

Newspaper Clips February 27, 2015

Kanpur-IIT suspends arrested prof

<http://timesofindia.indiatimes.com/City/Kanpur/Kanpur-IIT-suspends-arrested-prof/articleshow/46374953.cms>

Kanpur: The Kanpur IIT authorities on Wednesday placed under 'deemed suspension' senior professor in chemistry department N S Gajbhiye who was arrested by the CBI on Monday for his alleged role in Sagar University recruitment scam.

The institute had to take this action as Prof Gajbhiye is on police remand till February 26 and as per rules, if an official in government services stays in police remand for more than 48 hours, he/she is placed under 'deemed suspension' and the suspension is revoked only after a bail is granted.

CBI has charged Dr Gajbhiye for his involvement in different scams during his term as V-C in the Sagar University. The agency is probing his alleged role in the recruitment scam which had taken place while he held the office of VC.

IIT-K deputy registrar (Legal and Administration), C P Singh, said, "Professor Gajbhiye has been placed on deemed suspension with effect from February 23 following his arrest by CBI and subsequently being on police remand up to February 26."

Singh added that the suspension shall continue till further order and the professor will get only 50% of his salary.

The deputy registrar said that on producing bail papers before the institute administration, Prof Gajbhiye's suspension could be revoked.

"He can then join but this decision rests solely with the employer which here is IIT-K. If sections under which he has been framed are of a very serious nature, then using its discretion the institute can continue to keep him under suspension, otherwise his services could be resumed," said the deputy registrar while explaining about the procedure of the revocation of the suspension of Prof Gajbhiye.

This means that the fate and the future of Prof Gajbhiye would depend upon his getting bail. Institute sources said that the CBI may demand extension of remand for Prof Gajbhiye. And if this happens, the suspension would not be revoked.

Institute sources said Prof Gajbhiye stayed in house number 618 on the institute campus and was on the radar of the CBI for the past some months. He was under treatment of a local psychiatrist as he was suffering from depression. He had also underwent angioplasty sometime back, the sources added.

Despite repeated notices served on him to appear before CBI in Jabalpur, he had been making excuses. As he did not turn up after notices were pasted at his residence and at other places on IIT-K campus, the CBI followed him and tracked him at IIT-Kanpur and arrested him on Monday evening after the conclusion of 47th convocation ceremony of IIT-Kanpur.

IIT-B scholar develops software to convert 2D X-ray into 3D

<http://timesofindia.indiatimes.com/city/mumbai/IIT-B-scholar-develops-software-to-convert-2D-X-ray-into-3D/articleshow/46376185.cms>

NEW DELHI: An Indian Institute of Technology, Bombay, (IIT-B) research scholar has developed a software "Tabplan3D" to help surgeons convert 2D X-ray into a 3D model on tablets.

This could revolutionize knee replacement procedure for arthritis patients. Orthopedic surgeons can use Vikas Karade's software to plan surgeries in 3D without using radiation-intensive and expensive CT scans.

The software would be a boon in rural areas, where CT scan machines are rare. Annually around 1.5 lakh cases of knee joint replacement are reported across the country.

"It started in 2010-11 when I was completing my BTech from IIT-B. A noted ortho-oncologist, Dr Manish Agarwal, from Hinduja hospital asked me whether we can get a 3D model from 2D X-ray images of a bone from a patient's body?" said Karade.

Agarwal told Karade if he can reconstruct the model in his mind, then why it cannot be developed as a computer program.

"The idea was to generate 3D model using X-ray images unlike reconstructing a 3D model from CT scanning, which involves several hundred times more radiation, besides being more expensive," said Karade.

Karade took up the challenge as part of his PhD work at IIT-B under the guidance of professor B Ravi, who heads BETIC (Biomedical Engineering and Technology Incubation Centre). They finally developed algorithm "XrayTo3D".

A correct pre-operative plan is necessary to make surgical procedures such as knee replacement and other bone surgeries successful. Physicians need 3D view of the bones to plan accurately.

