



November, 2012

NEWS-LETTER FROM INFORMATION  
TECHNOLOGY, VCE Campus, HYDERABAD-500031

# NOSTALGIA

## EXPERIENCE & EXPOSURE

**Being a part of Vasavi**  
**By- Neha Khanjani**

Being a part of the most prestigious institute in Andhra Pradesh indeed instills in you a sense of pride and the feeling of a remarkable feat accomplished. Summing up my experiences at Vasavi in just a few lines seems nearly impossible. Simply saying that life at Vasavi has been life changing experience would be an understatement.

Life at vasavi has enriched me in ways more than one. I am an efficient multi-tasker now and have realized my potential and now aim to seek new vistas.

The quintessential teachers leave no stone unturned to ensure their pupil has a crystal clear idea about the subject matter. They also go that extra mile to keep the students abreast of the latest developments in the industry.

The IE and IEEE student chapters organize regular co-curricular activities, seminars and national Conferences, hence maintaining a goal oriented and motivated atmosphere at college.

The various talent clubs, Abhinay-The dance and dramatics club, Kriti-The arts club, 9 days-The music band, Theme Ballet are the stars behind the very successful cultural fest at college-Euphoria. Students from colleges all over the city eagerly await Euphoria and the celebrations and fun that come along with it.

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**It's not a faith in Technology. It's faith in people.**

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Acumen-A national level Technical Symposium at college boasts of events like paper presentations, workshops, seminars, robot designing to name a few and gives one a platform to exhibit their talent.

Had it not been for the guidance of the expert faculty, the excellent infrastructure complemented by the vast collection of books at the library, I doubt if I would be what I am today.

Our HOD's contribution to the department has been phenomenal, from shaping students' careers, to motivating them, to helping them realize their potential, the HOD has been a guiding light throughout this wonderful journey.

Staying back for the dance rehearsals at college, organizing events for the fest, sneaking out of class to have a quick bite at the canteen, submitting assignments, designing banners, the laughter shared with the many friends I made here are some of the memories I will be taking back with me.

These four years at Vasavi have moulded me to a near perfect individual and has given me a wonderful platform to experiment my interests. I would like to tell all my fellow students and juniors to cherish every moment spent at college and keep the banner of Vasavi College Of Engineering flying high.

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## ALUMNI COLUMN

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"Whatever the cost of our libraries, the price is cheap compared to that of an ignorant nation"

-Walter Cronkite

"Education is the ability to listen to almost anything without losing your temper or your self-confidence."

- Robert Frost

"The task of the modern educator is not to cut down jungles, but to irrigate deserts."

- C.S. Lewis

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## FACULTY COLUMN

### LEDs: Its Beginning Of End For The Traditional Light Bulbs

By- Mr. Misbahuddin

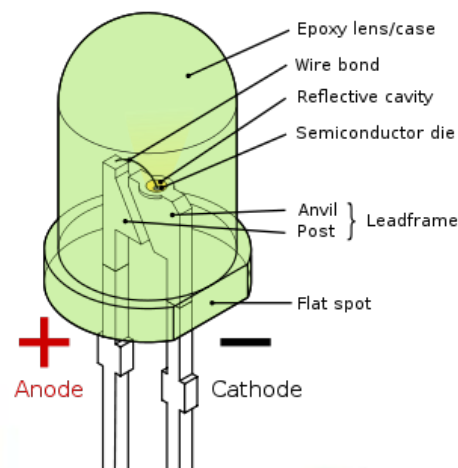
In the beginning, there was darkness.  
Then came fire.

It wasn't until the 19th century that artificial light was first generated. The big leap came in the 1880s, when Thomas Edison lit homes with the incandescent bulb. Since then, for the next 130 years, incandescents ruled the nights, the roads, and especially the Christmas tree.

But now, the incandescent light bulb, one of the most venerable inventions of its era but deemed too inefficient for our own, will be phased off the U.S. market beginning in 2012 under the new energy law just approved by Congress. In Europe also the stage has been set for the imminent death of the incandescent light bulb. And the rest of the World is also following the same. Already many stores across the world stopped stocking the good old bulbs already.

The days of the traditional incandescent bulb look numbered because these electricity-sapping glass orbs have fallen out of favour with environmentally-conscious governments and consumers.

