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Inter-IISER Winter Wars

Naven Narayanan



How many times have you imagined yourself sprinting past the others, with the crowd cheering you on, and with one final burst, zooming past the finish line? How many others, have you imagined scoring the winning goal in the finals of a football tournament and then being carried aloft by your teammates, with your trophy, surrounded by an adoring crowd?

IISM, which our very own IISER-P hosted this year, gave us an opportunity to do what we dreamt of—script glory, which had, in the past, remained just a fantasy. Personally, from the moment I slipped into my jersey, every fibre of my body was itching to get onto the field.

The event began with a formal opening ceremony with all the athletes lining up. It was akin to the 'calm before the storm'. Students from different IISERs and NISER mingled with each other, sharing stories, and in general, having a great time. One of the great things about this event was that it catered to various 'pal-

ates' (if I may call them so). The line-up of sports was diverse, ranging from the very common cricket and football to the more indigenous kabaddi and kho-kho.

The first day of the event brought about a drastic change in the attitude of the participants. Determination and a desire to win replaced the amiability which was visible the previous night. The long-distance events were up first and these events were quite frankly, a farce. The bagging of all three positions in two events in the ladies' category underlined the domination of the IISER-P girls in these events. Following a hurried breakfast, the basketball tourney began. Being one of the few sports played across the country with equal fervour, it showcased the abilities of the teams and pushed them mentally and physically to the limit. The boys team who were the defending champions endured a scratchy start, but their experience and talent shone through and they emerged victors again.

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The IISER-P girls basketball team, though, seemed to read a completely different script, and quite literally bull-dozed their way past all those who stood or ran against them. Be it throwball, volleyball or badminton, our contingent of girls proved that they were streets ahead of the competition.

More success was to follow that day as our cricket team notched up a comfortable victory, though in vain. Our chess team too, cleared their hurdles successfully to claim another gold. The kabaddi and

kho-kho teams followed suit, thrashing their opponents to add to the medal tally. The football team however, was quite unlucky and was eliminated on goal difference. We must also appreciate the efforts of the volleyball team who battled bravely, even though there were slight issues with the regularity of their coaching. The TT team managed to grab a silver medal as well.

No tournament in sport is complete without a bust-up between teams and this time it broke out between IISER-M and IISER-K in their fiercely competed volleyball match. This event

was however won by IISER-B who had quite admirably gone from being the wooden spoons of IISM 2012 to genuine contenders in almost every sport. After three exhausting, exhilarating days of sport, the rolling trophy went to IISER-P who had topped the points chart by a sizeable margin.

To call IISM a sports fest would be an understatement of the highest order. Friendships were forged and rivalries re-ignited. The promise of rekindling the same sort of adrenaline rush in the years to come does not seem too impossible. Kudos to IISER-P! Over to you Mohali!

Hip, Hip, Hippocampus!

Sadhana Panzade

Hippocampus: From Synapses to Behaviour' was organised under the auspices of the Indian National Node for Neuroinformatics in association with IISER-P from 1st to 3rd December 2013.

The workshop was a congregation of leading neuroscientists, working in the fields of computational and experimental neuroscience, to address questions that will add to our current understanding of the fields. It was an exciting initiative with the potential to lead to further investigations into hippocampal formation, spanning different levels of organisation.

Investigations ranging from the mechanisms governing the functioning of single synapses to the study of dynamics of large-scale neuronal networks and their effect on behaviour were talked about in the workshop.

The hippocampus has proved to be an extraordinary model system over the last several decades. At the subcellular level, the signal-

ling pathways underlying short- and long term plasticity have been deciphered from studies of the CA-3 CA-1 synapse of the hippocampus.

The interplay between excitatory and inhibitory neurons in hippocampal formation generates a rich repertoire of spatio-temporal patterns, which plays an important role in encoding and recalling environmental inputs. Hippocampal-dysfunction-associated neurological disorders have provided us insight into the role of the hippocampus in behaviour.

A synergy between quantitative modelling and experimental studies of the hippocampus has made significant contributions to our understanding of brain function in health and in disease.

It was a great opportunity to interview these brilliant scientists who shared their perceptions of Neuroscience with us. Being interested in the field, it was a highly motivating experience to be a part of the Hippocampus workshop.

Sci-fest - Disha Style

P M Shreenidhi

Vigyan Mela, the annual science fest conducted for the Disha kids, was held during the third weekend of this month. The mela kick-started on Saturday, with the chief guest, Prof. N.K. Subhedar, addressing the children. The way the usually naughty kids listened to him with rapt attention was amazing. It was followed by a singing performance by the kids of the 'Vasti'. An elocution competition was then conducted in which the kids

spoke with utmost confidence. The programme for the next day consisted of clay-modelling and a drawing competition for the tiny tots, while the young adults came to IISER and participated in science demonstrations and model-making. The afternoon was packed with fun games and puzzles. The mela concluded with a prize-distribution ceremony and the children displaying their artwork and drawings to proud parents.

Academic Buzz

Aashay Patil

Why should you write GRE?

If you wish to pursue doctoral studies in a university in the USA after graduation, the most important exam is probably the General Test of the Graduate Record Examination (GRE), which is mandatory for admission to any graduate program in the USA. When to give GRE?

