Newspaper Clips
February 6, 2015

Rohan Murty, IIT-D chairman named new members of Central Advisory Board of Education

http://economictimes.indiatimes.com/industry/services/education/rohan-murty-iit-d-chairman-named-new-members-of-central-advisory-board-of-education/articleshow/46136076.cms

NEW DELHI: Moving forward on the reconstitution of CABE, the highest decision-making body on education in India, the government has now selected about 20 of its 43 nominated members, among them the chairman of IIT- Delhi Vijay Bhatkar, Rohan Narayan Murty and Vice Chancellor of Gujarat Central University, SA Bari.

Former chairman of Editors' Guild of India, DN Bezboruah, VC of Hemwati Nandan Bahuguna Garhwal Central University, Jawaharlal Kaul, and educationist Indumati Rao are some of the other members of the Central Advisory Board of Education (CABE) selected by HRD Minister Smriti Irani, sources said.

Apart from the nominated members, CABE comprises education ministers of all the states, six Members of Parliament, heads of different bodies such as UGC, CBSE, National Institute of Educational Planning and Administration, among others.

The selection of Murty, son of InfosysBSE 2.27 % co-founder Narayan Murthy, assumes significance as he had conceived of the idea of publishing the classical texts of India. He is an alumni of Cornell University and Harvard University.

Bhatkar, on the other hand, is the chairman of IIT-Delhi's Board of Governors.

Sources said the reconstitution of CABE would be completed soon, so that its first meeting can be convened early under the new government.

Indications are that the formulation of the new national education policy would be deliberated upon at length at the meet followed by an interaction of the HRD Minister with the state education ministers.

The consultation process for formulating the policy was launched on January 26. Suggestions are invited on 33 themes identified for discussions.

Indian Express ND
06/02/2015 P-11

Rohan Murty among 20 new CABE members

EXPRESS NEWS SERVICE
NEW DELHI, FEBRUARY 5

DECIDING to reconstitute the Central Advisory Board of Education, the Human Resource Development Ministry has selected about 20 of its 43 nominated members, including the chairman of IIT-Delhi Vijay Bhatkar, Rohan Narayan Murty and Vice-Chancellor of Gujarat Central University S A Bari.

CABE is the highest decision-making body on education in India.

Former chairman of Editors' Guild of India D N Bezboruah, V-C of Hemwati Nandan Bahuguna Garhwal Central University Jawaharlal Kaul and educationist Indumati Rao are some of the other members inducted in CABE, sources said.

Murty, Infosys co-founder Narayan Murthy's son, is an alumni of Cornell University and Harvard University and had conceived the idea of publishing the classical texts of India.

Apart from the nominated members, CABE comprises education ministers of all the states, six MPs, heads of different bodies including UGC, CBSE, National Institute of Educational Planning and Administration.

Times Of India ND 06/02/2015 P-26

With technology becoming the basis of many emerging businesses, engineering graduates are turning to startups. The trend is most visible in IITs, India's most renowned tech institutions

IT'S A LEAP OF FAITH AT IITs

Sindhu Hariharan, Yogita Rao, and Kim Arora | TNN

THE BIG DRAWS ON CAMPUSES

IIT MADRAS

- Housing.com
- Ola Cabs
- Urban Ladder
- Zoomcar
- Leaf Technologies
- Unbxd
- Reduce Data
- Value & Budget Housing Corporation

IIT DELHI

- Zostel
- Nutanix
- VMock
- One97 / PayTM
- Limeroad
- Delhivery

IIT BOMBAY

- Housing.com
- Ola Cabs
- Zomato

Note: Older ventures like Flipkart and Snapdeal have not been included as startup recruiters

PLACEMENT PILEUP

IIT MADRAS

114 startup offers got accepted in 2014-15

13% of total placements were into startups

10 students opted for deferred placements to start ventures; there was no such instance in 2013-14

IIT BOMBAY

109 students went to startups in 2014-15 vs. 60 in 2013-14

11% of students opted to join startups in 2014-15, vs. 7% the previous year

12 students opted for deferred placements to start ventures in 2014-15, vs. 1 in the previous year

Source: IIT placement cell, 2014-15 data

NEWER SUCCESSES FROM IIT FOUNDERS

IIT DELHI

- FLIPKART **Sachin Bansal** (left) and **Binny Bansal** (right)

- ZOMATO **Deepinder Goyal** (left) and **Pankaj Chaddah** (right)

- SNAPDEAL **Rohit Bansal**
- QUIKR **Pranay Chulet**
- NUTANIX **Mohit Aron**

IIT BOMBAY

- OLA CABS **Bhavish Aggarwal** (left) and **Ankit Bhati** (right)

- HOUSING.COM **Advitiya Sharma, Abhishek Anand, Rahul Yadav, Snehil Buxy, Ravish Naresh, Sanat Ghosh, Neeraj Bhunwal, Amrit Raj, Jaspreet Saluja**
- COVACSIS TECHNOLOGIES **Tarun Mishra** and **Abhijeet Mhatre**