Moving to more efficient lighting is one of the lowest-cost ways to reduce electricity use and greenhouse gases. In fact, it actually will save households money because of lower utility bills. Ninety percent of the energy that an incandescent light bulb burns is wasted as heat.



LED and its parts

And waiting in the wings is a new breed of hi-tech light based on the humble LED (light-emitting diode), the small lights found in everything from TV remote controls to bike lights. Not only do they promise to solve the bulb's environmental woes, their backers say they will also respond intelligently to your surroundings and even influence the way we behave.

Efficient LED technology looks set to flick the switch on traditional incandescent light bulbs forever, say researchers.

Already, the efficiency and long life of LEDs is making them a popular option in places where changing bulbs is inconvenient or expensive, such as in

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motorway lights, traffic signals, airport runways or on large buildings and bridges. For example, the Louvre museum in Paris is currently replacing 4,500 bulbs with LED equivalents, a change that is expected to result in a 73% reduction in energy consumption. Plans are also in place to replace the 25-year-old lighting system that illuminates Tower Bridge in London with LED lighting in time for the 2012 Olympic Games.

Of course, the death warrant for the incandescent bulb has been signed before. Compact fluorescent lamps (CFLs) – or energy efficient bulbs, as they are more commonly known – were supposed to spell the end of the light bulb in the 1970s. But despite rising to prominence in the 90s and constantly improving, they have failed to deliver on their promise. In part this is down to them costing more than regular bulbs, taking an age to warm up and often producing low quality light. And that is without even mentioning the environmental concerns over bulbs that contain mercury.

LEDs, it is claimed, will help overcome these problems. These tiny lights were invented by GE in the early 1960s and were initially only available in red, a property that defined the look of early pocket calculators and digital watches. Over the years, however, more colours have appeared.

People still use vacuum tubes for some applications, and similarly incandescent bulbs may never go away completely. But it is not a question of if, but of when LED lighting will be the norm throughout the world.

We are only just at the start of the LED lighting revolution, and you may never look up at the ceiling in the same way again.



An assortment of LED lightbulbs that are commercially available as of 2010 as replacements for screw-in bulbs

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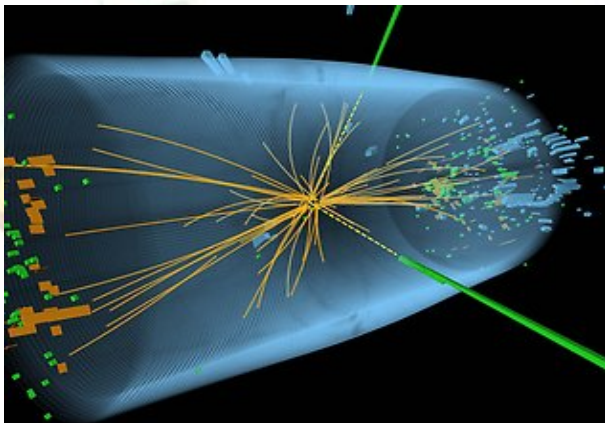


## STUDENT COLUMN

### God Particle Discovered: The Real Quest Begins Now

By- Diviteja.G

Physicists working at world's biggest experiment, CERN's Large Hadron Collider(LHC) near Geneva have discovered a new subatomic particle that looks for all the world like the Higgs boson, a potential key to an understanding of why elementary particles have mass and indeed to the existence of diversity and life in the universe.



A representation of the search for the Higgs boson.

LHC is a 27 mile tunnel deep under the border between France and Switzerland, the Large Hadron Collider (LHC) was built to recreate the conditions of the Big Bang, when the universe started and to find the Higgs boson. The LHC costs about around 10 billion USD to build and involved 10,000 scientists from around 100 countries.

Scientists all over the world are searching for existence of this particle for around 50 years.

It is "a historic milestone" and is probably the beginning of the end for one of the longest, most expensive searches in the history of science. If scientists are lucky, the discovery could lead to a new understanding of how the universe began.