You can give GRE at any time of the year. However, the deadlines of most US programs are in December-January, before which your GRE scores should reach the universities. The latest you should give the GRE is at the end of November. However, the best time to give the GRE will be in May-August, when your project load is low. This will also give you an ample amount of time to prepare for other tests, like the GRE Subject test and TOEFL. How to prepare for it?

For the Quantitative Reasoning section, it will suffice to just solve a bunch of questions from books or tests, to brush-up on your basic math concepts.

The Verbal Reasoning (VR) part of the exam is where you need to work hard. Online tests which show your percentile scores are extremely helpful. Develop and improve your vocabulary. Some recommended sites are vocabulary.com and quizlet.com. Although the Analytical Writing section is independently scored and is not a very important factor in admissions, it will be imprudent to ignore it. A bad score in this section will serve as a black mark in your application. Practice writing tasks given on the official ETS website. If you score below 4.0, you need a lot of practice. In the last 8-10 days before your GRE, give a lot of full-length mock tests (at least 5), in actual testing conditions and at the same time as your GRE slot. Best of luck!

Party All Night!

Papia Bera



Photo : Sharvaree V

This year, the Dance Club decided to kick-off the semester's activities with a dance party. The idea was not to host the usual party, with drinks, food and mingling; it was more about letting go of your inhibitions, being carefree and dancing all night long. So, on the 10th of January by 6:00 PM, the multi-purpose hall at HR-4 was decorated to create the effect of fancy, coloured lights with the ingenious use of bits of coloured paper. A long playlist of songs with genres ranging from House and R&B to Bollywood was used, though Youtube was always on standby for the crazier song requests.

It started out with a very small trick-

le of people; a group of ten or twenty jumping around as a few watched from the open doors, deeming them to be too crazy to join. As more people arrived, all trying to be fashionably late as is the norm in a party, everybody spread out across the multi-purpose hall. The tempo picked up and the song requests got crazier and more frequent. It all ended rather quickly and all sixty-seventy sweaty people left for dinner, though not before requesting another dance party in the following week.

Even though the response was mild, the Dance Club promises to conduct more of these so that no one misses out on the craziness.

Venki Talks

Divya Gadkari

On the 7th and 8th January, IISER Pune hosted two talks delivered by the distinguished Nobel Laureate, Prof. Venkatraman Ramakrishnan. The first talk, which was held on 7th was meant mainly for students and researchers who already had some knowledge of ribosomes and their role in the translation of RNA. Prof. Ramakrishnan expanded on how the ribosome recognises the specific tRNA that codes for a particular amino acid and how this tRNA is transferred to the ribosome.

The next talk, held on the 8th, was a colloquium on antibiotics and the mechanism of their generation in cells. He explained that the main principle behind the functioning of antibiotics was the blocking of the production of proteins in a pathogen. This could be achieved through a variety of ways such as by blocking the interaction between tRNA and the ribosome, allowing the attachment of a mismatched tRNA etc. After giving various examples of old and new antibiotics, he cautioned us against their improper use and serious negative consequences.

Prof. Ramakrishnan also made us aware of how scientific research has a direct impact on the society.

A Refreshing Course

Akshay Khadse

Prof. R. Srinivasan designed a refresher course in experimental physics, aimed at improving laboratory programmes in universities and colleges to help students understand the importance of experimental skills in physics, which are often neglected in curricula. He is an experimental condensed-matter physicist who now fully devotes his time to conducting refresher courses.

Until now, 54 such courses have been conducted throughout India.

The latest was conducted in IISER-P from 9th to 24th December 2013. There were 34 participants comprising of B.Sc, M.Sc, and Ph.D students, and professors from as far as NIT Srinagar.

It started with lectures on the experiments to be performed in the course by Prof. Srinivasan, Prof. T.G. Mahesh from NAL and various faculty members from Goa University. Lectures were followed by long hours in the laboratory performing various interesting experiments from the fields of Non-Linear Dynamics, Phase Transitions, Electricity and Magnetism, and Mechanics.

Prof. Ogale of NCL gave the first of the three guest lectures. In his lecture, he talked about the need for an alternative energy-source and highlighted the importance of solar energy. He also showed us a new technology developed to harvest solar energy us-

ing super-capacitors, which he and his students at NCL had developed.

This was followed by a talk given by Prof. Dharmadhikari of Pune University, in which he spoke about a low-cost Scanning Tunneling Microscope (STM) he built, which is on par with the STMs available in the market.

The last of the guest lectures was given by Prof. Arvind Gupta of IUCAA. He demonstrated how things around us could be used to make simple toys which could explain important physical laws to children. The course concluded with two experimental kits being awarded to the best participants.

Media Mania with Madhu

The following is an extract from our interview of one of the founding fathers of IISER's media centre, KP Madhu. Madhu's chatty demeanor, left the Sentience team speechless (quite literally!).

ST- What kindled your interest in promoting science in the media?

KPM- I studied physics, and then neuroscience. I wanted to find the connection between the mind and the brain, to tackle the problem scientifically, and not philosophically. So I chose the route of life sciences. Once, I was reading about science in *Nature* at a library in Kollam. Some guy approached me and suggested that I write scientific articles for their magazine. I did and they were published immediately. After this, I started writing articles for various Malayalam magazines. Soon after, I moved to Delhi and expanded my horizons. I worked for the UGC educational television initiative. I wrote and produced documentaries. And from there on, I didn't look back.