IIT MADRAS

- ATHER ENERGY **Tarun Mehta, Swapnil Jain**
- HYPERVERGE **Kedar Kulkarni, Kishore Natarajan, Vignesh Krishnakumar**

IIT KANPUR

- INMOBI **Naveen Tewari, Amit Gupta, Abhay Singhal**
- MYNTRA **Mukesh Bansal**
- NUTANIX **Dheeraj Pandey**

IIT KHARAGPUR

- CAPILLARY **Krishna Mehra** and **Aneesh Reddy**

TOI

BOLD MOVES: Many are shunning big corporate brands for the adventure of a promising new venture

Kishore Natarajan turned down an offer from a reputed multinational company during placements at the Indian Institute of Technology-Madras. The graduate of the 2014 batch had co-founded a company with friends from the campus when he was in his final year, and he preferred to pursue just that.

The venture, HyperVerge, has built solutions based on computer vision technology. It has big clients, and it has raised substantial funds from renowned Silicon Valley-based venture capital funds. "We are now looking to hire aggressively. And our first choice to hire from will be the IITs," says Natarajan.

The entrepreneur will likely find that easy. The relationship between entrepreneurship and IITs has never been this strong. It began with India's IT services revolution – IITians N R Narayana Murthy, Nandan Nilekani and Kris Gopalakrishnan were among those who founded Infosys in 1981 – but it has deepened in recent times as technology has become the basis of many of the most rapidly growing businesses, be it e-commerce, online marketplaces or software product development.

In IIT-Madras, 10 students opted for deferred placements to start ventures this academic year (placements happen in December); there was no such instance last year. In IIT-Bombay, that figure was 12 this year against one last year. In IIT-Madras, 13% of total placements was accounted for by startups this year, and in IIT-Mumbai, this figure was 11% against 7% last year.

Bhaskar Ramamoorthy, director of IIT-Madras, says the institute has a world-class Centre for Innovation where students can 'walk in with any idea, and walk out with a product'. "We have an environment in which bright youngsters can try out audacious ideas without fear of failure, and that's one of the key reasons why the startup culture is popular at IIT-M," says Ramamoorthy.

Inspiring success stories

The desire to start ventures, or be part of startups, is also driven by the sheer number of successful technology ventures by IITians in recent years. Look at any of the most well-known names of today, and you will likely find that one or more founders are IITians. There's Sachin Bansal and Binny Bansal of Flipkart, Rohit Bansal of Snapdeal, Bhavish Aggarwal and Ankit Bharti of Ola, Deepinder Goyal and Pankaj Chaddah of Zomato, Naveen Tewari, Amit Gupta and Abhay Singhal of InMobi, Mukesh Bansal of Myntra, and Pranay Chulet of Quikr.

"The students' desire now to do something on their own has a lot to do with the kind of success stories we read about," says Surabhi Yadav, a biochemical engineer from the 2014 batch of IIT-Delhi.

Agrees Ashwin Mahalingam, associate professor in the department of civil engineering at IIT-Madras. But he also points at the visible increase in venture capital funds that's making it easier to sustain startups and offer competitive salaries. Advitiya Sharma, co-founder of Housing.com and an IIT-Bombay alumnus, says problem-solving skills, which are critical to the success of an entrepreneur, can be found in abundance in IITians, "who clear a very challenging barrier to enter the institute."

Aditya Narayan Mishra, president at staffing firm Randstad India, says that for most startups, technical skills and culture-fit triumph over all other aspects when it comes to hiring, and this takes them to the IITs. "Having IITians on board can also help attract quality investment," he says.

Young & vibrant

Housing.com, a real-estate portal started in 2012, made 45 offers to IITians in its first year, and the number of grads hired in the latest placements is almost 115. Siddharth Dialani, an MTech biotechnology final year student at IIT, is one of those who decided to work for Housing.com, even when he had offers from large financial services players. His interview was like an informal debate with peers. "Being interviewed by someone just five to six years older than me, and in such an unconventional way, sealed my decision to work for a startup," says Dialani.

Flexible work environments, opportunities for faster career growth, and roles with greater responsibility are all attracting talent into startups. Vishranth Suresh, a final year IIT student who is considering a startup job offer, says the competitive salaries and stock options offered by some firms are also "making it easier to convince anxious parents."

The institutes, too, are creating a variety of platforms to encourage entrepreneurship. IIT-Bombay, for instance, has incubation cells and student innovation groups. Students have platforms to access academia and alumni for advice on ventures. IIT-Bombay even undertook a first-time initiative of holding a startup fair last week, where it brought together startups looking for hires and students looking for jobs.