"Alternate mode for a 3D model is a CT scan. But the problem is CT scan has a very high radiation dosage and it is expensive as well. It ranges from Rs 1,000 to Rs 5,000 as compared to Rs 50 to Rs 500 for an X-ray," said Karade.

"Moreover, CT scans are not easily available. Therefore I took up the challenge to convert 2D X-ray images to 3D model as my PhD work."

The next question is how to use the algorithm in a software product. Using 'Tabplan3D' software, a surgeon can import 2D X-ray radiograph/image of a bone in a mobile/tablet and the image automatically gets converted into a 3D model by XrayTo3D technology. The 3D bone model can be viewed and manipulated from any view angle and can be used for virtual simulation of the surgery, explained Karade.

"The 3D bone model can be viewed and manipulated from any view angle and can be used for virtual simulation of the surgery."

The innovation has been selected among top 10 innovations in the country for the President Scholar in Residence Program 2015. It won the National Award - Gandhian Young Technological Innovation - in 2014.

While the prototype is ready, Karade is teaming up with Amit Maurya (BTech, IIT-B), a BETiC team member, to test the product with a few selected surgeons. The commercial product will be available by the end of 2015.

Dainik Bhasker ND 26/02/2015 P-11

आईआईटी, कानपुर

बनेगा पहला फ्लेक्जिबल इलेक्ट्रॉनिक सेंटर



आईआईटी, कानपुर में देश का पहला फ्लेक्जिबल इलेक्ट्रॉनिक सेंटर बनाया जाएगा जहां टीवी और एलसीडी जैसे इलेक्ट्रॉनिक गैजेट्स पर रिसर्च किया जाएगा। 133 करोड़ की लागत से बनने वाले इलेक्ट्रॉनिक सेंटर के लिए

20 करोड़ रुपए आईआईटी, कानपुर देगा। बाकी रकम केंद्र सरकार देगी। इसके निर्माण में दो वर्ष का समय लगेगा।

Times Of India ND 26/02/2015 P-15

IISc researchers produce a superior water filter

R. PRASAD

A membrane capable of producing safe drinking water by filtering out objects at the nanoscale level and killing the commonly found pathogenic bacteria *E. coli* has been developed by a team led by Dr. Suryasarathi Bose, Assistant Professor, Department of Materials Engineering, IISc, Bengaluru.

The membrane is produced by mixing two polymers — poly(vinylidene fluoride) (PVDF) and poly(methyl methacrylate) (PMMA) — that become miscible at about 220 degree C. While PVDF crystallises during cooling, PMMA does not and separates out; the PMMA is removed using a solvent. This property of selective crystallisation and separation is taken advantage of to produce a nano-porous membrane.

As the membrane is about 1 mm thick, a combination of fine pores and channels are produced when the PMMA is removed. The average pore size is 50 nm. "The blend of two polymers is known, but we have been able to use that to produce a nano-porous structure by removing the PMMA," said Prof. Bose. The results of the work were published last week in the *Journal of Materials Chemistry A*.

Last year, Dr. Bose had produced a novel membrane that had micron-sized pores (0.57-0.68 microns). It was produced by mixing two polymers polyethylene (PE) and polyethylene oxide (PEO) at 180 degree C. In this case, the micron-sized pores were pro-



Maya Sharma, a Ph.D student, was a member of the team that developed the nano-porous membrane. — PHOTO: SPECIAL ARRANGEMENT

duced by removing the water-soluble PEO.

Unlike the micro-filtration achieved using the PE polymer, the nano-pore structure produced now has greater advantages. "It can support a reverse osmosis membrane," he said. "It can enhance the efficiency of a RO membrane if placed before it." The nano-porous membrane can filter the water and send semi-pure water to the RO membrane. As a result, the RO membrane will require lesser pressure to produce pure water.

