do it.

Although drowning is fun, there is a different kind of exhilaration to continue swimming.

-Kaushal Pillay (BS-MS 2015)



# GET ME AWAY

Get me away from this madness

Dissolve me in your arms

Keep me in your fortress

Let's lie next to silent farms

Get me away from this madness

Where we can be seen by naught

Make me believe in the goddess of love

Take a stroll in the gardens of my thought

Get me away from this madness

Be the rain to my drought

Kiss my nape softly from above

Teach me how my demons dark are fought.

-Susmit Bansode (BSMS 2017)



“

The more I get to know people,  
the more I love animals

(adapted from Mark Twain)

-Sai Tejas |Nikon D3400





# Address on International Women's Day, 2019

Greetings to all of you on International Women's Day 2019, a day to celebrate and honour all the women among us. The theme for this year's International Women's Day is 'balance for better', which means "Better the Balance, Better the World." It is intended to awaken, in all of us, an urgent call for a gender-balanced world. This gender balance is to be achieved in all realms of life; in income, leadership, safety, health, education etc. In general, gender balance is to be understood as the state of affairs where all human beings, regardless of gender, have equal opportunities to pursue their passions, develop their potentials and be rewarded equally for their contributions.

Through this theme, it is hoped that all of us are made aware of areas where such a balance is missing; so that we collectively try to generate this equality. This can then lead to a symmetric state, that is only natural justice. In addition to the beauty underlying such a symmetric state, it can also provide some immediate tangible results. Recent surveys indicate that there are more than 3 billion women in the world. If we could harness all that human power, which may otherwise go untapped, the world economy will have a pivotal boost.

Do we currently have a gender balance? If not,

how grave is this problem of imbalance? Of late, we have several intentional campaigns and strategic planning, at all levels. So have we achieved this to some extent already? Well, the World Economic Forum's 2018 Global Gender Gap Report says that true gender equality may take around 170 years. This is too far off, and we must reduce this period.

The United Nations Global Gender Gap Index in 2018 mentions that there is still a 32% gender gap around the world, mainly in four areas: economic participation and opportunity, attainment of education, health and survival, and political empowerment. A study of women in the workforce shows that globally, women hold less than a quarter (24%) of senior roles in 2018; and 25% of global businesses have no women in senior management roles. There is a large gap here that needs attention.

We know that women continue to be concerned about career-related issues like job security, work-life balance etc. However, globally, more women feel that their job prospects for the next 12 months are excellent or good, relative to five years ago. Also, women's savings rate has increased from 30% to 50% over the last five years. Another concern is that women still carry most of the load of caregiving to children, parents and family. A more gender-balanced world should give better support in these functions, with men willingly taking a larger role in the care of family and community.

What can we do about it? Identifying the variety of reasons why women are under-represented across many fields itself is the first step. We should then concentrate on taking practical and effective actions to shift this imbalance as soon as possible.

The immediately required, targeted activities are



to breakdown the rigid expectations built around each gender (which means getting rid of the norms and restrictions existing in society that generate gendered feelings even from early childhood), reduce inequality in pay, provide dignity and support to caregiving work and parenting, and bridge the disparities in leadership roles. These can eventually lead to a smooth transition to a gender-balanced state.

In connection to this, I would like to mention that our aim at improving the representation of women should not be through quotes or regulations; but rather by empowering and equipping women with chances to develop their potential. We must work together to bring about the changes that are needed; not just in professional areas but also in our daily lifestyles.

All of us must make it our responsibility to work towards achieving the highest level of equality in our country by contributing in every possible way to the empowerment of all women.

All of us assembled here are scientists and researchers or future scientists, and so let me specifically address issues related to us. In the early days, no such awareness was intentionally created, or no steps were taken at different levels (through forums or agencies) to empower women. I always wondered how in those days, few women scientists could succeed and reach great heights. I name a few of them: Madam Curie (1867-1934), Emmy Noether (1882-1935), Barbara McClintock (1902-1992) and Ada Lovelace (1815-1852). These women scientists are certainly our role models. They have the inner strength and

determination to rise over adverse circumstances. But these are singular, exceptional and isolated cases. We can call these extreme events in the history of science. But many women among us may not have such inner strength. They need proper guidance and empowerment to realise their dreams. We need to create an environment that will help to create many more great women achievers.