IIT-Madras is working on revamping its MS-in-entrepreneurship programme. The course offers students the flexibility to pick subjects which relate to their product idea, and pushes them to come up with a workable business plan by the end of the programme. "Traditionally, the course has had about two student registrants per year, but from the coming academic year, we expect this to go up to ten," says Mahalingam.

HT.COM ND 06.02.15 P-6

Germany to support IIT Indore with research in science, engineering

Brajesh Kumar

IIT IINDORE BECAME THE SECOND NEW IIT AFTER IIT AHMEDABAD TO RECIEVE FOREIGN SUPPORT SINCE 2009. UNDER THE UPA

After the United States came forward to support Indian Institute of Technology (IIT) Gandhinagar, by signing a letter of intent, Germany has now offered to collaborate with IIT Indore, a new university.

The collaboration, which will be formalised soon by an agreement between Germany and HRD ministry, will help IIT Indore in strengthening its research in various streams including material science and electrical engineering.

The agreement will also facilitate exchange of students and faculty between IIT Indore and various technical institutes in Germany. IIT Indore is the second among the new crop of eight IITs set up during UPA regime that has been identified for foreign collaboration

"Globalization has resulted in greater cross border higher education. However, there is a need for a better policy that encourages collaborations, student faculty mobility etc. What are the changes necessary to bring promote internationalization of higher education," the brief on internationalisation of higher education read.

HT.COM ND 06.02.15 P-6

Self-help and spiritual guidance reads on top of the list

Do you aspire to become a complete, happy and content human being? If yes, personal development is what you should seriously consider as an important goal both on and off work. Different people have different ways of realising it. While some read books, keep fit, take up a course, others turn to spirituality.

When asked if books were enough for personal development, a majority of respondents (55.16%) said it was not just books but a good balance of work and life that helped them keep things in perspective. About 19.84% said it was a regular fitness regimen that kept them healthy. Meditation and spirituality helped 9.13% respondents achieve personal goals.

The reading list of 65.87% respondents included news magazines and newspapers, both online and print, and as many as 38.49% referred to self-help books for personal development.

These included Stay Hungry Stay Foolish by Rashmi Bansal,which follows 25 MBA garduates fromm IIM Ahemdabad as they give up lucrative jobs for the rough and tumble of entrepreneurship. Who Moved My Cheese, a motivational fable by Spencer Johnson featuring mice and The Power of Positive Thinking by Norman Vincent Peale. which purports that the way to happiness is by keeping your heart free of all hate.

The Secret, a self-help book by Rhonda Byrne was also popular with the respondents. The Secret is based on the law of attraction and claims that positive thinking can create life-changing results such as increased wealth, health, and happiness. Rich Dad Poor Dad by American businessman, author and investor Robert Kiyosaki also topped the reading list of many respondents..

But what was interesting was that as many as 33.73% chose to read spiritual books for solace and personal development. A majority of the 252 respondents said they read the Bhagwad Gita for personal development. Others said they read the Ramayana, Quran and the Bible. The works of Swami Vivekananda and the Jataka Tales were also popular sources for spiritual guidance.

Economic Times ND 06/02/2015 P-6

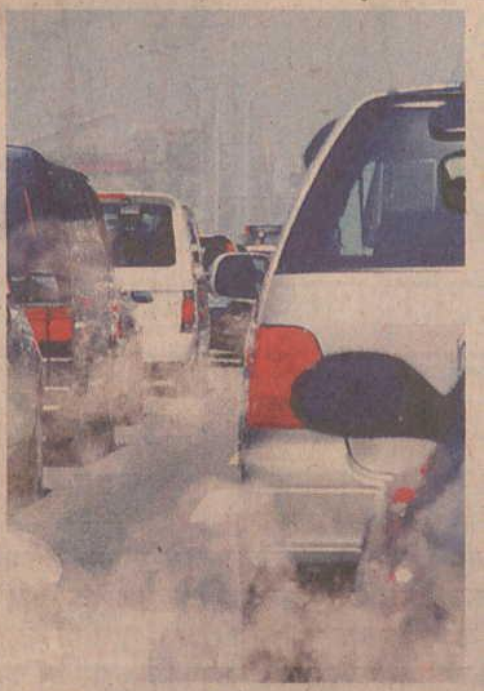
एयर क्वॉलिटी पर IIT-K की रिपोर्ट का हो रहा इंतजार

दिल्ली सरकार ने 2013 में IIT-कानपुर को दिल्ली में प्रदूषण के सभी स्त्रोतों का सटीक आकलन कर उससे निपटने के उपायों के बारे में सुझाव देने को कहा था

[ईटी ब्यूरो | नई दिल्ली]

