

It's Left Through The Hole In The Air

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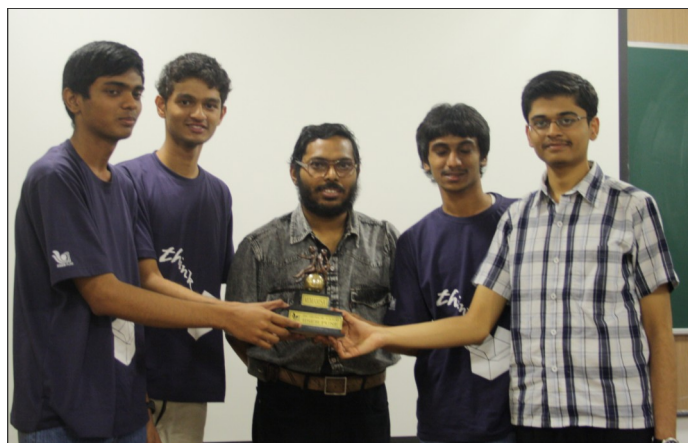
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MIMAMSA, the inter-college science quiz organised by the Science Club of IISER Pune, conducted its much awaited finals on 11th and 12th February. The four finalists - IISc Bangalore, IIT Kanpur, IISER Thiruvananthapuram, and St. Joseph's College Bangalore - were chosen through a tough preliminary round conducted across India at Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Mumbai, Nagpur, and Pune.

The questions for the quiz, which had multiple rounds, were designed to evaluate the teams' analytical skills and comprehensive prowess through a number of diverse concepts and their applications in hypothetical scenarios. Each team also had to present an exposition on a



Winners of MIMAMSA 2012 - Sathya, Amogh, Sriram, and Pranav of IISc Bangalore with Dr. Dey

topic of their choice followed by several rounds of grilling by their opponents, a panel of judges, and the audience. Once the quizzers got into the groove, the brick-batting never seemed to cease! After fourteen long hours of quizzing, the first-year students from IISc Bangalore emerged victorious, bagging the coveted MIMAMSA 2012 trophy.

It certainly wasn't a hands down win for IISc Bangalore, with IIT Kanpur and IISER Thiruvananthapuram snapping at their heels till the end.

Dr. Sutirth Dey, the man behind MIMAMSA, was very pleased with the performance of the teams. Given that a bunch of first-years won MIMAMSA for the second

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VARUN PRASAD

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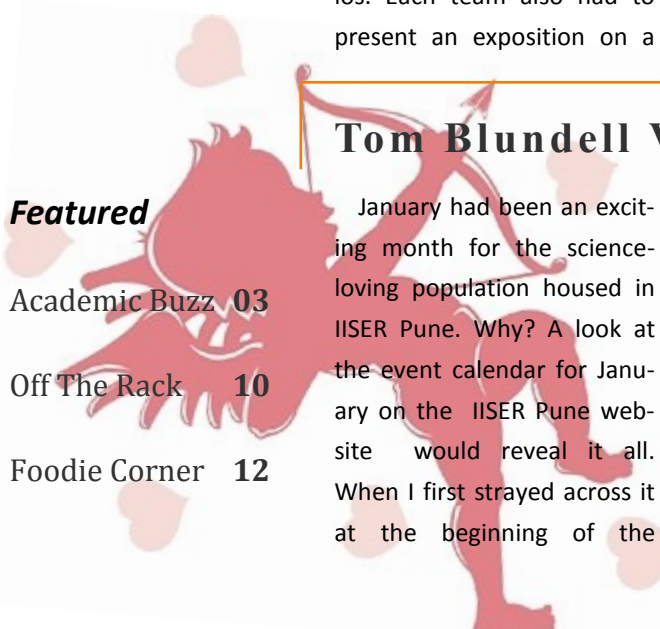
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January had been an exciting month for the science-loving population housed in IISER Pune. Why? A look at the event calendar for January on the IISER Pune website would reveal it all. When I first strayed across it at the beginning of the

month, I too, like the countless other science lovers, was ecstatic. Visiting us were the greatest scientists and researchers of today, like Dr. Bruce Alberts, Dr. Susan Blackmore and Prof. Michel Morange. Their arrival created quite a stir. The great

seminars given by these distinguished personalities did not fail to impress those who were fortunate enough to attend them. And giving this highly exciting month a fitting end was the visit of Sir Tom Blundell from Cambridge, UK.

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It's Left Through The Hole In The Air

Continued from Page 1 on a lighter note, commented on the “need to consider the state of higher education in India.” Prof. K. N. Ganesh presided over the formal presentation ceremony after the quiz. The team from IISc Bangalore walked away with the trophy and a cash prize of ₹12,000. Last but not the least, Dr. Dey congratulated his team of 81 undergraduates, whose hard work and dedication made MIMAMSA 2012 a grand success.

At the end of the day, the Sentience team interacted with the quizzers. We first caught up with the team from IIT Kanpur. What did they think of the MIMAMSA questions? The team apparently really liked the questions (the question-forming

“The people here are terrific. At IISc, we are treated like kids. We feel more at home here.”