One more reason why this is important presently is that the research scenario itself has completely changed. Every area of research now involves collective effort; requiring collaboration among many scientists. In this scenario, once we achieve gender parity, women and men scientists are motivated to work together more effectively. Together they can generate more creative ideas, that will lead to several innovative outcomes in research. I am sure women scientists of recent times face much lesser hardships compared those 30 or 40 years ago. Research methodologies have changed; doing quality research is now much easier and faster due to the increase in connectivity and availability of resources. There are daycare centres, and several support systems to help us now. Therefore, I feel it is much easier and feasible to manage both work and family.

Coming back to the theme of the day, as I said, 'Balance for better' calls for gender balance in all areas. But in my personal opinion, this balance need not be in exact numbers or a 50-50 representation for women and men. This is very difficult to achieve and may not be required also. I am happy to note that our institute is one place where 50-50 representation is achieved among BS-MS students. But balance need not always be in actual numbers. I propose, it can be a weighted balance, where each person is weighted based on performance, research outcomes and contributions in the workplace. For

example, a woman scientist who has exceptional achievements and contributes to work and performance much more than a single person can, need not be counted as one but can be weighted as 1.5 or 2, while counting for gender balance. So we need to develop statistics that take into account a weighted balance based on their performance index.

In my opinion, this theme of balance is to be interpreted in 3 or 4 different contexts, in addition to gender balance. Balance also means profession-family balance for every woman, which is to be arrived at by each one of us in our own style. This can be done if we can manage our time equally for research and care for family and children. This equal time-balance is now almost possible due to technological advances and high connectivity. While your baby is sleeping beside you, you can open your laptop and start working; while waiting for the pressure cooker whistle, you can connect to your collaborator in the U.S. over Skype and discuss your research. The profession-family balance can also be made possible in a phased out manner: which means taking a break for 5 or more years to take care of family and then get back to research and profession. This is now feasible with the help of several schemes and projects run by Government departments, especially meant to help women with a break in career, giving support and encouragement to come back after a break.

Balance is also about emotional balance, which is required for comfortable and trouble-free professional and family life. Balance is necessary in individual qualities too; our personality must be an equal mix of courage, mental strength, honesty, integrity, sincerity, loyalty, confidence, compassion, affection, respect for others etc. And most important is balancing time: among our personal, professional, and family requirements. As we know, even the most successful man or woman has only 24 hours in a day. So it is a matter of how

we manage these 24 hours, that will help us achieve our dreams in life. For this, a balance of time, weighted as per the requirements of each phase, profession and family, is to be worked out.

If we can train ourselves to achieve this time-balance, I am sure we will succeed in having a very satisfying, resourceful and enriched life.

With best wishes to all of you for a very successful career.

Thank you!

- Prof. G. Ambika  
(Dean, Academics, IISER Tirupati)



