STUDENT VOICE

Read what NSIT has to say about its formidable plight of inappropriate student-teacher ratio.

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INDULGE

In the world that is beyond books and engineering with a review on a popular book and a movie.

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OPEN PAGE

Read about the two things that have taken the youth by the scruff- an MBA degree and QUORA.

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THE ALLIANCE

BRINGING NSIT TOGETHER

Vol. 8 | February 2013 | www.alliancensit.com

NSIT: A step-child of D.U.?

An estranged son on a foreign island. Yes, that's us. This is the current plight of our institution in the Delhi University. Taking nothing away from the fact that we are one of the premier technical colleges in the country, it is sad to say that this excellence comes at a great price. Despite being affiliated to the Delhi University we have rarely been recognized as one. It is not unusual that when we say that we study in NSIT, people jeer at us that "*I.P. bhi nahi mila*" ! There can be many reasons which attribute to this failure but the outcomes are faced by all of us. On retrospection over our differences with the Delhi University, we came up with a list of issues justifying our call for attention over this matter. See for yourself.

REASONS

NSIT is one of the prestigious colleges in the country and till recently, the only technical college in DU. But surely, this must not be the reason for isolation from our own university. The relocation of college from Kashmere Gate to Dwarka, did little to improve the situation. Our relocation isolated us from the north and south campus and the relation between NSIT and DU became a long distance love affair. And after almost 3 decades there seems to be no romance alive.

SYLLABUS

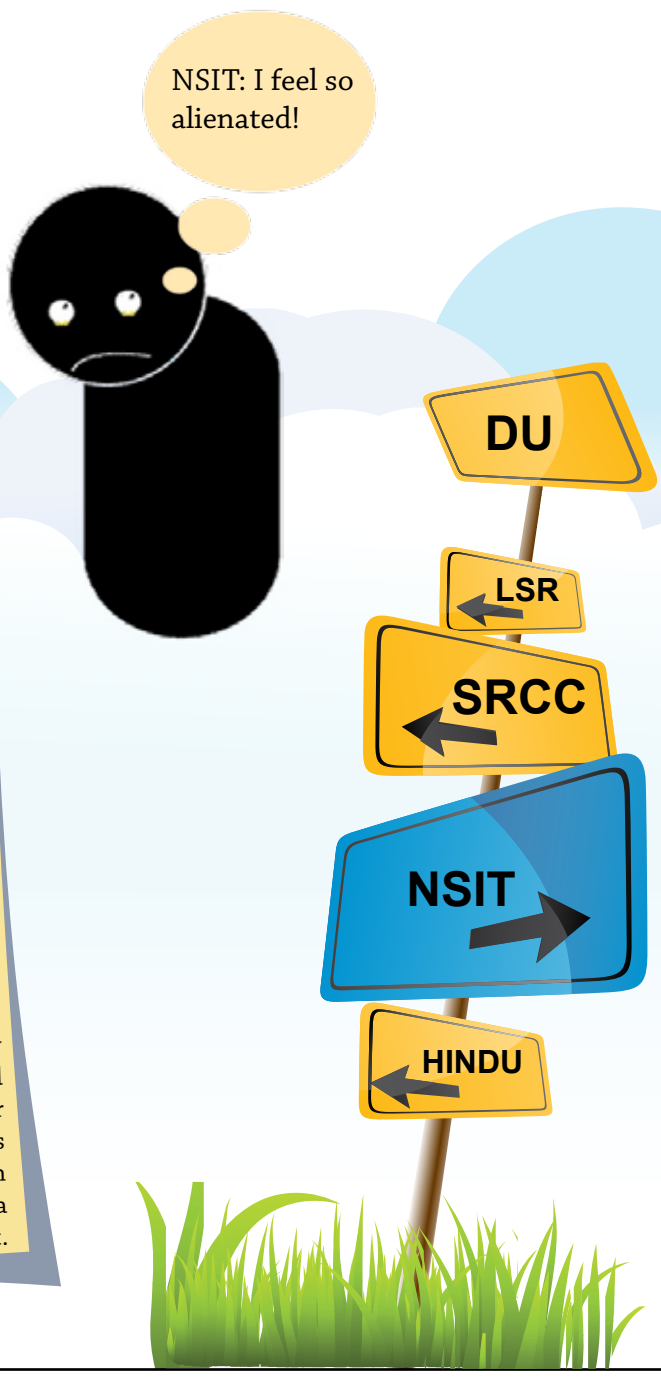
Amongst other things, it is difficult to digest that while other DU colleges have their syllabus updated regularly, NSIT, even though being a technical college is left behind. Who is to blame, the college administration or University? We don't know. But what we do know is that the age old syllabus stares down at us until someone changes the system.

LACK OF A STUDENT UNION

This one, is more of an internal problem. NSIT, hosting a student population of almost 2000 students, doesn't have a student union. Baffling, isn't it? Every college needs to have a front which could represent the students and communicate with the administration to relay our issues and discuss with them ways to come to a middle ground. Usually, in our college, such a thing ends up in unnecessary bickering and chaos with no tangible solution. With the many problems we face every day and our differences with the administration, we have no means to gather together a majority and present our problems to them. We need to take a leaf out of DU's book and form a student union through student elections enforcing a transparent system.

SOCIALLY-INACTIVE

The lack of interaction with other colleges has made the general crowd of NSIT socially inactive. Taking nothing away from NSIT's hardworking society enthusiasts, it is sad to see such poor participation in other college fests or activities. Whether it is dance, drama or debate, our college has so much to offer, but it is just a handful of people who take their talents outside. Vice-versa too, our other university mates do not visit us often enough. It is just on Moksha or Innovision, that one can find a bunch of outsiders flocking around; otherwise it is just a sad portrayal of lack of interest from both sides.



THE META-UNIVERSITY

The Meta-University starting in the next academic session will see collaborations from Jamia Milia and IIT Delhi (still in talks with DU). Our question to the Delhi University: Why isn't NSIT a part of this groundbreaking concept which is bound to revolutionize our education system. Here's more: Delhi University's newly-born Cluster Innovation Centre is all set to welcome students into their Meta university program. Just think about how research and PG programs in NSIT would flourish if they received exchange students, aid and could transfer some of their own to IIT Delhi under the aegis of this program. An alliance like this could only be of good news to the research and development industry. But, this is just a dream, gathering dust while we rant about it.

MUCH-DELAYED RESULTS

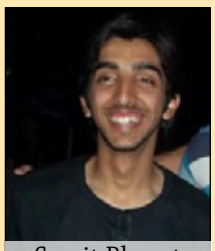
While the rest of Delhi University is already out with their end semester results which takes place around the same time (November – December) in all colleges including NSIT, we are still anxiously anticipating the results. Rumors are that they'll be released somewhere in February but speculations are all we have to live by while the remaining DU can breathe easy and begin their semesters without having to look back. The administration of DU is quite stern and has a no-excuse policy when it comes to releasing the results on time, but somehow we manage to get away with it, much to the misery of the students. We have a more than able faculty and a long enough break to prepare and publish the results. So, the reason behind this lag is still unfathomable.

Student to Faculty Ratio @NSIT

KRISHAN KUMAR SINGH

VOICES FROM NSIT

STUDENTS SPEAK



Sumit Bhagat
ICE (4th Year)

"Nowadays, students are increasingly considering different parameters while joining colleges rather than relying solely on placements. As NSIT already has a great intellectual capital and placement record, I believe that a better student-faculty ratio will enable it to have an edge over other top colleges of India. A technical college of the stature of NSIT needs a rich research culture, and to build that, it will require students to have fair amount of options and resources to avail guidance in their field of interest. Now that NSIT has drastically increased its intake, I believe that heightening the student faculty ratio is paramount failing which will not only be denying deserving students their due but will also put undue stress on the existing resources available at the present."

Rahul Duggal
COE (2nd Year)

"The dearth of permanent faculty is easy to notice at NSIT. Anybody, who aspires to undertake projects or research work in the sophomore year has to undergo this problem. There is no point, searching for mentors outside the campus when your institute is one of the finest in India. Also, the number and quality of guest faculties and TRFs allocated for the 1st and 2nd years at NSIT need to be checked at frequent intervals."

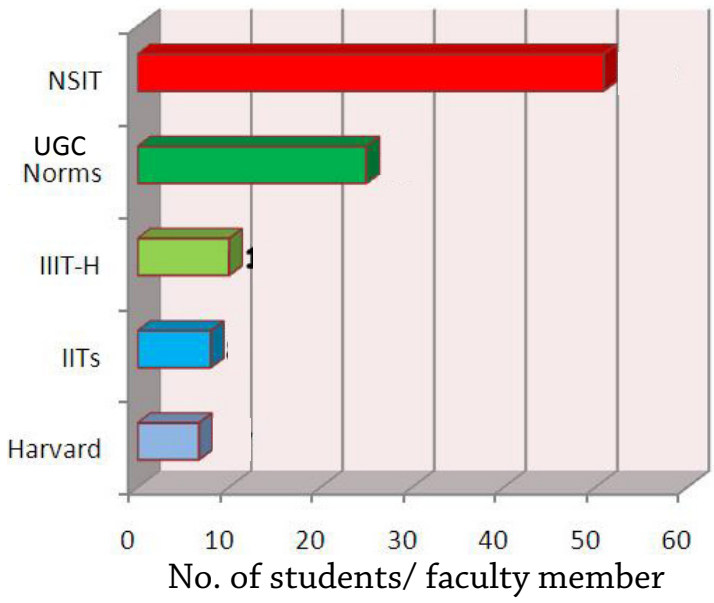
Garvit Pareek
COE (1st Year)

"Being a fresher, I don't think the high student-teacher ratio has affected me a lot in terms of academics. But, I surely have apprehensions about my future opportunities. Talking at a personal level, I feel the high ratio is the reason for the lack of a healthy student-teacher relationship in the college; reducing the teachers to mere attendance markers, thus, ignoring all the important roles a mentor can play in the life of a student of our age."