ST- How did the idea of a scientific radio show come about?

KPM- I am not a radio person. But since Nita was around, I was completely confident that we could do something. We talked about it and also discussed it with some students.

There is this community radio at the University of Pune, whose footprint is in such an area where there are all kinds of educational institutions.

The region is full of young, educated people. So, we thought we could do a good science show without having to dilute the content too much. The idea is that over a course of time, we should have our own channel, and it should be run by the students.

ST- What is the feedback that you have got regarding the radio channel from IISER and elsewhere?

KPM- Radio is very difficult to deal with, in terms of response. We don't know who is listening. No survey is done. So we throw out information into the waves. What we have is primarily a campus radio. So there

would not be too much of a listenership. But I am not too bothered by this. Even if 22 people listen to the show, I will be very happy. 22 people! That's a class, no? [laughs]

ST- Are there any plans of having a regular television show?

KPM- I expect that by the end of next year, we will have a series of programmes on air. We will have a full-edged production centre by the end of February. From February to December, all scientists who visit IISER will be interviewed. If there are 30 such interviews, I can package twelve to thirteen of them, which will constitute one season, and give them to a television station. Of course, the first few will be mess-ups because we still have to learn to handle the equipment. Over a course of time, if we



have the capacity, then we can look for a channel. I do not see this happening in the next five years, at least.

ST- What is your opinion on the present student culture at IISER?

KPM- We call it the Indian Institute of Science Education and Research. But when we come in, there are chunks of people who speak the same language. For example, in the initial stages, there was a huge section from Andhra Pradesh. Now, I find that there's a huge sector from Kerala. So, we have people who speak the same language and they mostly mingle amongst each other, which is fine for them. In reality though, this

practice is tremendously disadvantageous to the students themselves.

The parochial attitudes with which we come in with have to be broken through. We have to be world citizens, and not just Indian citizens. And yet, we are so narrow that we don't want to expose ourselves to the Himachali or the people from the North-East. So we do not completely discover India.

ST- Do you have any hobbies that you indulge in?

KPM- My main hobby is communication design. For example, I have started a blog now, Science News for CR. It's fun to do. I experiment with different kinds of designs. Not visual design, but communication design such as how do you begin and end so that you make an impact. Basically, the design of a page is what I am talking about. For me, work is a hobby. I read books, newspapers and journals. I read mostly scientific material. All this feeds into my work. I also listen to music. I would love to play (a sport), maybe volleyball and also to attend all lectures and colloquia that take place.

ST- As a veteran in the field of journalism, we would like to know your opinion about Sentience and hear your suggestions, if any.

KPM- There is a lot you can do in terms of design. Selection of fonts is one major aspect. You think that the text is more important because you write it. But, design is as important. We say, Content is the king, and style is the queen. For example, breathing spaces have to be provided in a page. That notion of design is not there because you are science students! You learn on the run. You should not have more than two fonts on a page. What size? Do you want italics? Do you want a box somewhere in the page? How many columns?

These are issues that you have to look at. These are not things that can be taught. These are things which should sink in here [points to his heart], and not here [points at this head]. Design is an art, and not a science.

Diving Deep

Mohammed Aamir Sadiq

Whales, the fascinating creatures that wander the oceanic abyss, are capable of dives that no other kind of mammal can execute. Some, like the humpback whale and sperm whale can stay submerged for a very long time, diving down more than 2 kilometres deep, in search of prey. Sperm whales have been known to hunt down colossal squids in the icy depths of the Arctic waters. So, a very obvious question arises. How do they do it?

Whales have small lung volumes. Being as it may seem, this adaptation works out just fine. At great depths, high pressure forces gases to dissolve into the blood. If ascent occurs too quickly, these gases diffuse out of the blood, causing a condition known as 'bends', which is a decompression sickness. The lungs collapse with the dive. This helps in diving by decreasing buoyancy. Re-enforcing cartilage bands on the alveolar sacs help the lungs withstand these

changes of shape. Surfactant proteins coating the alveolar sacs prevent them from sticking together.

Buoyancy can be controlled by other methods as well. Sperm whales have a unique specialisation wherein their head cavities are filled with a spongy tissue containing spermaceti oil. This oil has a low melting point. At the start of a dive, cold water is passed into the cavity causing the oil to solidify. This increases the average density of the animal, thus decreasing buoyancy. During ascent, vasodilation around the cavity increases temperature. This melts the oil, reducing its density.

But if the lungs are small and collapse during a dive, one wonders where the oxygen that sustains the dive comes from. Well, whales have large volumes of blood which come rich in haemoglobin. The muscles have enriched oxygen stores owing to the high myoglobin content. Incredibly, even such novel adaptations do not enable the whales to stay submerged for as long

as they manage to. The whales must have some secret up their sleeve. Studies show, that during a dive, whales can voluntarily regulate blood flow to different organs. By selective constriction of arteries to other organs, oxygen delivery to the heart and brain is optimised. These other organs, which include the kidneys, intestines, etc. have better resistance to hypoxia due to their immense amounts of myoglobin. In order to reduce lactic acid build-up in the muscles, whales adopt a characteristic 'swim and glide' technique.

Interestingly, this is also seen in many birds like wagtails and woodpeckers. Studies to understand more about these cetaceans are well underway. What physiological revelations they will yield remains to be seen.