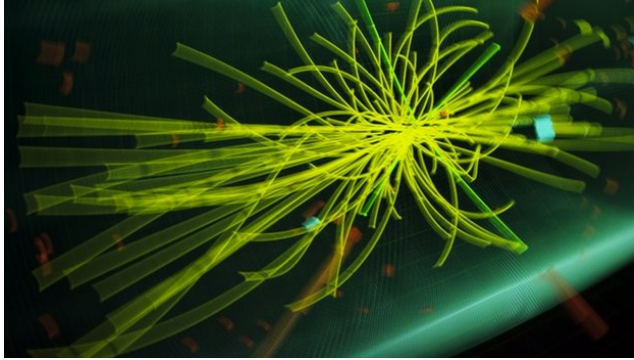
Scientists have already cautioned that the discovery may not answer all the questions they have about pressing mysteries in nature. Nonetheless, the scientific world was in agreement that the discovery was of major importance.

### WHAT IS THE GOD PARTICLE?

The Higgs boson is frequently referred to as 'the god particle', a name adopted after Leon Lederman's book. Nobel Prize-winning physicist Leon Lederman, the Higgs boson is a particle believed to bestow mass on all other particles.

The Higgs boson is a type of elementary particle within the Standard Model of particle physics. It plays a key role in modern scientific theories of the universe and its existence or non-existence is considered pivotal in determining which theories about the nature of the physical universe are more likely to be correct. In particle physics, a boson (named for physicist Satyendra Nath Bose)

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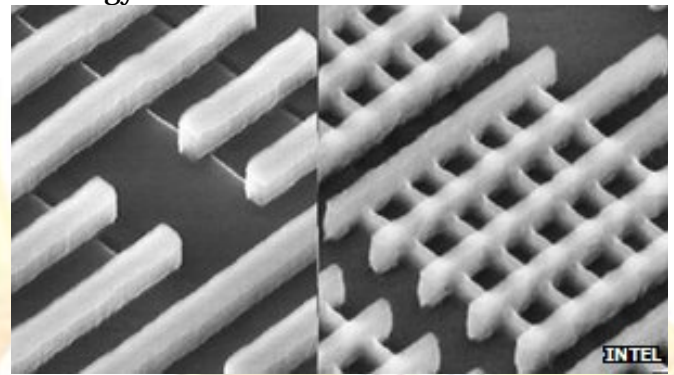
God Particle Discovered: The Real Quest Begins Now

The existence of the Higgs boson was predicted in 1964 to explain the Higgs mechanism—the mechanism by which elementary particles are given mass. While the Higgs mechanism is considered confirmed to exist, the boson itself—a cornerstone of the leading theory—had not been observed and its existence was unconfirmed. Its tentative discovery in 2012 may validate the Standard Model as essentially correct, as it is the final elementary particle predicted and required by the Standard Model which has not yet been observed via particle physics experiments.

## Next-gen Ivy Bridge Processors With 3D Transistors

Intel has officially launched the first wave of its Ivy Bridge processors with a new tri-gate transistor technology, touting the new chips as the “world’s first 22 nanometer product.”

Intel’s new Ivy Bridge processors use a new tri-gate transistor technology to boost processing power while reducing the amount of energy needed.



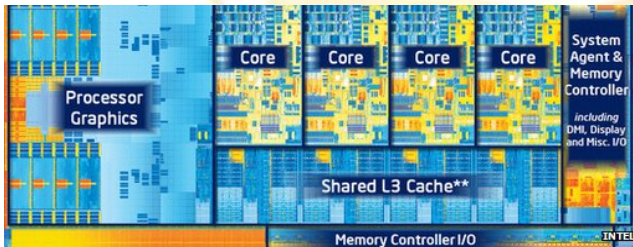
Traditional planar chip design (left) and Intel's new Tri-Gate technology (right).

The initial release includes 13 quad-core processors, most of which will be targeted at desktop computers. Further dual core processors, suitable for ultrabooks – thin laptops – will be announced “later this spring”.

This is the world’s first 22 nanometre product and we’ll be delivering about 20% more processor performance using 20% less average power.

The firm has already built three factories to fabricate the new chips and a fourth will come online later this year.

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Intel's new Ivy Bridge processors use a new tri-gate transistor technology to boost processing power while reducing the amount of energy needed

**Low power:** The fact that Intel's new transistor technology – the on/off switches at the heart of its chips – are more power-efficient could be crucial to its future success.



INTEL Intel's Ivy Bridge chip

**Tri-gate transistors:** Intel hopes a new transistor technology, in development for 11 years, will help it challenge Arm's reputation for energy efficiency.