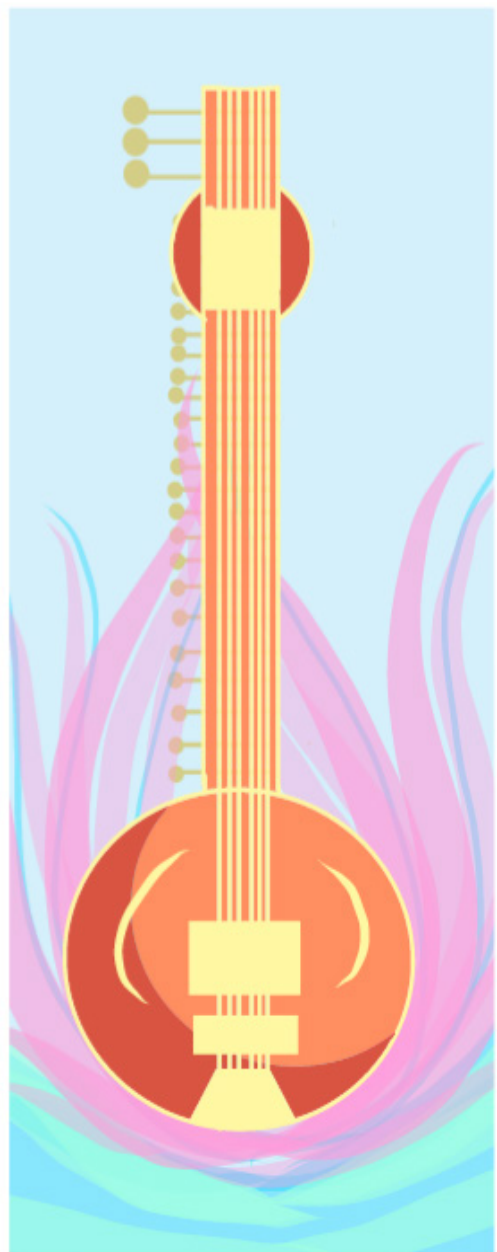
# Saraswati Bandana

*Abstract: This poetry is a prayer of appreciation to the Hindu Goddess of knowledge “Saraswati”. In the poem I have described all the attributes of the Goddess starting from her beauty to her qualities. In the first stanza I have asked for her blessing to start the poem of her appreciation. Hindu Brahmins address the goddess as “Tridevi of Sandhya”, “Gayatri” and “Savitri”. So I started the first stanza by calling her as mother and Tri-devi of Sandhya and asking for her blessing to start the poem. The rest of the poem is the Odia version of the famous Hindu mantra for Saraswati “Ya kudendu tusar har dhawala.....”. I also added some simple suitable words from odia vocabulary to bring out the true meaning of the above mantra.*

ମା ଗୋ ତୁ ବିଦ୍ୟାଦାତ୍ରୀ	ତ୍ରିସନ୍ଧ୍ୟାର ଦେବୀ
ଆଶିଷ କରଲୋ ମା	ତୋ ଗୁଣ ଗାଇବି ॥1॥
ସ୍ବଚକ୍ଷୁରେ ଦର୍ଶନାହିଁ	ତୋହର ସ୍ବରୂପ
ସବୁଠାରେ ଦେଖୁଅଛି	ତୋ ଚର୍ଚ୍ଚିତ୍ତୁଜା ରୂପ ॥2॥
ଆଦିକବି ବର୍ଣ୍ଣିଥିଲେ	ତୋତେ ଶୁଭ୍ରାଜ୍ୟୋତି
ତୋଫା ତୋଫା ଧଳା	ତୁ ମା ବରଫ ପରିକି ? ॥3॥

ହସ୍ତେ ଧରି ବୀଣା	ଭାରି ମନଲୋଭା ଦିଶୁ
ଧଳା ପଦୁଆଁରେ ମା	ଆନନ୍ଦରେ ବସୁ ॥4॥
ମୟୂର, ରାଜହଂସୀ ତୋ	ପାଖରେ ରହନ୍ତି
ବ୍ରହ୍ମା, ନାରାୟଣ, ଶିବ	ତୋର ଜଣାଣ କରନ୍ତି ॥5॥
ହସ୍ତେ ମାଳା, ପୁଷ୍ପକ ଓ	ବୀଣାର ଧାରିଣୀ
ତୁହି କାଳି, ସରସ୍ବତୀ	ତୁହି ମା ତାରିଣୀ ॥6॥

କିପରି ଧନ୍ୟବାଦ୍ ଦେବି	ତତେ ବାଗ୍ ଦେବୀ
ତୋହରି ପାଇଁ ତ ମା	ମୁଖରେ କହିବି ॥7॥
ସ୍ବମୁଖେ ନିସୃତ କରେ	ଶବ୍ଦ ତୋ ଯୋଗୁଁ
ବିପଦ ଆସିଲେ ମା	ଘଣ୍ଟ ଘୋଡ଼ାଇବୁ ॥8॥
ଧଳା ଶାଢ଼ି ପିନ୍ଧିଥିବା	ଦେବୀ ସରସ୍ବତୀ
ଗ୍ରହଣ କରଲୋ ମା	ମୋ ଭାବର ଆଳତୀ ॥9॥
ନିର୍ବୋଦ୍ଧକୁ ବୁଦ୍ଧି ମିଳେ	ନିର୍ଧନ କୁ ଧନ
ନିଃସ୍ବାର୍ଥ ଭକ୍ତିରେ ଯିଏ	ଭଜେ ତୋର ନାମ ॥10॥



- Surya Narayana Sangitra  
(PhD physics)

RIYA GOGTE



~RIYA GOGTE



ANJALI KUMARI SINGH



Anjali Singh  
05/05/2018

GOWTHAMAN S









# Every cloud has a silver lining ?



She had just arrived from the market and there was no time to relax. She would have to wait until they are gone.

