

May 2013

|| Volume 2 || Issue 2 ||

# ReNeWs

Newsletter of Research Scholars



# Team ReNews

2012 - 2013



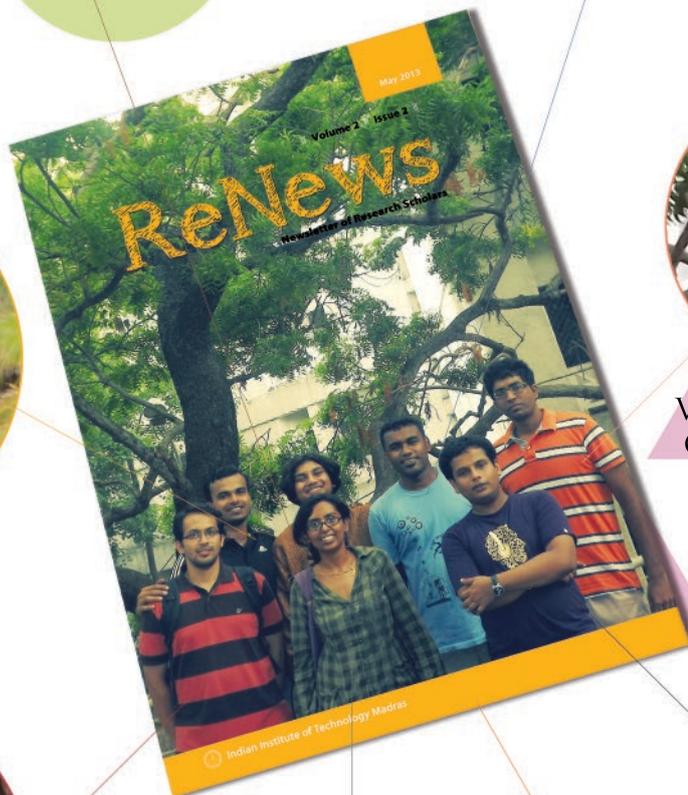
WILLIAM KUMAR MOSES JR.  
EDITOR



OSWALD JASON LOBO  
EDITOR



ANEESH PRABHAKAR  
DESIGNER



VIVEK BHARADWAJ  
CORRESPONDENT



ARAVIND ANTHUR  
CORRESPONDENT



ASHWIJ MAYYA  
CORRESPONDENT



ISHITA KUMAR  
EX-RAS



ADITI YADAV  
COLUMNIST

## Editorial

Hello everyone. This our final issue as editors of ReNews. We had a good run and a great time taking ReNews from its infancy to what it is currently. We now hand over the reins to **Ranjan Piyush**, M. S. scholar from the Dept. of Applied Mechanics, and **Malini Rajan**, Ph. D. scholar from the Dept. of Biotechnology. We wish you all the best and hope you guys take ReNews to the next level of awesomeness.

We had two events take place this May, both of which are covered in this issue, as well as the formation of several new groups (and old) dedicated to helping the research community here at IIT Madras. Information about those groups is present in the RAS Desk. We also have our ever present columns which provide us, month after month, with interesting, thought-provoking, and enjoyable articles. And finally, we have several nice reader articles. Do look into them. And remember, we love feedback and would be happy to publish any letters to the editor that you, our beloved readers, may write to us. So feel free to drop a line to us at [renews@smail.iitm.ac.in](mailto:renews@smail.iitm.ac.in).

It's been a great run for us and on that final note, we bid you adieu. We hope you all enjoy this final edition from us and hope all of you like what the next editors have in store for you.



Oswald Jason Lobo



William Kumar Moses Jr.

## Contents

Editorial 03

RAS Desk 04

Awards 05

Events 07

*IPR and Patenting - Building Awareness and Creating Value*

*Joy of Science Lecture*

Columns 09

*Another Take on the World*

*Ek Aur Kahani*

Reader Articles 10

*Faculties of the Mind*

*Cauvery 1011*

*Rahul Gandhi*

*And Research Goes On*

*जी भर के देखूँ*

### Disclaimer :

The views represented in ReNews in the reader contributed articles may not necessarily represent the views held by the ReNews team. The research scholars solely are responsible for their views.

### Contact Info :

To contribute to ReNews or to send your valuable feedback/comments/suggestions, please mail us at [renews@smail.iitm.ac.in](mailto:renews@smail.iitm.ac.in). Any issues/problems of a research scholar related to academics or housing can be raised either by sending an email to [sec\\_resaf@smail.iitm.ac.in](mailto:sec_resaf@smail.iitm.ac.in) or by calling 09444005772.

## RAS DESK

The important thing that happened in the month of May was that Research Affairs Team meeting on 23/05/2013. There were nine teams all together,

- (1) ReNews,
- (2) ReGCell,
- (3) Placement core,
- (4) PR and alumni,
- (5) Culturals,
- (6) Sports,
- (7) Branch councilors,
- (8) Webops and
- (9) Events.