वर्ल्ड हेल्थ ऑर्गनाइजेशन (डब्ल्यूएचओ) की एक रिपोर्ट में दिल्ली की एयर क्वॉलिटी को सबसे खराब करार दिए जाने और उस पर हाई कोर्ट के संज्ञान लेने के बाद दिल्ली सरकार का पर्यावरण विभाग हरकत में आ गया है। हालांकि कोई भी नीतिगत कदम उठाने से पहले विभाग को आईआईटी-कानपुर में हो रही एक स्टडी की फाइनल रिपोर्ट का इंतजार है। दिल्ली सरकार ने 2013 में आईआईटी-कानपुर के एक स्टडी ग्रुप को यह जिम्मेदारी सौंपी थी कि वह दिल्ली में प्रदूषण के सभी स्रोतों का सटीक आकलन करे और उससे निपटने के उपाय भी सुझाए।

पर्यावरण विभाग के एक अधिकारी ने बताया, 'अभी तक यही पता नहीं चल पाया है कि दिल्ली में किस स्रोत से कितना एयर पल्यूशन हो रहा है। यह जानने के बाद ही कोई पॉलिसी फ्रेमवर्क तैयार होगा। आईआईटी-कानपुर की रिपोर्ट एक-दो महीने में आने की उम्मीद है।' दिल्ली हाई कोर्ट ने बुधवार को डीडीए और दिल्ली पल्यूशन कंट्रोल बोर्ड (डीपीसीसी) से दो दिन के भीतर यह बताने को कहा था कि इस बारे में सुप्रीम कोर्ट तो कोई सुनवाई नहीं कर रहा। हाई कोर्ट ने कहा था कि अगर सुप्रीम कोर्ट सुनवाई नहीं कर रहा होगा तो वह स्वतः संज्ञान के आधार पर इस बारे में सुनवाई करेगा और जरूरी निर्देश देगा। डीपीसीसी फिलहाल नेशनल ग्रीन ट्राइब्यूनल की ओर से दिए गए निर्देशों के तहत प्रदूषण निरोधक उपाय करने में लगी है। इसमें सबसे ज्यादा जोर वाहनों से होने वाले प्रदूषण पर है। इसके तहत ट्रक, बस और भारी वाहनों की मूवमेंट कम करने के उपाय भी तलाशे जा रहे हैं। लेकिन आईआईटी कानपुर की रिसर्च टीम से प्रदूषण के उन स्रोतों पर भी फोकस करने को कहा गया है, जो हाल में पनपे हैं। इनमें कंस्ट्रक्शन और मलबे से होने वाला प्रदूषण भी शामिल है। डीपीसीसी का दावा है कि बीते डेढ़ दशक में दिल्ली से खतरनाक उद्योगों को बाहर करने या नेगेटिव लिस्ट में डाले जाने के बाद यहां इंडस्ट्रियल एयर पल्यूशन का स्तर घटा है। ऑरेंज कैटेगरी में आने वाले मौजूदा उद्योगों पर एमिशन ट्रीटमेंट और दूसरी बंदिशें



लागू हैं। गौरतलब है कि हाल ही में अमेरिकी राष्ट्रपति बराक ओबामा की यात्रा के दौरान दिल्ली की हवा में ठोस कणों की मात्रा ज्यादा होने की आशंका जताई गई थी।

Deccan Herald ND 06/02/2015 P-11

Google's new quest: Web to billions lacking access

With a collection of devices in the sky, Google hopes to take Internet to underserved areas the world over

By Conor Dougherty

Google has never shied from novelty or spending big to find ways to connect more people to the Internet. Over the last two years, its ideas have included fleets of little satellites, solar-powered drones that would fly around the world and balloons that float high into the stratosphere, beaming the Internet to those below.

Building on that, Google and the mutual fund giant Fidelity announced a $1 billion investment on Tuesday into Space Exploration Technologies, a growing private rocket company that is still trying to prove itself on the world stage. The company, also known as SpaceX, could give Google a way to put its devices into outer space.

With that growing collection of devices in the sky, Google believes it can spread the Internet to underserved areas around the world. The investments also reflect a bit of enlightened self-interest, since the more people who are connected directly to Google, the more ads it can show them. And that is how Google makes its money.

"Anything they provide, if it's going through their own pipe, they have more control over the experience and more potential for revenue," said J P Gownder, an analyst at Forrester Research. That means those consumers are more likely to stick with Google services like search, Gmail or YouTube rather than going somewhere else.

Google's interest in satellites is anything but original. Last week, the Virgin Group and Qualcomm, a maker of communications semiconductors, announced they had invested in OneWeb, a network of Internet connectivity satellites, while Planet Labs, a maker of shoebox-size satellites that offer earth imagery, announced on Tuesday that it had received $95 million in financing.

Last year, Facebook bought a British drone maker and hired a bevy of top aerospace scientists, with the goal of deploying high-altitude, unmanned planes to deliver Internet service to parts of the world that have little connectivity now. The company is also experimenting with satellites and lasers to deliver Internet services.