Dreaming is a legitimate process, and so is the explanation for those dreams. The NSIT symphony in itself reflects an abundance of muddled dreams, whose apathy remains unexplainable.

The charter of technical instutions stands pragmatic for all the colleges of the world with NSIT being no exception. All these documents, whether official or non-official, insist on the importance of a teacher's role in the academic growth of its students. Academicians are often found advocating the theory of lesser student-faculty ratio for the all-round growth of an institute. Students who are a part of smaller classrooms have been consistently producing significantly better results in the past compared to their counterparts.

If one complains about the infrastructural incompetency of NSIT, a lot of hands may stand high to second it. As teaching-learning process is a major factor determining the role of an institution in enhancing students' academic abilities, certain areas of excellence assume a pivotal role . Student-Faculty ratio is one such area of importance as it lays the underpinning for better dissemination of excellent education.



It's the symbiotic relationship between a teacher and the student, which provides life to bricks and mortar, and makes what we call an institution.

Student to Faculty Ratio - The NSIT scenario

The cliché, "NSIT produces more accountants,consultants and management professionals than engineers," is surely a topic of debate, but neverthless, has a deeper insinuation behind it.

The absence of permanent faculty is palpable and could be noticed by anyone who is or has been a part of this institution.

In the first two years of undergraduation at NSIT, the class time-tables reflect this fact with the presence of ample numbers of Guest Faculties(GFs) and Teaching cum Research fellowship(TRF) faculties in the teaching routine. The ancient syllabus along with the limited accountability of non-permanent faculties aggravates the potential of technical 'gyaan' that a student aspires to seek at college. Sometimes, this trauma leaves the students with reference textbooks, whose authenticity is another point of debate. These potholes usually mold the student to perceive college as a degree granting body and thus, equating college to an abode of wisdom seems mockery for him/her.

In the later two years of engineering, this fact strengthens when sedulous and hard-working students face the dearth of technical research opportunities available in the college. Understanding that the limited permanent faculty is already overloaded with projects, some students switch to non-technical fields while a few brave ones explore and realize opportunities beyond the collegiate limits. In fact some NSITians went ahead to work on projects with professors from IIITs, IITs and even the prestigious Ivy Leagues.

In recent years, the myopic decision to augment the batch strength without contemplating over the need to maintain the quality and quantity of faculty has added to the woes of students.

Possible solutions

- Expanding permanent faculty positions and filling up vacant positions could help better the student-faculty ratio in the long run.
- There is a strong need to check the accountability of GFs and TRFs on a regular basis. Imparting quality teaching to students from the very foundational years would boost up the quality of research output from the college.
- The quality of faculty shouldn't be compromised in case of a batch expansion. This exacerbates the already poor student-teacher ratio.
- In case there is a paucity of permanent faculty even after the recruitment process, the authorities could go ahead to regularize the willing guest faculties keeping in mind the quality.

A new ray of hope

As a better learning environment could take away a lot of miseries, the NSIT administration seems to have realized the exploding student to faculty ratio and has opened up the recruitment process for 63 assistant professors.
The advertisement for the same could be viewed at - http://nsit.ac.in/recruitment/pdf/advt-faculty-2012.pdf

Comparing Student to Faculty ratios

- Harvard- http://goo.gl/FUQDW
- IITs – http://goo.gl/Chwh7
- IIIT Hyderabad- http://goo.gl/8j2He
- University Grant Commision (UGC) Norms * – http://goo.gl/2Zf7h
- NSIT – http://goo.gl/rI1Tc

Furthermore, we need to realize that if these things continue to follow the same dwindling path, NSIT would not only experience a diminished brand image, but also lose self-esteem on the moral grounds of integrity and sanctity of an institution.

*UGC Norms - 25:1

SUMMERS IN TEXAS INSTRUMENTS

SIDHANT KHANNA

Introduction
TI came to campus last summer offering internships across 6 profiles:
1. Analog Applications
2. Analog Design
3. Digital Application Associate
4. Digital Design
5. Technical Sales Associate (TSA)
6. Software

12 lucky 3rd years were picked up. Here's a chat with *Anurag Arora*, selected as an Analog Designer.

Q. Talk us through the entire selection procedure, beginning with the written round to finally getting the call letter."
A: It began with the written round; since there was no percentage criterion this time(was 75% last year), nearly every ECE and ICE student sat for it. Prima facie, it reminded me of those ridiculously impossible problems in Bansal classes IITJEE modules. I attempted 10 - 11 of the total 20 questions; they were twisted no doubt, but if you knew the trick there were no complex calculations involved.
For the interview round of Analog profile, 6-7 ECE as well as ICE stduents were shortlisted .The interviewers began with some very basic questions based on charging/discharging, diodes, and transistors and then asked me to resolve a few problems from the written test. I think they were observing my modus operandi and how I approached a problem. I made some silly mistakes, but I guess they were fewer than the others. In the end, I was the only one selected for the Analog Design profile.

ANURAG ARORA

Q. Please tell us about how you prepared for the interview.
A: The announcement that TI was coming to campus came barely a week before the written round, so I just skimmed through some 3rd semester books of Electronics-1, Signals and Systems; and Electronics-2, DCS from the 4th semester.
I talked to an NSIT alumnus working in TI who told me that they have a unique, atypical paper and the questions might seem out the blue. It was a tough paper and expectedly unexpected!

Q. Why did you choose the profile of "Analog Designer" in particular? Tell us about it.
A: Like everyone, I too was inclined towards programming in my first semester, but some of the third semester subjects caught my interest and gradually I didn't even realise I was exploring new books on analog out of interest.

Q. What was the role of your CV in the selection process?
A: The recruiters refused to take a look at it. I was lucky because I haven't completed any project here at college and others had better CVs. I guess it was an internship interview and not a job interview that saved me. But students should undertake projects to polish their practical knowledge, which in my case is quite low.

Q. What are your expectations from the internship?
A: Having not done any project, I can't say with aplomb that I can design stuff or solve problems from scratch. So I would love to enhance my practical knowledge.

Q. Have you planned for higher studies?
A: I want to be a part of TI or seek a technical job for now. Maybe 2-3 years after that, I shall go for a Masters degree.

The Man with the "Gold"!

KARAN CHOWDHURY

Q. Which companies did you appear for during the placement season? Please tell us in brief about some distinct aspects of the various placement processes you were put through en route?

A: I was placed within the 1st week of the season. My first strike was Amazon, prior to which 4 other companies (Adobe, Microsoft, Facebook, Directi) visited NSIT. Although the basics needed while sitting for these were pretty common, yet each company had a distinct procedure. To crack an Adobe interview, you need to have a strong aptitude and knowledge of computer science. For Facebook and Directi, one must be comfortable with coding puzzles. Amazon presented original questions, and expected students to think spontaneously and provide solutions which exemplified logical reasoning.

The Google experience too was unique in every way. The questions they presented were not unearthly, but twisted enough to entice you into thinking deeper before presenting your algorithms.

Next, I sat for Goldman Sachs. They judged us not only on coding but also on non-coding puzzles and some mathematics. They were looking mainly for candidates who did something significant in terms of projects/internships as well as those with excellent communication skills.

Q: What about this opportunity made it stand out?

A: Firstly the name — GS is the largest organization in the world in terms of revenue, work ethic, etc. They [usually] visit only IITs and IIMs, so that meant working with quality people. Thirdly the profile and division they offered me is a rare amalgam of algorithm design and finance. So one gets a perfect opportunity to enhance skills in both domains. Lastly, the package they offered is the highest a new engineering graduate can get in India, and was undoubtedly irresistible.

Q: Was there any notable non-syllabus related preparation that went into your run up to the placement season?

A: The syllabus encompasses less than 40% of what you require. There is an enormous difference between preparation for end-semester exams and for placements. There are many things you need to go through. Internet and books are available in plenty. One of the many things which really helped me, was the video lecture series on "Data Structures and Algorithms" by Dr. Naveen Garg of IIT-D.

ARJUN SINGH

Q. What do you think it was that you did/ was about you that gave you an edge over other students competing for the same job and profile?

A: As far as Goldman Sachs is concerned, I feel that there are a number of things. The resume is your first impression. I worked on a couple of innovative Research Projects and participated in popular coding contests like the ICPC. I am a seasoned orator, and thus pretty expressive.

