

Newspaper Clips

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43 special labs coming to test for drug-resistant TB

With 99,000 Cases A Year, India 2nd Only To China

Kounteya Sinha | TNN

New Delhi: India is increasing its diagnostic capability to better detect multi-drug-resistant (MDR) tuberculosis — a strain that does not respond to two of the best known first line anti-TB drugs. With a World Health Organization report recently saying, India with 99,000 new cases of MDR TB annually is second only to China (1 lakh cases), the nationwide TB control programme is now setting up 43 specialized labs to only diagnose samples for MDR TB.

Around 19 labs are already in place, while the rest are expected to become functional in the next few months. According to director general of India's TB control programme Dr L S Chauhan, it takes over four to six months to confirm a single drug-resistant case.

This is why the Union health ministry has now introduced the line probe assay test in these labs, which can detect MDR TB within two days.

"At present, India has 60,000 MDR TB detectable cases across 10 states. By March

Still A Killer

- ▶ India recorded **2 million** new cases of TB in 2009
- ▶ Of 1.3 million who died from TB in 2008, India accounted for **2.8 lakh** lives
- ▶ TB claimed **1.7 million** lives in 2009 — of which **3.8 lakh** were women
- ▶ TB claims **4,700 lives** daily
- ▶ The four countries, which had the largest number of MDR-TB CASES were **China (100,000), India (99,000), Russia (38,000), and South Africa (13,000)**
- ▶ Globally, **4.4 lakh** new cases of MDR TB were recorded in 2009
- ▶ **One in 4** TB deaths is HIV-related

2011, we'll be able to detect MDR TB in all states," Dr Chauhan said.

India estimates that around 3% of all new cases are MDR TB while 12%-17% among retreatment cases are MDR. Meanwhile, the nation is also increasing its lab count to better diagnose TB among those suf-

fering from HIV/AIDS. Christian Medical College, Vellore, is presently testing and evaluating a new technology called Xpert. This rapid molecular detection of TB and rifampin resistance test not only detects the presence of TB, but also identifies whether it is resistant to rifampin, a critical first-line drug, in only eight hours. "We desperately need a test like Xpert. We are therefore accessing its performance in the Indian scenario," Dr Chauhan said.

TB is the single largest killer of HIV patients. One third of the 33-million HIV patients worldwide are infected with TB. Left undetected and untreated, 90% of them will die within months of contracting the disease. Experts say, around 50% of India's 2.4 million HIV patients could be suffering from TB.

INP+ — the largest group of people living with HIV (PLHA) in India — has, however, made a concerted effort to make Xpert available.

Jahnabi Goswami, president of INP+, said, "tests that use molecular technology like Xpert can potentially save millions of lives by timely detection and treatment."

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Toothpastes harmful for fetal brain?

London: Toothpastes and soaps contain a chemical that can leave unborn babies brain damaged, according to scientists.

They fear pregnant women who are exposed to high levels of the chemical, called triclosan, may be putting their babies at risk. Alarming new findings suggest triclosan, a powerful anti-bacterial that was developed nearly 50 years ago, may disrupt the flow of blood to the uterus, starving a baby's brain of the oxygen it needs to develop properly.

"We know it's a problem. But we just don't know how much of a problem," the Daily Mail quoted Margaret James of the University of Florida as saying. Triclosan is commonly used in everything

HEALTH HAZARD

from toothpastes, deodorants and handwashes to washing-up liquid, anti-bacterial chopping boards and even some toys.

However, it has been dogged by

concerns over its safety and earlier this year the Food and Drug Administration in the US announced it was carrying out a major review on its safety. In the latest study, tests on sheep showed it interferes with an enzyme that allows the hormone oestrogen to circulate in the womb.

Oestrogen hormone helps to keep open the main artery carrying oxygen-rich blood to the foetus. If there is too little, then this artery narrows and oxygen supplies are depleted. **ANI**

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Cream eases arthritis pain in mins

'Joint Mud' Works Faster Than Headache Pill, Cuts Aches By Over 70% In 18 Min

London: Now, a "miracle" cream which eases arthritis pain in just minutes — even quicker than it takes a headache pill to work, say scientists.

A team at Greek Island Labs company has produced the 'Joint Mud' cream which it claims can reduce arthritis pain by 74% in just 18 minutes, which is 12 minutes quicker than the average off-the-shelf fast action headache relief. In US trials, long-term users reported a 239% increase in flexibility, mobility and range of motion in aching limbs, the scientists say.