Sriram, IISc Bangalore

committee can safely pat themselves on the back). Abhinav, one of the four from IITK, said “The mathematics questions were really fun. We couldn't answer many, but it was great. But there were too many organic questions in chemistry”. When asked about their opinion of the judges on the panel, they seemed to have fallen in love with Dr. Aurnab Ghose, Prof. Raghuram, and Prof. Anil Gangal! Just like most of us.

In a frivolous mood, Shank, the long-maned geek, (often confused for his teammate, Nitica!) was bombarded with questions regarding the hair oil, shampoo, and other hair products he used, as well as tips to maintain healthy hair. But he was hesitant in revealing his secret and we reluctantly moved on to the next question on the list: What wonder did the hair-stylist work on his glorious resplendent locks? The IITian's answer was that he cut it really short and let it grow on its own! Believe him?!

We next talked to the St. Joseph's team, who were more reserved than the IIT Kanpur team. They liked the grilling in the 'Exposition' round (for all those who slept through it, it lasted for three-



Team MIMAMSA with the finalists

quarters of an hour). Apart from studying wall-crack patterns in the rooms, they also interacted and found the competitors very friendly. They enjoyed the 'Deep Thought' too. They especially liked the questions asked by Dr. Dey and Prof. Shashidhara. Shilpa, a member of the St. Joseph's team, felt that MIMAMSA was the best quiz she had ever been a part of. She said she would like to come back for it next year too.

The IISc team seemed very happy to see the vibrant crowd at IISER. Sriram S, one of the team members, said, “The people here are terrific. At IISc, we are treated like kids. We feel more at home here. People here are extremely enthusiastic too. I liked the 'Analyzer Round' but the 'Deep Thought' was quite long!”. The other mem-

bers said that they would have liked more questions in the quiz. The only other negative point was the lack of variety in the Biology section.

Last but not the least, were the guys from IISER Thiruvananthapuram. They were very enthusiastic about MIMAMSA. They found the hospitality and food here amazing. They liked the cross-questioning by the faculty and the competing teams, which they considered the most interesting part of MIMAMSA.

In general, the feedback for MIMAMSA was great! Food, hospitality, people, enthusiasm, chocolate toasts (not included in food provided at the mess, as special efforts were put to bring it here!), questions - everything contributed in making MIMAMSA a grand success.

BookWormHole

V SAUDAMINI

Have you ever experienced violent withdrawal symptoms? Rising heart-beat, sweaty palms and a feeling of anxiety, and a deep craving that seems to get deeper with time?

For the past three semesters, a few geeky bookworms have been battling these very symptoms which manifest on and off in their day-to-day life. For the past three semesters they have been craving books - books that open the doors to vivid imagination and rich language, books that take you on a journey away from the worries of life, books that leave you high for hours after you have put them down. After three torturous semesters, the bookworms have decided - enough is enough! They have decided to tunnel their way out from the depths of inactivity and break into action. And *voila!* The grand plan of setting up our own library was born! This is for all like-minded bookworms out there who have been unfortunate enough not to meet the aforementioned Bookworms, but share their obsession - Come join us!

The plan's pretty simple and I enumerate it in three simple points, thus:

1. Get books. Lots and lots of 'em. (Beg, borrow but don't steal).
2. Find a place to house our valuable relics.
3. Establish a self-sustaining system such that 'non-book-lovers' do not ruin and plunder our sacred shrine .

It is important to be aware of the Bookworms' Code :

1. The books will not be the property of any one Bookworm.
2. The shrine will be under proper

guard and will be open for public use periodically.

3. Books will be available to fellow Bookworms only. Monetary details for joining the Bookworms are yet to be announced.

Two Bookworms, Saudamini and Rachana (of the 2010 batch) have decided to forgo their secret identity in order to lead the movement forward and give it momentum. Bookworms in possession of Books which they would like to donate or loan for their fellow Worms to read and enjoy, are called upon to declare their intentions to the above mentioned. Others who wish to communicate by more furtive means or who wish to remain anonymous may voice themselves at bookworm.iiserpune@gmail.com. This also applies to all the faculty who share the Bookworms' enthusiasm for reading and empathize with the absence of literary joy in our lives. Please contact Head Bookworm - Dr. Girish Ratnaparkhi, if you wish to absolve us of our misery.

You may now go back to your mundane book-less lives (which we don't have to, since we know that fellow Bookworms have already started rummaging through their belongings to look for suitable tributes to us).

So long and thanks for all the fish.*

-A MELANCHOLY WORM

*Only a true Bookworm recognizes this phrase and only an equally true kindred spirit appreciates its randomness.