The nano-sized porous structure can prevent bacteria from passing through the pores as bacteria are typically micron-sized. However, the bacteria can form a biofilm on the structure. As a result, the filter's efficiency will be reduced within a short period.

To prevent this and to kill the bacteria, they mixed silver, titanium dioxide and carbon nanotubes to the PVDF-PMMA mixture. Due to polarity and specific interaction with PVDF, all the three added materials got embedded only on the PVDF.

The three nanoparticles serve two important purposes. First, the nanoparticles promote PVDF crystallisation at a much faster rate. As a result of faster crystallisation, defective crystals are developed. "We get nanopores of uneven sizes (50-100 nm) and these increase the flow rate of water and hasten the filtration process," Prof. Basu said. "Under 25 psi water pressure, the flow rate is more than 2 litres per meter square second."

The second advantage of

silver, titanium dioxide and carbon nanotubes that are embedded on membrane is their ability to kill *E. coli* bacteria. Silver leaches in water and when the ions so released kill the bacteria by destroying the integrity of the cell and by damaging the cell proteins and terminating the DNA replication.

Titanium dioxide also kills the bacteria. Though its antibacterial property is best in the presence of UV light, the present study did not use UV light.

Carbon nanotubes kill the bacteria through direct physical contact — the roughness of the nanotubes kills the bacteria.

A combination of all the three nanoparticles was superior in killing the pathogenic bacteria *E. coli*.

IIT-B to set up internal security centre to help state police

<http://www.dnaindia.com/academy/report-iit-b-to-set-up-internal-security-centre-to-help-state-police-2064179>

To counter the increasing and omnipresent threat of terrorism, police forces across the country must remain a step ahead in terms of both gathering information and acting on it. Technology plays a crucial role in this endeavor of intelligence gathering, crime detection and law enforcement. Several independent studies concur that Indian police forces lag behind as compared to forces from other developed countries in terms of having cutting edge technological support and know how. In order to assist this cause, the Indian Institute of Technology, Bombay (IIT-B) will soon start the National Center of Excellence in Technology for Internal Security (NCETIS) which will look to help state and paramilitary forces in technology matters.

“While the [Defence](#) Research and Development Organisation (DRDO) works primarily with the armed forces, there is no particular group looking at the state and central police forces,” says a faculty member from [IIT-B](#) who is the proposed head of the centre. NCETIS will collaboratively work on different projects keeping in the mind the needs of the end user (security professionals) and innovation gaps of the sector. “Projects may involve different areas such a developing a state of the art communications system, ground penetrating radar, video analytics, robotics, forensics, [cyber](#) and geo spatial security etc.,” said the faculty member. Other objectives include engaging in industry for strategic needs as well to undertake research related to regulatory issues.

Another objective of the center will be to ‘undertake training activities for technology appreciation’ wherein structured programmes will be conducted to acquaint and familiarize the forces with different kinds of technology. “The aim is to ensure that NCETIS becomes a complete resource centre for police forces to discuss how [modern technology](#) can be used more effectively to aid crime solving and prevention,” said the faculty member. Since there are so many organisations involved in this collaborative process, the structure of the Centre accommodates a member from each of them, including one from the DRDO for inputs as well as to ensure that there is no overlapping of work,” said the proposed head of the center

As far as the funding of the institution goes, NCETIS will soon receive Rs.100crore from Department of Electronics and Information Technology, [Government](#) of India. Although faculty members will majorly handle these projects that involve creation of prototypes as and when required, students (especiallyPhD) students will also assist in their execution. Ultimately, NCETIS must leverage the research at other institutions, provide consultancy and advisory service to state police forces as well as customize technology as per their needs.