Mark Binette of Greek Island Labs was quoted by the Daily Express as saying, "I have been practising medicine for over 21 years and have



WORKING A MIRACLE

never seen a product with such staggering results.

"I believe Joint Mud will help millions of people deal with aches and pains. I've seen impressive results in patients suffering from pain in their knees, back, hips, shoulders, hands and fingers," Binette said.

The makers of the cream claim that the organic product will allow people to stop taking over-the-counter pain pills, which can cause liver, kidney damage, stomach ulcers or heart failure.

Among more than 25 ingredients, Joint Mud contains cherry oil and clary sage oil, which the makers say are known in Greece for reducing in-

flammation and relaxing muscles.

A study by Oregon Health and Science University in the US found cherry oil also helps to quickly reduce pain. Another ingredient is pomegranate oil, which scientists at Ohio's Case Western Reserve University say is good for cartilage cells.

In the UK 10 million people suffer from arthritis — one in five of the adult population. It affects all ages including 12,000 children and 27,000 people under the age of 25. The condition also places a huge burden on the taxpayer with one in five GP visits involving the symptoms of arthritis such as joint pain, stiffness, and impaired mobility. **AGENCIES**

Hindustan Times ND 02/12/2010 P9

'Crowded IIT helps cheats'

SEATING PROBLEM Kharagpur professor writes to authorities, pointing out rampant copying during tests

Charu Sudan Kasturi

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NEW DELHI: Crowded classes at the oldest Indian Institute of Technology, in Kharagpur, may have spawned an unexpected problem – increased copying among students in crucial tests that determine their overall performance at the premier engineering school.

Senior IIT Kharagpur computer science professor Rajeev Kumar has written to top Institute authorities pointing out "rampant copying" among students, especially in subject examinations held by specific departments.

This cheating is a result of improper seating arrangements, Kumar has written to Director Damodar Acharya and Institute examinations in-charge B Maiti, requesting a special meeting of the IIT Senate to discuss the problem.

But senior IIT Kharagpur officials blame the space crunch caused by the massive 54 per cent increase in total student intake following the implementation of the OBC quota law, to explain their inability to space student test-takers better.

Kumar's argument appears justified, and his suggestion should be followed.

an administrator

The hike in total student intake – across categories – means that the IIT is currently faced with a space shortage in classes, hostels and in examination halls. This space shortage forces the IIT to seat students appearing for the same subject subject next to each other, facilitating cheating, the officials argued.

But while curbing any copying is a priority, ensuring students appearing for the same subject test do not sit next to each other will not be easy, they said. "We have 1400 first year students who appear for the same subjects. We are struggling for space. Fancy seating arrangements are something we cannot afford at the moment," a senior administrator said.

Scores in the IIT examinations all contribute to the cumulative grade point average (CGPA) of students at the end of their course. The CGPA plays a key role in determining eligi-

If space is indeed a barrier ... the institute's position must also be understood.

a professor

bility of students in the eyes of companies that come for on-campus placements, and higher educational institutions.

Kumar has suggested mapping the student seating to the subject they appear for, and then ensuring that no two subjects are close to each other. He has argued that this system of seating was followed earlier based on his proposal and had proved successful.

"Kumar's argument appears justified, and his suggestion should be followed. But if space is indeed a barrier in implementing Kumar's solution, the institute's position must also be understood," another senior IIT Kharagpur professor said.

Kumar is arguing that his seating suggestion can be followed despite the space constraints but IIT authorities argue they need an upcoming new academic block to be ready for seating problems to be sorted out.

Hindustan Times ND 02/12/2010 P7

Bringing change in school education

CONFERENCE School of Tomorrow's second edition brings together experts from all over

HT Correspondent

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NEW DELHI: The second edition of School of Tomorrow, an annual international conference on education, will be held simultaneously in the Capital and three other cities — Mumbai, Hyderabad and Chennai — on December 7.

According to iDiscoveri, one of the organisers of School of Tomorrow, the conference will offer a platform to schools to engage in high-quality dialogue with leaders from all walks of life and create "a momentum for progressive change in school education".

Said Ashish Rajpal, CEO of iDiscoveri Education: "This event is an effort to bring together over thousand leaders from respected schools across the four cities, along with international education experts, entrepreneurs and policy-makers to give shape to the future of school education."

At the conference, eminent speakers, such as former President Dr APJ Abdul Kalam,

Traditionally we educate for the known, (but) ... Here we envision the opportunities and challenges of educating also the unknown.