The main agenda of the session was to have a group activity and ask each team to tell their vision about their teams for the coming academic year. All of them participated and came up with a list of ideas as to what they want to do, what they didn't like about what happened previously and how they want to bring about a change. ReGCell has pitched in to make this structure work by forming a layer in between the RAS and all the other teams. Now, in time they have to bring in more clarity towards their goals as they start on these things. Towards the later part, I suggested all the teams to meet once in a week for a little time, in one place to handle issues where multiple teams have to come together for doing something. Research Carrels is suggested as the meeting point, Thursday, 6:30 pm. This will also have a session called Open Forum for scholars to come and talk to the RAS about their problems. The idea of having it when all these teams are meeting is to direct these students to a particular team if required.

Another important development is the meetings and discussions on fee hike. The student

representatives (SGS and RAS i/c) met the students and understood their concerns. A team of nine people including them was formed and met the director on 21/05/2013, in director's office. The director explained the details of the fee hike and the stand of the institute. The MoM will be published in ReNews this edition. Then RAS i/c and Guru S. J. (Ph. D. councilor) met the students to answer any questions that students might be having on the MoM. Future actions were decided which will be communicated to everybody shortly.

Few proposals need to be sent to the Dean (AR) and I welcome comments, feedback and suggestions on the same. I actually wanted a brief discussion on the same, but it needs to be sent to the Dean at the earliest. The proposals are:

- (a) TA waiver for the Research Affairs Team of IIT Madras,
- (b) Feedback system for supervisors like course feedback,
- (c) Two day orientation session for the new scholars,
- (d) Scholars having the right to choose their topic,
- (e) Right for placements if the scholars clear a particular criterion.

### Minutes of Meeting on Institute Fee Hike

Conference room, Director's office  
21/05/2013, 5 pm

Representatives from institute side:

1. Director, IITM – Prof. Bhaskar Ramamurthy,
2. Dean (AR), IITM - Prof. Sarith K. Das,
3. Dean (AC), IITM – Prof. K. Ramamurthy.

Student representatives:

1. Research Affairs Secretary, IITM– Aravind P. Anthur,
2. Student General Secretary, IITM – Deepak Johnson,

3. PhD councilor – Guru S J,
4. PhD councilor – Vikram Singh,
5. PhD councilor – Bhartendu K Srivastava,
6. Yogang singh,
7. Ayyappa das,
8. Taniya mandal,
9. Smriti nath.

This was a meeting called up to raise the concern of students with the Director, IIT Madras about the recent institute fee hike. Student representatives had met the students and understood their concern, in a meeting called up by student general secretary, IIT Madras. The answers from the director point wise is given below, but it must be noted that these are not the exact words of the director but only the brief outline of what Director said.

1. Recent fee hike is a decision taken by IIT council coming under MHRD and all the IIT's are asked to follow the new fee format.

2. This fee hike is towards containing the subsidies given to the students in the hostel sector. Institute continues to subsidise items like network connection to the hostels.

3. Scholars who has finished their courses and exams has to pay the tuition fee towards the supervision provided by their guides and exam fees towards the expenses of the PhD viva.

4. The fee has not been increased in the last 15 years (last one was in 1998), when the stipend has gone up during this period, for both Masters and PhD scholars.

5. The stipend of MS and Mtech scholars is not expected to increase, but the PhD scholars will be provided sufficient stipend increase with time.

6. This price increase was suggested in the board of students meeting attended by all the previous student secretaries, and as per their request, it was decided to introduce this fee hike in phases.

7. Director has promised that any possibility of reducing the medical insurance and gymkhana fee will be looked into after a detailed proposal by students.

8. MS and M.Tech is going towards a system when there will be zero cost towards their studies in IIT and it is expected to have a positive cost in 10 – 15 years.

9. It was mentioned that this is a central policy and institute will not be able to roll back or subsidize the fee to such a large number of students.

10. The institute is not receiving HRA for students staying in quarters and hostels (CSIR and regular).

11. Contingency grant is pooled and given to each departments, which uses it to provide the necessary items for students and research scholars in their labs like print outs, lab equipments etc. There are other expenses too, but the institute provides for that. However, it is not clear as to why the spending of contingency is not made transparent.

## AWARDS

*As taken from the IITM website*

1. **Dr. Satyanarayana N. Gummadi**, Associate Professor, Department of Biotechnology has been selected as the Winner of 'NASI Scopus Young Scientist Award 2012' under the category Biological Sciences. He has been chosen from among 134 applicants in the Biological Sciences Category. The Award consisting of a trophy, a citation and INR 75000/- will be handed over during a felicitation function that will be held during June 2013 in New Delhi.

2. **Dr. G. Siva Kumar** and **Dr. Srinivas Bhaskar Karanki**, former PhD scholars, Department

of Electrical Engineering have each been awarded the '**POSO Power System Award**' (PPSA-2013) for their PhD thesis entitled 'Mitigation of Voltage Sags with Phase-Jumps using UPQC in Distribution System' and 'Topologies and Design of Sate Feedback Controller for Custom Power Devices in Power Distribution Systems' respectively by the Power System Operation Corporation in partnership with Foundation for Innovation and Technology Transfer. The award consists of a Certificate and Cash Award of Rs. 75,000/-. Both have been guided by Dr. B. Kalyan Kumar and Prof. Mahesh Kumar.

3. **Prof. Mukesh Doble**, Department of Biotechnology has been selected as "**The Dow Professor M.M.Sharma Distinguished Visiting Professor in Chemical Engineering**" for the year 2012-13 by the Institute of Chemical Technology, Mumbai.