These companies have different technologies and different ideas for making money, but the bind among them is a common assumption that there is no economic way to physically wire the world's underserved consumers. So the only way to do it is with satellites and other wireless technologies.

There is another benefit for Google: The company is always looking for ways to get around Internet service providers. As Google executives have shown with new offerings, from insurance shopping to the growing Google Fiber broadband service, if there is one thing they believe, it is that their company's interests are best served by going directly to the consumer.

INTERNET IN ORBIT: A Planet Labs Dove satellite being released into space in February 2014. Planet Labs makes shoebox-size satellites that capture images of the earth. NYT

And as first reported on the tech website The Information, Google has been in talks with cellular network companies with a goal of providing its own wireless service, according to two people familiar with Google's efforts.

"If you're a big Internet company, you don't want to have to deal with every cable company, every telco, that are potentially or actually trying to interfere with your freedom to do business," said Steve Jurvetson, a founder and partner at Draper Fisher Jurvetson, a Menlo Park, California, venture capital firm. He is on the boards of both SpaceX and Planet Labs.

This idea of sky-high Internet connections seems to be a fixture of technology booms. In the mid-1990s, there were similar efforts. One, called Sky Station, was a sort of stratospheric blimp that would hover over areas that needed broadband Internet service. It was not successful, mostly because there was not much demand for the high-speed access it could provide, said Martine Rothblatt, the inventor of the satellite service SiriusXM who was a partner in Sky Station and is now the chief executive of United Therapeutics, a biotechnology company.

"Twenty years ago, when people were like really happy to get a phone call on a mobile phone, it was inconceivable that most people's television platform would be their mobile device," Rothblatt said. Today, Rothblatt added, the demand for bandwidth is "essentially insatiable."

The interest in satellites also extends to services. Last year, Google spent about $500 million to buy Skybox Imaging, a maker of small high-resolution imaging satellites that could do things like monitor crops or map the terrain below a forest canopy.

Reduction in satellite cost

But be it imaging or connections, the recent interest in satellites stems from a reduction in satellite cost. Unlike the first space race, when governments had to make almost everything themselves, there are now all kinds of off-the-shelf chips, batteries and other components that can be mixed and matched. And just as the camera on your mobile phone becomes better with each upgrade, the advancement in space imaging technology has been rapid.

"Aerospace is following business because the dominant research and development dollars are no longer in the Air Force or NASA, but they are in Google and Apple and all these places pushing the boundaries of miniaturised electronics," said Will Marshall, co-founder and chief executive of Planet Labs.

There is nothing new about connecting to the Internet via satellite. People do it on airplanes, at sea and in remote corners of the world. ViaSat, a Carlsbad, California, satellite company, beams satellite Internet to 700,000 homes and apartments in the United States. But this is done with bigger, higher-orbiting satellites that sit in a geosynchronous orbit, meaning they move at the same speed as the earth and so stay above a fixed point.

Mark Dankberg, ViaSat chief executive, estimated that dozens of companies around the world are working on satellite-based Internet services that are regional in scope and use these higher-orbit technologies.

But the satellites Internet companies have become enamoured of use lower orbits and can cover the world to put the 3 billion people who do not have Internet access online.

Low-Earth-orbit satellites are already revolutionising imaging technologies by allowing companies to receive continuously updated pictures of earth, which lets them do things like measure a mall's hourly parking lot traffic. But whether these satellites can be used to connect people to the Internet more cheaply has yet to be proved, Dankberg said.

One advantage is that low-Earth satellites could have less lag between typing a search into Google and receiving the results. But since most of the world is water and barren land, Dankberg said, a fleet of Internet-connected satellites would have many of its components hovering over unpopulated areas.

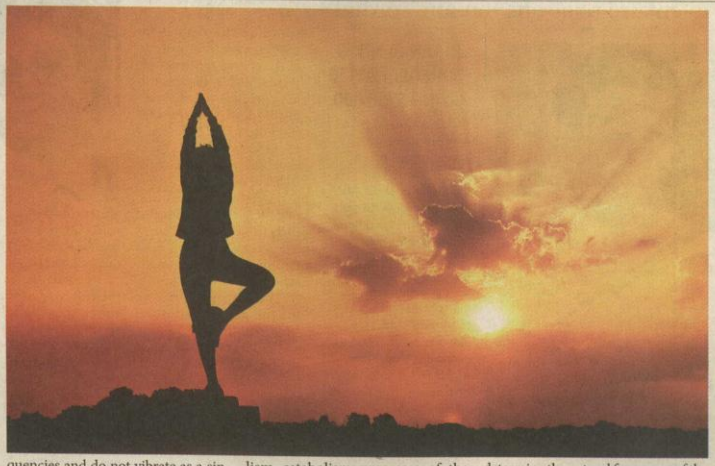
"It has yet to be proven that lots of little satellites can provide Internet more cheaply than a handful of big ones," he said.