PROF DAVID PERKINS
Harvard University

Peter Senge from MIT, professor David Perkins from Harvard University and Gurcharan Das, author and ex-CEO of P&G, will provide actionable vision for the schools from an Indian and international perspective, Rajpal said.

Organised in association with Hindustan Times, School of Tomorrow will open with two keynote addresses: one from Dr Kalam, who will outline his vision for the kind of citizen India needs to emerge as a knowledge superpower, and another from Harvard's professor Perkins, who will speak on effective schools of future.

"I was happy to know that it (the conference) aims at providing a knowledge seminar and communication forum for school leaders and educationists across the nation to facilitate discussion on the pressing needs of the education system," said the former President.

Said professor Perkins: "Traditionally we educate for the known, (but) ... Here we envision the opportunities and challenges of educating not just for the known but the unknown."

The first edition of School of Tomorrow, hosted in 2009, witnessed participation from more than 250 schools.

At last year's conference 'Adopt a School' programme was launched, under which allows corporate houses to participate in improving the learning outcomes in low-income schools.

For more information on the conference, or register for it, visit www.schooloftomorrow.in, or email to schooloftomorrow@idiscoveri.com.

Times of India ND 02/12/2010 P1

Premji pledges \$2bn to fund edu in India

Biggest Act Of Philanthropy By An Indian

TIMES NEWS NETWORK

Bangalore: In the largest act of philanthropy by an Indian, Wipro chairman Azim Premji will give about Rs 8,846 crore (\$2 billion) to improve school education in India. Other charitable donations by any person or corporation in India pale in comparison to this massive endowment. It effectively silences critics who say Indian billionaires are measly donors, and focus on big-name western universities rather than addressing India's problems.

Premji, India's third richest man with a net worth of \$18 billion, will transfer 213 million equity shares of Wipro Ltd, held by a few entities controlled by him, to the Azim Premji Trust. It will fund educational activities of the Azim Premji Foundation (APF) which works mainly with schools in rural India.

BIG GIVERS

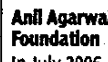
AZIM PREMJI will give \$2bn to his trust to fund improvement of school education in India



Mark Zuckerberg, CEO and a founder of Facebook, agreed to donate \$100m to improve troubled public schools in Newark



Bill and Melinda Gates Foundation in 2009 committed \$1bn over 20 yrs for the Gates Millennium Scholars program



Anil Agarwal Foundation In July 2006, announced an endowment of \$1bn to set up Vedanta Univ in Orissa

Gordon and Betty Moore Foundation in 2001, promised \$600m to California Institute of Technology

The Tata Group has given \$50m to Harvard Business School to fund a new academic and residential building on its campus



Anand Mahindra gave \$10m to the Humanities Centre at Harvard University

N R Narayana Murthy gifted \$5m to Harvard to set up the Murthy Classical Library of India

He had previously transferred over Rs 700 crore to the APF.

Premji said more may come in future. "I'm completely committed to supporting the larger ambition of creating required social change."

The money will be transferred to the trust by next Tuesday and Wipro's former strategy chief K R Lakshmi-

narayana will be its chief endowment officer. Even at a conservative return of 8%-12%, it should generate annual returns of \$160-250 million (Rs 750-1,150 crore), which will be used to run APF initiatives, including Bangalore's Azim Premji University.

► Univ to start next year, P 15

Premji's univ to start next year

► Continued from P 1

We believe that good education is crucial to building a just, equitable, humane and sustainable society. We want to contribute significantly towards improvement of education in India, and through that towards building a better society," he said.

"All our efforts, including the university we are setting up, are focused on the underprivileged and disadvantaged sections of our society. Our experience of the past 10 years has motivated us to significantly scale up our initiatives, across multiple relevant dimensions." So far, the nine-year-old APF has worked extensively in six districts — two in Uttarakhand, two in Rajasthan and two in Karnataka.

Dileep Ranjekar, co-CEO of APF called this the beginning of APF's second life. "The current phase we're launching is based on 10 years of experience wherein we realized what needs to be done to scale this in a concrete manner." His co-CEO Anurag Behar said, "The aim is to increase the deep focus to 50 more districts across India." Such a huge financial commitment has been made mainly because a university cannot be run without a large

Will rich Indians follow example?