4. **Ms. M. Padmaja**, Research Scholar, Department of Humanities and Social Sciences (HS12D009) has won the **Best Paper Award** for her paper entitled 'Trade and Economic Growth in SAARC Countries : A Panel Analysis' at the Sixth Doctoral Theses Conference held at IBS Hyderabad during April 26-27, 2013. She is guided by Dr. S. Subash.

5. **Prof. P. V. Subrahmanyam**, Department of Mathematics has been elected as **President of the Forum for Interdisciplinary Mathematics (FIM)** for a second term for a period of two years from January 1, 2013. Forum for Interdisciplinary Mathematics is an India based international society incepted in 1975 and consists of scholars working in mathematical sciences and its partner areas.

6. **Mr. Ravinder Reddy**, M. S Scholar, Department of Management Studies has been declared the second runner-up in the **ICICI Stockmind – Quest** for the best budding investor national contest. The contest was held in two stages, Institutional and National, and witnessed a total of 217 participants in the Nation-

-al level finals. The runner-up will receive a trophy, a laptop and a Certificate.

7. The paper by **Dr. Krishna Jagannathan and P. Lakshma Naik**, Department of Electrical Engineering entitled Scheduling Strategies to Mitigate the Impact of Bursty Traffic in Wireless Networks co-authored with Libin Jiang and Eytan Modiano has been awarded the **Best Paper Award** at the 11<sup>th</sup> International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013) held during May 13-17, 2013, Tsukuba Science City, Japan.

8. **Ankesh Jain**, Department of Electrical Engineering (EE09D011) has won the **Best Student Paper Award** for his paper entitled 'Efficient Characterization of High Speed Continuous Time Delta Sigma Modulators using a Duobinary Test Interface' at the International Symposium on Circuits and Systems (ISCAS). He is guided by Prof. Shanthi Pavan.

9. **Paresh Hader**, Department of Ocean Engineering has received the **Best Poster Award** for his poster entitled Numerical Simulation of Film Cooling Turbine Blade at the ANSYS Convergence Conference 2013 held in Pune on May 17, 2013. He is guided by Dr. Abdus Samad.

*Congratulations  
to all  
Winners*

# EVENTS

## IPR and Patenting - Building Awareness and Creating Value

21st May, 2013

Progress in research has produced many promising results, the benefits of which are reaped by the user community throughout the globe. With increasing involvement of industries in research, a drastic change in the methods and dynamics of research has been observed. The approach to research pursued by industries and academics is quite different. Industries aim at commercialization from the beginning, while the academics' objective is primarily to spread knowledge. The recent collaborations between academia and industry are set to change the scenario completely. Inventions are seeded in institute laboratories and given commercial shape by the industries. This calls for a fair share of acknowledgement to the inventors in terms of recognition and flow back of revenue for their brilliant intellectual efforts. Here comes the role of IPR and patenting.

Ours being an established research institute, we should have a sound foundation for protecting intellectual property latent in our research from infringement and harness the proper value out of it. On these grounds, the RAS-in-charge invited Mr. G. M. K. Raju, from the IC & SR to conduct an interactive session with the students to build awareness of the processes for deriving value out of their research.

Mr. Raju kicked off the session by presenting a macro view of the present world knowledge economy and the critical role of IPR. Today an idea is considered as an asset that can be evaluated in terms of monetary revenue that it can generate. The role of academic research in this context has gone beyond publications and their focus is shifting towards capitalizing ideas. He provided insights into the various forms of IPR

provided insights into the various forms of IPR and highlighted patents, copyrights and industrial designs which have importance for the research community.

IIT Madras has a steady stand in this regard and has a well defined and updated IP policy which can be found on the ICSR website. The preliminary task is to decide whether a particular idea is patentable. For this he explained the patentability assessment process. It looks for a non-objectionable subject, industrial applicability, novelty and the specifications of inventive setup. The intention here is to find a functional character of the idea.

The patent filing process has been tweaked to encourage patent filing. The process has been made easy and swift with options like provisional filing. Here the idea can be registered with a rough draft (within 2 weeks) and published immediately after. The complete filing process should however be done within a period of 12 months. This provides considerable security and also provides sufficient time for complete filing. He very patiently took the audience through the complete process of filing a patent while concurrently resolving numerous doubts raised. The details of filing a patent can be found at <https://icsr.iitm.ac.in/?q=node/patents>.

Mr. Raju also introduced the IP cell of our institute and talked about its objectives. This setup would guide the inventors (students and faculty) through various aspects of the patenting process. Since it is not a well known body among the scholars, the first point on their agenda is to create awareness and dispel incorrect notions about IPR and patenting from



Ranjan Piyush  
M. S. Scholar  
Applied Mechanics

*'In search of myself.'*

the minds of inventors. This cell facilitates inventors through the various processes from searches and techno-legal filing to grant of the patent. The institute also supports the maintenance of patent for the initial years in terms of renewal fees and other issues. The commercialization process can be flexibly handled by both the inventor and institute.

Enough light was shed on various methods to be adopted for extending a patent abroad and also to control the market driven by it. Along with this, a special mention was made of an organization that buys the ownership of ideas and undertakes patenting or commercializing of them.