Also when sitting before any company, I think it is of utmost importance to assure the interviewers that you're keen on working for their firm. Finally, you need to be lucky. No matter how good you are, if it isn't your day, I'm afraid you can't hit the bull's eye.

Q. In your opinion, what other skills besides quantitative aptitude does one need to possess in order to successfully land a similar job?

A: I would advise anyone reading this to not work on your skills in order to achieve only a superior package. Work hard to increase your knowledge, and gain experience by going for projects. A good job and/or package shall follow.

Back to the question, if you are in COE/ IT you need to be a confident programmer. A core technical company like Amazon would seek great coders/ problem solvers. Aptitude is an important parameter in the written rounds for any company, because if you don't get through it, there is no way you can show off your coding, soft skills, work experience etc.

Q. Tell us about the internships you enrolled in across the last 3 years of college. Please elaborate on how you went about acquiring and subsequently utilizing them.

A: I worked on a research project under Dr. Anand Gupta on Natural Language Processing, and had a research paper published. Next I did an internship at IIIT-D, under professors from Carnegie Mellon University. The work that we did there, primarily because of the mentors, actually helped me in completing the other projects I had.

I also had a stint with Ph.D students from Massachusetts Institute of Technology, during a design workshop. Finally, I did an industrial internship at C-DOT.

Q. Any tips to help the freshers and juniors extract maximum and holistic productivity out of their years at NSIT?

A: I would say that you could extract a lot out of your time at NSIT. You must communicate with seniors a lot, since they can be your best guides. Also you must be able to decide where you want to end up after B.E.

If you have an inclination towards research, then get to know about the professors at NSIT or any other college and start approaching them with proposals. For placement seekers (COE/IT), the bottom-line would be to start coding early. The number of programming languages you know will never be important, but how much you know about even a single one shall be deterministic. I think 3rd semester should be the time when the bells must start ringing.

Q. Any general advice to juniors who look up to you?

A: Never be afraid of failure. If I look back, there was a point during the third year when I had faced atleast a dozen rejections for summer internship. My confidence was shattered. But I kept trying and finally had my day.

Secondly, do not become a victim of peer pressure. Realize what you really want. A number of students force themselves into projects, coding, etc. because that is what everyone else is doing. If you're more interested in non-tech stuff, stick to it and avoid getting lured by the package offered by tech companies, because if you end up in a job you don't like, the money would never get you joy.

From NSIT to UPenn

DEEPSHIKHA ACHARYA

SHANJIT SINGH JAJMANN

From going on an impromptu late night excursion to co-authoring a book sponsored by Texas Instruments while working in the CEDT lab, this senior truly exemplifies hard work and fun. As Shanjit Singh Jajmann from ECE (2013 batch) gets ready for pursuing his masters in the coveted University of Pennsylvania (USA), he tells us about his life at NSIT.

Q. Which course have you taken up in the University of Pennsylvania?

Shanjit: I will be pursuing MS in Embedded Systems at the School of engineering and applied sciences in the University of Pennsylvania.

Q. Would you like to pursue an academic path or taste the corporate world after your masters?

Shanjit: I haven't really made up my mind right now. It will all depend on the state of my finances at that time.

Q. What is your ultimate aspiration and how do you plan to go about it?

Shanjit: My ultimate aspiration is to start my own company. I am still finding my way around in this technology driven world. However, I have a knack to explore. It's easy to disregard something that doesn't belong to your field of study, but for me exploration is about completing a whole circle, from development and designing to manufacturing and even marketing, moving across all fields and disciplines.

Q. Do you have a specific role model? If not, what exactly are you looking for in your role model?

Shanjit: I have never really spent too much time in trying to emulate people. But yes, I am greatly inspired by Elon Musk because of the nature of the companies he has founded, they cut across different technology domains and are future driven. Even Robert Downey Jr. took a lot of pointers from him for his movie Iron man! (Google it if you don't believe!)

Q. How would you guide your juniors to preparing for the entrance exams to UPENN?

Shanjit: The University of Pennsylvania requires a GRE and a TOEFL score for their online application. The focus on English in both these exams is surely not overstated, more so for the GRE. It's important to cram those word lists and practice writing tasks beforehand. I used to listen to the audio cassettes of the word lists which I found on the internet. More importantly, these scores are just for the initial cut-offs, your projects, academics and recommendations matter far more. Make sure that you give each bit its due importance.

Q. Why University of Pennsylvania? Why not an Indian institute instead?

Shanjit: I have given more exams in my life than I have made things! I think colleges abroad are poised better to give me more in terms of opportunity, resources, exposure and hands-on experience.

Q. How do you think your years in NSIT helped you achieve/plan your future?

Shanjit: I think one of the best things which NSIT gives you is abundant time. And you really start pondering over things somewhere in the middle of your four years here. I have been fortunate to have found the things I like and that has really helped me plan my future.

Q. What internships/research projects did you undertake in your 4 years in the college?

Shanjit: I learned Java during my first year, building apps in my first winter and summer break. I also interned with SEETA, which was the initiative of a senior. I moved onto winter training, android and arduino over the next summers. I then associated with CEDT and have been an intern with TI since Dec 2011.

Q. You have written a book sponsored by TI. How and why did you come about writing the book?

Shanjit: Texas Instruments wanted to get some pedagogy material for their ARM cortex-m3 controller. We at CEDT proposed to make a development board and complement it with a Manual for the same, hence the book.

ON A LIGHTER NOTE

1. Your best hang out place during college days?
Shanjit: Jeetos during night and otherwise, the roof of Block-IV
2. One best and worst of NSIT—
Shanjit: Best -the time it gives you, the friends I have made and Prof. Dhananjay V. Gadre. Worst - Found quite a few irrational people here and the outdated coursework.
3. If you could introduce one thing in your college canteen what would it be?
Shanjit:It would be better if they just improve their quality and extend their timings.
4. Your special thanks goes to-
Shanjit: Family, friends and Associate Professor Dhananjay V. Gadre
5. One memorable moment in NSIT you'll carry along all your life?
Shanjit: When we decided to go visit Agra to see the Taj Mahal at 2 am in the morning. We were back by noon the next day.
6. If you were the college dean for a day, what would you have done?
Shanjit: Get us free broadband speed wifi, extend canteen timings and make fests last all night.

Q. What 'wise words' would you like to give the clueless freshers to help them plan their future course of work/studies?

Shanjit: NSIT gives you a lot more than you think it does. Make the most of your time here.

Wisdom Tree: The Power of Sun

DHRUV MATHUR

Introduction

Solar energy is the energy generated by the Sun, by the nuclear fusion mechanism in its core. It is a limitless resource, and if efficiently exploited, can easily meet energy demands for all of civilization with ease. Sample this: In every hour of daylight, the amount of solar energy hitting the streets of the United States is enough to supply the entire country with electricity for a year. However, for most of its history, the major Achilles heel of Solar Power has been the efficiency (or lack of it), making it impractical for us to tap the enormous power of the Sun. Now, research and developments in the last 2 decades have finally made it possible to look at solar energy as a viable alternate for 'conventional' fossil fuels.

The Background

Ever since the Industrial Revolution in the 18th Century, the world's economy has been completely dependent on fossil fuels. They have influenced our daily lives to an unimaginable extent, improving the standards of living all over the globe. However, as economists never get tired of quoting, "There's no such thing as a free lunch".

In the case of fossil fuels, this trade-off comes in the form of severe environmental damage, both in the short term (as in an oil spill, or air quality degradation), or more ominously, long-term effects like accelerated climate change and instability due to the greenhouse effect.

Fortunately, this problem has finally been identified as a major threat to many species (including a large fraction of humans) on the planet. It is for this reason that engineers majoring in Electronics fields now look at solar energy as a fruitful field-both for jobs as well as research.

The Basics

The Earth receives approximately 3,850,000 exajoules (Exajoule=10^{18} watts) of energy annually from the Sun. In comparison, the total energy used for the year of 2009, by the whole world, adds up to a 'mere' 510 EJ. Imagine the potential that this so far untapped source of energy holds!

Thus, it seems quite clear that our planet's future energy needs can, and should, be taken care of by using the boundless energy stores of our friendly local stellar companion, the Sun.

This can be done in many different ways. The two major methods of harvesting the Sun's energy are:

1. Using the Sun's heat energy : Sunlight is concentrated into a narrow, intense, high-temperature beam, which is used to heat up a fluid (usually water) to its boiling point. The vapours are then used to spin a turbine, which powers a generator. This method is called 'Concentrated Solar Power' or CSP.
The efficiency of such a system lies between 19-32%, depending on the exact details of the mirrors/lenses used.

2. Using the Sun's light energy: Sunlight is incident on a photovoltaic cell, a semiconductor device that converts the radiation directly into electrical energy. Such a system is majorly dependent on the materials used in the fabrication of the solar cell, and also on the total available surface area.
The efficiency of most Photovoltaic (PV) systems lies between 15-40% in currently marketable systems.