Will Premji inspire rich Indians to part with their wealth? That's a billion-dollar question but the American example may have the answer. Microsoft chairman Bill Gates and Warren Buffett of Berkshire Hathway are persuading wealthy Americans to give at least 50% of their wealth to charity. They're even asking people to take a pledge they will do so, and with considerable success. In India, the tech sector has led the way in giving away some of its wealth. All Infosys co-founders have charitable arms. TNN

endowment. For example, if AP University were to follow the Tata Institute of Social Sciences model which meets just 14%-15% of its costs from student fees, the AP University will need to meet 85% of costs from non-fee based resources. "The foundation's significant increase in scale and its clear focus on social purposes will require a long-term financial commitment, which is the purpose this endowment will serve," Premji said. The varsity, offering PG courses in education and development, will start with 200 students in 2011 and scale to 2,000 in 4-5 years.

Times of India ND 02/12/2010 P6

JNU allows re-exam, changes teacher

Manash Pratim Gohain | TNN

New Delhi: The Jawaharlal Nehru University (JNU) administration changed the teacher in charge of the protesting students of the Centre of Persian and Central Asian Studies and asked the students to reappear for the exam on Wednesday.

The decision came at the end of the sixth day of the indefinite hunger strike. The sixth day of the strike witnessed large mobilisation of support from the student community as hundreds of students staged a demonstration in front of the administrative building. As the condition of two of the students worsened, approximately 200 students marched from their hostels to the vice-chancellor's residence late at night demanding immediate action and submission of the university level grievance cell's report.

The seven students on hunger strike were alleging that their in charge Dr

Syed Akhtar Hussain had failed them on the basis of their religion and victimized them, while the teacher claimed that the students have been not performing well in their sessionals and managed a C- grade. But on Monday, the students informed the administration that except for one student who had scored a C-, rest of the students had scored either B or B-. The revelation came after the students filed an RTI contesting the claim made by Hussain.

The VC on Monday asked his advisor and former proctor II, Ram Adhikari Kumar, to intervene and resolve the issue. "The issue has been resolved for now as the university has decided to remove the faculty member, who was in charge of students, and students can reappear for the exam. The centre has also taken note of the development and is further going to investigate the allegation against the faculty member," said Kumar.

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Times of India ND 2/12/2010 P-17

'Men with longer index fingers' at lower risk of prostate cancer'

Paris: Men whose index fingers are longer than their ring, or fourth, fingers run a significantly lower risk of prostate cancer, according to a study published in the *British Journal of Cancer*.

The chances of developing the disease drop by a third, and even more in younger men, the study found. "Our results show that relative finger length could be used as a simple test for prostate cancer risk, particularly in men aged under 60," said Ros Eeles, a professor at the Institute of Cancer Research in Britain and co-author of the study.

Finger pattern could help identify which men should undergo regular screening, especially in combination with genetic testing or other risk factors such as a family history of the disease, she said. From 1994 to 2009, Eeles and colleagues ques-



Finger pattern could help identify which men should undergo regular screening

tioned more than 1,500 prostate cancer patients in Britain, along with 3,000 healthy control cases.

For more than half the men, the index was shorter than the ring finger. Compared to this

group, men whose index and ring fingers were the same length — 19% of the cohort — had a similar prostate cancer risk. But when the index finger was longer, the risk of developing the disease dropped by 33%. Men under 60 were 87% less likely to be in the cancer group.

The relative length of the two fingers in question — set before birth — appears to be a marker of different levels of sex hormones to which a baby is exposed in the womb, with less testosterone correlating with a longer index finger.

Earlier research has shown that testosterone promotes the growth of prostate cancer. Underlying the unexpected connection between digits and cancer are two genes, HOXA and HOXD, that control both finger length and the development of sex organs. AFP

Times of India ND 2/12/2010 P-1 Soon, system to stop firms from spying on you online

London: The makers of web-browser Firefox are working on a system which will allow internet users to stop themselves from being tracked online.

Mozilla wants to build a mechanism which will allow people to opt out of companies secretly monitoring which websites they visit, currently a common practice. Internet giants like Google and Facebook use such information to sell targeted adverts and make money without ever asking the consent of the user.

Mozilla executives and other developers are to appear before a special panel this week in the US to discuss how they will put an end to this, reports the Daily Mail.

Currently companies like Google and Facebook make a fortune using 'cookies' that automatically save themselves onto your computer when you surf the web, and then monitor your browsing history. This data is then sold on to advertisers. IANS

Never mind your lingo, voice is password here

An IIT-Guwahati Team Led By SR Mahadeva Prasanna Is Working On An Authentication System Through Speech Recognition

Bikash Singh & Debjoy Sengupta
GUWAHATI/KOLKATA

Scenario I: An illiterate person walks into an ATM, utters his password in Bhojpuri to withdraw money. Or a labourer working under the National Rural Employment Guarantee Act (NREGA) speaks his voice signature to mark his attendance for the day.