Mr. Raju very generously answered the large number of doubts popping up in the inquisitive minds. He also urged the audience to spread this valuable information, which can play a vibrant role in improving the stand of our institute in the research community across the globe.

We express our regards and appreciation towards the efforts he put throughout the session and also for being generous enough to promise more of such sessions at different levels for targeting specific issues related to IPR and patenting.

## Joy of Science lecture

24<sup>th</sup> May, 2013

*This* Joy of Science lecture was delivered by Prof. V. Balakrishnan, of the dept. of Physics at IITM. Affectionately known as Prof. Balki, he is known for oratorical skill and ability to distill complex ideas into easily consumed nuggets of information. The subject of his talk was research and over the course of an hour or so, he presented his views on what it means to do research in a Ph. D., the current state of research in India, and his views on the current trend to increase admissions to Ph. D. programs in

India. He also spent time at the end of his talk addressing questions by the audience.

He opened the talk with a simple, yet fundamental question. What is research at the Ph. D. level? He went on to answer this question and talked about what a Ph. D. should be. He felt that a Ph. D. is not merely another degree, a mere continuation of kindergarten, high school, college, and so on, but something entirely different. The requirements to get a Ph. D. are different from anything that came before it and getting a Ph. D. requires a person to be a leader in the world in some epsilon of knowledge.

He then moved on to research in India. He mentioned that in India, data acquisition is sometimes mistaken for experimental research and similarly analysis of that data is mistaken for theoretical research. He addressed the question of whether a direct scaling up of Ph. D.s in India is possible, feasible and necessary. With so many people doing research and then going into jobs that don't require that expertise, was it really necessary to ramp up the efforts to churn out more Ph. D.s in India. Furthermore, to enable this increase in quantity, are we sacrificing the quality of a Ph. D. degree. Prof. Balki felt that this desire to create the no. of Ph. D.s coming out of India was a result of people thinking of the Ph. D. degree as just another degree, which tied back in to what he talked about earlier.

This led to Prof. Balki talking about quality and how to maintain it. He made an especially important point for quality, noting that unlike other degree holders, Ph. D.s go out into the world and train others. If they themselves are not properly qualified, subsequent Ph. D.s held by students they train will be of substandard quality. Prof. Balki also felt that India's reputation would not necessarily go up if we had 10x Ph. D.s coming out of India, unless all of them were quality Ph. D.s. He also explained to the audience that the best way to maintain high standards is by having lots of one-to-one inter-

William K. Moses Jr.  
Ph. D scholar  
Computer Science & Engg.



*'A guy who really likes a good story.  
Can write one every now and then too.'*

-action. This interaction takes place in many ways, among them guidance and monitoring of the students.

He asked students to strive for excellence and pointed to the book Advice to a Young Scientist by Sir Peter Medawar as a good reference. He concluded his talk by letting everyone in on the secret to becoming a successful scientist. If you do a little every day, then over 5-6 decades, it adds up to a lot.

## COLUMNS

### Humans!

Another  
Take on  
the World

I was reading *Three Men in a Boat* by Jerome K. Jerome. Even though I did not quite get what the author was pointing at, the comedy in the book was at times hilarious by making fun of human nature, laughing at that, laughing at others and most importantly ourselves! I also observe people, I observe people eating, cycling, walking, talking, attitudes, staring of people and every other human emotion. I don't know why I do that, but it is interesting for me, I enjoy doing it. I also observe animals like cats, monkeys, etc., but let us confine ourselves to humans, a more complicated subject of study!

Hence, I won't be giving any models, conclusions or my opinions about humans, but I will just tell why it is interesting for me, why it is important to laugh at ourselves! For example, I see people jumping up and down, shouting at their maximum volume, giving inspirational

speeches, but usually (>90%), the people who are silent are the ones who actually have the real guts in them. Some don't care at all as to what others think about them or worry about it. Others live to prove to others a point, prove themselves, prove somebody wrong, for image, respect and what not! Some enjoy eating, eat it with full focus and concentration, others eat with books and as if they don't care! Some are great listeners while others... no comments! I actually saw a group of three students walking together and importantly, all were talking at the same time, God knows whom they were talking to! Some people, especially girls (lots of boys as well these days) are too much bothered about dressing up well, what to wear today, matching this matching that, this will be cool, blah blah blah! Or, even if it is simple, boasts about having branded watch, belt and what not. Different stages, for multimillionaires, they want to buy luxury cars and when they have cars, they want to buy yachts and aeroplanes. It seems Mukesh Ambani gifted his wife an aeroplane as a birthday gift! There are also people who throw away all their money and go into spirituality or give it away to charity. People while wearing new trends make fun of old fashion styles, when they forget that they themselves will be laughed at by their grandchildren for what they are wearing now! We make rules for others, but don't follow it ourselves. Policemen are found talking on phone while driving, drive rashly when they themselves give fine for all these. People stand up for their rights but forget their responsibilities, when both are written by them only! And the list goes on and on and on.

What is the point? The point is go and observe around, observe people, observe everything, and laugh at all this comedy happening on the biggest stage called the universe, and most importantly look in a mirror and laugh at yourself/ourselves. Life is only about being happy and there are loads of opportunities around, very near!