Academic Buzz

1. Visiting Students Internship Programme, Indian Institute of Astrophysics (IIA), Bangalore

Link: <http://www.iiap.res.in/degree>

Duration: May to July

Deadline: 3 months before the start of the project

2. Summer Internship Programme (SIP 2012), Physical Research Laboratory (PRL), Ahmedabad

Duration: 14th May -13th July

Link: <http://www.prl.res.in/>

Deadline: 16th March

3. Visiting Summer Student Programme, Institute of Mathematical Sciences (IMSc), Chennai

Link: (Physics) http://www.imsc.res.in/visiting_summer_student_program

(Math) http://www.imsc.res.in/visiting_summer_student_programme

Deadline: 29th February (Theoretical Physics), 15th March (Mathematics)

4. IISER Pune Summer Student Programme (SSPC), IISER Pune

Link: <http://www.iiserpune.ac.in/~sspc/>

Deadline: 20th February

5. Bose Institute, Kolkata Summer Programme

Link: http://www.boseinst.ernet.in/all/advt/11/advt_34.pdf

Deadline: 9th March

6. Visiting Students Research Programme (VSRP), NCRA-TIFR, Pune

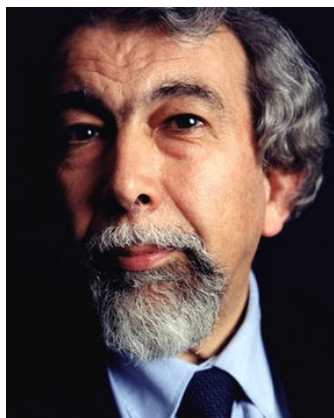
Duration: 7th May to 6th July

Link: <http://mutha.ncra.tifr.res.in:8080/VSRP2012/candidate/welcome.ncra>

Deadline: 20th February

Tom Blundell Visits IISER Pune

VARUN PRASAD



Sir Tom Blundell

Continued from Page 1

Prof. Tom Blundell is a structural biologist whose research focuses on Structural Biology and Bioinformatics and their applications in Drug Discovery and Medicine. He visited IISER Pune from 29th January to 2nd February.

During the course of his lecture on 30th January, he spoke about his career in science and his interest in music and politics. He revealed that he frequently visited India. His first visit to India was about forty years ago to IISc, Bangalore, where he discovered the beauty of Carnatic music.

Tom Blundell told us about an old problem he worked on. Instead of constructing the structure of the protein from the given amino acid sequence, he tried to deduce the amino acid sequence based on the way it folded. It would then be easy to find out similarities in the amino acid sequences of different proteins based on motifs. He then explained how this could be used to hypothesise the structure of various enzymes which could be used as drugs. He showed us how interdisciplinary his work was, with his team composed of Biologists, Physicists, Computer engineers, and Chem-



Classical Music Session with Sir Blundell

ists. The notion that this is how labs were going to be in the future was a point that he emphasised repeatedly. He also said that the kind of interdisciplinary and multi-disciplinary environment present at IISER was the need of the hour.

We were taken by surprise when we were informed that we were to have an exclusive music session with Sir Tom Blundell. And Indian classical music at that! Apparently, he had learnt Carnatic music and knew how to play the *Veena*!

The music room played host to the PhD students, Tom Blundell, Chaitra, and me. He asked us about ourselves and our music, after which we played a few Carnatic songs for him. We hoped to impress him with what little we knew. He seemed to greatly enjoy the

music. Manasi, one of the PhD students, then sang a *Bhajan*. The session ended with a couple of *Bhajans* sung by all of us, accompanied by Harsha on the *Tabla*.

The next day's talk was titled 'Genomics, Molecular Biology and Making New Medicines'. This was a colloquium, and was slightly less detailed. I was thrilled to see the photograph of our music session on one of his slides. It was a splendid talk, which provided amazing insight.

He definitely has left a lasting impression on the lucky few who enjoyed his company. For me, it was one of the most amazing experiences of my life. And to top it all, I just got to know that he left me a huge box of Lindt chocolates. So, off I go to devour them before my roommate gets his hands on the box!

“The kind of interdisciplinary and multi-disciplinary environment present at IISER is the need of the hour.”

Prof. Tom Blundell, on the future of science.

Interview With A Raghuram



Prof. A. Raghuram

Two score and one years old, charismatic and armed with four post-doctoral degrees, Prof. A. Raghuram has been the talk of the town ever since he broke upon the idyllic IISER scene. The Sentience Team decided to please the readers with a much-awaited interview with this dapper Pink Floyd follower, Buddha fan, and father of the IISER girls' hostel's current heartthrob. Here are a few excerpts.

ST: Before you came here, the Math department was headed by a Biology professor. What do you think of that and how do you envision the future of Math at IISER Pune?

R: That it was headed by a biologist is because the Deputy Director, Shashi, was the de facto coordinator of Mathematics for want of someone. And, yes, right now the faculty numbers are small, but I was just in the

midst of making arrangements for a selection committee meeting. It's very likely that soon, by next Fall, we'll be hiring three more faculty members.

ST: Talking about IIT Kanpur, there is no comparison, because they are two entirely different things, but a lot of people wanted your views on how different IISER is from IITs.