International New York Times

Times Of India ND 06/02/2015 P-9

Yoga and Applied Science for enhanced learning

Dr. SS Mantha *explains how the application of ancient yogic science can sharpen concentration for better performance, especially among school children*



Pātañjali sutra explains that शौचसन्तोषतपःस्वाध्यायेश्वरप्रणिधानानियमाः i.e. cleanliness, contentment, austerity or penance (tapas), study and recitation of sacred scriptures and devotion to the Lord are the five 'Niyamas' or observances. What better way than yoga to cultivate these values through education?

In an attempt to understand and scientifically establish the importance of inculcating Yoga as a part of our education system, the Human Resource Development Minister's efforts are truly noteworthy.

Why?

According to **Pāṇini**, a 6th-century BC Sanskrit grammarian, who wrote the first commentary on the Yoga Sutras, yoga means samādhi or concentration.

Science describes Natural frequency = $(1/2\pi)\sqrt{k/m}$, where K = Stiffness and m = mass

Natural frequency is the frequency at which a system tends to oscillate in the absence of any driving or dampening force. "Free vibrations" of any elastic body is called natural vibration and happens at a frequency called natural frequency.

Forced vibrations happen at frequency of applied force (forced frequency). If forced frequency is equal to the natural frequency, the amplitude of vibration increases manifold. This phenomenon is known as resonance.

Stiffness is P/δ where P is the applied load, and δ is the deflection at P

For a body to operate at higher frequencies, the natural frequency needs to be high enough so that the forced frequency or external disturbances do not cause failures by resonance.

How then does raising the natural frequency of a body become important? In mathematical terms, increase stiffness/toughness or reduce body mass, so that the deflection is small for a unit load. The ability to have smaller deflections for large loads would in a way raise the stiffness/toughness of the body. Material properties have a significant role in determining the natural frequency. Herein lays the strength of Yoga, the power of concentration and its effect on human body.

Every object including the human body (or mass) has a resonant frequency. When an object is vibrated at its resonance frequency, the maximum amplitude of its vibration will be greater than the original amplitude (i.e. the vibration is amplified)

Several researchers have reported that vibrations in the frequency range of 0.5 Hertz to 80 Hertz (Hz) have significant effects on the human body. The Gāyatri Mantra:

ॐभूर्भुवःस्वः।तत्सवितुर्वरेण्यं। भर्गोदेवस्यधीमहि।धियोयोनःप्रचोदयात्॥

recited at about 20 Hz has a healing effect on DNA like no other sound in our life.

Individual body members and organs have their own resonant frequencies and do not vibrate as a single mass. This causes amplification or attenuation of input vibrations by certain parts of the body due to their own individual resonant frequencies. The most effective resonant frequencies for vertical vibration lie between 4 and 8 Hz.

Vibrations between 2.5-5 Hz generate strong resonance in the vertebra of the neck and lumbar region with amplification of up to 240 per cent. Vibrations between 4-6 Hz set up resonances in the trunk with amplification of up to 200 percent. Vibrations between 20-30 Hz sets up the strongest resonance between the head and shoulders with amplification of up to 350 per cent.

Whole body vibration may create chronic stress and sometimes even cause permanent damage to the affected organs or body parts. Suspected health effects of whole body vibration include blurred vision, decrease in manual coordination, drowsiness (even after proper rest), lower back pain/injury, insomnia, headache and/or upset stomach. Although whole body vibration causes stress that may lead to health failures, controlled vibration actually improves the DNA. Practicing Yoga under a trainer will aid in controlled vibration and improve DNA.

The earth too vibrates at a resonance of 7.83 Hz, better known as the Schumann Resonance. This vibration is considered to be the natural state of everything. Inhaling and exhaling

प्रच्छर्दनविधारणाभ्यांवाप्राणस्य

at about this frequency will set up a rhythmic beat in consonance with that of the earth and hence could be extremely useful in controlling the metabolism–catabolism processes of the human body.

Let us move to the material world. Every rigid object in existence has a natural structural resonance frequency, a frequency at which it wants to shake more than any other. A wine glass can also be shattered by singing the right note - though you have to hold the note for several seconds so that the vibrations build up. In addition, you will have to sing in just the right minimum pitch, or else have your voice amplified.

The first śloka of Rigveda says

अग्निमीळेपुरोहितंयज्ञस्यदेवंरत्वीजम। होतारंरत्नधातमम॥

By theoretically triggering the fundamental field of matter in space into expansion, the extraordinary output of free energy can be obtained.

As I earlier said, the resonant frequency of an object depends on its structure. Generally, larger the object, lower the frequency. Large buildings need to be designed so that natural weather conditions (such as wind, rain), do not combine to shake them at one of the resonant frequencies. Failure to do so can result in mishap due to the resonance like that of the London's Millennium Bridge or the Angers Bridge in France.