HT.COM ND 26.02.15 P-8

AUS TO PROVIDE SKILL DEVELOPMENT IN INDIA

NEW ALLIANCE

Recently signed pact promises a college for vocational and skill training in India

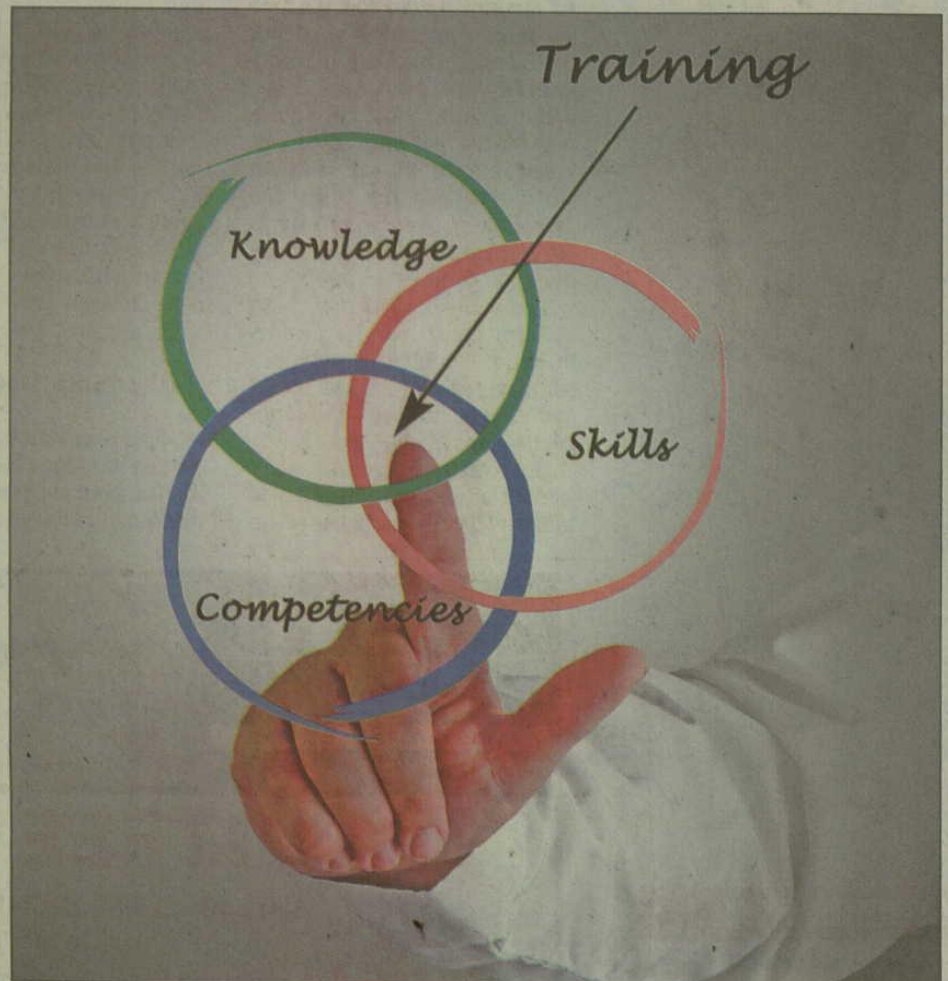
Rozelle Laha

Strengthening its skill development initiatives, the National Skill Development Corporation (NSDC) recently signed a pact with Australia's largest provider of vocational education and training, Technical and Further Education (TAFE), South Australia and Heraldo Education and Training.

"This is a first-of-its-kind collaboration where a vocational education and skill training college is being established in India, where the curriculum will be based not only on the Indian framework, but also transnational standards," says Dilip Chenoy, MD and CEO, NSDC.

Participants can re-skill or upskill themselves for industries like automotive, retail, healthcare, construction, telecom, IT/ITES at this college. On offer will be two-month courses for dropouts, existing students and currently employed workforce. The college will also train personnel for basic entry level jobs.

Apart from this, there will be nine to 12-month employment-oriented courses delivered in partnership with industry partners. These will have a heavy component of hands-on training. The institute will also offer specialisation skill courses for existing



THINKSTOCK

students enrolled in engineering colleges.

On successful completion of the course, each participant will be awarded a certificate by SSC and TAFE respectively.