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1. Caroline Wood, Catalyst (Dec 2011); marine bio.org

Bleeding love



Photo : Dr. V. S. Rao

SO FAR, Yet So Near

Karthik Prabhu

RAAF captures flying saucer on Ranch in Roswell region. This was the headline of the newspaper Roswell Daily Record dated July 8th 1947. It was reported that the Roswell Army Air Force (RAAF) had recovered a flying saucer on the previous day. However, the very next day the U.S. government announced that they

wait. If the enemy somehow found these spheres and broke them open, they would find nothing inside. It was a hollow metal sphere. What was so special about these spheres?

How is this related to the UFO story? The Roswell incident was also a project of Maurice Ewing, called Project Mogul. The common factor was the

the external pressure of upto one km depth. And that is exactly where the SOFAR Channel is. At this depth, it would succumb to the massive pressure and explode, sending out sound waves. These waves could travel across tens of thousands of kilometres. These waves would then be picked up by microphones placed at 3 or more different places at the same depth. By determining the difference in times of arrival, the exact location of the stranded pilot could be found, similar to the method used by GPS.

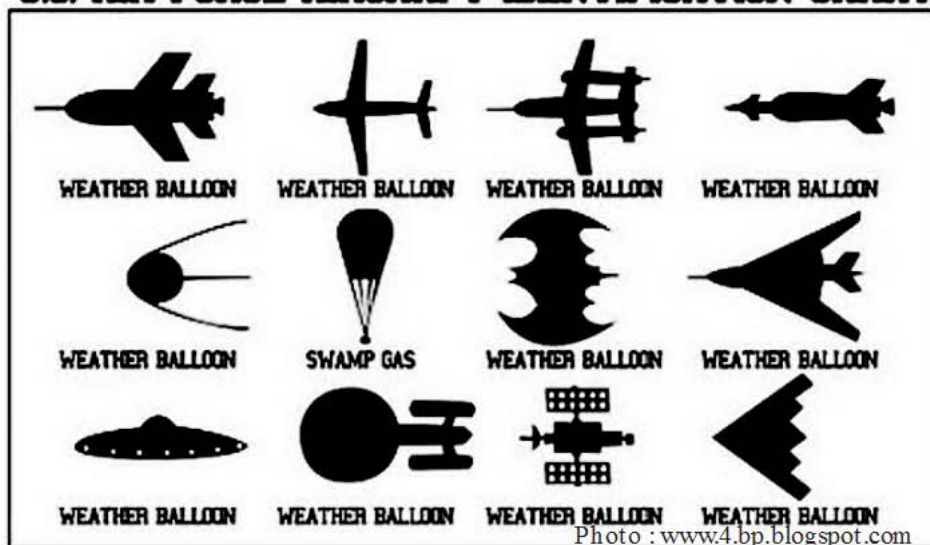
Let's get back to the Roswell incident. Now, Maurice predicted that there must be a similar channel in the atmosphere. The pressure goes on decreasing as we move up. Also, the temperature decreases with altitude. However, after about 50,000 feet, the temperature rises. This is because of the presence of ozone in this layer. A SOFAR channel is also present here. And this was the basis for the 'Project Mogul'.

Specially-designed balloons with sophisticated microphones were placed in this layer, which were used to detect nuclear explosions. Whenever a nuclear bomb explodes, the hot air rises up rapidly. When it reaches this layer, it generates a loud boom which travels across the world. However, this process of detection was quite cumbersome. Instead, they found better ways to detect nuclear bombs - earthquakes.

Very sensitive seismographs were developed and put around the world. This led to 'Project Mogul' being dropped. Nevertheless, it was a successful project. It so happened that one of these specially-designed things crashed. Since it was highly classified information, they had to lie that it was a weather balloon.

No doubt, this is a fantastic discovery for mankind. But the whales have been using this sound channel to communicate for a very long time. Amazing, isn't it?

U.S. AIR FORCE AIRCRAFT IDENTIFICATION CHART



had actually recovered a weather balloon and not a flying saucer. As you might have guessed, they were lying. It was too exotic to be a weather balloon. It was kept confidential for many years until the U.S. Government announced in 1995 that they had lied.

It is no longer confidential and I can safely tell you what it was. But before that, let me tell you something else that is related to this topic. During the Second World War (WW-II), a scientist named Maurice Ewing was studying ocean acoustics. He predicted and verified the existence of something which was very crucial during WW-II. If any pilot was ever shot over the Pacific Ocean and managed to get on a life raft, he couldn't risk sending radio signals back to the base as the enemies would capture him. Instead, he had these spheres called SOFAR spheres or SOFAR bombs in his emergency kit. He had instructions to drop one of these spheres into the ocean and

movement of waves.

Variation in the speed of sound waves in the ocean is quite intricate, but it mainly depends on temperature and pressure. The temperature decreases rapidly until a certain level and hence the speed of sound goes on reducing. At a certain point, the increase in pressure overcomes the effects of temperature, and the speed of sound starts to increase. At a depth of about 1km, the speed is minimal. This region was called the SOund Fixing And Ranging (SOFAR) channel. Waves bend towards the side that has a slower wave velocity and thus change their direction. Thus, the waves generated in the SOFAR channel are effectively reflected back into the channel. This movement is similar to the propagation of light waves in an optic fibre.