Scenario II: The door at a top-secret Indian defence establishment opens on a voice recognition system that allows only certain officials access to the premises.

IF YOU think this is stuff out of movies, think again. A team of Indian professors is developing a person authentication system based on the speech verification method. Simply put, it's a solution that can be retrofitted into any password authentication system and will recognise your voice as a password—in-irrespective of the language you speak. And when launched, it is likely to work in all environments—offices, railway stations, airports or at an ATM.

By 2011 a pilot project will be rolled out with commercial use expected the year after. "We have been approached by a few companies to use the system in in-

dustrial environments as well as for its commercial production," says Dr SR Mahadeva Prasanna, associate professor at the department of electronics and communication engineering at Indian Institute of Technology-Guwahati (IIT-G). Prasanna leads an eight-member team which is working on the project, being funded by the department of science and technology.

He, however, says the underlying concept is not entirely new but the challenge is that available systems only recognise English, that too with UK or US accents. "The real challenges are to make the system Indian-language compatible and fail or fraud proof. Plus, it will have to support different accents of Hindi as well as Indian English. It will also have to work perfectly well in noisy environments," the professor said.

"Indian office environments are different from that in the UK or the US. An Indian office almost is always noisy. So are places like railway stations, airports or even some ATMs, for that matter. The system being developed will cut out background noise and capture only the voice. Moreover, a person's voice may vary and it can be different due to reasons including cold or a choked throat. We are now busy making sure that the system can handle such voice deviations and yet be fail-



SR Mahadeva Prasanna

New Tech In Works

Retrofit it

It's a solution that can be retrofitted into any password authentication system and will recognise your voice as a password.

Pan-environment

And when launched, it is likely to work in all environments—offices, railway stations, airports or at an ATM.

proof," said Dr Rohit Sinha, who's also working with the professor on the project and is an assistant professor at IIT-Guwahati.

The authentication system has a speech processing security application that can be used in e-commerce platforms apart from in high-security areas. The system has been tested on a group of 100 individuals speaking a mix of some 11 languages as well as different accents of Hin-

di and English. It has also been tested through various voice input systems like headphones, tablet PCs, microphones, headphones and digital voice recorders in uncontrolled environments. The sample size was recently raised to 200 and the number of languages to 18. Plus, the system was tested on a mobile phone platform.

But there are sceptics. Mr Nitin Khanapurkar, executive director at KPMG and a specialist in IT and ITeS, says: "Such voice-based authentication system has not been much successful in the past. A voice can be faked much easily than any other standard biometric impressions like iris and thumb imprint. Additionally, voice modulation varies with climate and the surrounding environments making it difficult for such systems to function properly."

"Such systems can at most be used as a supplementary or complimentary authentication system. Difficulty in India is manifold with many accents of the same language as well as large number of languages," said Mr Khanapurkar. Dr Prasanna, however, said: "That the team is working towards making it fake proof." Voice, he argues, is also the biometric feature of an individual and can't be same for two persons, hence is largely fake-proof. According to Mr Prasanna, some parts of the voice of a fraudster will differ from that of the original person—enough for the system to keep the crooks at bay.

smart
CHIP

Premji gifts \$2-bn shares to education foundation

fe Bureau

Bangalore, Dec 1: In what is perhaps one of the largest such endowments created, Azim Premji, chairman of India's third largest IT services firm, Wipro, has transferred 213 million equity shares of the company worth nearly \$2 billion (Rs 8,846 crore) to a trust, for providing added financial muscle to the Azim Premji Foundation.

Wipro on Wednesday said the transfer will be effected by December 7. The Foundation, started in 2001, has worked on the quality of education with various state governments focusing on the underprivileged. The Azim Premji University, which will work within the ambit of the Azim Premji

Foundation, is seen as the foundation's next major initiative.

"We believe that good education is crucial to building a just, equitable, humane and sustainable society. We want to contribute significantly towards improvement of education in India, and through that towards building a better society," Premji noted in a statement.

"All our efforts, including the university that we are setting up, are focused on the underprivileged and disadvantaged sections of our society. Our experience of the past 10 years has motivated us to significantly scale up our initiatives, across multiple relevant dimensions," he added.

The endowment will serve the long



term financial commitment required for scaling the foundation's activities, he said.

Azim Premji Foundation's co-chief executive Anurag Behar told FE that the organisation would significantly increase its field activities.