The Advantages

- It could provide low-cost, abundant, practically limitless energy, more than enough to fulfill our needs.
- It would lessen the negative environmental impact that human civilization currently has on the Earth's biosphere.

The Limitations

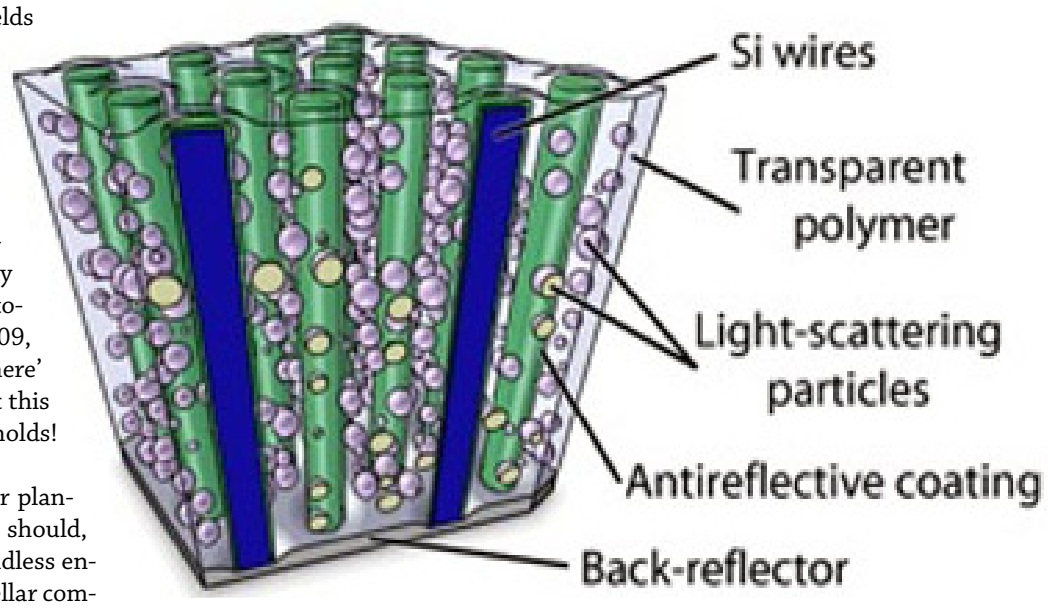
Currently, there are a few major factors that are holding back the expansion of solar power as a field:

- It is very expensive to set up
- Systems have low reliability
- Most systems are bulky and take up a large area

However, these drawbacks are slowly being overcome, as more research takes place into high-efficiency solar panels.

The Electronic Engineer's dream: The ideal solar energy system

While there is no such thing as a 100% efficient solar cell, (and never will be, thanks to thermodynamics), an engineer will always aim to achieve whatever maximum is practically achievable. For him, it is not only important for the system to have maximum possible efficiency, but also to have low costs while maintaining a steady and reliable output. In such a scenario, the engineer would look to amalgamate the latest available technologies in such a way as to retain all their advantages and manage to cover almost all of the disadvantages of each. The following solar cell system would be one as imagined by the 'ideal engineer':



Silicon Microwire-Nanoneedle Arrays

These are solar cells recently developed by researchers at the California Institute of Technology (popularly known as Caltech), which hold a lot of promise for energy generation, since they are made up of 98% plastic, and only 2% Silicon. This decreases both the bulk and the cost of the solar array. In addition, this class of cells has a very high efficiency, absorbing 97% of all light incident on it.

These cells are also very thin, as they are mostly made up of periodic arrangements of Silicon microwires, which are close to 70 microns in length, and only 1 micron in diameter, with small 5-micron long Nanoneedles co-integrated between the longer, periodic microwires.

The usage of plastic polymers is an added advantage, as it not only lowers the cost of the cell by a significant amount, it also enables them to be flexible, which allows them to be used in many different configurations, as per the needs.

Another major way to increase efficiency would be to place our hypothetical solar panel array in space, on a satellite to transmit power back to Earth. This has been the subject of active research in the past few years, by UN organizations like the SGAC (Space Generation Advisory Council) as well as space agencies like NASA and the European Space Agency (ESA). The advantages of a space-based system would be threefold:

1. It would take away constraints based on area, since there is no lack of space in, well, space.
2. It would increase the amount of radiation reaching our hypothetical array by a factor of 1.4
3. It would also enable the energy to be directly transmitted to wherever it may be required.

A quick calculation shows the efficiency of a space-based model to be around 1.54 times that of a commercially available ground-based solar energy system.

The Future

In India, the future of solar power seems filled with fast growth. Under the National Solar Mission, targets of 20,000 MW electrical generation will have to be achieved by 2022. For this purpose, the Government allocated Rs. 1000 crore in the 2010-'11 budget.

A large number of established companies, such as the Tata group, the Reliance group, as well as some state-owned power companies have set up solar branches, with many small plants cropping up across the country. The largest such plant is at Charanka, Gujarat, with a peak power output of 214 MW.

In rural areas, solar lanterns and solar-powered home lights are being installed, to replace carbon-based fuels like kerosene. Solar photovoltaic cells are also being used to power water pumping systems for irrigation and drinking.

India is viewed as a perfect location to have large-scale solar power systems put in place, mainly due to its tropical location, and its high population density. The daily average solar energy incident over India varies from 4 to 7 kWh/m2 with about 1500–2000 sunshine hours per year (depending upon location), which is far more than current total energy consumption. The falling prices of photovoltaic cells, coupled with growing cost of grid power, makes increased solar adoption a must in the medium-term future.

According to recent estimates, by 2022 the Indian solar energy industry will need around 1 lakh engineering oriented employees . In addition, many start-ups have also come up in the field, looking to fill up the void. Here is a short list of the up-and-coming solar energy start-ups:

1. Greentech Knowledge Solutions (P) Ltd
2. BridgeToIndia
3. FJS Energy Pvt.Ltd.
4. Global Energy Pvt Ltd
5. ALBEDO ENERGY CONSULTING
6. M-Power Energy India (P) Ltd.

Many of these are consultancy firms, providing environment-friendly solutions to energy needs, but a few are also technical companies, providing systems for using solar energy on a small scale (For example, solar water heaters and small solar photovoltaic panels to power streetlights).

All in all, solar power seems like a great field for an upcoming engineer to head into.

Acknowledgements

The author wishes to thank Mr. Akash Arora (2nd Year ICE student, NSIT) for his help in compiling the list of startup companies, & Mr. Gursimran Singh Sethi (1st year Engineering at Hong Kong University of Science & Technology) for the 'Silicon microwire array' section, adapted from the paper 'Solar Space Power Generation' by Gursimran Singh Sethi & Dhruv Mathur, published in the International Journal for Scientific and Engineering Research, Volume 3, Issue 8, August 2012.

NSIT SOLAR CAR CONCEPT

"I have no doubt that we will be successful in harnessing the sun's energy. If sunbeams were weapons of war, we would have had solar energy centuries ago."

-George Porter (Nobel Prize winner in Chemistry, 1967)

Research and innovation is required in the field of solar power and keeping this in mind, a team of undergraduate students from NSIT came together in 2007 to form NSIT Solar Car Concept. They built the first solar car and used the theoretical concepts and put them to real-world applications. The first car Advay I, built in 2007 was one of the cheapest solar powered race cars in the world and went on to win many awards and came 2nd in a cross-country race which took place in South Africa. The second car Advay II was built in 2010 and subsequently the present batch decided to take forward the legacy by building the third solar car of the college.

The third project to build Advay III, started in January 2013 and the primary aim of the team is to build a car that demonstrates the viability of alternate sources of energy. The team also aims to show innovation in the mechanical and electrical sub-systems present in the car. The team plans to complete the project by October 2013 and build a very low-cost solar powered car and race it across North America and Australia in the respective challenges.

To follow the activities of the NSIT Solar Car Concept Team, visit their Facebook page at : https://www.facebook.com/nsitsolarconcept?fref=ts

NSIT Solar Car

PROFESSOR PROFILE: DR. TARUN KUMAR RAWAT

ANONYA CHATTERJEE

A dynamic and nonchalant person who has epitomized how one may achieve excellence and authority, who advocates and has abided by the motto that "there is no shortcut to success". His gleeful persona makes seemingly obscure lectures extremely overwhelming and keeps students engrossed in class. His famous book has become "Bible" for the third semester students. Surely, one would grasp a fair idea that we are talking about our very own "TKR Sir". Catch a glimpse of the informative yet jovial rendezvous where he shares his thoughts with us.

Q. Firstly we would like to know when did you enter the teaching arena and since how long have you been associated with the NSIT family?
A. I had commenced my profession as a pedagogue from the Maharaja Agrasen Institute of Technology, Rohini. I joined NSIT in 2001 for pursuing my post-graduation (M.Tech). My association with NSIT has been since 2005 when I took up full-time PhD here. I have been teaching here as an Assistant Professor since 2008.

Q. What are the various domains of research that you have delved into?
A. My key area of research includes Digital Signal Processing, which broadly pertains to the study of deterministic signals and Statistical Signal Processing which is linked with the analysis of random signals.