She heard the door knock. As expected, the children had arrived. She welcomed them inside while they sat down.

She was a kathak dancer, and had decided to share this knowledge with the world around six years ago. Who better could she have chosen to share her love for dance with than orphan children? And since then, she treated all the kids as her own. She loved them more than she could love her own child; if not more, at least not any less. The children loved her equally. She was like the mother they never had.



But today something was different. She looked at the clock every ten minutes or so. She was waiting for the dance class to end, waiting for the children to leave. She didn't care when the two girls on the left missed a step. An hour-and-a-half more. She didn't care when a child nearly hit another child. An hour more. She didn't notice when two kids crashed into each other. Half hour more.



Finally, with ten minutes of the class remaining, she started bidding the children good-bye. After all the children had finally left, she rushed back into the kitchen. She rummaged through her shopping and found what she was looking for. After reaching her bedroom she sat on her bed and took a deep breath. She was terrified, still holding the packet in



her hand. The time had finally arrived.

She took the pregnancy kit and entered the washroom. She took the test and sat down, waiting for the results. With every ticking of the clock, she could hear her heart beating like a hammer in her head. She couldn't take it anymore. She hid her face in her arms and closed her eyes.

After several seconds or minutes (she didn't know what) later, she lifted her head. She had to see the results. It couldn't be what she was dreading. She gathered all her courage and lifted the pregnancy kit. All the chaos in her head seemed to abruptly cease as she read the result – negative.

Her world seemed to have stopped. Fifth time in a row. Negative again. She had lost her sense of emotion. She didn't cry this time, just like the last time, and the time before that. She smirked a little. Laughing at her own misery, how pathetic was that? She took a deep breath and stood up. She cleaned herself, discarded the kit, and walked out of the washroom.

“Maybe I'm not ready for a child yet”, she assured herself. But somewhere deep down, she knew she was ready, she knew that the day might probably never come in her life, and she knew she had nothing but only false hopes to help her survive.

- Anjali Kumari Singh and Mayur Bajaj  
iPhD



# আত্মসম্মান

আত্মসম্মান

ভাটার টান।

জোয়ার আসুক ফিরে

নিয়ে থাক শবটিরে,

তপু গাবো গান,

বাঁচুক আত্মসম্মান।

স্বপ্নেরা ভোরবেলা পথ হাঁটে

রাতের অন্ধকারে করা

যেন তার কাটে

দূর থেকে শুনি আহ্বান

বাঁচাও আত্মসম্মান।

নতুন ফুলের কুঁড়ি

জলের অভাব,

মালে হতে জল চাই

কেমন স্বভাব।

জলহীন মালি তারে

করে অপমান

শিকড়ের জল বলে

বাঁচাও সম্মান।



# Sexual Responsibility

There was an uneasy quietness in the house. Purushottaman with his legs stretched out was lying in an easy chair at the centre of the living room, in a pensive mood looking at the ceiling. A science teacher in the government higher secondary school, in the district headquarters, he commanded immense respect in his town, for his dedication to work, honesty and humility as well as for being a socially responsible being. His wife Janani, a well-known Tamil scholar and a teacher in the same Government school, was standing in front of him, eagerly awaiting their son's return. They just got to know from one of Janani's friends, that she found Vasu entering Chandra's house. In a while, their teenager son Vasudevan, who had taken his tenth standard exams, returned home with their domestic help SivaShakti. He tiptoed inside, taking note of his parents, but did not dare to strike a conversation. Janani was very upset but could not stop her son. Instead, she walked towards Shakti with simmering rage. She shrieked, "How can you do so?"