Its programmes have already touched over 25,000 schools and 2.5 million children.

"We will set up 50 district resource centres over the next few years to run programmes that improve the quality of education. The resource centres will look at all angles of education which includes things like teacher capacity, building assessments and improving the curriculum," he said. The Azim Premji University is one di-

mension of the Foundation's expansion, he added.

The university, when it rolls out next year in Bangalore, is aiming to create education experts and people who can design education policy for systemic reforms in the sector. Starting with about 250 odd seats in mid-2011, the university will offer post-graduate and post-doctoral programmes—Masters in Education Policy, Masters in Assessment Methods, Masters in Philosophy of Education and M.Phil in the Philosophy of Education among others.

The Karnataka Government had recently approved the formation of the University under a special legislative act.

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Pact for new biotech centre

The Energy and Resources Institute of India and Deakin University, Australia, have entered into an agreement to establish the Deakin-TERI Nano-Biotechnology Research Centre. The agreement is an outcome of TERI's core capability of knowledge creation and development of efficient, environment-friendly technologies and Deakin's India Research Initiative. This initiative involves up to 50 Ph.D. students co-supervised by leading researchers in India and Australia.

The research centre is linked not just to advanced technical products and futuristic applications but also to outcomes that can make a difference to India's poor and Australia's remote communities.

Jawaharlal Nehru University organised the seventh Nehru Memorial Lecture on "Nehru's India: Pluralism and Knowledge" which was delivered by scholar and diplomat Dr. Abid Hussain earlier this week.

Earlier editions of the lecture have been delivered by Prof. Bipan Chandra, Dr. Torsten Wiesel, Dr. Karan Singh, Prof. Jayant V. Narlikar, Somnath Chatterjee and Mark Tully.

The Pearl Academy of Fashion organised a workshop on "Fashion Business-Prospects and

CAMPUS JOTTINGS

Potential" at Jesus and Mary College earlier this week. The aim of the workshop was to explore opportunities for graduate students in fashion and identify skills and aptitudes needed in the field. A case study was also presented to participants to evaluate their problem solving abilities.

Students were also tested on their knowledge on brands through a quiz.

Jamia Millia Islamia's Centre of Culture, Media and Governance organised a seminar on "National Consultation on News and Diversity" earlier this week. The seminar was divided into two working sessions and several papers were presented on topics such as "Exploring Diversity of Content: Statistical Analysis", "News and Content: Qualitative Analysis", "Issues of Scaling-up the Project" and "Issues of Advocacy." The seminar was followed by a discussion.

Indraprastha College of Women is organising a national conference on mathematics on February 22-23 on the theme "Mathematics Beyond Formulas and Theorems."

The aim of the conference is to promote under-graduate and post-graduate research in mathematics. This conference will serve as a platform for students to present their creative and innovative projects and exploring new dimensions by exchanging ideas with other students and faculty members in addition to helping students understand the diverse application of mathematics. The broad areas which the conference will cover include mathematics in sciences, nature and music, its applications in security, network and graph theory, history of mathematics and statistics.

Kozhikode-based Indian Institute of Management is planning to develop a museum of Indian business history. This museum will house business related historical artifacts, objects, sculptures, models, photographs, documents and illustrations. This initiative is a step in acknowledging the contribution of India's business leaders in the making of corporate India.

The aim of the museum is to inspire aspiring business entrepreneurs in the county. Key business houses have been requested to contribute historical objects and memorabilia to the museum which is expected to be formally opened in 2011.

Urvashi Sarkar

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Using moon to trap elusive cosmic particles

A team of astronomers used the Moon as part of an innovative telescope system to detect mysterious, ultra-high-energy neutrinos from distant regions of space.

Their work gave new insight on the possible origin of the elusive subatomic particles and points the way to opening a new view of the Universe in the future.

Neutrinos are fast-moving subatomic particles with no electrical charge that readily pass unimpeded through ordinary matter.

Though plentiful in the Universe, they are notoriously difficult to detect. Experiments to detect neutrinos from the Sun and supernova explosions have used large volumes of material such as water or chlorine to capture the rare interactions of the particles with ordinary matter.

Special equipment

The team used special-purpose electronic equipment brought to the National Science Foundation's Very Large Array (VLA) radio telescope, and took advantage of new, more-sensitive radio receivers installed as part of the Expanded VLA (EVLA) project.

Prior to their observations, they tested their system by flying a small, specialized transmitter over the VLA in a helium balloon.