The SOFAR spheres were designed such that their weight was more than the weight of an equal volume of water. It was strong enough to resist

What People Deserve

Rabindro

Early economic principles were based on the assumption that the people participating in the market are rational and this led economists to believe in the existence of an 'invisible hand' that balances the prices in the market. Hence, economics was studied through game-theoretic modeling, the mathematics of a game that assumes that the participants are 'rational'. But then, these models failed and the markets crashed unpredictably, to the great surprise of mathematician-cum-economists. It turned out that people are not that rational at all. Today's economics is chiefly the study of human behavior which is assumed to be fundamentally irrational.

What does all this have to do with democracy? Well, several advocates of democracy make the same assumption when they praise democratic systems and plan the future of this world. People elect a government whose policies are the best manifestation of public opinions. And since people are rational, their opinions are always for the collective good of the society and the democratic system provides a marvelous feedback system, forcing the governments to act according to the wishes of the masses, and the wishes that are for the good of the people.

is very fundamental assumption has given some leaders of the world a dream - to create a 'new world order' and in their attempts to create a free world they fought many wars.

What is ironic about this whole situation is that the likes of Rousseau, one of the founders of modern democratic ideas, never assumed that democracy is a magical potion which will provide the ultimate solutions to the world's problems. They merely suggested that it is a fairer form of governance. Incidentally, Sir Bernard Shaw has condensed this philosophy into one line: Democracy is a device that ensures we shall be governed no better than we deserve. Our strong urge to believe that the democratic

system is a magic potion is due to the appealing and simple logic of the 'vote and test' system. But we have to be careful because it is not a computer algorithm but a social system, an affair that is much more difficult to understand.

Assuming that democracy is a self-sustaining magical formula leads to us being dormant, unresponsive and carefree about our system. We need to keep in mind that democracy is more of a verb than a noun. It works with the participation of people. So when the US extends its hand to help others establish democracy, it needs to realise that this version



of democracy will be a short-lived phenomenon and barely of any use, because unless the demand for democracy arises from the society that is supposed to practice it and unless the society is ready to practice it, democracy is more of a burden - a fair burden but a burden nevertheless.

What has happened in India and elsewhere has shown that people, irrespective of their number or educational and economic status, can be fooled, not just for decades but for centuries. They follow the crowd and get easily polarized on the basis of caste, religion, colour and surnames!

The fact that democracy is not a mere

system but a practice, levies upon us, or anybody who can read this article, a responsibility to make it work. But blessed people like us don't find participation in the democratic system interesting. The electoral turnout in India for the middle and rich class is less than 40 percent. Hence the responsibility of running the democracy of this country is carried by the poor illiterate mass, for whom the technicality of law-making, political equations and significance of constitutional rights and duties are concepts as alien as their dream to prosper. It's a bit unlikely that a poor farmer in the middle of a drought has the information and right state of mind to make a rational decision.

So when the streets are full of people cursing the government, when someone sits for an indefinite fast to blackmail the government to pass a bill, when a well-settled IAS officer quits his job to fight against a powerful leader and is elected to become a CM, I see it as a good sign for our democracy. It means people are moving their feet! While the politicians were alleging that these recent events in Delhi are undermining the democratic status of the country, President Mukherjee accepted that the movement of Anna Hazare has added an extra dimension to the democracy of the country, and one could not have agreed more. Democracy should not run just on elections, it should run on mass movements, people emerging every now and then on the roads to shout against a government decision, because no government can be perfect. If people do not respond, they are not doing their job.

No one knows if Arvind Kejriwal is a man with good plans, I doubt if even he is sure about that, but the sheer fact that he rose up against a government and turned it upside-down is a good sign and it is required that every decision that he makes should be dealt with with the same scrutiny that he showed.

We, at IISER Pune, lead privileged lives and we don't need to reiterate why. We have noted before that we are growing as a community and that academic opportunities, student spirit and campus culture are only getting better as time passes. We've been given wonderful facilities with more still to come and we're running more clubs and activities than ever before. Things are looking good and we're all enjoying ourselves, but there are always issues to address and improve upon. Here and now, we think we need to bring up an issue that has always been a thorn in the side of any society- a collective civic or common sense, and its lack thereof.

It's quite remarkable that as an institute full of scientists-in-training, who've all passed grade school, and in most cases, difficult nationwide examinations with superb scores, we need to deliberate on this. We are supposedly the future of this country's science, tomorrow's leaders, the great next generation, here to further our own education to contribute to our community and be examples of good citizens, and yet, many times, we act as though our brain slipped out of our head and onto the pavement.

The most irksome display of the vacuum of civic sense on campus is often viewed as the most innocuous, making it more damaging in the long run. We're talking about littering, and it is done by a staggering number of people, often in the dumbest of places, such as five metres away from a large and very visible dustbin (and this is by no means an exaggeration). All of us complain about the filth on the roads of Pune and of India in general; we all want it swept away and scrubbed, but we litter anyway, since 'somebody will be paid to clean it up eventually'.

The logic behind it is spectacular and we are meant to be among the country's more rational people. There are bucket loads of trash lining the road from HR-4 to Mendeleev, there is a mini-landfill opposite the Lecture Hall Complex and the cricket ground and hostel lawns are adorned with

crushed coffee cups, candy wrappers, and thumbs-Up cans. We need to keep our own campus clean before we can expect it outside and we need to stop throwing garbage like it's confetti elsewhere too. It's ridiculous, especially when we think about who the litter is coming from.