Ignoring Janani's anger, and with serenity on her face, SivaShakti responded, "I did

what I thought was appropriate and was in the best interests of Vasu". Janani felt the response unconvincing, cold and utterly irresponsible. To gather herself, she left the scene to provide an evening meal to her son. Without a word spoken, she served food to Vasu and got back to the living room. Her restlessness increased when she found the room utterly quiet. As though she awaited Janani's return, Shakti started to provide an explanation, looking at Purushottaman than at Janani- "You know how and where you picked me up from. I understand and appreciate Vasu's curiosity. But, my experiences have been bitter and painful. I thought I am not the right person. I wanted him to learn from a person who was engaged in the practice, someone who would educate the positives and negatives, the dos and the don'ts, the benefits, and the harms. I could not think of anyone better than Chandra. You know, she has a daughter of Vasu's age."

Purushottaman was angry but could not utter a word. The loudness of his silence irked Janani further. A faint call from Vasu, made her legs move involuntarily. Seeing no reaction from Purushottaman, and inferring his silence as approval of her actions, Shakti moved into the house to attend daily chores. Eyes closed, he started reconstructing the happenings in his home over the last few days. Of late, Vasu has been vying into something new. His various covert attempts to learn more about women and sex caught everyone's attention in the house. Purushottaman and his wife chose to ignore it and be indifferent as they thought discussing such issues with their son was a taboo, like every other Indian household. In fact, the change in Vasu's behaviour was not even a part of their private discussions. Cognizant of Vasu's curiosity Shakti took him to

a middle-aged sex worker Chandra to educate him. Purushottaman knew Chandra, as one of the mothers whose daughter Thulasi was enrolled in his school. He had to put up a fight with some of his colleagues, who were against Thulasi's admission owing to her mother's profession. A smirk spread across his lips when he realized that Chandra donned the role of a teacher for his son. Being a teacher himself, he recognized her help and thanked her within, and a pleasant, relaxed smile replaced the smirk. Janani, who happened to pass through the living room, was shocked and confused, looking at her husband with a glowing smile when the house was so tensed.

His agitated mind, pregnant with emotions a moment ago, now relaxed and gave birth to a burst of thoughts. He was suddenly drawn to what Shakti said - 'But, my experiences have been bitter and painful. I thought I am not the right person.' He instantly nodded in approval. He remembered rescuing Shakti from a bunch of molesters on a highway at dusk, on his return from training the teachers in a primary school in a nearby village. He also distinctly remembered how her helpless situation led to repeated sexual exploitations, ever since her family abandoned her. Purushottaman was moved by Shakti's responsible behaviour. He conceded that in his family, two well-educated persons with the social responsibility of shaping future society had apprehensions in dealing with such an important issue. He felt small in front of Shakti.

It was a moment of introspection for him. Being an honest man, he admitted his reluctance to educate his son, on matters re-



lated to sex. With a bit more pondering, he reasoned that the cultural barriers could have incubated this reluctance. But this intuition was immediately countered by “But no cultural barriers ever prevented me from educating my kid on every other aspect of human life, including managing hygiene related to feeding and excretion. Therefore, these must be perceived barriers, without any basis” he concluded.

The flurry of thoughts raised an important query “As elders in the society, are we sexually responsible?” The prompt response was “No”. When he mulled over further, the consequences of this callous behaviour frightened him. He figured that this conscious irresponsibility has, from time-to-time, given rise to and systematically nurtured moral deformities. Firstly, over generations, this has established gender preference and priority, and has led females to firmly believe that they are lesser than equals and males justify their lack of respect for and violence on other genders. More so, he was moved to learn how sexual cruelty is seeded in the society when parents indifferently abandon their children when they realize that their kids have trans-gender identity or homosexual preferences. SivaShakti was a living example for him, who was disowned by her parents when they realized that their son Siva turned into a transgender. “But, how to correct these anomalies? How to prevent the perpetuation of this prejudice?” he inquired.

“Can you take the steps, please?” said a strong voice. He opened his eyes to find Shakti mopping the living room. She requested him to take the steps to the veranda or to the terrace so that she can continue

her work. The conviction in Shakti’s words guided him. He rose from the comforts of the easy chair to take the hard steps towards realizing his sexual responsibility, to impart moral hygiene to his son as well as to his associates, both young and old.