In 200 hours of observations, Ted Jaeger of the University of Iowa and the Naval Research Laboratory, and Robert Mutel and Kenneth

Gayley of the University of Iowa did not detect any of the ultra-high-energy neutrinos they sought. This lack of detection placed a new limit on the amount of such particles arriving from space, and cast doubt on some theoretical models for how those neutrinos are produced.

Cores of galaxies

The ultra-high-energy neutrinos the astronomers sought are postulated to be produced by the energetic, black-hole-powered cores of distant galaxies; massive stellar explosions; annihilation of dark matter; cosmic-ray particles interacting with photons of the Cosmic Microwave Background; tears in the fabric of space-time; and collisions of the ultra-high-energy neutrinos with lower-energy neutrinos left over from the Big Bang.

Radio telescopes can't detect neutrinos, but the scientists pointed sets of VLA antennas around the edge of the Moon in hopes of seeing brief bursts of radio waves emitted when the neutrinos they sought passed through the Moon and interacted with lunar material.

Such interactions, they calculated, should send the radio bursts toward Earth. This technique was first used in 1995 and has been used several times since then, with no detections recorded.

The latest VLA observations have been the most sensitive yet done, according to a National Science Foundation press release. — **Our Bureau**

ConsumerScope

Kapil, let's get \$35 tablet out



DEEPAK KUMAR

In just a few days of assuming charge as the Union Minister of Communication and IT, Kapil Sibal got a bonus feather on his new cap—a well publicised kick-off of the much delayed mobile number portability (MNP).

Sibal has exhibited a penchant for taking populist tech topics to center stage, which serves a purpose nevertheless. In his other role as Union Minister for HRD too, he had showcased the prototype of a 35-dollar tablet PC for the education segment, which drew global media attention and prompted no less than a Nicholas Negroponte to write an open letter to him. (We discussed that under this column in July this year.)

With both HRD and ICT ministries now being part of his ministerial portfolio, Sibal has a bigger opportunity at hand, of expediting India's low-cost PC dream.

In fact, the low-cost PC-for-education proposition can be made even more compelling if the device can come bundled with Internet access, or even better, with 3G-based broadband access.

A low-cost tablet PC can help trigger a computing revolution in India on the lines of the telecommunication revolution made possible by low-cost mobile services and being supplemented by handsets that are affordable for masses. Of late, India-based vendors have also played an important part in bringing out feature phones at lower price points. But most important of all, the role played by policy makers and regulators has been pivotal, as it helped define the market and develop the required market competition in the first place.

But while India has accomplished the mobile telecommunication revolution, she has failed time and again on the PC adoption front. A key deterrent to this has been the lack of an affordable and easy-to-use PC. Moreover, the poor power situation means that the regular PCs cannot be run in a dependable manner in a majority of homes, educational institutions

and small businesses.

A 35-dollar tablet PC can be the harbinger of a computing revolution of sorts, even if meant for the education segment only. This is because it will lead to a market situation where a sub-100-dollar tablet would be very much achievable in the open market.

As discussed earlier in this column, 35-dollar bill-of-material points are achievable if a scale of 1 million or above units is reached. Also, such price points can be offered to students only if the import and other duties are waived off, something that only the government can do.

A similar product, when brought out for the consumer market will cost more because it will attract

Kapil Sibal is now the boss at the HRD ministry and the Ministry of IT and Communications. He couldn't have gotten a better position from which to realise the dream of the \$35 tablet for the education segment.

various government duties. Moreover, it may have additional features to suit ICT needs of consumers. And yet, there can be a tablet PC that is affordable for Indian consumers who are lower on the socioeconomic pyramid.

Further, the familiarity of consumers with mobile phones means that they can potentially adopt tablets more intuitively compared to the more regular PCs like the desktops. Widespread adoption of tablets can also act as a 3G and Broadband Wireless Access (BWA) accelerator.

Tablets would also be better suited for accessing e-Governance services, which are already at varying stages of rollouts in different states and by different departments. After all, the aim of e-Governance is best met if citizen services are delivered at their doorsteps, literally.

Sibal has been quick to announce January 20 as the date for a pan-India rollout of MNP. Hopefully, he will also set a timeline for the 35-dollar tablet soon enough.

Study says India ranks fourth in academic paper frauds in the world

Copycats plague Indian research

By Dinesh C. Sharma
In New Delhi

THE CASES of misconduct in Indian science, such as plagiarism and falsifying research data, are on the rise in the absence of any institutional mechanism or legal framework to check such fraud.