We move onto the abused furniture of the Lecture Hall Complex. Undoubtedly fancy and polished, they looked quite posh when we began to use them enthusiastically last semester. They're still pretty to look at, but observe closely and you can discern hieroglyphics, song lyrics, hastily

An issue that has always been a thorn in the side of any society, a collective civic or common sense, and its lack thereof.

made calculations and declarations of the 'X loves Y' variety scrawled across several desks. Several rows of seats shake like a 6-D amusement park ride, some desks are broken and still others are missing altogether. We all know that this stuff has been given to us; it's ours to use and enjoy. It's our responsibility to make sure that we make it last, leave it usable and we're not doing a very good job at the moment, which is, again, strange, given our supposed capacity for reasoning and problem-solving.

Another point that we should be troubling ourselves with is food wastage. The mess put up daily statistics detailing how many kilograms of food were being thrown away by mess-users last year. The numbers were ugly-many days saw the figure climb close to one hundred. Dumping that last spoon of gravy or that extra cucumber slice on the plate into that green bin is

different; it happens sometimes, we're not contending that- but we're talking about mountains, sheer mountains of rice and stacks of uneaten rotis and toast, tossed every meal because we don't think about how much we really want to eat before we scoop food onto our trays. It's unacceptable, simply because it's unfair to the hungry, and to the people who make it. It's the most basic stuff that we learnt when we were children; our mothers told us unequivocally that it was plain wrong to waste food- and here we are, doing just the opposite day after day. We're better than that and we can change this.

Arguably the most inconvenient instance of the death of community sense on campus is smoking (whatever the substance) on the hostel premises. We are not here making a stand against smoking or the consumption of narcotics, nor are we going on about the health hazards to the user and the implications of the same. We are not saying that people should or should not smoke. We are simply saying that smoking in the hostel, where the stench (or fragrance, depending on your inclination) easily wafts from room to room and to different doors through the wonderful process of diffusion, is extremely irritating to those who like their air smelling like air. It is inconsiderate, shows a disregard for other people's health, and is, in the first place, disallowed.

Much of what we are trying to say may end up annoying people, but it needs to be said. The fact that it needs to be said is by itself sad and we're sure that most will agree that our griping is reasonable. We repeat that we are students who receive much more than our counterparts across the country in almost every respect, and we need to hold ourselves to a higher standard when it comes to taking care of our property and our surroundings. We need to act like the educated, considerate individuals we are. All it will take is a little awareness, effort and the willingness to keep things working for the community. We can do it and we are confident that we will.

Animorphs

Mangesh Sonawane

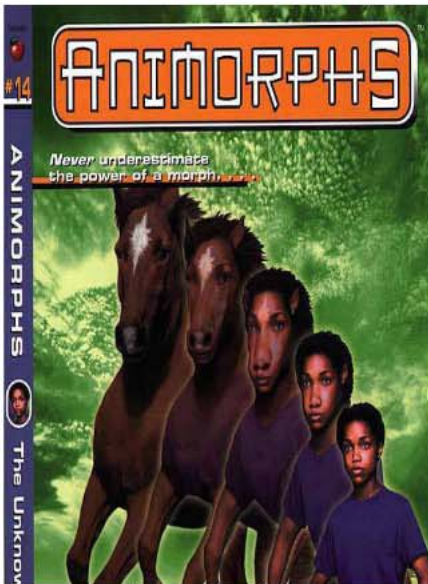


Photo : google.images.com

Imagine you are walking past an abandoned construction site with a few friends, passing time as you usually do, when you come across what appears to be a falling star. You see a spaceship and a weird blue alien who has the ability to talk to you via your thoughts. And he gives you a strange ability; the ability to morph into any living being that you touch. What would you do?

At first sight, this may seem like a regular sci-fi novel. However, it is an epic series composed of 54 books and 8 extra supplements that weave through the main story.

Jake, Cassie, Marco, Rachel and Tobias are the five kids who happened to acquire the power to morph. Along with this the dying alien (called an Andalite) tells them that the Earth is under invasion by a parasitic alien species (called Yeerks) and implores them to fight back.

Published by Scholastic, the series is

essentially a set of children's books, but despite the simple language, the story conveyed is heart-rending. These kids, initially thrilled with their powers, fool around until they discover the reality of the situation. The story talks of the grave dangers that exist, of how they evolve into hardened warriors, of stealth, sacrifice and sorrow, of loss and victory, of fear and courage, of learning to live with the consequences of one's actions, of reality-bending revelations, and of morality.

Sixty books may seem too many. For a story this intricate and beautifully detailed you simply can't get enough. You don't simply read it. You act in it. No other fantasy series is quite comparable to Animorphs. Not Harry Potter. Not even the genre-defining Lord of the Rings. Here is a journey for the mind, a discovery.

If you haven't had the pleasure of perusing an Animorph, I recommend that you begin today.