## गुस्ताखी

कुछ कहें ..पर कहें तो क्या कहें ,  
अनकहे कुछ शब्द बस कहते रहते हैं ..  
जो कहना चाहें ..वो कहें कि ना कहें ,  
उलझन में खुद को फसाये रहते हैं ..

जिसे देखें ..देखें भी तो कैसे देखें ,  
हर वक़्त बस नज़रे बचाये फिरते हैं ..  
जितना भागे ..उतने खिचे चले आये ,  
उसी जाल में हर बार ही फसते हैं ..

जिसे सुनें ..बस उसी को सुनना चाहें ,  
ख्वाबों की दुनिया बसाये रखते हैं ..  
कहें क्या आगे ..कुछ समझ ना आये ,  
जब देखो बस यही तो कहते रहते हैं ..

गर देखें ..बस उसी को ही देखें ,  
इन आँखों को बस मूंदे रहते हैं ..  
कुछ और देखें ..तो क्या ही देखें ,  
इक परदा सा लगाये फिरते हैं ..

इक वही खता ..हर बार वही करें ,  
कैसी उधेड़बुन सी बनाये रखते हैं ..  
बस यही कह कर खुद को समझाये ,

खैर ! एक गुस्ताखी का हक़ तो हम भी रखते हैं ...



Aditi Yadav  
M. S. Scholar  
Management Studies

*'Researching myself...  
phrasing the feelings'*

## READER ARTICLES

### Faculties of the Mind

Man is essentially a mental being, *manusya*<sup>1</sup>. The development of the mind has been a quantum jump in the process of evolution of consciousness. It has equipped humans with the power of rational thinking and self-reflection and is the foundation of unique human creativity. In India, the mind has been the focal point of our study since times immemorial. It has been studied in so much depth and so many dimensions that no part of life has been left untouched by it. The first movement had been to understand the different faculties and principles of the mind which then formed the basis of the ancient Indian education system. The gigantic intellectuality, spirituality and moral force that we see pulsating in the Ramayana and the Mahabharata, in ancient philosophy, in supreme poetry, art, sculpture and architecture of India couldn't have been possible without a great and unique discipline of training of soul and mind.

The English term mind is a generic term and is quite insufficient to explain all the different faculties of thought and perception. The Sanskrit term equating the generic "mind" is *Antahkarna*. It consists of multiple layers, the first of which is the *chitta*. The *chitta* is the storehouse of memory. It contains all past impressions. *Chitta* again has two parts, passive memory and active memory. Passive memory needs no training; it is perfectly developed in human beings. Anything that is perceived by the senses is recorded by the passive memory without exception. Active memory is like the search engine of *chitta*. It is the faculty that searches through the huge database of passive memory and tries to come up with required information. While passive memory is faultless in its operation, it is active memory that requires training because it is still not well evolved in humans. Suppose tomorrow a friend of yours

asks about what you read? You might not recall this article but then he asks a few things about the mind and you immediately recall having read this article along with all the ideas expressed here. This clearly demonstrates that the information was always within you, storage was perfect, but retrieval of information had a problem. The ancients employed various processes to achieve *chittasuddhi*, purification of the *chitta*. The capacity of an ancient Brahmin, still possessed by a few, to commit to memory all of the four *vedas* and the two epics with over a couple of lakhs of slokas along with their intonations will be considered as an extraordinary feat by any modern standards.

Before explaining further layers of the mind, let's see what Indian psychology has to say about the sense organs. There are six sense organs: eyes, ears, nose, tongue, skin and *manas* (mind). Each sense organ except *manas* has a gross and a subtle counterpart. The physical organs receive the external stimuli which are then passed on to the *antahkarana* by the connecting subtle senses. In fact until subtle senses attach themselves to the physical senses no perception is possible. There can be multiple physical and psychological obstructions in perception by senses. Apart from physical obstacles, which are the domain of the physician, there are many nervous and emotional obstacles that may be dealt with by the system of education. These disturbances arising out of nervous weakness may distort the sense perception. Sometimes a rope appears as a snake or a waving curtain as a ghostly form. These can all be traced to some form of emotional disturbance and the only remedy for them is a habit of calm and habitual steadiness of nerve. The ancient system achieved this by a particular process of purification of nerves known as *nadi-suddhi*. Apart from that they also spent considerable amount of time developing attention through various concentration exercises, *dhara-na*. Most of the time we do not observe sufficiently or with sufficient closeness and the sight, smell or touch knocks in vain at the door for admission. All information received by the

senses is stored in the *chitta*, which in turn form the materials of thought. It is exceedingly important that the materials of thought must be perfect and for that the education system should aim at training the senses to perfect accuracy and the mind to perfect attention.

The second layer of *antahkarana* is called as *manas*. This receives the data from all senses and translates them into sight, sound, smell, touch and taste and re-translates them to thought sensations. It doubles up as a sense organ itself, the sixth sense of Indian psychology. If we show a hibiscus to an ordinary man he will say "It is a flower." A scientist with perfected sense perceptions will see the same flower and say that "It is a hibiscus. It is red in colour. It has five petals. It is about 10 cm broad. It has a strong sweet fragrance and a long stamen." A yogi with a developed sixth sense may see the same flower and say, "It has a character that will stimulate emotional and vital strength." *Manas* has a tendency of uncontrolled musings over the data in the *chitta* and create endless chains of thought. Here again our aim must be to instill control of random activities of *manas* and drive it along directed channels under the control of the central Will.