Let us apply this theory to the human body. In our mind's eye, the process would go something like this: First, figure out the resonant frequency of the human body. This can be done by triggering a known low energy disturbance and accelerometers to measure the passage of that disturbance through the human body. Since the human body is not exactly rigid, a disturbance could be triggered through various body parts. We could start the process with the brain. Ideally an objective function that captures the natural frequency of all body parts may determine the natural frequency of the human body.

Measure how long it takes for the disturbance to reach the other side of the human brain, bounce back and return to the epicentre, where it originally started. Let us say it takes about 1 second for one complete cycle. When the echo returns, trigger another disturbance at that instant and the same location, thereby adding the two disturbing energies. Wait for the stronger echo this time. Do it again and again. Trigger disturbance after disturbance until the human brain itself can be seen to bulge and distort from space. Keep doing it. Finally, the whole human brain spontaneously breaks apart, and separates permanently into pieces. Is the human brain thus destroyed? Not really.

The first problem is one of energy dissipation. During each oscillation, some energy is lost. Disturbances do not echo forever and then laws of rigid body dynamics do not exactly apply here. Otherwise, the human brain would shake forever, which is not the case. As it goes on, the amount of energy stored in the human brain rapidly levels off to a strictly finite quantity - even though more energy is added all the time.

However, one can notice that the total energy retained is only slightly more than the energy from the original disturbance. If we want this total energy to be big enough to destroy the human brain, the original disturbance has to be large enough to destroy the brain permanently.

Secondly, some assumptions are made. Even an object as simple as a solid sphere actually has multiple vibrational modes i.e. different ways in which it can shake. For more complicated systems, the number of vibrational modes become very large and not all of them can be known. In the Millennium Bridge mentioned above, the reason for the alarming vibration was the discovery of an entirely new vibrational mode, which had never been seen in any previous structure.

It is not at all clear which of the human brains modes we would aim to agitate. Real disturbances generate at least three distinct types of waves, which pass through the brain's interior on different paths and at different speeds. Also, it is not clear which of these waves we would be attempting to build up. In addition, the brain's interior is not uniform and solid, but layered and fluid and so is the entire human body, meaning that it does not vibrate anything like an ordinary sphere would. This complicates the situation further.

And lastly, it is far from clear what happens at this mysterious point where the brain finally has enough energy to shake itself to bits. More abstractly, it would seek a state which is more stable, a state with lower energy. However I suspect this prevents one from becoming one with the cosmos.

Yoga allows one, through the power of meditation, to concentrate and raise the natural frequency constantly by altering the value of 'k' and 'm', which allows the amplitude to not build indefinitely till it breaks. The phenomenon would last till the first harmonics since the value of k and m cannot be altered forever.

Yoga aids in the movement to the second harmonics by not allowing the amplitudes to build or allowing the cross over in least possible time. Like it is said तत्रस्थितौयत्नोऽभ्यासः (Practice makes one perfect)

Higher orders of concentration

तदेवार्थमात्रनिर्भासंस्वरूपशून्यमिवसमाधिः

and meditation would eventually place the human system to operate at higher levels of frequencies that would eventually merge with the cosmic resonance or realisation that sets in. This certainly requires

ततःप्रत्यक्चेतनाधिगमोऽप्यन्तरायाभावश्च

(Self realisation)

Moving over from one phase to another would obviously put the human body and mind to great test and perseverance. In the process of reaching a state of cosmic resonance, there will be several states that ordinary human beings will not be able to realise. Herein, lies the journey from Hata Yoga to Rāja Yoga. The real understanding of life and the cosmos as enlisted in Ishavasyopanishad begins here.

पूर्णमदःपूर्णमिदंपूर्णात्पूर्णमुदच्यते। पूर्णस्यपूर्णमादायपूर्णमेवावशिष्यते॥ ओंशान्तिःशान्तिःII

Meditation, so important to Yoga in building concentration and thereby altering the natural frequencies of the human body, is central to realisation and mind-body healing.

Schumann resonance is a global electromagnetic resonance, which has its origin in electrical discharges of lightning within the cavity existing between the Earth's surface and the ionosphere. This cavity resonates with electromagnetic waves in extremely low frequencies of approximately 7.86Hz – 8Hz, and is the fundamental "beat" of the planet. .

"Ordinary" thought waves that are created by a human brain ranges from 14 Hz to 40 Hz. This range only includes certain types of dendrites belonging to brain cells, predominantly within the left side of the brain, which is the centre of activity.

If both sides of our brain are synchronized with each other at 8 Hz, they work more harmoniously and allow the maximum flow of information. In other words, the frequency of 8 Hz seems to be the key to activating the full and sovereign potential of our brain. The multiples of this at different harmonics raise the ability to perceive visible and invisible spectra.