Western Classical - Getting a Small Picture

Prof. Sunil Mukhi

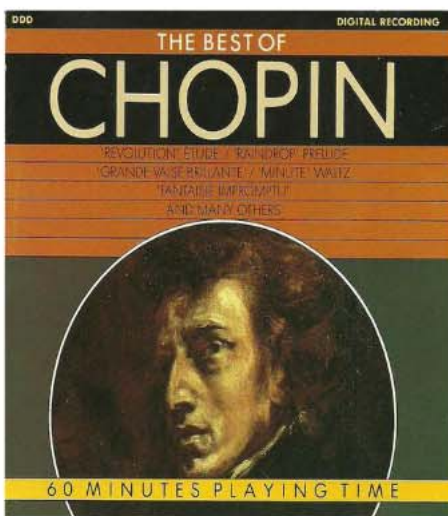


Photo : www.userserveak.last.fm

For someone attuned to Indian music, it is easy to perceive western classical music as a collection of pretty noises. But it's harder to really understand what the music signifies and this discourages a lot of us. The structure appears very formal and there are a huge variety of forms: opera, ballet, symphony, concerto, sonata, waltz, fugue, etc. So let's first try to look at the more playful aspects of this music. Music is supposed to be fun after all!

Ballet is a dance form that tells a story, with the accompanying music serving to communicate the storyline. One of the most popular ballets is 'The Nutcracker', created by the Russian composer Pyotr Ilyich Tchaikovsky. After listening to it a couple of times, you will be able to recognise and even hum the various tunes of which it is made up.

Another way to initiate oneself into

Western Classical music is by listening to the piano or pianoforte, which means so -loud, coming from the fact that the volume of sound is proportional to how hard one strikes the keys. This enables the piano to convey very delicate shades of emotion. With this instrument, a single performer can produce a level of complexity comparable to an entire orchestra.

Some of the greatest piano works are sonatas by Mozart and Beethoven. 'Moonlight Sonata' by the latter is a particularly well-loved piece. A beginner may prefer to try out some very short and incredibly beautiful - waltz compositions by Frédéric Chopin. Go to a quiet place and listen carefully to one of the most famous waltzes ever written: Chopin's 'Minute Waltz', technically known as Opus 64, No. 1. It lasts less than two minutes, and you will be hooked forever.



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Of Confusion, Chaos and Conspiracy

Lokahith Agasthya

Despite the IISER administration, in a moment of ingenuity of thought and foresight, having provided the hostel with two li's over one, one has to endure long torturous waits for the li to arrive at the right door almost every day. The wait often involves furrowed brows and lewd references to the non-existent mother and sister of the li's in official languages of the country other than English.

The program somehow screws up the simple dynamics problem and seems to ensure the li takes the most circuitous route possible to the said door.

Perhaps more frustratingly, the li insists on capping off this victorious lap with a triumphant song designed to irritate before opening her doors for the impatient throngs. Sahana Srivathsa, a lanky second year, captain of most of the IISER girls' teams and best known for being an unusually tall member of the girl species (and also my friend) assures me that the routine is similarly cumbersome in the girls' hostel.

Rather than fume and spoil the rest of the day, I, the eternal opportunist, attempted to understand the cause of the awed programming and the baritone that succeeds it. The answer presented itself to my mind reasonably quickly. The li's were designed and programmed by IIT graduates. Weary and jealous of the ominous growth of IISER Pune as a world-class institute, they designed the singing li's to drastically reduce student efficiency and thus thwart us from taking over the mantle of India's best institute. Those scheming bastards.

IITians are not the only folk endeavouring to thwart their rivals from performing well. The Chinese, as a celebrated and reputed economist of 21st century India alleges, are the brains behind making the new one rupee and the two rupee coins more alike than identical twins. He went on

to do some pretentious mathematics and calculated that the time wasted in distinguishing between the two coins over millions of transactions by a billion Indians cost a total of 53.7 million man hours per year since 2006. If these hours were put to productive work, we could grow faster by a rate of 10%.

One sees it immediately of course. In his essay *Dealing with Middle-Eastern Conspiracy Theories*, Daniel Pipes notes that the assumptions distinguish the conspiracy theorist from more conventional patterns of thought: appearances deceive; conspiracies drive history; nothing is haphazard; the enemy always gains; power, fame, money and sex account for all

Conspiracy theories have often been proven right. And even if incorrect, they prove entertaining 86.4% of the time. For example, certain people have put forth a theory that 38% of all statistics are not backed by data, but simply made up. I would have personally made that number much larger.

Not only are conspiracy theories entertaining, the fact that people actually believe them shows the nascent fever deep inside all of us - that the government, the media and the rest of the world are out to deceive and deceive only. They are screwing around with us.

Numbers, as statisticians regularly prove, are wonderful weapons for the liars. The common man skips the fallacious steps and is appalled by the end result. We at IISER though, are smarter than that.

Here are some interesting conspiracy theories that have turned a few heads. Some are so blatantly true that you would have been under the impression it was a well-established fact, while others border on the hilarious. Some though, do turn heads. USA brought down the twin towers to give themselves an excuse to attack Afghanistan and round up Muslims

for sterilisation without being questioned to serve purely racist ends. This particular theory is popular with several educated public figures and journalists. The theory further claims the CIA planned and executed the attacks; the terrorists involved were all made up. There is oil hidden somewhere in the mountains of Afghanistan. A simple Google Search will give you several hits, documentaries and comprehensive proof.