R: Well I guess one can compare at several different levels. Firstly, IITs have been around for a very long time and IISERs are new. So you make allowances for that. Secondly, because they have been around for a while, there's a lot of people—faculty and students. But I think IISER has something that is extremely advantageous, which is the very structure of this five year programme. This is a truly new model that I have not seen anywhere else in the world. You come, you do general courses, start studying the subjects of your liking and the fifth year is totally free for research - this is unheard of. So, I think students who'll graduate out of IISER are already half PhD students! And this is a big advantage. Facilities here are as good as any IIT in Physics, Chemistry, Math, and Biology. What more do you want?

ST: In your words, what would be the highest point of your life?

R: It is yet to happen. I don't know... This is a really hard one. Certainly, getting my NSF grant was one of the high points, because there you're competing with the best in the world. *(on being asked what the NSF is)* NSF is the National Science Foundation. In Mathematics, it is the main funding agency in the US. Typically, people who get an NSF grant would have done something non-trivial. You can't just thrash around in shallow waters and get the grant.

ST: What was it that pulled you to India, leaving your position at Oklahoma State University?

R: One deciding factor was that Oklahoma State University has been around for a very long time. And the College of Arts and Science has around 200-300 faculty. So you are one amongst so many. And do what you might, your most serious contribution would just be a small ripple. But I think here you have something new and happening so I felt like there would be a feeling of really contributing towards building something...

ST: What are your opinions on the IISER mess food?

R: It is extremely spicy and extremely oily. It is terrible.

ST: You like psychedelic rock; were you in a band in your college?

R: I tried to learn the guitar and I tried to learn the *mridangam*, but I don't have a musical hand. I enjoy music but I'm musically challenged.

“When you work things out for yourself rather than just read, you become aware if you know it or not.”

ST: Do you take project students other than third or fourth years? What would you expect from them?

R: I certainly don't have any policy like that...I'm not averse to taking students for projects. And what do I expect? Just work hard and don't fraud around. It's easy to see when one fakes. Also, when you work things out for yourself rather than just read, you become aware if you know it or not. This has been my style even with students at OSU. I often tell them to go to the board and explain stuff to me and then after some point I take over. So yeah I would take students!

ST: Thank you very much, and a warm welcome to IISER Pune.

The “First” Way of Spreading The Love

SHRUTI PARANJAPE

Surprisingly, we first-years (an otherwise pretty unromantic batch) decided to spread the love this Valentine's Day. It began with all the girls crowding around the water fountain on the second floor in the girls' hostel.

Having picked up a chit containing the name of one girl from our batch, we all swore to be that person's secret admirer from then (31st January) to V-Day! The rule was to avoid catching or being caught. And to surprise your admiree (if that's a word!) on Valentine's Day with a gift by revealing your identity to them.

'Girls will be girls.' I never realised how true this was until the secret admirers kicked off! It began with quite a bang. Notes turned up stuck onto people's doors. Some people were a little too obvious and were so excited about dropping off notes that they let out a small squeal every time they did. (Of course the admiree slept till 11, so it didn't really matter). I still remember the squeals that were given out on receiving notes!

Hand-writing was the key! Everyone knew everyone's. Some people got painted stuff, printed stuff, stuff written in capitals just so that they wouldn't be found out.

Then someone came up with the good idea of using other people to do the dirty work. On Rose Day, our batch-mates decided to do something else!

The guys sheepishly approached us, not with roses, but with a proposal (no, not the kind you're thinking of!). They asked whether we could ALL give roses to a certain someone in our batch... Let's call him Akbar for the time being.

Rose Day finally arrived. The roses had been bought and every girl had one with her. Having gotten a hunch that something was up, Akbar slipped out of class and ran off to Sai! But alas, HR4 has the one thing everyone needs... the mess! So at dinner time, a certain sweet-smelling girl went up to Akbar and handed him his first rose.

Akbar, being the kind of boy who cannot speak to a girl without blushing, let alone accept roses from one, sat at the table totally baffled. He was asked to accept or reject her confession of love. He rejected in a complete daze. But his night was far from over.

One by one, girl after girl, entered the mess providing Akbar with a plethora of yellow and red roses! The mess



The Secret Admirers revealed

table was rife with roses.

When we returned to the hostel, some lucky girls found red roses from their secret admirers. Chocolate Day proceeded to attract chocolates of different kinds from our secret admirers. Ethnic wear Day or Trad Day saw the least response, with four girls (I counted!) turning up in saris. Other than a real surprised set of eyebrows on Dr. Suneeta Vardarajan's face, it didn't achieve much. Mismatch Day also saw poor response. Looks like the girls didn't want to look hideous so close to V-Day.

But as V-Day drew nearer and nearer, the secret admirers seemed to become more and more romantic! The day before V-Day, Pashan's Prashant Stores was packed with first-year girls. Inevitably, we shared information on who we were admiring so as to get the perfect gifts for them.

The boys in our batch

geared up as well. They made a list of romantic songs to sing and dedicate to all the couples/almost-couples in our batch. Of course as predicted, the boys in our batch fell flat on their faces and nothing came of this surprisingly brilliant plan.