Q. Please enlighten us about the projects for which you have provided your guidance to the students?
A. At the undergraduate level, I undertake student projects in the fields of Communication, Signal Processing and Image Processing.

Q. ....And the ones you are presently mentoring?
A. Presently, I am mentoring students of 8th and 6th semesters for projects in the aforesaid areas. Also a bunch of students from 4th semester are currently doing a project on Signal Processing.

Q. Most of us are eager to know what are the parameters based upon which you select amongst the students who approach you to seek your assistance and mentorship. Is any pre-requisite knowledge essential? Is any preference given to those from ECE branch?
A. It is expected that students keen to pursue projects in Signal Processing and Communication have basic knowledge of Signals and Systems and Communication Systems respectively. Students have ample scope of enriching their know-how in these subjects since these are taught in 3rd and 5th semesters. However, students inquisitive about Image Processing are required to invest additional endeavour and explore beyond textbooks if they are zealous to take up a project in the field.

Q. How would you opine on the current syllabi being followed and taught at NSIT? Do you feel that the curriculum would suffice the rapidly changing industrial demands? How can this change be incorporated? How can the pedagogy be modified in accordance?
A. Undoubtedly the syllabus needs revision at regular intervals. But the curriculum cannot be termed as entirely obsolete since the flexibility to manoeuvre the course content, as has been the case of some subjects like Circuits & Systems and Communication Systems, does lie in the hands of faculty. Thus the course title remains unaltered, since only the University of Delhi could leverage it, while the content may be modified in accordance with the changing trends.

Q. Over the past few years, the sanctioned intake of students into the Institute has increased. Do you think the present student-faculty ratio is affecting the education being imparted in any way?
A. The current student-faculty ratio has obviously impacted the education in terms of quality teaching-taking a toll on both theory lectures as well as laboratory classes. Consequently it becomes imperative to appoint guest faculties to compensate for the deteriorating student-faculty ratio. The approval of such appointments by the Government is a time-consuming procedure. Moreover the quality of the guest faculty may not be "up to the mark" and they may not be vying enough.


Dr. Tarun Kumar Rawat

Q. A question that frequently pops up in the minds of ECE students (in particular) is the limited number of core companies visiting the college. Many as a result are swept towards non-technical fields. So what are the other equally interesting opportunities one could explore?
A. Besides working in technical fields in core companies, one could ponder of being a Data Analyst. The job prospects for Data Analysts are witnessing a mushrooming demand and gaining immense popularity. Data Analysts can explore work in myriads of fields- for instance; Biomedical Data Analysts are engaged with the medical sector. Moreover, preconceived notions of such jobs being non-technical are erroneous. These also employ extensive use of statistics, communications and random variables to name a few. So, students desirous of continuing with their technical line can look up for this option too.

Q. The very idea of "research" might sound arduous, boring and unrewarding to a lot of students. How would you convince students here to pursue a career in research?
A. It would be a daunting task to persuade students here in this regard. It is difficult to figure out why students are unwilling to go for postgraduate studies, particularly in technical education. Very few students have interest in pursuing research in their respective core fields and only a small fraction go for further studies like MS. But it is relatively easier to convince postgraduate students to take up research as a career and they don't perceive research as mundane. Students have full freedom to identify the subject that they find intriguing and once they initiate with research in that sphere, they would realise that research is not at all boring.

Q. ...And even in research most of us prefer to go abroad, rather than staying in India. What is your take in this regard?
A. India has failed to absorb people into the research and development sector due to reasons well known to all. Even premier institutions such as IITs have seen a fiasco as far as garnering undergraduate students for M.Tech programmes is concerned. Meagre financial assistance and incentives are bottlenecks for those who envision development in research, whereas in foreign countries there is sufficient financial aid is granted and state-of-the art infrastructure is available.

Q. Which are the societies in college/ outside you are associated with?
A. I am associated with Institution of Electronics and Telecommunications Engineers (IETE). It is a technical professional society, having centers all over India.

Q. Your research papers have been published in highly coveted international publications like the IEEE, Elsevier, Taylor & Francis, Wiley, Thamnasat International Journal etc. Also your book on "Signals and Systems" is well known to all. Please take us through your journey.
A12. While doing my PhD, I was free from the preoccupations and prior to the submission of my thesis; I had three to four months' time as it is a rule that one can submit the thesis only after two years from the date of registration. I always had the idea of writing a book on Signals and Systems at the back of my mind. Meanwhile, I was approached by Oxford University Press and I agreed to write the book. There are many good books available such as Oppenheim & Willsky and Simon & Haykins. But students usually find the language of these books challenging. I also found it difficult to comprehend. On the contrary, there are books by some Indian authors that are too easy. I consider my book between these two categories. The purpose is to provide an exhaustive, simplified and student-friendly book.

Q. A lot of 3rd semester students are absolutely terrified of the subject "Signals and Systems". What do you think is the reason behind it?
A. The prime reason is that it is something entirely different from what students have studied till that time. The subject is mainly about application of mathematics into engineering problems. For instance, they study about functions and convolution in mathematics but they are not aware of the practical applications of such manipulations. It deals with a lot of terms that students are not acquainted with. All this makes this subject little tricky.

Q. A few words of advice for NSITians...
A. My motto in life is that there is no shortcut to success. I would advise every NSITian to persevere and work hard.

"Canvas"-ing the language of art

SHREY BANSIWAL

Science kills creativity. This very adage reeks of a pessimistic, cynical and stereotypical view. Unfortunately, this was probably the state of mind of a bunch of creative artists who entered NSIT and got disappointed due to the absence of an art society even as they saw various seniors promoting their societies with full vigor and enthusiasm that dealt with everything under the sun, except for arts.

It seemed that there was no place for a wayfaring thinker who wishes to express his thoughts with colours on a canvas amidst the great minds of engineers and budding managers or entrepreneurs. Science did seem to have killed creativity.

So, this bunch of people- which included Akanksha, Rashmi, Anshu, Abhinav and Saumya- set out to start a society that aims to bring out the latent artist in the students. Thus was born 'Canvas'- The Art Society of NSIT.


Team Canvas at an art exhibition at the Indian Habitat Center

While the idea was floated a long time back, it materialized into a society on the 2nd of February, 2012. Its activities kicked off with an orientation and went on to organizing an event in *Moksha* 2012, by the name of *Indradhanush*. It received great response from various art and design colleges. With this started a chain of events that went through the entire two semesters that followed. The team organized The Art Fiesta, a workshop that was convened by a renowned artist, Neha Mukhi. The members of the team have also visited various art exhibitions so far, one of them being at the India Habitat Center.

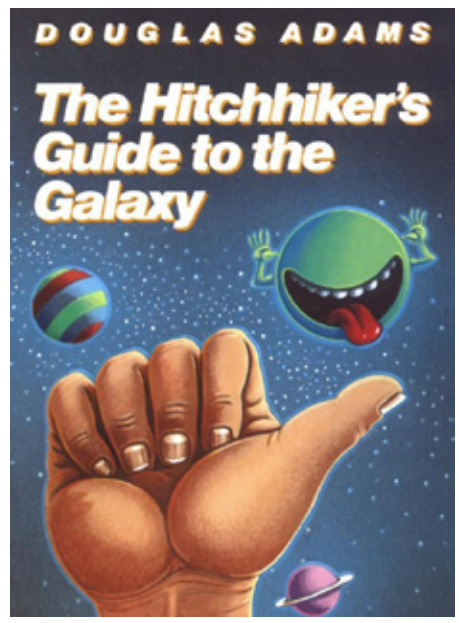
Canvas now plans to organize workshops and events on a larger scale and participate in more events. So, all those who have a hidden artist in them, be a part of Canvas!

Don't forget to bring a towel!

"It is an important and popular fact that things are not always what they seem. For instance, on the planet Earth, man had always assumed that he was more intelligent than dolphins because he had achieved so much - the wheel, New York, wars and so on - whilst all the dolphins had ever done was muck about in the water having a good time. But conversely, the dolphins had always believed that they were far more intelligent than man for precisely the same reasons." - Douglas Adams in *'The Hitchhiker's Guide to the Galaxy'*

AKANKSHA DEWAKER

There seems to be no appropriate line left unwritten, no right word left unsaid about the novel *'The Hitchhiker's Guide to the Galaxy'*. This review is written not to praise or analyze it, but only to introduce you to this marvelous book. It's a huge international bestseller and highly influential within its genre. Actually, it can be held as one of the earliest and yet the most successful comical science fiction book.



The novel takes you on a breath-taking journey through the cosmic space with never-ending twists. This novel is an amazing read that will leave you yearning for more; to our great fortune, Adams indeed has left us more in the form of four subsequent books as the Hitchhiker's guide. The writer, Douglas Adams draws his humor from death, recession, even philosophy, and of course science. His humor is almost impossible to describe - this novel must be read to be appreciated. Every character, whether human or alien can be related to. You pity the poor earthman, admire his alien friend ford, hate the vogons, empathize with the two-headed president of the galactic government and well, love all the other wonderful creatures. It seems like every single line holds a joke of some kind within it and the best part is, you 'get' it, all of it.