The most glaring example of this trend is the recent case of plagiarism by the country's top six science academies in their report on genetically modified foods. The academies have neither retracted the report nor taken any action against those responsible for it.

This is typical of what happens in most cases of misconduct in scientific and academic institutions.

"There is inaction all over. Scientific journals, at least, are forthcoming and retract research papers once plagiarism is proved, but the institutions involved never take any action," says Dr R.K. Kotnala, the secretary of Society for Scientific Values (SSV), currently India's only watchdog for fraud in science. The complaints pouring in at SSV have gone up manifold — from just a handful a few years ago to almost 80 this year.

No legal framework to punish the frauds

Even SSV has not been spared. It was shocked when an American scientist complained against an Indian scientist Dr. P.K. Nagar for copying his article on ethics and getting it published in SSV's newsletter. The society found the charges to be correct and barred Nagar from writing in the newsletter and also published details of this misconduct in the next issue.

Many cases go unreported. For instance, just this month Kos Galatsis, associate professor in the department of materials science at the University of California, Los Angeles, discovered during a routine search of Google Scholar that his paper on nano-electronic devices published in an IEEE journal in January 2009 had been copied verbatim by two persons from Pondicherry and published as a chapter in a book.

He immediately wrote to the vice-chancellor of Pondicherry University (PU).

When contacted by MAIL TODAY,



Scientific Journals have retracted 800 papers in the past 10 years of which 50 were Indian.

FORMULAE OF DECEIT

COPYING FROM OTHERS' WORKS: Copy material from a published paper or a book and publish as one's own work

MULTIPLICATION OF PAPERS: Use one's own sets of data to publish more than one paper in different journals, just to increase the number of papers published by them

METICULOUS MANIPULATION OF OTHERS' DATA: Taking scientific data from other published works, tweaking it and publishing as one's own without any new research

AUTHORSHIP FRAUDS: Senior scientists add their names to papers of juniors and doctoral students or those pursuing research under them, without any real contribution

GLARING CASES OF PLAGIARISM

Dr RAM BAHADUR SINGH: This doctor from a self-styled medical research centre and hospital in Moradabad published a series of scientific papers on studies relating to dietary and nutrition for heart patients in prestigious journals including *The Lancet* and *British Medical Journal* all through the 1990s. All the papers were based on fake or falsified data

ACTION: The journals sent investigators to India and later withdrew the papers. This remains the biggest scientific fraud of recent time

PRITHVIRAJ CHAVAN (as MoS for SBT): He plagiarised a significant portion of an official letter he wrote to health minister A. Ramadoss defending genetically modified crops, from a publicity booklet of Mahyco, a body funded by Monsanto, and other seed giants

ACTION: Nothing happened



SIX SCIENCE ACADEMIES:

Top scientific academies in their report on GM crops and Bt brinjal copied a large part of the operative portion of the report from an article published in a newsletter of the Department of Biotechnology written by a GM crop developer

ACTION: The academies admitted their mistake but refused to withdraw the report or change their conclusions



“Only a legal framework would instil a sense of fear in those indulging in scientific misconduct”

— Dr R.K. Kotnala, Society for Scientific Values

K. Vaitheki, assistant professor in the department of computer science at PU — one of the authors of the plagiarised book chapter, expressed 'regret' and said she was writing to the publisher, Springer, to withdraw the chapter. Vice-chancellor JAK Tareen

said: "The matter has been referred to an enquiry committee and will be placed before the executive council for appropriate punishment after giving due opportunity to the faculty member to clarify her position." Cases of plagiarism have been

reported even from top research institutes and the Indian Institutes of Technology.

Once plagiarism or falsification of data is proved, journals retract such papers. Nearly 800 papers have been retracted by scientific journals in the past 10 years. Of them 50 were by Indian authors, while the US with 280 retractions topped the list, according to a study published in *Journal of Medical Ethics* this month.

But research and academic institutes are slow in acting. "Faculty members of the National Institute of Technology, Allahabad, have plagiarised three papers from IIT Delhi. The Director asked us what can be done. We suggested that an enquiry be conducted and the

guilty punished. We have not been informed of any such action," Kotnala said.

Easy access to research journals and doctoral thesis is too tempting to some researchers who indulge in copying content or data without citations. At the same time, new digital technologies have made detecting such fraud relatively easy. Pondicherry University, Tareen claimed, has software in place to check plagiarism and plans 'mandatory plagiarism test' for all these submitted.

Undue weightage given to the criteria of publications in promotion policies is another reason for growing misconduct, says Kotnala.

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