Finally D-Day dawned... Or rather, V-Day dawned. The girls gathered on the second floor by the water fountain, where it all began. Everyone told everyone else who they thought was admiring them, while the real person smiled inconspicuously. Finally, we revealed our identities and everyone reeled in their merchandise. Presents were in the plenty and people chatted until late into the night about incidents of just being caught, trying to catch, and accidentally writing in their own handwriting.

All in all, it was a perfect Valentine's day filled with plenty of hugs, presents and high-pitched squeals!

Measure My Style

ASHWINI RAMESH

There is the victim and bloodshed, the suspects and chases, more Bones and Dexter. Perhaps a few twists and turns along the way and you are blown away with the American-Prime-Time-Crime-Drama Forensic Department for their ability to reason, logically deduce and solve just any case!

But really, the Forensic sciences are much more evolved than any of this! Stylometry is an application of the study of linguistic style, in which methods of statistical analysis are used to determine authorship of various texts. This has become a great tool in the utility belt of forensics. The measurement of variation in written language is a good supplement to its qualitative description and is necessary to critically analyze and interpret the style.

The qualitative analysis of such writings or texts, popularly suicide notes, handwritten wills, or documented articles is extensively practiced. With the advent of Crime Drama, it does not take much effort even for an amateur to crack the code.

However, to do the quantitative aspect well, one has to have good fundamentals of stylometry. For instance, when comparing two docu-

ments one might observe certain differences in the pattern of usage of words, grammatical features, or punctuation in the documents. Quantitatively analyzing their frequencies would assess whether the differences were significant or not.

Quantification of data has been highlighted for the past couple of years, despite its tedious and rigorous calculations. This ensures that the data being collected and analyzed substantiates the hypothetical 'quality' analysis they do, hence ensuring that decision making is more precise. It is also a methodical and meticulous way of applying scientific inquiry in an otherwise twisted plot.

In Frequency Distribution statistics, comparison is made on the basis of the usage of a certain word in the 'victim' text and a known sample of writing from the suspects.

In one of the many spiteful divorce cases, the court received two anonymous letters allegedly from the husband accusing his wife of misbehaviour towards him and his kids. In defence, the court was provided with two sample writings from the husband.

The questioned letters

contained shorter sentences than the known letters. Sentence length was a possible discriminating style-marker. The Mean sentence length (by word) was 15.67 in the questioned letters and 17.80 in the known writings, raising the question of whether the difference between the two means was significant enough to use sentence length as a marker of style distinguishing the questioned and known writings.

This resulting standard error of the difference allows rejection i.e. the sentence length of the document in question and the known writings is the same, only at a level of significance of $p < 0.10$, meaning that there is only a 10% probability that the differences are significant.

There are several other tests like the Proportion test where the ratios of degree of (dis)similarity are measured. This can range from the length of spacing between two words to the vertical spacing between the two dots of a semi-colon.

Let's illustrate this in a simpler way. Consider two linguistic 'variables' X & Y where:

X represents sentences containing one terminating unit (Against those contain-

ing more than one).

Y represents sentences starting with a word function e.g. Article, Pronoun, etc. (against those with Noun, Verb Adverb etc.).

If the two variables correlate, it would mean that they are an important benchmark in determining the characteristics of the case. Also, this method takes into consideration the formatting of the entire article instead of just a single line or paragraph, and hence is more consistent.

If the variables turn out to be independent, then it would mean that the text might belong to another author. This is determined by comparing the anonymous document with a random text as well as with a document from the suspected author. They also take into account unassociated markers in this process.

In a world of sophisticated criminal systems, we need to find better ways to destroy the "Best Laid Plans, for Watson, you really need to graduate from the Elementary!"

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1. Forensic Linguistics: Advances in Forensic Stylistics by Gerald McMenamin
2. en.wikipedia.org

Fours, Sixes, and Catches

AAMOD DESAI

Upcoming Matches

17.02.2012

Alchemist vs. IISER Utd.

The Rascals vs. Slayers'07

18.02.2012

The Rascals vs. Shaurya'10

Slayers'07 vs. Alchemist

19.02.2012

IISER Utd. vs. Shaurya'10

The Rascals vs. Alchemist

Slayers'07 vs. IISER Utd.

20.02.2012

Faculty vs. IISER Utd.

04.03.2012

Slayers'07 vs. Faculty

As you are reading this piece, the IISER Premier League (IPL) enters the business end of the tournament. Slayers'07, Shaurya'10, The Rascals, IISER United, Faculty, and Alchemist have worked their way through the tricky preliminary leg into the Super Six stage.

A quick glance at the results of the qualifiers, and you wouldn't want to call any team just fortunate with their progress, as all the teams deserve their berth in the Super Six stage with convincing wins in the league stage. While some teams like The Rascals and Slayers'07, touted as favourites, have breezed their way through, others like IISER United have not had the easiest way in. The prospect of moving into the Super Six stages is inviting, not only in terms of excitement and anticipation but also in terms of the quality of competition. The top four teams at the end of the stage would move an inch closer to the coveted title.