But behold... it is much more; it even gives you the answer to the ultimate question of life... only if you know the question in the first place. Go figure! And read the book!

New kids in town

IRA SAXENA

Rejoice my fellow hipsters. Psychedelic has never been better. My love for unearthing good music led me to MGMT and I'd like to spread the word around. So, tweak those speakers of yours and read further. Founded in a Wesleyan dormitory by Andrew VanWyngarden (frontman) and college mate Benjamin Goldwasser (key-boardist) as The Management, it was a college project which was meant to end there only. They never intended to be a mainstream band and did not clamor for fame and success. In fact if it wasn't for Andrew's father, a noted journalist himself, who advised the duo to sign up Columbia Records and not miss out on the opportunity, we may have never gotten the chance to witness the phenomenon that MGMT is. So after signing up, they changed their name to MGMT to avoid copyright issues and released their debut album *'Oracular Spectacular'* in 2008. The rest is history.


MGMT

The reaction they received was huge and overwhelming. Biggies like Paul McCartney and Jay-Z, self-admitted fans all wished to collaborate with them. Who wouldn't? The sounds heard on the album were nothing like anyone had ever heard. The lyrics are profound, enigmatic and original.

"Mystic referee, don't look on me with scorn
I'm a child, I'm a lover being born"
-Metanoia

It's hard to place this album under one particular genre though. Singles like 'Time To Pretend' and 'Kids' could be safely labeled synth –pop. But the 2nd half of the album leans towards psychedelic influenced electro pop with traces of psych –rock in between .The guitar-solo at the end of *'Of Moons, Birds and Monsters'* will leave you still with joy and awe. Andrew's vocals on *'Weekend Wars'* will remind you of Led Zeppelin's Robert Plant in his prime years. To sum it up it's a firecracker of an album which only leaves you wanting more and excited for the next.

MGMT, clearly unfazed by the success and applause received for *'Oracular Spectacular'*, seemed to have taken an altogether different route for their second album ,*'Congratulations'*, abandoning pop overtones in favor of their psychedelic leanings. *'Congratulations'*, released in 2010 was received with polarized reviews. The reason being, not a single song on that album even closely resembles the poppy, synthetic sound of *'Time to Pretend'* and *'Kids'*. So, in case you're looking for the sounds of the previous album, then you're in for a disappointment. Because MGMT are in no mood to replicate the success of *'Oracular Spectacular'*. No, this time around, they're here to create art. And art it is.

The first single, *'Flash Delirium'*, is a pandemonium and gives a brilliant start to the album. You can hear flutes, horns and different sections that resonate old-school rock'n'roll, electro-balladry and the Beatles at their most high. The wonderful thing about the song is that every time you listen to it, you'll pick up a different sound, because it's so well-layered. It may not be their best work lyrics wise because they don't make much sense in most parts of the song, but then again that is my interpretation. One of my favourite tracks, *'It's Working'*, traces its influences to the 60's Californian psychedelic music. Mr. VanWyngarden adds that the song is about the band's experience with drugs and how it wasn't all that great. But, it sure takes a few replays on repeat to realize what he's talking about. *'Siberian Breaks'*, the 12-minute long ballad will take you into Andrew's head and if you really see the images he's trying to paint with his words, then, give yourself a pat on the shoulder . But those clever little hipsters saved their most simplistic song for the last. *'Congratulations'*, gives the prefect closure to the album. It's folksy and simple –sounding, but the lyrics uncover what MGMT have been trying to tell us all this time.

"I'll keep your dreams
You pay attention for me
As strange as it seems
I'd rather dissolve than have you ignore me"

They don't yearn for money and fame. All they want is recognition, credibility and people to really hear them out.

Today, MGMT seem to be down the same road as The Velvet Underground and The Talking Heads were; who were never really recognized in their own time and years later, people suddenly discovered how great they were and hailed them as visionaries. But for what it's worth, they have certainly created a niche for themselves in the indie/psychedelic scene and are often sought after for inspiration by new and up-coming bands. What really sets them apart is how each album is so amazingly distinct from the other. So if indulging in some MGMT is your agenda for the weekend, then you're in for a surprise. Happy listening.

The Dark Knight Rises - Game Theory Approach

AARON SWARTZ

Aaron Swartz, in his last blog, had outlined his thoughts on what exactly happened in The Dark Knight (2008 movie).

Here is a reproduction of what he said:

'What Happens in The Dark Knight'

From the start, the city is torn about how to handle the Batman, who has inspired a wave of second-rate imitators. Some believe it's wrong to be idolizing a masked vigilante, but most (including the new DA, Harvey Dent) approve of his results. Dent is doing his own part to lock up the criminals, working inside the system.

Dent decides the only way to win is to go big — really big. He arrests everyone at once, on charges that are unlikely to stick. Dent doesn't care that he's breaking the rules, as long as it solves the problem. He cites the Romans who suspended democracy to protect their city. "You either die a hero or you live long enough to see yourself become the villain," Dent explains. He hopes to take up Batman's mantle, but do it from inside the system. Just as Dent is frustrated with the justice system, the Joker is frustrated with the criminals. He tells them they need to go big: they need to kill the Batman. He offers to do it for a sizable sum of money, which the gangsters eventually agree to. The Joker is obsessed with the homo economicus of game theory: when the gangsters ask why he needs the money to kill the Batman, he explains "Like my mother used to tell me: if you're good at something, never do it for free."

The film opens with the Joker hiring five men to rob a mob bank: Dopey silences the alarm, Happy shoots him and drills through the vault, Grumpy shoots him and empties the cash into duffel bags, a bus runs him over, Bozo shoots the bus driver. Finally, Bozo pulls off his mask to reveal he's the Joker. This is a classic pirate game and, just as in the theory, the Joker gets to keep almost all the cash.

Batman eventually tries to track down the Joker by threatening the gangster Maroni. But it's no use, as Maroni explains: "No one's gonna tell you anything—they're wise to your act—you got rules. The Joker, he's got no rules. No one's gonna cross him for you." This is a straightforward application of game theory's Davies-Folk theorem: the rational thing is to seem irrational so your opponents can't count on you doing the rational thing. Sure enough, when the Joker finally does get his hands on the money, he merely lights it on fire.

In a climactic scene, the Batman finally confronts the Joker in the middle of the street. The Joker knows Batman lives by just one rule ("I will not be an executioner") and encourages him to break it and kill him. But Batman can't bring himself to do it, he swerves at a key moment and ends up smashed while the Joker survives. (Yep: the Joker has just won the game of chicken.)

Gordon arrests the Joker and takes him to the major crimes unit, only to find the Joker claiming Gordon does not actually control the unit — his people actually working for mob boss Maroni. "Does it depress you, Lieutenant, to know how alone you are?" he asks (a classic principal-agent problem).

The Joker has kidnapped both Dent and Rachel and set them both to blow so that Batman can only rescue one (opportunity cost). Batman goes to rescue Rachel but the Joker has switched their addresses and he actually ends up rescuing Dent. Reese, one of Bruce Wayne's employees goes on TV and threatens to reveal the identity of the Batman, but the Joker calls in and asks him to stop. He threatens to blow up a hospital unless someone kills Reese. (He has thus constructed a trolley problem: people must decide whether it's better to let the 100 die or kill the 1.)

Batman, meanwhile, is also crossing lines. In his attempt to find the Joker, he has turned every cell phone into a spy device. Even he admits this might be too much power for one man to have.

The Joker scares the city onto its two ferries. Once the ferries are in the middle of the water, he cuts their power and gives them both a button to blow up the other ferry, thereby constructing a prisoner's dilemma (one boat is filled with real prisoners). The passengers discuss and vote. One of the prisoners makes a Ulysses pact and credibly commits by tossing the detonator overboard.

The Joker also took a busload of people from the hospital to the Prewitt Building where, through the window, you can see Joker's thugs with guns holding hospital people hostage. Gordon rushes in to get the thugs, but Batman discovers the thugs are hostages and the hostages are the thugs. The Joker is illustrating"The Market for Lemons": if the Joker is making it easy for you to kill his henchmen, why should you believe they're actually his henchmen? Yes, the entire film had a deeper meaning. Next time you watch the Batman cruising, this post will make a small smile and a know-it-all look appear on your face.

Charity begins from "Neighbourhood"

SHREY BANSIWAL

Students taking computer classes

Even as the world plunges into the deep darkness of evil, a small niche keeps the light of hope of having a better society alive. Such an example of this hope, The Neighbourhood Project, a society started by the students of NSIT under the aegis of a revered professor, Mrs. Sujata Senger has come a long way on the road of philanthropy with the noble cause of teaching.

The Mini Library is an initiative of The Neighbourhood Project wherein its members devote two hours each day, imparting knowledge to the world. They get together and teach disadvantaged kids - including children from the vicinity of NSIT and those from the NGO Anugraha(Dwarka)every day in the evening.

The class strength is usually around thirty students, each class looked after by two volunteers (who are NSIT students), thereby maintaining a good teacher to student ratio. Not only this, the team also caters to students who require any kind of special attention, and makes sure that they receive it.