Similarly, another theory claims the Indian government executed the 26/11 attacks on Mumbai simply to kill Hemant Karkare. The bullet-proof jacket was intentionally designed to welcome bullets into his heart as he had dug deep into the secrets of Sharon terrorism and the RSS involvement in terrorism.

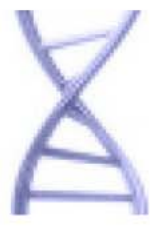
At Dr. Homi Jehangir Baba, of Dr. Homi Jehangir Baba/ Pashan Road fame was killed in plane crash master-minded by the CIA to prevent the Indian nuclear programme growing beyond what the USA found it is another, fairly realistic theory.

And shockingly, several people claim USA invaded Iraq just to get at their huge oil reserves. (This one tickles me, I just couldn't have guessed it)

So while they might routinely turn out to be hokum, it is advisable for one to indulge in formulating conspiracy theories at moments of utter unemployment. They can give rise to interesting debate and discussion issues, form excellent food for thought for one on the pot pondering.

The only con of an excess of thinking about conspiracy theory explanations for simple, everyday events is the beginning of the path to schizophrenia.

It's a scheming world out there. May God spare IISER and India. (<https://sites.google.com/site/unsightiitb/home/the-chinese-coin-conspiracy>)



pr e s s i o n

Oh My Goship!

The Mad Chatter

A rumour that this esteemed newsletter has failed to publish a tongue-in-cheek article in over a year has been floating around. So, we have decided to swoop down and sort things out by acknowledging the questionable news of the past year:

The Chilling Discovery of Botanical Projects: The winter began with the storming of our hostel rooms by faculty members who were puzzled to see what was cooking. Further investigation demanded the searching of all rooms, which inevitably lead to the suspension of certain herbivores and the confiscation of equipment.

The Hunger Games: While some sore losers found room in their hearts to set up Facebook pages devoted to cribbing about the home version of this sporting event, public opinion was that it rocked. It was also good to see the unfinished mess being put to good use. **Girl Power** was definitely IISER-P's motto, not to say that the boys didn't do their part, of course. The tallest female was certainly the most popular amongst the sportsmen while the speediest got eight medals to her name.

The basketball team found themselves captain-less [refer above] but the gold was still a sure-shot. All in all, way to go IISER-P for winning it all and for being the best conductors of donut parties!

O K Team: While this year's celebration of youth, culture and expression (to take a page out of their book) was debatably (and it has been done many times) the best IISER has seen, the behind-the-scenes wasn't always rosy. With a bossy core team and a bunch of rebellious club heads and volunteers, every idea was peeled apart (sometimes put ruthlessly to shame) and as a result, new stuff happened.

Jee Van: Certain unhyphenated names have come to the notice of this grammarly newsletter. Whether it was meant to be a pun or just a phase of

the cell cycle remains unknown. Either way, we seem to find that the students' (and newsletter's) best efforts at showing the admin what kind of names they wanted were in vain.

Safe and Secure: A little light of mine, I'm going to let it shine. Indeed with the setting-up of so many floodlights and the keeping-on of all lights in all buildings, IISER has done just this. The installation of CCTVs and the introduction of new guard posts has rendered the campus extra-secure, making it difficult for lovebirds to nest (Good riddance, some might say!).

I Shout and Someone Seems to Hear: On a slightly different note, one must admit that the relaxation of gate curfews and the sparing of lectures for late-coming has made life easier for late-night discussers. Also, the post-1-am world wide web and an open co-ed student room with wi-fi have been blessings, no doubt. Tables (TT and otherwise) and chairs have materialised in our hostel common rooms too. These are definite signs that change is here, much like a mini-revolution in IISER. And we can't wait.

From IISER, with Love: In accordance with the Poincare recurrence theorem, the room for reading once again has no door. Love-birds have hence migrated to new paths, giving the PhD students a clear view of illicit (perhaps promiscuous) activities. With V-day coming up, love seems to be in the air.

Hearts of Clubs: The clubs took the phrase coming alive in the odd semester, to a whole new level. What with the Goa-going, flash-mobbing and extensive drama of the dance club, the Mad-Eye-Mood-I prelims participation of the drama club, the quizzical Joans of the quiz club and the trillion (or more) old trips of the photography club, all we have to say is that it's a miracle there were first years left to join us!

Foodie Corner

Shruti Paranjape

For any die-hard Masterchef fan, has it not always been a dream to be served something different and exciting, with flavours that are far from the usual but seem to gel together perfectly? Well, for this Masterchef fan, it was a dream that came true.

The Fusion Room is a relatively new (2-month-old) restaurant that is perfect for a quiet celebration or a special dinner. With most of its chicken entrees (each feeds one hungry person) priced between ₹200-₹300, I find that even my student wallet seems to think it strangely worth the expense.

It offers a variety of food (I tried the Kar Lime Chicken and the Coq Au Vin) ranging from Thai to Continental to Indian to strange combinations of these cuisines as well. The dessert (I tried the Tiramisu) section of the menu, though exceedingly brief when compared to the rest of it, ranges from Indian sweets to random pastries. On the whole, not the best dessert, but after a meal like that, does it matter?

The ambience is simple. With small unimposing abstract art and smart modern-looking furniture, the place is small and the service good.

All in all, a must for the more adventurous before graduating from IISER!

Contact:

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Shri Chandra Residency,
Palod Farms, Phase II,
Baner Rd

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