Despite the final six being decided relatively early in the league stages, the closing matches of the group stage were not short on excitement, fervour, and entertainment. The teams who could not make it

through should be complimented for the good show in their respective four outings. Ra'ele'One (the team with the highest per-capita CGPA) lost all four matches of their league stage, but they won the hearts of everyone with their commitment towards the game and the amusing on-field antics of their captain.

The last couple of weekends of the league stages witnessed some very tight games. The tied match between Nemesis and Biohazard in Pool B, saw the crowd go wild. There were couple of notable individual performances like the blistering *43(13) by Dr. Chakrapani for Faculty in the annihilation of Pirates'11. The progress of Faculty has come as a bit of surprise, with the team unable to qualify beyond the league stages for the previous three seasons, but winning all their league stage matches in IPL 2012.

The Super Six stage has seen three matches so far. Shaurya'10 have lost two (against Alchemist and Faculty) of their four matches, and are facing an uphill battle to advance to the semi-finals. The other match of the Super Six saw the demolition of the Faculty by Ankur Paliwal, with a five

wicket haul for The Rascals. Some of the matches you definitely need to check out are The Rascals vs. Slayers'07 tie on 17th February and Shaurya'10 vs. The Rascals match on 18th February.

The remainder of the Super Six expects the teams to play close, tight games. There are also stars who have underperformed until now, but could play a crucial role in the upcoming matches.

The participants would do well to maintain camaraderie and keep up the spirit of the competition. The organizers and volunteers - the group of 'behind-the-sets' people - deserve credit for execution of the plans so far. A part of the league stage that could be tagged as 'disappointing' was the low turnout for matches, but with the tournament entering its crucial phase, this is expected to change. Everybody would be rooting for their favourite side, and rightly so, as every win henceforth is a step closer to the semi-finals and every loss would make that tougher.

The others, who don't quite associate with the super six teams, could stick with the good-old idiom, 'May the best side win!'

The Green Way To Goo

MEERA BESSY


There's an old joke saying "Why is there a fence around the cemetery? It is because people are dying to get in."

As the world population continues to expand at a dizzying rate, how can we dispose off an increasing number of dead bodies in an ecologically sustainable way? From the day we walked on Earth, we have disposed off corpses only by two methods – burial or cremation. In burial, coffins are mostly made from non-biodegradable chipboards. Even when they are biodegradable, embalming liquid often contains carcinogenic formaldehyde which can leak into the soil. In cremation, remains are burned at 850°C. This process can create up to 400 kg of greenhouse gases per corpse. Both burial and cremations have environmental drawbacks, from contributing to climate change to monopolizing countless acres of increasingly precious land. But now, mortuary science has come up with a third option - that of dissolving bodies in lye at high temperature and pressure. So, resomation or alkaline hydrolysis is introduced as a green alternative to cremations and burial.

Alkaline hydrolysis is a water-based chemical process using strong alkali in water at temperature of up to 300°C to rapidly reduce the body to ash. It is a highly accelerated version of natural decomposition chemistry. Alkaline hydrolysis is also a process that happens in the small intestine where consumed food is digested by the process with the benefit of gut enzymes. It is a moderately fast process for small amounts of food.

As the name suggests, it is the process of forcing water molecules between the chemical bonds holding large tissue molecules such as fats, DNA and proteins together. This process breaks the tissue down to its original small molecular building blocks. This process takes only 2-3 hours and the ash is returned to relatives in an urn, as in traditional cremation. In alkaline hydrolysis, the body is enclosed in a silk bag. The silk shrouded body is placed inside a metal cage and loaded into a machine called the resomator, which is then filled with a mixture of 92 gallons of water and 4 gallons of potassium hydroxide and set to a temperature of 300°C under 60 psi pressure.

RESOMATION vs CREMATION

 <p>Resomation...</p> <ul style="list-style-type: none"> - Uses less energy - Less pollutants - Relies less on fossil fuels 	 <p>Cremation...</p> <ul style="list-style-type: none"> - Uses more energy - More pollutants - Relies more on fossil fuels
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What comes out at the end is a small pool of greenish-brown broth made up of amino acids, peptides, sugars, salts and some bone remains that have turned soft and porous and contain no DNA. The bones are crushed into fine ash, placed in an urn and returned to loved ones. The liquid can be recycled back to nature as fertilizer or simply flushed into the sewer system.

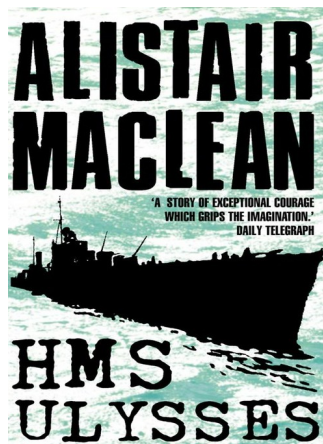
It has advantages both over burial and cremation. It uses less energy than cremation, produces far fewer greenhouse gases, releases no harmful mercury into the atmosphere, protects trees, and reduces CO₂ emission. Cemeteries monopolize millions of acres worldwide that could be put to better use. Above all, it could be an eco-friendly and greener way of disposing of human bodies.