The third layer is intellect or *buddhi*. It consists of several groups of functions divisible into two important classes, the faculties of the left hand and the faculties of the right hand\*\*. The faculties of the right hand are comprehensive, creative and synthetic while the faculties of the left hand are critical and analytic. To the right hand belong judgment, imagination and observation while left hand distinguishes, reasons, infers and concludes. The right hand is the master of knowledge while the left hand is its servant. The left hand holds the body of knowledge while the right hand penetrates its soul. The left hand limits itself to ascertained truths while the right hand grasps that which is still elusive and uncertain. For a perfect education, both halves of the *buddhi* must be trained simultaneously to their finest working power.

Ashish Kumar Sahani  
Ph. D scholar  
Electrical Engg.



*'Ashish is closely associated with VSC and takes deep interest in Indian philosophy.'*

Finally, we have the layer of intuition. It is a layer above the buddhi and does not require the crutches of reason for its action. It has the characteristics of sovereign discernment and direct vision of knowledge, often amounting to prophetic revelation. Development of this part of the mind is rare in the current state of human evolution, yet few possess it imperfectly or in flashes. It is still distrusted by critical reason of mankind due to its imperfect action and admixture of error. Yet, but for this faculty, humanity couldn't have advanced to its present stage. This is the one that leads to the element of genius. A mere teacher does his best to stifle genius while a wise teacher welcomes it. It is foolish to neglect them. Their imperfect development must be perfected and error must be wisely removed.

The ancient system was based on the wisdom that, "If we have to cut a tree it will be wise to take a few minutes sharpening our axe." It started with the training of faculties of mind through simple, easy and interesting means and each student was trained as per his own *swabhava* (natural tendencies). In the words of Swami Vivekananda, "To me the essence of education is the concentration of mind, not just collection of facts."

*"This article draws its main lines of thought from a series of essays entitled 'A system of national education' written by Sri Aurobindo in the Karmayogin magazine, year 1910.*

*"In one passage in this series, Sri Aurobindo elucidated on the difference between the capacities of the left hemisphere and the right hemisphere of the brain. Sri Aurobindo's remarks anticipate the discoveries on functional lateralization in the human brain made by Michael Gazzaniga and Roger Wolcott Sperry in the 1960s. Sperry was awarded the Nobel Prize in 1981 for his work on split-brain functioning. Today, it is commonly known that the left-brain is logical and analytical while the right-brain is said to be intuitive and creative.*

*'manusya is derived from Sanskrit word manas.*

## CAUVERY 1011

I opened the door and the room spewed dust on me as if it were a ritual of welcoming a new resident. It was approximately an 8 feet by 10 feet squarish-room belonging to the era of baby-boomers. The room seemed to be painted at first glance by visibly big stains of paint on the floor, but a closer look revealed that the walls were left in the lurch of it. I wondered if the painter wanted to paint the floor instead. There was a fan attached to an extraordinarily high ceiling and there was some math attached to its working as it worked only on an odd number of the regulator. There was one bed and a table-chair. I tried various settings for each of them but finally settled down, tired, with the same position in which they were found. Not much is left to you when the room is of this size and the key word is space-optimization. I had come prepared with a couple of posters to make my room livelier and fixing them was no easy task as the walls were soaked in dust. By the time stars appeared in the sky I felt like a dead man walking and the only wish remaining in my heart was to slip into a deep slumber asap.

I believe that it was the best possible thing to happen to me in the last one year. A friend in times of joy, a mentor in times despair, a wall against prying eyes, an incubator for new thoughts. It allowed me to be me. It gave me the freedom to lie in my state of affairs and just be myself.

I will certainly miss my hostel room which was a home-away-from-home in an entirely unknown city.

Nishant Jairath  
MBA Student  
Management Studies



*'I think therefore I am... confused!!'*

# Rahul Gandhi

A lot of criticism was associated with this personality even before his recent speech at CII in front of the country's top industrialists. Though, according to me, he served the purpose at the CII meet as he convinced the participants (source: twitter). I always have been an ardent supporter and loyalist of this man, sorry, this youthful personality. People close to me would find the reason to be the similarity in our names. However that's not the case, maybe he has a charisma which his father, the former Prime Minister of India, Mr. Rajiv Gandhi had. Still it's not the reason. I blindly love him and I am fond of him to such an extent that I am betting high on his credentials for becoming India's 2014 Prime Minister. This blind faith and inclination towards him increased a little more after his recent talk, as expectedly criticized by the opposition and his critics. Some stating his speech to be amateurish, I am grateful to those people since they have used the word "amateurish".