Bell Labs created the first transistor in 1947, and it was about a quarter of the size of an American penny. Since then, engineers have radically shrunk them in size – so there are now more than one billion fitted inside a single processor. It all poses quite a challenge to Intel's main competitor in the PC processor market – Advanced Micro Devices.

AMD plans to reduce the amount of power its upcoming Piledriver chips consume by using “resonant clock mesh technology” – a new process which recycles the energy used by the processor. However, full details about how it will work and a release date are yet to be announced.

They are targeting 20 times better battery life on standby – always on, always connected- in the updated version, due for release in 2013.

So, you can get all your files and emails downloaded onto your PC while it's in your bag, and still get more than 10 days of standby and all-day battery life.





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## GADGET CORNER

-Rohith Reddy.C

### Battery On Shoe Charges With Every Step:

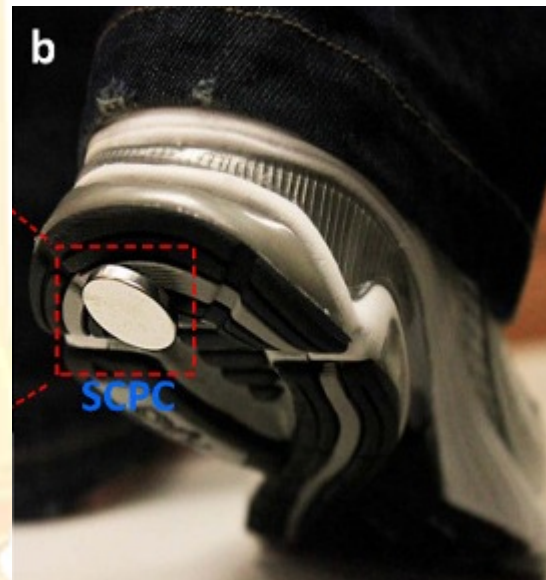
A breakthrough battery that charges itself has been named one of the top innovations of 2012 by Physics World magazine.

The battery, developed by [Zhong Lin Wang](#) and colleagues at the [Georgia Institute of Technology](#), converts the kinetic energy from motion into chemical energy, which can then be used to power any device. By placing the battery on the bottom of a shoe, for example, it could generate energy with every step.

You have probably heard about similar technologies, but all other systems of this nature require two processes. The new system achieves it in just one. The first research on this new battery was published in August 2012 in the journal [Nano Letters](#).

Until this new system was developed, capturing kinetic energy required converting mechanical energy into electricity, which would then be converted into chemical energy for long- or short-term storage. This new method skips a step and converts energy from motion directly into stored chemical energy.

This introduces a new approach in battery technology that is fundamentally new in science.



Not only does this new battery technology create a more efficient process — five times more efficient than current systems, Lin Wang says — it reduces the amount of size and weight of the resulting battery, making it even more portable and easy to incorporate into all manner of devices.

Right now the battery system doesn't generate all that much electricity — about enough to power a pocket calculator — but the scientists say that could be increased to the equivalent of today's 1.5V batteries. Put to use in a broader scale, they say it could produce almost unlimited electricity.

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## Microsoft Confirms Messenger Will Shut Down On March 15

Microsoft has planned to discontinue Windows Live Messenger in 2013, moving all users over to Skype sometime in Q1 of this year. Microsoft has emailed all 100 million+ Messenger users to announce that the company will retire Messenger on March 15, after which users must use Skype. (The exception to this will be users in mainland China, who will still be able to use Messenger as the platform is operated locally.)

However, Microsoft suggests this transition should be easy. In the email to users, the company says: "Update to Skype and sign in using a Microsoft Account (same as your Messenger ID) and all your Messenger contacts will be at your fingertips. You'll be able to instant message and video chat with them just like before, and also discover new ways of staying in touch with Skype on your mobile and tablet."

As for what happens between now and March 15? Also in the email to users, Microsoft says "Messenger will continue to work as you know it today. If you are signed in with Messenger on your desktop you will see a banner notification to upgrade. When you click on the banner, an installer window will open with the request to upgrade. This will take you through our installer flow to install Skype and automatically uninstall Messenger."

Microsoft clearly wants users to make this switch as soon as possible – if not to make it easy on users, but so the company does not lose them altogether.

## TEAM MEMBERS:

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