Burial and cremation have environmental drawbacks, from contributing to climate change to monopolizing countless acres of increasingly precious land.

Ecological comparisons

With resomation, metals and plastics in the body are easily retrieved, including mercury fillings, metal hips and knees, pacemakers.

PER BODY	RESOMATION	CREMATION
CO ₂ emissions (kg)	50	400
Natural gas used (cubic metres)	7	92
Electricity used (Kwh)	9	29



HMS Ulysses

HMS Ulysses is the first book by author Alistair Maclean, who is somewhat a relic of the bygone Cold-War era for most of us. This one tells the story of an Arctic convoy to Russia – which, for the unenlightened, was the naval transport of supplies between Britain and the Soviet Union with material and goods via convoys through the Arctic Seas. It is loosely based on the true story of the disastrous convoy PQ 17 in 1942, where, of thirty-five ships, only eleven reached the destination.

The story may be adopted,

but the characters are Maclean's own. The dying captain, his exhausted men on the brink of mutiny, the rigid Admiralty with no grasp of Arctic warfare, the indestructible commander, the officer with nothing left to lose, and the perpetually cheerful 'Kapok Kid' - this is the crew of the *Ulysses* and it is their job to escort the merchant ships to Murmansk, and act as bait for the German warship *Tirpitz* along the way. In the frozen sunlight of the Northern Seas, under horrific conditions, the ship is battered by foes and seas both,

and would not survive either, if not for the unparalleled heroism and courage of its men. The harsher realities of war are vividly brought to life here.

It is not a book for light reading, being intense and tragic. It also has an overabundance of nautical terminology, and the incessant misfortunes tend to wear. But for the stout-of-heart (armed with an even stouter dictionary), it is a book well worth the read, with superb writing, Maclean's characteristic wit, and realistic characters.

AVANI GOWARDHAN

Off the Rack

Big History

"Big History presents the scientific creation, from the Big Bang to the present, told in succinct, understandable language."

These words, an excerpt from the book itself, aptly describe its contents, concepts and the style of writing employed. Written in a tell-tale fashion, the author, herself an educator-historian, narrates the story of the Universe in an elegant manner, knitting together facts and theories about events and timescales from the very beginning of time (or at least

the concept of it) - The Big Bang.

The birth of the Universe, the formation of the Earth, the debut of life on it, its subsequent evolution, and the accession of the humans to the helm of lordship - the book touches upon all this and much more.

She also crisply examines the debates and discussions of the yesteryear and its relevance in today's society. It deals with a wide range of topics such as the origins of speech, the invention of languages, alphabets, and

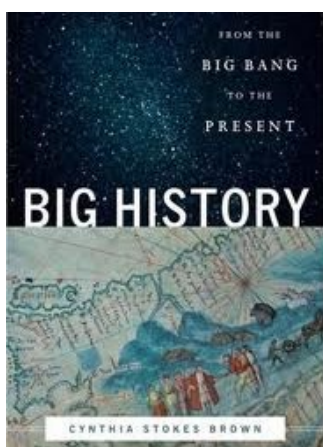
numerals by different civilizations, the advent of agriculture, the rise and fall of empires, the dawn of the industrial era, and also the steep rise in the human population in the twentieth century and its effects on our planet.

The author signs off in style with an intriguing question:

Whether man, who has been able to influence remarkable changes in ecology (if not cause it), will be able to steer the course of his own evolution.

So what do you think?

RADHIKA R



Woos, Vows and Woes

V'ED

Welcome to the other side. This is no Gossip Girl telling you how to woo the dame you have set your eyes on, definitely not a restaurant guide or a clandestine lovers' hangout guide. This, my dear dedicated readers, is the harsh, ignominious truth!

Knowing that patiently reading through this editorial you should be what the rest of the world calls a nerd and you would be oblivious to popular culture, I feel obliged to familiarize you with this obscenely overhyped holiday. Valentine's Day is a day of popular celebration of love, courtship and generally, the boring way of life. If you have noticed an enhanced number of teddy bears, candy hearts, flowers or heightened hormonal levels all around you, then you know what I am talking about.

This season, I set out to demoralize couples who plan to dress up and go on dinner dates leaving their single friends to mope back in their quarters. With the exception of a stray red, heart-shaped balloon or a discarded gift paper found in the classroom, however, IISER love-birds seem to be quite discreet in their so-called activities. A curious

case was observed in the mess and lecture hall a week ago, when undergrads of the second year turned up for lectures and in the mess(!) clad in ethnic Indian wear!! The intention surely was to make a few heads turn and for once have a date on V-Day. But this gimmick was not a penny's worth.

The anguish of a singleton increases perceptively, peaking in intensity on the 13th. However, if history is to be believed, your life is most assuredly safer without being someone's Valentine. Peeking into the days of yore, we find many a man named Valentine burnt at the stake, fed to lions, stoned to death, and least imaginatively beheaded. These so-called martyrs have been sentenced for trifling crimes such as being in Africa (I don't vouch for this), getting bachelors married at the time of war... These martyrs, 14 in number, ascended their heavenly abode at different times, but the most notable of them, St. Valentine of Terni, was beheaded on 14th February. These are probably the activities of an underground Dark Ages movement of mathematicians trying to steal the thunder from the number 13! I would optimis-

tically assume that they were wiped out during witch hunts and the Crusades.