Have you?

-Sreenivas Chavali

# The Epitome of Excellence: Dr. V. Shanta

We at IISER, Tirupati joined the Global IUPAC Women's Breakfast. As a part of this, our faculty Prof Ambika and Dr Vasudharani proposed that we celebrate the occasion by inviting someone who has contributed to the society in an exceedingly exceptional manner. This is when the idea to invite Dr Shanta came up. Celebration is only a reason to bring an eminent person to the campus, believes Dr Vasudharani. She recalled that the first attempt to invite her via telephone was not successful: hence an email was sent to Dr Shanta to the chairman email ID. "We were surprised to hear back from in a positive and enthusiastic manner. She wrote back saying: Women's day was not possible as she was visiting two other places. We aimed to bring inspiring women and hence we decided to invite her at her convenient date, which turned out to be March 17th , 2019", said Vasudharani ma'am.

Our visitor, Padma Vibhushan Dr V. Shanta, is a well-distinguished oncologist in India and the current chairman of Adyar Cancer Institute, the second cancer research center to be set up in India, after the one in Mumbai. The Adyar Cancer Institute was set up by Dr Muthulakshmi Reddy, the first woman medicine graduate of India.

Dr Shanta dedicated her entire medical life, of over 50 years, in caring and curing cancer patients; and also contributed with Dr Krishnamurthi in the development of the Cancer Institute (WIA) from a cottage hospital of 12 beds into a major comprehensive cancer centre of national and international importance. She created a signature of her own with her commitment and endurance. She continues to stand as a pillar in the development of cancer research in India. She is an inspirational woman to the young minds due to her free spirit, compassion and professionalism.

She was the President of the Indian Society of Oncology (88-90), President of the Asian & Pacific Federation of Organisations for Cancer Control (97-99) and President of the 15th Asian & Pacific Cancer Conference (1999). She has been recognized with numerous awards and titles, like the Padma Vibhushan (2016), Padma Bhushan (2006), Ramon Magsaysay Award for Public Service (2005), Padma Shri (1986) are some of them. She was also honoured with doctorates from many reputed institutions and has published over 95 papers in various journals.

As an audience, it was very inspiring to see Dr V. Shanta on a Sunday morning in our campus. At the age of 93, she still amazes the people with her strong independent thoughts and great enthusiasm. She said, "Normally I don't do any outside travelling on Sunday, but the moment it was IISER, I wanted to see the institute and meet the science students". Such was her enthusiasm to meet future scientists. (I witnessed it personally as I got an opportunity to host her and chat with her for a couple of minutes! But missed to take a selfie :( ) She delivered a lecture on 'Evolution of Cancer Care in India'. We were overwhelmed and proud to hear her talking about the efforts people had put into the development of cancer research in India. She humbly mentioned all the milestones in the history of the cancer institute since 1955, including the earlier X ray-based diagnosis of cancer and radiation therapy and how they were eventually replaced by biopsies/histological methods/imaging and chemotherapy which helped us in the prognosis and cure of cancer. These newer interventions in cancer treatment led us to an era of 'preventable cancers' and 'effective cancer management', she said. She also urged the young minds about the importance of future research in the area of palliative care. After the talk, she engaged in an active interaction session with the audience. Following




that our director, Prof K.N.Ganesh, honoured her with a souvenir and shared a few words about her. To double the delight, the oncologist of SV hospital Tirupati, who is also her former student, joined us. He proudly shared his memory and conveyed his gratitude. Then the head of our biology department, Prof. B J Rao said that she is an inspiring person with extreme professional ethics and compassion, which is a rare combination.

Finally, the half-day session came to an end with a standing ovation from the audience to the legend, a real role model for all women in the country. We salute her continuous contributions and perseverance in uplifting cancer research in India and sincerely thank her for setting up a benchmark to look up to in our life.

