

### **India's Z-Morh tunnel to be built**

The proposed tunnel between Gagangeer and Sonamarg on the Srinagar-Leh highway will be constructed by Border Road Organisation (BRO) on Build Own Transfer-BOT basis, local news announced this week.

The Z-Morh tunnel will be 6.5km long having two lanes with parallel 6.5km long escape tunnel. The cabinet committee on infrastructure has approved the Z-Morh tunnel, which is expected to be completed by 2016 to 2017.

The Z-Morh tunnel will provide all-weather connectivity between Srinagar and Leh. Currently, the road is closed for nearly seven months of the year due to heavy snowfall and avalanche prone areas.

The only other road into the region, the Leh-Manali highway, is open for only four and a half months because the road passes through the high Taglang La, Baralacha La and Rohtang Pass, which also becomes inaccessible due to bad weather.

*Source: Tunnels and Tunnelling International, 4 October 2012  
([www.tunnelsonline.info/news](http://www.tunnelsonline.info/news))*

### **TBM at Chennai's Nehru park begins tunnelling**

The second TBM to be used for excavation at Nehru Park metro station, which is part of the Chennai Metro Rail Limited (CMRL) in southeast India, will begin operations by mid-October.

The first machine, which was launched in late July, has already covered about 84m. The two TBMs will cover a stretch of 939m from Nehru Park station to Egmore station. Both the tunnels are expected to reach Egmore by the end of January 2013.

CMRL awarded the design and construction of the twin tunnels to Larsen and Toubro, in a joint venture with Shanghai Urban Constuction Group for the design and construction of the 3.342km tunnels including three underground stations at Nehru Park, Kilpauk Medical College and Pachiappa's College. Larsen and Toubro started the construction work on 7 February 2011.

*Source: Tunnels and Tunnelling International, 4 October 2012  
([www.tunnelsonline.info/news](http://www.tunnelsonline.info/news))*

### **Mumbai's first urban road tunnel nears completion**

The Eastern Freeway project, which will ensure a 16.8km-long smooth ride from the eastern suburbs and satellite towns to the island city of Mumbai, India, reaches a milestone at the end of this month when work on one of the 500m-long twin tunnels along the route will be completed.

The \$11.9 million tunnels are being excavated by nearly 200 workers of the Mumbai Metropolitan Region Development Authority (MMRDA), using the drill and blast method to pave their way through a mountain. According to local news media, these are the first urban road tunnels of Mumbai.

Work on the Eastern Freeway project started early 2008. Officials of the MMRDA plan to open the first tunnel by December. The second tunnel will be open to traffic by March 2013.

*Source: Hindustan Times, 20.8.2012  
(www.tunneltalk.com)*

### **Widening of National Highways in India - A challenging task**

India has invited Austrian contractors to participate in its National Highways Development Project (NHDP). It involves the widening of 30,000km of roads, including tunnels.

Road Transport and Highways Minister Mr. C.P. Joshi said India needs foreign contractors for the NHDP. "Austrian companies have outstanding tunnelling expertise and some of them are already executing a project in Rohtang, Himachal Pradesh."

Mr. Joshi said there are plans to at least build a few tunnels in the Zozila and Kargil regions. The Indian government is exploring opportunities for a memorandum of understanding with Austria for the development of the Indian road sector. A high-level delegation from Austria is likely to visit India in October. The government plans to bid out road projects worth \$54 billion to be built under public-private-partnerships.

*Source: India Times, 29.6.2012  
(www.tunneltalk.com)*

### **God particle Higgs boson, last of the 12 particles that created universe, spotted**

After a quest spanning nearly half a century, physicists claimed to have spotted a sub-atomic particle "consistent" with the Higgs boson, or 'God particle', which gives all matter in the universe size and shape.

Amid rousing cheers and a standing ovation, scientists at Switzerland's European Organization for Nuclear Research (CERN) announced discovery of the elusive Higgs, believed to have been responsible for lending mass to particles that eventually formed stars and planets after the Big Bang 13.7 billion years ago.

"We have reached a milestone in our understanding of nature," CERN Director General Rolf Heuer said. "The discovery of a particle consistent with the Higgs boson opens the way to more detailed studies."

## News & Views

Joe Incandela, leader of CMS, one of the two teams at the world's biggest atom smasher, told a packed audience at CERN that the data has reached the level of certainty needed for a "discovery". But he did not confirm that the new particle is indeed elusive Higgs boson.