I would take lead from that word from his critics. Being amateurish is the need of the hour in the political arena in our country. Famously told, amateurish is truth shown explicitly. He sure would have truth flowing out, being a grand successor of the father of the nation, an epitome of truth. The consequence of being amateurish was explicitly seen in his talk, being bold enough and risking his stakes ahead of the parliamentary election he used strong words to describe our country. "Beehive", for which he was most criticized. To be practical, he just used a synonym as our country is humongous and densely populated. On a light note, to be honest I hate the queen bee in his beehive. I rather blame the critics, who criticized him for not offering a solution, as he gave a solution – "Don't give power to a single person, give it to billions of people and see how this country works." He was effectively referring to the decentralization model; Kerala being successful in

in following this model is worth mentioning. He wanted an inclusive growth of our economy achieving it through empowerment of women, tribals, and the minorities. Wanting the growth to start from a common man – his ideas, his energy – he made clear that the economy does not stand alone in the industrialists in a place completely filled with top industrialists of the country. Is this not a solution? With a race for the "hot seat", he could have taken the less criticized route of glorifying the country and UPA rule. He could have stated the achievements and the goodwill policies adopted during the 10-year tenure. This bold speech by a petit man is worth praising instead of loose talks by non-secular forces.

Bolstering this person for the PM's candidature, I admit the fact that he has not years of political experience or rather service in any ministry, yet his USP is that he is the successor of India's grand old party. Once leading the youth congress, now the vice-president of INC at an early age, he is strongly set up to reach peaks in his political life. Explicitly known to people of this largest democracy that there are no clean hands in this country, it includes IAC as a whole who were blamed for the corruption regarding the funds for their anti-corruption movements. In his first ever interview to a foreign media he stated "India's not a decisive place and there will be a backlash towards this ideology" and I again take pride in mentioning that this secular nature of this person and his party is always necessary for the growth of our country, which can only be achieved collectively. With the recent victory following his first ever electoral campaign for the high octane Bangalore government state election he is set to achieve many things. As a 'youth' I wish him all the best.

Rahul P. R.  
M. S. Scholar  
Chemical Engg.



*'Loves being on his own and has interest in political science.'*

## And Research Goes On

*Somewhere at a bus stop near MSB.*

It was around 10:30 in the night. A couple went past, jogging with music blaring through their earphones, as they made their way through the dark roads, periodically lit in yellow by the lamp posts. The last bus for the day could be heard approaching at a distance. A few deer were negotiating some trees, creating a random hustling sound. Otherwise the road was silent.

"What? But you spent nights on the first draft and then on corrections."

"Haan yaar, I am no longer the first author on that paper. I overheard Prof asking Sumesh to submit the manuscript with his name as the first author."

"What? Sumesh as the first author? But, did you even talk to Prof?"

"Leave it. I don't feel like seeing him. Let's talk about something else."

"Wait. But that is your work and you wrote the results and discussion completely on your own. Hell, you wrote the entire paper on your own."

"Not really. Sumesh worked on it too. And he did the TEM samples."

"Doing TEM cannot make him the first author. We will talk to Sumesh. No, you will talk to him. This is not over yet. But why would your Prof do that? I mean he isn't that kind of person, is he?"

"You never know who's being their true self and who's a put-on. Remember those nights in June I worked for completing that DST project. I had even lost count of how many. He took us all for dinner at the Cream Centre after that. He then

told me privately that I alone deserved it and he invited others so that there wouldn't be any unnecessary talk. And I felt so good. Shit! I have been so naïve, and all along I thought I just needed to work harder and harder. Good food clouds your judgement, ugh!"

"Aren't sizzlers very good there?"

Realizing his mistake Sandy managed to blurt out, "Remember, he was a research scholar too. All these people are like this."

But Kiron was not paying attention. "Have you got some beer in that lab refrigerator of yours?"

"Machi, not so loud. Must be there, I'll just go check."

Kiron looked around and with a puzzled look, said, "Who is going to hear me here? Sometimes you na... Anyway I will be waiting here."

After close to fifteen minutes Sandy came back along with a backpack. They scanned the area for anyone watching them and after feeling satisfied that they did not have any unwanted company, they surreptitiously made their way along a small road leading to a bicycle stand, passing through the gargantuan roots of a Banyan tree. There was a flight of stairs which led to some classrooms on the first floor. They sat down a few metres away from the stairs, in a corner of the bicycle stand with their backs against the wall. This was one of their hide-outs. After sunset, the place would become pitch dark and there was no way anyone would find them, unless they voluntarily wanted them to. Except during the exams, the place was pretty much safe. Of course, the risk was running in to some slithery creatures, but one worth taking for chilled beer. That's as much adventurous as it gets for a research scholar.

While Sandy sat and unpacked, he said, "Last time Sumesh was here along with us. And that has been like ages."

Prasanna Kumar Iyengar  
Ph. D Scholar  
Metallurgical and Materials Engg.



*'Indulges in Books, Music, Movies, Maths, Machines  
and now Materials. Whenever awake.'*

Kiron sighed, "Actually, I saw Sumesh today."

"What did he say, huh?"

"No, he didn't even look at me. I am standing in the corridor and he just walks past me, keeping his head hung. It was, as if I didn't exist at all!"

"Probably he went and bitched about you and then hung his head in shame or whatever."

"I don't know. I don't think he is that kind of guy. Sometimes I call him at night to help me out and he has stayed several of those times till late. Even a couple of days back one night I had some experiment in the workshop and he offered to stay..."

Sandy shook his head slightly, muttering something, while he opened the bottles.