This exercise has been phenomenally successful. The students who are taught by NSITians are mostly from government schools, and the knowledge given to them is inadequate in both quality and amount. Even after all this, most of the students have come at par with the others of their age who by virtue of their economic and social status, have the advantage of attending better schools and this has left the members of The Neighbourhood Project beaming.

The Neighbourhood Project has become the reason the guards of NSIT have become proud of their children as they happily send their kids to the evening classes close to their very homes, and at the same time feel secured about their future. The Mini library has brought smiles to many a faces and if the practice continues, it will surely lead to a better society. The Alliance can only bow to the creators and practitioners of the noble idea.

Bhavuk Ahuja teaching Class VI students

HNMUN Delegation 2013

KARAN CHOWDHURY

Harvard University, Boston, in February, will play host to the 59th edition of the biggest, oldest collegiate extravaganza in public speaking today — the Harvard National Model UN conference. It holds the prestige of being the largest running Model UN simulation in the world, and among the biggest in USA. As has been the norm for two seasons now, this time too, NSIT has been invited to the prestigious event. Come February, NSIT is all set to step up to the stage, with a team of 16 competitive upstarts.

Model UNs, or MUNs as they are identified here in India, are a revolutionary new platform that operate as simulations of actual United Nations organs, mirroring diplomatic proceedings within, protocol verbatim et al. Students take on the roles of real-world mediators, representing countries, preparing case studies, coming together to compare, discuss, and analyze each other's work — and having fun doing it; with the objectives of giving the youth of today an insight into the various conflicts and problems global leaders grapple with on a daily basis, diplomatic communication, and most importantly, sensitizing people about their responsibilities as aware global citizens. MUNs have burst onto the global and domestic stage in the last decade, and evolved rapidly from a mere extracurricular, to a dynamic knowledge-exchange phenomenon.

The NSIT Delegation to HNMUN '13

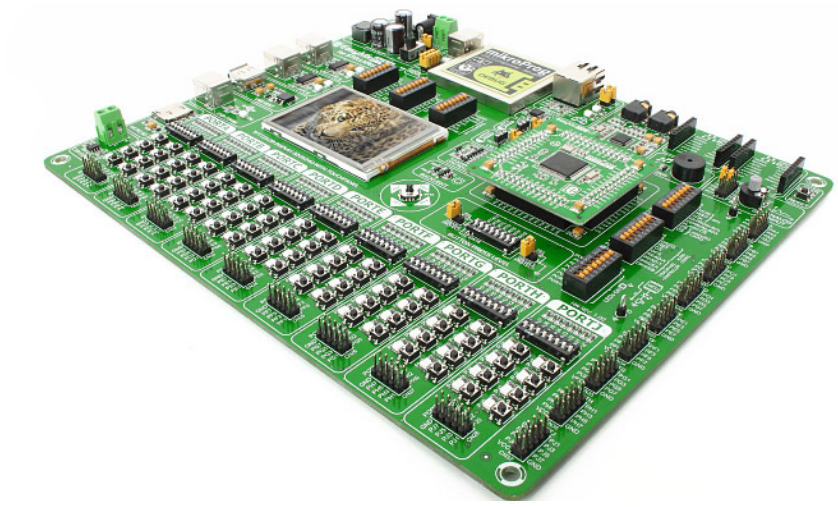
NSIT's own foray into said phenomenon of Model UN was a 'project' that was humble in its beginnings, with a team of 16 students selected to represent the Delegation of Indonesia in 2011. Even though it was a step into relatively unknown territory for students of an institution noted for pupils with acumen more technical than oratory, they were repaid for their initiative in the most stunningly rewarding fashion, picking up an Honorable Mention and going on to finish among the Top 20 international teams at an event that featured hundreds. Since then, NSIT has never looked back, growing in stature as we were invited for the successive session, going to HNMUN as a 21 member team representing the Delegation of Mexico in 2012, to now, where we have been invited yet again, as the Delegation of Afghanistan, the progressively increasing prestige of our allotments only signifying how fast this institution is climbing the ladder of expectations.

Representing Afghanistan will be a challenge as arduous as it is prestigious, the country being one widely noted for being mired in a variety of economical and social issues, as well as military ones. The team of 16 is led by Shifali Gupta, majoring in IT, currently in her Senior year. Having been a part of the acclaimed 2011 delegation, Shifali is an international Model UN veteran of sorts, having seen and faced both the captivation and the grind of HNMUN herself. Spearheading various divisions of preparation, under her tutelage, the team has been an edgy, tough-as-nails bunch, improving well and getting better with each day, truly leaving no stone unturned in their bid to reach peak preparedness and mental fitness ahead of the big event.

Success ultimately, belongs to those who want it most badly, so as the team sets foot in Boston, its focus and confidence levels are high. If there's one thing that is undisputable, it is that when this team meets its match at Harvard, they'll be giving the best of the best something to sweat about, and raising NSIT's profile on the international public speaking circuit manifold.

For Electronics Junkies

SIDHANT KHANNA



The T.I. centre for excellence led by our haloed Prof. Dhananjay V. Gadre organized a total of 4 workshops from 19th to 20th January at NSIT. The workshops dealt with Wireless Connectivity based on semiconductor solutions , multicore DSP , MSP430 Microcontroller , and 32-bit ARM-based Stellaris microcontroller.

After an inaugural speech by Mr C.P. Ravi(Director ,TI India university programme) and our esteemed Director Prof. Raj Senani , the participants headed to get a hands on experience on the provided kits under the watchful eyes of eminent engineers from TI . The workshop, 'Introduction to Stellaris Microcontroller' was a big hit. It was led by Shanjit Singh (ECE , 4th yr) and Rohit Dureja (ICE , 4th yr), who are both proteges of Gadre sir and are heading to the prestigious University of Pennsylvania for further studies.
The event saw extensive participation from various colleges including IIT Delhi, Kanpur and Ropar; and the students sure enjoyed the sumptuous food served on both days.

Our curriculum has long been imprecated for dearth of hands on experience, so this was the perfect event to get a taste of what is out there in the industry.

Do you have something to say? Send in a letter to the editor
Mail us at 'nsit.newspaper@nsitonline.in' or comment at 'http://www.alliancensit.com'

The Quora Phenomenon

SONALI GARG

In lingua franca, Quora is a perpetually growing question and answer website, edited and organized by its community of users. However, like its meteorically rising popularity suggests, this bland description does not do justice to the phenomenon that is Quora. The website was opened to the public in June 2010 and had an estimated 500,000 registered users, as of January 2011. By June 2012, it had 1.5 million unique visitors per month, registering a growth rate of 350% over the previous year. So what makes it tick?

We all have that little child within us, inherently curious, always wanting to know more, perennially questioning. Quora is the perfect platform to satiate that youngling. The hype about Quora was originally due to the quality of the answers from high profile technical experts being so astoundingly good. People noted that it had a preponderance of Silicon Valley's finest among its users and that a number of influential people were using it. Having people like Steve Case, the co-founder and former chief executive of AOL asking and answering questions was a great endorsement for the site. Many of the people answering questions had the credentials to back up their words. While the initial discussions pivoted around topics related to technology and business start-ups, the site has gradually witnessed an astounding diversification with topics like business and technology, food and entertainment, politics and social sciences, health and life advice all finding an even foothold. The answers on Quora are an amalgam of hard facts and opinions, and their sheer ingenuity is commendable. The attention to quality has been a major novelty factor for Quora. User's ability to edit answers or questions and vote the answers up or down is able to sustain accuracy, and the transparency in who is voting provides another layer of authenticity to the process. Also, Quora has a strong group of moderators who have thus far managed to keep the site spam free and circumvent the problem faced by sites like Reddit which became more conversation centred, leading to a decline in quality.

Quora's mission, as put forth by its co-founder D'Angelo is 'to share and grow the world's knowledge'. You can ask and answer questions, vote up the answers, vote down the answers, discuss, interact- Quora gives you the perfect space for an intellectual discussion. The user interface is visually appealing and supports interaction.With the recent annexation of the feature called Quora posts, Quora now combines the best of both worlds – personal blogging as well as problem solving.

When recently questioned about Quora's future, D'Angelo stated ,"We hope to become an internet-scale Library of Alexandria, a place where hundreds of millions of people go to learn about anything and share everything they know. To do that we are going to have to expand." In expansion, Quora faces the challenge to maintain its growth rate and increase its mass appeal without compromising on the quality it is known for. While it is often compared to social networking sites like Facebook and Twitter, Quora's stiffest competitors are the fellow question and answer sites, Wikipedia and Yahoo Answers, and whether it will be able to surpass them remains to be seen.