This certificate will not just be recognised in India and Australia but will be valid internationally, significantly enhanc-

ing the job prospects of all those who opt to participate. NSDC will fund approximately 74% of the total operational cost to kick-start the project.

As per the plan approved by NSDC, Australia aims to skill approximately 83,500 students in the next 10 years.

Controversies take their toll on Nalanda University, peers race ahead

MAYANK MISHRA & AKSHAT KAUSHAL
New Delhi, 25 February

For an institution looking to revive past glory, the Nalanda University's initial days have been far from glorious. The university, in the tourist town of Rajgir in Bihar's Nalanda district, could attract only 15 students for its two programmes in the first academic session that began last year. Worse, the controversy around some key appointments and the eventual exit of Nobel laureate Amartya Sen as its chancellor seem to have taken their toll on its performance.

Compared with some other universities founded around the same time, Nalanda's progress so far has been less than satisfactory on most parameters. Besides poor student intake, launch of new courses has been slow, too.

Other universities like Ashoka, Shiv Nadar and OP Jindal Global, by comparison, appear to have moved a fair distance. Enrolments for the two programmes of the Sonapat-based Ashoka University in its first academic session (2014-15) stand at 330. And, given a three-fold increase in the number of applicants for its undergraduate programme, 300 more students are expected to join this year.

The Nalanda University's journey had begun relatively early, with the establishment of a mentor group in 2007. But it took another seven years to start its first academic session with only two courses — undergraduate programmes in historical studies and environment & ecology — on a makeshift campus.

Compared with some other universities founded around the same time, Nalanda's progress so far has been less than satisfactory on most parameters

The plan is to add five courses over five years.

In between, there were controversies over a reader at a Delhi University college being appointed Nalanda's vice-chancellor, for a very high salary, besides some other key appointments.

While the government-run Nalanda University has had a rather slow start, corporate-backed OP Jindal University, which commenced operations in 2009, already has a student strength of nearly 1,700. The latter runs five schools with programmes in law, business administration, international affairs, public policy and liberal arts & humanities. Law courses seem to be the most popular — 80 per cent of those joining the university opt for law courses.

A spokesperson for OP Jindal University says: "A total of 111 of students from our first batch were placed across Indian and foreign corporate law firms. Additionally, students also

STUCK IN A QUAGMIRE

NALANDA'S TEPID START

- Mentor group formed in 2007
- First session began in 2014
- Only two courses on offer at present (number to increase to five by 2020)
- Only 15 students joined the first batch

PEERS MUCH AHEAD

OP JINDAL GLOBAL UNIVERSITY

- Began operations in 2009
- Five schools up and running
- 1,677 students enrolled for various programmes
- 80% of students pursuing courses in law



SHIV NADAR UNIVERSITY

- Began operations in 2011-12
- First batch had 263 students
- Current student strength at 1,500
- 32 courses on offer; a few to be added this year
- BTech in computer science and electronics the most popular courses

ASHOKA UNIVERSITY

- First academic session began in 2014-15
- 10 courses on offer
- Total student strength at 330
- Has five operational centres that are open for all students

joined independent counsels practising in various high courts and the Supreme Court. The average annual salary for our students placed in corporate law firms was ₹9.1 lakh."

Noida-based Shiv Nadar University, another corporate-backed private university founded by the Shiv Nadar foundation in 2011, has seen

nearly five-fold increase in its student strength over the last three years. Bachelor of technology (BTech) in computer science & engineering and BTech in electronics and communication engineering are the preferred courses among students. With a strength of 163 faculty members, the university currently offers 32 courses.

A spokesperson for Shiv Nadar University told *Business Standard*: "In the coming academic year, we will be offering PhD in chemical engineering, PhD in history and TEST (Theatre for Education & Social Transformation), besides postgraduate diploma programmes for working professionals. For the 2015-16 academic year, we

also plan to start Masters in management and entrepreneurship, in association with Babson College, and Masters in film and television production."