The particle was hypothesized in 1964 by six physicists, including Briton Peter Higgs, after whom it was named.

To find the mission Higgs scientists set up a Euro 3-billion Large Hadron Collider, the world's biggest and most power full particle accelerator set up in a tunnel 100 metres underground on Switzerland-France border. In the experiment, two beams of protons are fired in opposite directions to smash millions of particles into each other every second, a setup that recreates conditions that existed after the Big Bang. This is the time the Higgs field is believed to have come into play.

*Source: Hindustan Times, 5.7.2012*

## **A devotion to the poor**

*The miracle called Noble Laureate Mother Teresa continues to be an Inspiration to us.*

Mother Teresa's journey was extraordinary. Imagine a teenager living with her family in the early 1920s in distant Skopje, then a town in Albania. At the age of 18 when teenagers often don't know their mind, she made up hers to travel to distant India to become a nun. She found that the only way to India was through the Loreto Order. For almost 20 years, she taught the poorer girls at the Loreto Convent in Kolkata. However, she was convinced that her true vocation lay in the streets and the slums. She sought permission to leave the convent, but with her vows intact. In an extraordinary move, they gave her permission. When she said goodbye to the convent, she said it was a parting even harder than leaving her own home.

Visualise Kolkata (formerly Calcutta) of 1948. The tragedy of the Partition which came on the heels of the Great Famine saw hunger and hardship on every street and pavement. In these rough neighbourhoods, she walked alone, with no helper, no companion and no money to speak of. She soon started a ragtag school in the shadow of her Convent walls, whose security constantly beckoned her to return. In spite of fatigue, loneliness and often hunger, she persisted. She created a little school in Motijhil, soon a little dispensary elsewhere. She taught herself to beg, especially for medicines from chemists to hand out to the sick. She met with goodness but also hypocrisy, criticism, refusal and learned the hardest lesson of all, the pain of humiliation. She once told me that the greatest fear that a human being faces is the fear of humiliation.

This then is where she started. We know where she left off. By the time she died she had established her Missionaries of Charity in 123 countries. She and her Sisters set up clinics and dispensaries, feeding stations, soup kitchens, leprosy treatment centres, Aids hospices, Shishu Bhawans for abandoned children, and old age homes for the elderly destitute. In the process she benefitted untold millions. All this was done without the assistance of accountants, administrators and computers. When I asked her how the Missionaries of Charity would survive without her charismatic presence at its helm, she

explained, “You have been to so many of our missions in India and abroad. Everywhere our Sisters wear the same saris, eat the same kind of food, do the same kind of work. But Mother Teresa is not everywhere. Yet the work goes on”. Then she added, “As long as we remain committed to the poorest of the poor and do not end up serving the rich, the work will prosper.”

She was criticized for conversion. Yet in all the 23 years I knew her she never once whispered such a suggestion. I once bluntly asked her if she did convert. Without a moment’s hesitation, she said. “I do convert. I convert you to be a better Hindu, a better Muslim, a better Protestant, and a better Sikh. *Once you have found God, it is up to you to do with him as you wish.* She was quick to realize that in India, the 19<sup>th</sup> century proselytizing approach could not be sustained.

Her brand of religion was, therefore, not exclusive. Every person she ministered to was for her Christ in suffering, and so she was able to reach out to people everywhere irrespective of their faith. I once asked Jyoti Basu, the legendary Chief Minister of West Bengal who supported Mother Teresa throughout, what he, a communist and atheist, could possibly have in common with Mother Teresa, for whom God was everything. With a smile he answered, “We both share a love for the poor”.

The very last time that I met Mother Teresa was in July of 1997, two months before she died. She recapitulated simple lessons: loving, caring, and sharing. She reminded me of my promise that I would not leave government service, as I had wanted to do some years earlier. “You must continue to touch the poor,” were amongst her last words to me.

On August 26, Mother Teresa’s birth anniversary will be marked with prayers and thanksgiving for the life of a humble nun whose name has become synonymous with compassion and goodness.

*Navin Chawla, Former Chief Election Commissioner of India and biographer of Mother Teresa*

*Source: Hindustan Times, 24.8.2012*

## **ISRO ready for historic 100<sup>th</sup> space mission**

The country’s space programme is poised for his historic milestone on 9.9.2012 when Indian Space Research Organisation’s (ISRO) workhorse PSLV rocket will put two foreign satellites in orbit in the agency’s 100<sup>th</sup> mission from the spaceport at Sriharikota in Andhra Pradesh, about 110 km from Chennai.