= Jalaja Madhusudhanan  
(BSMS 2015)





# മഴയ്ക്കു മുമ്പേ...

വരണ്ട കണ്ണുകൾ മാനത്തേക്കെറിഞ്ഞു  
മൺത്തരികൾ മഴയ്ക്കായി കാത്തിരിക്കുവതേറെയായി  
മഴയെത്തുമെന്നോതി മോഹമുണർത്തി  
മഴകാറ്റു വീശുന്നതും ഏറെയായി  
മഴ വന്നു പുണരട്ടെ സോദരാ എന്നോതി  
കരിയിലകൾ കാറ്റിൽ വഴി മാറി  
കാർമേലം വന്നു വാനിൽ കരിപരത്തിയപ്പോൾ  
ഇന്നത്തുമെന്നുറപ്പിച്ചു ഇലകൾ തലയാട്ടി  
നനവിന്റെ ഗന്ധത്തിൻ സ്മരണയിൽ ഞാനും  
മഴയെ പ്രതീക്ഷിച്ചു കൊതിക്കണുമായി നോക്കിയിരുന്നു  
കുളിർ കാറ്റ് വന്നെന്ന തഴുകിയകുന്നപ്പോൾ  
അറിയാതെ ഞാൻ ചിരിച്ചുപോയി  
അലിഞ്ഞൊഴുകാൻ കാത്തിരുന്ന കാർമേലങ്ങളെ  
മാറിലൊതുക്കി ആഞ്ഞുവീശി കാറ്റകുന്നപ്പോൾ  
ഇനിയെന്നു വരുമായിരിക്കും മഴയെന്നോർത്തു ഞങ്ങൾ  
കാർമേലം പൂണ്ട മുഖവുമായി വീണ്ടും കാത്തിരുന്നു .





**Arnab Lahiry**

*was finally released from  
his 5 year sentence.*



**Kaushal Pillay  
Jaikumar**

*"Big brother is watching  
you."  
-1984, George Orwell*



**Chaitanya  
Chawak**

*"God put me on earth  
to accomplish certain  
things. Right now, I'm so  
far behind, I'll never die."  
-Calvin, Bill Watterson*



**Revathy Menon**

*"I'm on a see-food diet."*



**Nandita V Nair**

*"That's what I do. I sleep  
and I know things."*



**Veena Shankar  
Avadhani**

*"If they can make penicil-  
lin out of mouldy bread,  
they can sure make  
something out of you."  
-Muhammad Ali*



**Dibin Baby**

*"Yes, that is my actual  
last name."*



**Kartikeya  
Avadhani**

*"I wonder what I am  
doing here."*



**M. Nithyassree**

*\* Insert something  
awesome here \**



**Anubhav Dhar**

*"Peace out."*



**Mrigaraj  
Goswami**

*"I don't know how I ended  
up here."*



**Ishita Amar**

*"Sometimes good  
decisions involve bad  
haircuts."*



**Hari Krishnan CP**

*"'Kummanism' is an art."*



**Sutirtha  
Chattopadhyay**

*"Life is all about making  
choices: we should try to  
make the right ones and  
try our best to learn  
from the wrong ones."*



**Tejas Borkar**

*"At 18, I realised I'm just  
a kid. I can't understand  
this world."*



**Akshay Dhan**

*"The true measure of a  
shinobi is not how he  
lives but how he dies."  
-Jiraiya*



**Adithya S**

*"Come watch TV"  
- Morty*



**Deevitha  
Balasubramanian**

*"Tea is, therefore I am."*





**Parvathi S  
Gopinath**

*"I used to think I was  
indecisive, but now I'm  
not too sure."*



**Swapnil Mane**

*"Touch your face and  
you'll realize that there is  
one skull inside."*



**Uppu Harish**

*"Fight for what you like."*



**R Raajalakshmi**

*"Empty has plenty.  
Search for it, you will get  
it."*



**Gayathri PS**

*"Get obsessed, get cured."*



**Bismiya Fasni CK**

*"Heal the pain of a seed-  
ling, the woods will cure  
your heart."*



**Jenochristina JP**

*"Why is everything so  
heavy?"  
-Mike Shinoda*



**Akshara Vincent**

*"When nothing goes  
right, go to sleep."*



**PS Vishnuprasad**

*"Life, uh, finds a way."  
-Dr. Ian Malcolm*



# “Rays of hope

- Mrigaraj Goswami | Redmi Y2