"Look, I know everyone thinks he is the reason that Bhargi had to leave the project halfway. Maybe there was some genuine reason. At least I have never had any bad experience with him. It was just today, that he behaved awkwardly. But something looked out of place. He looked sad. Like he had lost something."

"You are just naïve. He would not have reached the 'deadline' for this month. He is the only 'great' research scholar who plans and sticks to it."

"Sandy, come on yaar, don't be jealous. He can and so he does."

"Oh what the f\*\*\*? If you really think, he is all that gentlemanly, why don't you go ask him why did he become the first author, when you were supposed to be the one?" Sandy almost

shouted.

"Ok cool it. Even I wanted to ask him in person. It is just that for the past couple of days, I keep awake till 5 in the morning and then doze off till the evening. I haven't been to the lab too. Probably tomorrow I will get up earlier."

"Funny. Even my body seems to follow the same schedule." And then in a funny tone, mocking some faculty he said "But then it is not research if..."

"If it does not happen in the night." Kiron completed the sentence and they both started laughing loudly.

*The next day morning in the lab.*

"Sumesh thambi, what should we do to Kiron amma's cupboard."

Sumesh looked through the gap between his glasses, which concealed dark circles from lack of proper sleep. He looked at an empty chair beside the cupboard; the sweeper was pointing at, and pondered aimlessly at it for few seconds. A call of thambi again by the sweeper jolted him out of his thoughts into reality.

"Sir...Sir, hasn't decided yet. We'll have to hand-over the personal belongings to her family. We will see..."

On the table beside him lay a newspaper that was a couple of days old. The newspaper had been turned and folded to the second page. The sweeper was leaving when she stopped looking at the newspaper. She recognized a photo on the page and said, "Paperla vandircha?" as she left the room. It was five past nine and he was alone in the lab. He took his glasses and put them on the table. He then folded his arms on the table and buried his head in it; his arms resonating with a stifled cry.

An article in the newspaper that lay beside, read:

### Research at IIT, at your own risk

**Chennai:** In a shocking turn of events, before the administration could come to terms with the last week death of a researcher K. Sadanand, Kiron Salve a researcher from the same institute lost her life while working alone in the machine shop. When the staff first saw her on Wednesday morning, her hair had got entangled in the chuck of the lathe. The lathe is used to machine metal and it rotates at high speed. It is believed that while working she probably stooped over the machine while it was still switched on, during which her hair got entangled in it, asphyxiating her. A technical staff who wanted to be unnamed said that the chuck runs at high speeds and she could not have released herself without someone else's help. It is believed that she was working alone in the night and that is an accepted norm in the institute. She was not wearing any safety gear at the time. This comes close on the heels of the death of Sadanand who died of burns while alloy melting which went awfully wrong, ending in molten metal splashing on him, vigorously. He also was not wearing any protective gear at that time. Tragically, both Kiron and Sadanand completed their graduation in the same private college and were known to each other.

This issue has raised many questions on the negligence towards safety in the academia in the name of freedom 'deemed necessary for fruitful research'. If sources are to be believed, not a single research institute in the country has a dedicated training programme on safety precautions for the students. Larger questions will be raised on the lacklustre way in which the government backed autonomy is being used to setup labs which adhere to no set safety norms. On being questioned, the administration stonewalled saying...

Further reading:

<http://www.nature.com/news/2011/10418/full/472270a.html>

<http://www.dailymail.co.uk/news/article-2139538/California-lab-shut-young-researcher-dies-personal-crusade-vaccine-meningitis.html>

## "जी भर के देखूँ"

उसे जी भर के देखूँ, तो जी ना भरे ;  
बेचैन दिल ये, जाने क्या क्या करे ॥

वो जुल्फें ज्यों ज्यों सुलझती गयी ,  
उम्मीदें मेरी उलझती गयी ।

हरियाली में यूँ थी, वो बदन को लपेटे ;  
मुट्ठी में ज्यों थे, हम साँसें समेटे ।

इक हाथ कंगन, इक हाथ खाली;  
यूँ वो कातिल अदा, मुस्कराने वाली।

चुप शर्मिली आँखों व बोलते झुमकों का वादा ;  
मुलाकात वो छोटी, पर यादें थी ज्यादा ॥

उसे जी भर के देखूँ, तो जी ना भरे ;  
बेचैन दिल ये, जाने क्या क्या करे ॥



लेखनी : अजय चहल

अजय चहल धातु विज्ञान एवम पदार्थ अभियांत्रिकी विभाग, भारतीय प्रोद्योगिकी संस्थान मद्रास के शोधार्थी हैं। इन्हें लिखने एवम राजनीतिक चर्चाओं के साथ -साथ प्राकृतिक सुंदरता व आध्यात्म से भी बेहद लगाव है।



*Painting credits:*  
Anandraj Hariharan  
Ph. D scholar  
Mechanical Engg.



*Painting credits:*  
Dickins John  
M. Tech Student  
Civil Engg.



**Editorial Board**

**Editors | Oswald Jason Lobo, Ph. D Scholar, Mechanical Engineering | William K. Moses Jr., Ph. D Scholar, Computer Science & Engg.  
Design & Graphics | Aneesh Prabhakar, Ph. D Scholar, Mechanical Engineering**