Prime Minister Dr. Manmohan Singh will witness the launch of PSLV C-21, scheduled at 9.51 am, that will carry French advanced remote sensing satellite 720 kg spot-6 and its 15 kg Japanese micro satellite PROITERES. The mission is without any Indian satellite.

The 51 hour countdown which began at 6.51 am on 7.9.12 “is as per time schedule,” an ISRO official said. “Weather conditions are fine though it had rained yesterday,” he said.

The Prime minister, who arrived here this evening enroute so Sriharikota, will stay there overnight.

From the time of its humble beginnings when it launched the indigenous 'Artyabhata' in Russia on April 19, 1975, it has been a long and successful odyssey for ISRO. SPOT-6 is the biggest commercial lift so far since India forayed into the money-spinning commercial satellite launch services after 350 kg Agile of Italy was put in orbit in 2007 by PSLV. Twelve other foreign commercial satellites were less than 300 kg.

France's five earlier SPOT satellites were launched by European Araine rocket. SPOT-6, built by ASTRIUM SAS, a subsidiary of EADS, France, is an earth observation satellite, while PROITERES, developed by students and faculty of Osaka Institute of Technology, will study Kansai region of Japanese island of Honshu.

*Source: DNA Sunday, Mumbai, 9.9.2012*

## **An exceptional education initiative**

*Through an innovative education initiative, Super 30's Anand Kumar has worked miracles with his students*

As a friend, philosopher, guide and teacher, Anand Kumar has touched and changed many lives and made dreams of bright young students come true. Through his innovative and unique educational initiative, Super 30, he coaches aspirants for the Indian Institutes of Technology Joint Entrance Exam (IIT-JEE).

In the 10 years of the Patna-based super 30's existence, a whopping 263 students have cleared the tough IIT-JEE. Remarkably, most of the successful candidates have been from most under privileged sections of society, many of them first-generation learners from rural and poor backgrounds. They are children of brick kiln workers, rickshaw pullers, farmers and roadside vendors and are now doing very well in life.

While training for the engineering exams, the candidates get free food, lodging and coaching. Though offers have come in from the private sectors and government for financial support, Kumar prefers to take care of his students' needs.

### ***Unique teaching methods***

"I use a multimedia projector to teach students with the help of two characters, Rikki and Bholu. Rikki is from a rich family and wears a tie, a jacket and nice shoes. Bholu is from a poor family and wears simple clothes and worn-out chappals (sneakers). Both are serious about clearing the IIT-JEE. While Rikki eats pizzas and burgers, Bholu eats bhutta (corn). Rikki rides a motorbike, Bholu rides a broken cycle. When I give them a question to solve, Rikki solves it using traditional methods but Bholu uses multiple solutions. Through his method, students learn better and build their confidence," says Kumar.

Students are taught about the importance of education and perseverance. “No one should be barred from pursuing education just because they don’t have money. Education empowers you and I am happy I can empower my students,” he says.

The best thing ‘Guru’ Anand Kumar did was to teach his students to dream of doing the impossible and then empowering them to make it all come true.

### ***Creating super 30***

In 1994, Kumar got a chance to study at the prestigious Cambridge University but unfortunately, financial hardship ended that dream. “I decided to do something for the underprivileged students, who invariably lose out without getting the right opportunities,” he says.

Interested in math, he then started a club called the Ramanujan School of Mathematics. “My teachers encouraged me and under their guidance, I started a free training programme for math lovers.” Paying a nominal fee, a small group of students were trained for various competitive examinations. Those who couldn’t afford it were coached for free. Soon, Kumar formed Super 30.

### ***Wide recognition***

The man who has got his papers and problems on math published in various national and international journals, and newspapers, is now famous. Discovery Channel made a documentary on the coaching centre and called it a “revolutionary experiment to bring about social change.” Time magazine selected Super 30 in the list of Best of Asia 2010. Newsweek magazine included Super 30 on the list of four most innovative schools in the world. In 2011, Kumar was selected by Europe’s Focus magazine as “one of the global personalities who have the ability to shape exceptionally talented people.”

*Source: Hindustan Times, 5.9.2012*

## **Humour!**

### **Who’s responsible?**

A man frantically calls the hotel manager from his hotel room. “Please come at once, I’m arguing with my wife and she is threatening to jump out the window. The manager responded, “Sir that’s a personal matter.”

Husband: “The window won’t open! That’s a maintenance matter...”