MBA - The rat race

SHIVANGI SAXENA

Assumptions:

1. Familiarity with basic C/C++

2. Appetite for sarcasm

3. Low self-esteem

Do
{

The situation:
The despicable third year awakens you out of your deep slumber namely the past 2 years in college. You feel that you were hungover all this time and suddenly life came up with lemons. You are struck down with the life-defining questions of which career to choose, which coaching institutes to join and whether to text that douchebag boyfriend of yours.
for(int i=0; i<=Summer break before 3rd year; i++)
{
You think. You take frequent breaks. You eat. You continue eating. You salivate while watching Masterchef. You try to think again but decide to trouble your dog by hiding his food. You are engaged in a dog-fight (pun intended). You think again.
}

Enter friend:
Your friend has achieved worldly wisdom. He has completed his thought process and zeroed in on the things he wishes to accomplish. You blame the dog who distracted you. Legit enough.

Credits : Allwin Tom, ECE (1st Year)

The talk:
Stop giggling. It's the different talk. *the kids these days* Let me rephrase:

The MBA talk:
The omnipresent word is enunciated.
Your friend has decided to do an MBA. He has weighed the pros and cons and counted the number of hot girls in his dream college. He strokes his beard, shows unabashed confidence and lives in blissful ignorance that now his life is sorted out. *Poor fella*

Thinking Phase part 2:
You plug in Kesha vociferous music and try to figure out what you might want to do for the rest of your life. Well you hear a small voice in your head saying 'MBA' but it is overshadowed by the protuberant voice saying 'FOOD'. You shuffle the songs while balancing your midnight snack.

Days 1.2.3.4..... :
Your neighbor. Your 'supposedly' best friend. The guy you stole food from. The girl wearing neon shoes. The social pariah. Your aunt's second cousin's sister's brother's son.
All enrolled in MBA coaching institutes. On a completely unrelated topic, Ravindra Jadeja is bowling the last over while Rohit Sharma is cheering him. You shout profanities and write a Facebook status that Dhoni is a promiscuous bitch. Then you decide to check out coaching institutes. On facebook.

You do the Maths:
You need a 1.7 crore package.
Highest package of IIM-A is 2.5 crores.
Defining statement1:
2.5>1.7
Defining Statement 2:
79.24% of your batch has been allured by the glamour of the MBA coaching institutes.
(The rest 37% you cant stalk on facebook)
(yes, you are bad at maths too)
That satisfaction:
You have unwittingly stumbled upon the greatest truth - You want to do an MBA and that North Campus has the best shawarmas in Delhi. (The vegetarians can scoff but then again, I am not really a fan of salads.)

The excitement:
You want to join a coaching institute to pursue your lifelong dream of doing an MBA. You plan excursions with your little friends and with the intent of visiting and critically analyzing each coaching institute.
You end up groggy and drunk after indulging in big-time retail therapy.
You join the institute where your friends are holed up. The institute boasts of :
Maximum Facebook likes and the funniest trolls.
You are satisfied with life.

The relief:
You figure out that you have done your part and then re-enter into the assuring world of day dreams bordering lunacy. You are accepted in your group as you have treaded the frequented path. Damn that Rober Frost. Stupid jackass with lots of time up his sleeves. Well then again he didn't have MBA coaching. *you give out an audible yet superior sigh*

You being a magnanimous soul shed fake concerns for those who didn't join any coaching institute. You look with pity and share your burger as an attempt to cheer them up. You try to help the disillusioned chaps who still believe in dreams by listing out the noticeable advantages of MBA coaching.
You list out rule:
Join MBA coaching institute ∝ being successful in life
neglecting effect of passion, dreams and other unmentionables
They try to argue with reasonable and scientific explanations but you brush them aside and brand them as irrationals fools.

The grind:
You are handed study material which can make environmentalists shout in horror on viewing the brazen callousness of paper abuse.
You try to work out the problems, pay attention, maintain separate registers, read the moronic Hindu while still eyeing the chick sitting next to you. You come to terms with the fact that a man can't multitask.
You decide to ask the chick whether she knows answer to question 6.
For those who still are unfamiliar with love maneuvers, there is no question 6.

The story continues:
You see people obsessing about Investment Banking. You google the terms.
Highest package = 6 crore
6>2.5>1.7
}
while (you discover your fallacies || you get laid)

Commandments:
1. *Thou shall not quote/abuse/mock/jeer the desultory author and her rambling ways when you encounter her running frantically to her merciless class on 3rd floor.*
2. *Thou shall shower compassion as she herself hasn't joined anything and naïvely believes in dreams and passion bullshit.*
3. *Thou are welcome to **offer free food** to the pitiable soul.*

The Alliance invites guest articles for our Open Page. Mail us at 'nsit.newspaper@nsitonline.in' with subject 'Open Page'.

NSIT joins hands with Virender Sehwag

For all those stumped by Viru's surprise visit to NSIT, here's the answer. Invited at the behest of his friend - our sports director Mr. Praveen Saroha, Virender Sehwag and his entourage visited our campus on 21st December and extended a proposal to set up a world class cricket academy at NSIT grounds. The meeting was kept under the wraps for security reasons.

The academy would be equipped with locker rooms, bowling machines, audio and visual aids to track an individual's progress and bolstered by a reputed panel of coaches including the likes of Ashish Nehra, Mithun Manhas, TA Sekar and of course Sehwag himself. The written proposal constituted an elaborate 7 year plan, beginning with setting up of 3 pitches and nets in the first year, spectator seating and changing rooms in the second year and concluding with the installation of flood lights in the 7th year. This would entail our college to provide electricity and water for ground maintenance, opening it for outsiders and putting up banners at NSIT gates for the academy.

Besides, profits would be shared and the NSIT cricket team will be coached for free.

This surely is a win-win situation and if things fall in place, it will greatly help in fostering a healthy sporting culture at NSIT.

Center for Excellence at NSIT

TI Center for Embedded Product Design was inducted in Netaji Subhas Institute of Technology by Texas Instruments on 22nd January 2013. Professor P. V. Indiresan, former director, Indian Institute of Technology, Madras, inaugurated the centre in presence of Dr. C.P. Ravikumar, Technical Director of University Relations at Texas Instruments, India. Few student projects were also showcased during inauguration.

It is the first center of excellence set up by Texas Instruments in any educational institution in India. T.I. would be funding the projects undertaken here, while students will try to use TI products and design systems for them. The students working here may end up as TI interns depending on their work. The Center is actively working under the guidance of Dhananjay V. Gadre and C. P. Ravikumar. It is presently situated at top floor of Library building which was previously occupied by IIIT Delhi and is open to students and faculty from any education institute for various research and development purposes. The Center will focus on designing of various embedded products based on TI's semiconductors.

ACM now at NSIT

A Student Chapter of the Association for Computing Machinery (ACM) has been started in NSIT. The NSIT Student Chapter has been started with the objective to promote research among undergraduates and to give them the opportunity to come together on a common platform to discuss their interests. The society plans to hold research talks throughout the semester, inviting speakers from institutions such as IIIT Delhi and Microsoft Research. ACM NSIT will be organising a programming competition in mid-March in association with ACM IIT-D. For more information, visit the ACM NSIT Facebook page.

Seaboltz NSIT

Seaboltz NSIT is developing an Autonomous Underwater Vehicle (AUV) and they will be representing NSIT at the 15th International RoboSub Competition at California. The event is organized by The AUVSI Foundation and will be held during 22-28 July, 2013.

The team was initiated by few third year students in September 2012, with the aim to participate in NIOT- SAVe 2014. The team later decided to participate in the AUVSI Robosub '13 competition.

For the RoboSub Competition, Seaboltz held its Recruitments on 30th January and recruited members from all branches from 1st, 2nd, 3rd year. Implicitly, all members of the team will be equally involved in all aspects of the project.

In November, 2012, Seaboltz registered for Student Autonomous Underwater Vehicle (SAVe)-2014 competition and cleared Phase I on the basis of preliminary design report (PDR).

In contrast with previous such initiatives, Seaboltz NSIT is a self-governing team and is not affiliated to any of the college teams or societies.

Quiz Club Collaboration

Identify this actor.

Hint: He was at the centre of a controversy recently.

CSI-NSIT Collaboration

If you think, you have what it takes to ace a programming contest, try and solve the question:
(click here for question - http://csinsit.org/the-alliance-collaboration), keeping in mind the time and memory constraints.
Fill in your answers here.

Junoon - Photography Club Collaboration

Identify this place in NSIT?

The Newspaper Team

MENTORS **Mansi Aggarwal | Rajat Goel | Arjun Singh | Nilayan Das Gupta | Gazal Gupta | Esha Puri | Nitin Garg**

EDITORS


Akanksha Dewaker
ECE 3rd Year (Feature)


Ishan Nigam
IT 3rd Year (Content)


Shivangi Saxena
IT 3rd Year (Content)


Toshit Agarwal
COE 3rd Year (Manager)

JOURNALISTS


Anonya Chatterjee
ECE 2nd Year


Ashish Kothari
COE 1st Year


Ayush Maiti
ICE 2nd Year


Chandan Kar
COE 1st Year


Deepshikha Acharya
ICE 1st Year


Dhruv Mathur
ICE 2nd Year


Ira Saxena
ECE 1st Year


Karan Chowdhury
ECE 1st Year


Krishan Kr. Singh
COE 2nd Year


Shrey Bansiwal
ECE 2nd Year


Sidhant Khanna
ICE 2nd Year


Sonali Garg
IT 1st Year