One would think that these heinous activities are enough to deter lovers from celebrating this sensationalized holiday but a romantic poet, Chaucer formulated love couplets invoking the name of St. Valentine, the meanings of which are quite dubious. He scribbles...

*....For this was on seynt
V o l a n t y n y s d a y
Whan euey bryd comyth
there to chese his make.*

His disciples and interpreters claimeth that these lines refer to birds breeding in the romantic (please!) land of England in the month of February (Please!) and this hints at the beginning of the present-day interpretation of the feast of St. Valentine (These scholars evidently had no knowledge of English fauna and their mating seasons). In my parallel Universe, though, interpreters would understand the intended meaning of it that Chaucer was just hungry. He was fantasizing about a slice of bread arriving fresh in Spring fated to be united in matrimony with cheese. (However, Chaucerus interruptus!) I invoke the Occam's razor to conclusively prove this argument. I wish

commercial juggernauts would have embarked onto this train of thought and *Choo! Choo!*-ed away to glory.

The alternative to celebrating this holiday is, obviously, not celebrating it. A tempting alternative is to celebrate Anti-Valentine's day and probably burn a few effigies of Cupid, or tear out a fuzzy red pillow in the process. The blatant consumerism associated with this holiday would surely be making many a (be)head roll and have a certain Former President of the United States somersault in his grave. Perennially cute and cuddly was surely not the legacy he had hoped for!

Besides strangulating boredom, the only incentive to celebrate Valentine's Day that comes to mind after Deep Thought is being a chilli-flake (oregano's a waste on such scum) in the eye for pink *chaddi* recipients and male chauvinist pigs and female chauvinists who call themselves feminists. As a bulwark of these virtues (and for no petty pleasure, don't get me wrong) I would delightfully make a scene in a public place with any decent-looking nerdy chap.

Yours hypocritically, Ed.

geneEXPRESSION



the students' corner

A Puppy Eulogy

NIVEDITA RANGARAJAN

For the glorious few months you lived,

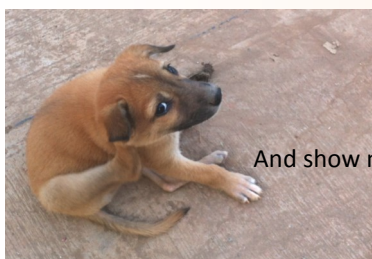
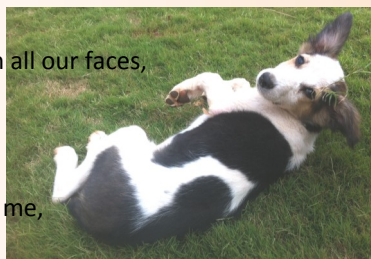
For the countless smiles you brought on all our faces,

For giving me the one thing I wanted

from the time I was a small child,

To see a puppy wag its tail when it sees me,

And lick my hands and feet,



And leap at me when I bring food,

And run after me when I try to leave,

And show me the true meaning of puppy-dog-eyes,

I hope puppy heaven treats you well...

I will always love you three,

The first pets I ever had,

Cyrano, Arthur and Socrates,

They don't call it puppy-love for nothing.



YOUR ARTICLE COULD BE HERE

or maybe in a bigger and better spot?

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Foodie Corner

AASHAY PATIL

It is a general experience that you get the tastiest food in the filthiest places. That's the reason why roadside *Vada Pav* and *Chaat* stalls have such thriving businesses. Such places, which provide tasty food at ridiculously cheap prices, are a favourite hangout for students.

One such place is Coffee Stop in between Senapati Bapat Road and University Road. It caters to the Symbiosis crowd, for whom the place is a favourite chill-out spot. Actually, there are two shops – Coffee Stop and Coffee Shop - adjacent to each other. You will get awesome cold coffee here at just ₹20. Then there is Veg. *Pulav*, *Pav Bhaji*, sandwiches and shakes – mouth watering items, all at amazing prices. And you definitely have to try the superb Bread Crumbs, they are just too good. Adjacent to the two shops, on the same street, there is a *pani poori* stall, a *Loni* sponge *dosa* stall, a *momo* stall, and a juice stall, to round off your meal. There is also the Hot Pizza stall, which has delicious pizzas at ridiculously low prices.

On the opposite side, there is the Dragon Cafe, for quick and cheap Chinese food. In a little street next to it, a tiny Venkatesh Paranthas provides sumptuous amounts of choco-shakes for only ₹40.

So, in that time of the month when your scholarship is just a few days away and your wallet empty, scrounge around for spare change and go to Coffee Stop!

ADDRESS: Deep Bunglow Chowk, Near Om Super Market, Model Colony, Pune - 411016.