Even the recently launched Ashoka University has executed its plans faster than Nalanda. Founded by some top corporate names, the Ashoka University attracted students from Indian Institutes of Technologies (IITs), top business schools and other reputed colleges, for its flagship one-year postgraduate multidisciplinary Young India Fellowship Programme. The batch of 2014-15 saw 197 enrolments for this programme. "We believe no profession is unidimensional any more. All professions require a multi-disciplinary approach, hence the offering," says Vineet Gupta, co-founder and pro-vice-chancellor of Ashoka University.

Besides 10 courses, the university runs five centres — those for political data analysis, writing and communication, leadership, gender studies and entrepreneurship. All students, irrespective of their courses, have access to these centres, says Gupta. Even for students pursuing a particular stream, the course has been structured in a way that he or she learns other subjects as well, he adds. "Say a student is pursuing a Bachelor of arts (economics) course. He will have to learn 12 courses in pure economics and 12 courses outside of the subject."

Statesman ND 26/02/2015 P-3

Philosophy scholar deprived of working space at Delhi University

KUSHAGRA DIXIT

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New Delhi, 25 February

There are a plenty of unsolved problems in philosophy, and like his area of research, Dr Ramesh Kumar Sharma, 69, finds his problems at Delhi University unanswered. Dr Sharma, a UGC emeritus fellow, is trying hard to get the basic requirements, however, he has received the cold shoulder from the authorities.

Dr Sharma is associated with Department of Philosophy, where he is carrying out his research on "Studies in Ontology of Roderick M. Chisholm".

After joining the department in December 2011, the scholar was asked to work in the corridor of the arts faculty without basic facilities.

"All I asked was proper working space and an almirah where I could put my books and Journals; I don't think that it was a big demand from a scholar. I was given a chair and broken table in the corridor where students often have their lunch. At times, the department head also shouted at me claiming that I was not his responsibility and that I was free to leave," said Dr Sharma.



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Irked by the treatment that he got from the University, Dr Sharma, moved to high court in November 2013.

The court, in January 2015 directed the University to release his due honorarium grant and contingency grant worth Rs.3,40,000 and extended the fellowship till December 2015, till the researcher turns 70.

Before taking the legal action, Dr Sharma says that he wrote multiple letters to the higher authorities including Vice Chancellor, Registrar and the Head of the department though nothing

happened.

Watching his attempts fail, he further wrote to UGC, which recommended the Registrar, DU to provide the basic facilities to the scholar. However, irritated from old man's consistent buzzes and evidently suffering from infrastructure crisis, Delhi University rather decided to discontinue his fellowship in July 2013, and immediately stopped his grants.

"They never explained the UGC about why I was discontinued. It was not in their rights to do that. In a letter written on No-

vember 2012, the UGC directed them to provide the facilities instead, but it was not followed," said Dr Sharma.

The Court also ordered the University of Delhi to grant the him "a sofa, chairs, air conditioner, computer with internet, library books available in the Department, 10 library cards of the Central / Arts Library and a seat on the research floor without any teaching loan," exactly what University claimed in their affidavit to had provided to the scholars.

He added that his only con-

cern is to complete his research work before his fellowship ends as he would turn 70 in the month of December.

"After the judgment, I had requested the University officials, in a letter on 10th February, asking them to implement the order of the court on a priority basis. But I am still waiting for a reply," he said.

On being asked about the progress, the University registrar stated that all the legal matters are being handled on priority. "All the legal matter are under consideration and University is serious about them. It will be done on priority basis," said Tarun Kumar Das, Registrar, University of Delhi.

The Department of Philosophy head Professor HS Prasad stated that Dr Sharma is welcomed to work and can resume his work at any point of time.

Meanwhile, a teacher stated that there is a huge crisis of space in the arts faculty.

"There are 32 departments but the space is limited. In this department alone there are handful of rooms, how can we accommodate all of them. Even the professors had to share the rooms," commented a faculty member.