8 Hz is also the frequency of the double helix in DNA replication. Hence, a human body resonating at this frequency or a frequency of 432Hz has the ability to heal DNA. On a musical scale, if we take 8Hz as our starting point and work upwards by five octaves (i.e. by the seven notes in the scale five times), we reach a frequency of 256 Hz, in which scale the note A has a frequency of 432Hz.

According to the harmonic principle, by which any produced sound automatically resonates all the other multiples of that frequency, when we play C at 256 Hz, the C of all other octaves also begin to vibrate in unison and so, naturally, the frequency of 8Hz is also sounded. This is why (together with many other mathematical reasons) the musical pitch tuned to 432 oscillations per second is known as the "scientific tuning" and allows natural healing. The human body, which has the ability to resonate at this frequency or be tuned to higher harmonics, has the potential to reach Rāja Yoga.

ॐईशावास्यमिदंसर्वंयत्किञ्चजगत्यांजगत्।

तेनत्यक्तेनभुञ्जीथामागृधःकस्यस्विद्धनम्।

Indeed, all our children should realise that everything in the Universe is controlled and owned. Yoga rationalises simple and truthful living and makes better citizens for tomorrow's India by instilling valued principles. Hence yoga is a great supplement to better education.

(Dr. S S Mantha is Ex Chairman, AICTE and Prof. Robotics and Control Theory)

UGC asks universities, colleges of state to get NAAC gradation

http://timesofindia.indiatimes.com/city/patna/UGC-asks-universities-colleges-of-state-to-get-NAAC-gradation/articleshow/46125929.cms

PATNA: The University Grants Commission (UGC) has asked the Bihar universities and their colleges to get National Assessment and Accreditation Council (NAAC) gradation failing which it can stop grants from April 1, 2015. None of the universities in Bihar has NAAC accreditation so far.

According to sources, universities and colleges in Bihar were asked to apply for accreditation by June 1, 2014. The UGC Regulation of 2012 has made it mandatory for each university and college to get NAAC gradation for availing of UGC grants for their development.

About 100 colleges in Bihar have so far applied for NAAC gradation and 200 colleges in the state have got letter of intent (LoI) from NAAC office. The World Bank is helping develop infrastructure in the universities and colleges to improve the higher education scenario in Bihar, the sources said.

According to a state education official, Bihar government has of late been putting stress on development of higher education. Workshops, seminars and conferences are being held in most of the universities to create awareness among university functionaries and teachers about the importance of NAAC gradation, he said. He said minor and major research projects under UGC schemes are being carried out in most of the universities. There has been more stress on quality teaching now in the state universities, he said.

However, lack of proper infrastructure in most of the constituent colleges in the state and crunch of faculty members are affecting higher education atmosphere in Bihar, sources said and added none of the 11 universities of Bihar has been accredited by NAAC so far.

"It is important to get the university and colleges accredited by NAAC so that UGC funds could flow uninterrupted for their development," the education department official said.

HRD ministry appoints RSS's Inder Mohan Kapahy as a UGC member

http://economictimes.indiatimes.com/news/politics-and-nation/hrd-ministry-appoints-rsss-inder-mohan-kapahy-as-a-ugc-member/articleshow/46126865.cms

NEW DELHI: The human resource development ministry has appointed as a member of the University Grants Commission (UGC) Professor Inder Mohan Kapahy, a long-time member of RSS and founding member of the National Democratic Teachers' Front that led a successful fight against Delhi University's four-year undergraduate programme last year after the Narendra Modi-led NDA government came to power.

Kapahy had met HRD minister Smriti Irani several times over the issue and also demanded an inquiry against Delhi University vice-chancellor Dinesh Singh for alleged financial irregularities. Irani later wrote to President Pranab Mukherjee for initiating action against Singh.

The ministry appointed Kapahy as a UGC member on January 27, as per an official notification accessed by ET. "In exercise of the powers conferred by the University Grants Commission Act, 1956, the central government hereby appoints Inder Mohan Kapahy, Professor, School of Applied Sciences, Maharaja Agrasen University, Himachal Pradesh, as a member of the University Grants Commission with immediate effect for a term of three years or till further orders, whichever is earlier," the notification ..

Kapahy has been associated for long with the Rashtriya Swayamsevak Sangh, ruling BJP's ideological mentor, and has been writing articles for the RSS mouthpiece, Organiser. "I feel this appointment is recognition of the contribution a grass-roots teacher like me can make in decision-making at the apex education body, UGC," Kapahy told ET.

UGC has 10 members, with Professor Ved Prakash as the chairperson. Asked if his political leanings as a RSS activist could have played a role in the appointment, Kapahy said, "Political ideology does not matter in posts like a UGC member. RSS has got nothing to do with this. It is only that some people in the RSS are known to me." In his role as the NDTF founding member, Kapahy had last year pointed to allegedly unapproved expenditure of over Rs 170 crore for buying more than 50,000 laptops in Delhi University from OBC funds.