



Vidya Vikas Education Trust's

# Universal College of Engineering

( Permanently Unaided | Approved by AICTE, DTE & Affiliated to University of Mumbai )

(Accredited with B+ Grade by NAAC)

## Coffee & Code ;

An Initiative by the Department of Computer Engineering

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### VISION

To be recognized as a department that provides quality technical education and research opportunities that eventually caters to helping and serving the community.

### MISSION

- To groom the students to participate in curricular and co-curricular activities by providing efficient resources.
- To motivate the students to solve real-world problems to help the society grow.
- To provide a learning ambience to enhance innovations, team spirit and leadership qualities for students.

### PROGRAM EDUCATIONAL OBJECTIVES

The graduates will:

PEO 1) Establish a career in the field of computer engineering

PEO 2) Pursue higher education or become entrepreneurs

PEO 3) Be lifelong learners



### JADAV PAYENG

Environmental Activist  
Padma Shree Awardee  
"Forest Man of India"

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“

*Every Child should plant a tree and take care of it until they leave school.*

”

## Seminar on “Software Testing Reports”

**DATE:** 2nd May 2019

**VENUE:** Lab 514

**TIMING:** 3:00 pm to 4:00 pm



A Seminar Session was conducted by Mrs.Silviya D'Monte on 2nd May 2019 from 3 PM to 4 PM on “SOFTWARE TESTING REPORT”. Guidelines were given on how to perform testing for final year project.

A very first step in testing is reviewing the requirements. If requirements are not proper then test case may fail. Then next step is decide testing strategy and testing plan and finally to make sure that no bug in project.

Further she has also explained how to write test plan, test scope test cases and test release documents. It was a really interactive session and the students thoroughly enjoyed every bit of it. The session had really helped the students to prepare their final year project Test Reports well on time.

## IET Present around the World (PATW) 2019

UCOE IET Chapter had conducted a National Competition round of it's "Present Around the World (PATW)" Competition at Marwardi University, Rajkot on 28th April 2019. PATW is IET's global competition where participants showcase their presentation skills.

Participants included two representatives each from three different states, all who were winners of local network competitions in their respective states. Each Participants were given 10 minutes time to present their topic.

Our Student Mr. Ayush Shetty had represented Maharashtra State and his topic was "**Mixed Reality in Healthcare**". The jury comprised of a panel of three judges for adjudicating the presenter's skills and technical content.

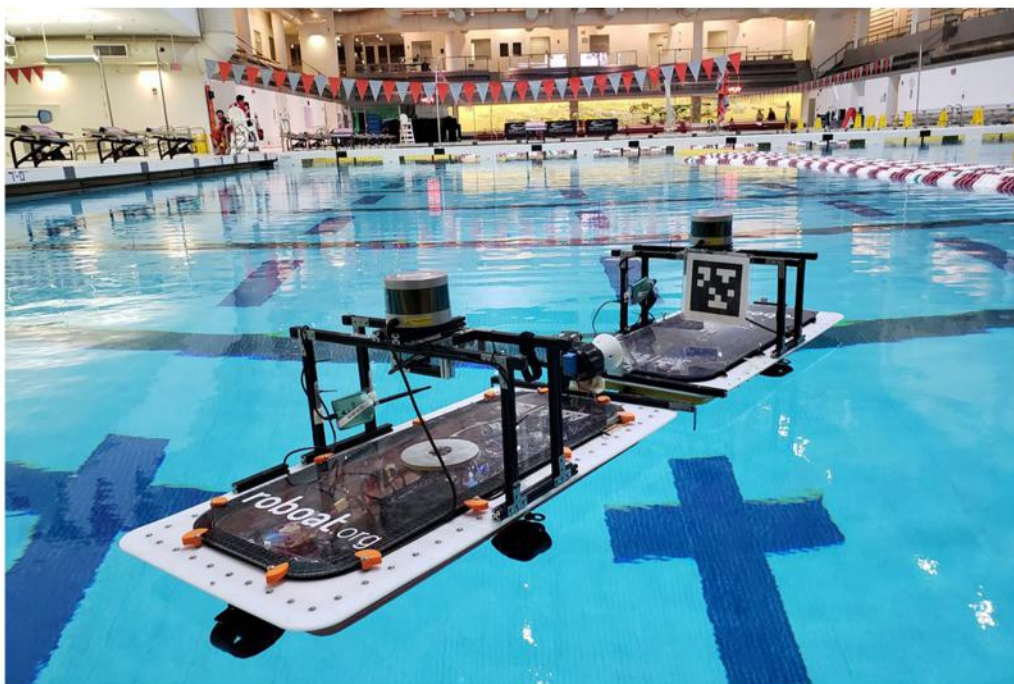
The presentation round then concluded with a 5 minute Question-Answer session which included two additional judges on the panel. Finally after all the scrutiny and brainstorming session Ayush proudly secured "Second" position and was awarded a certificate and a cash prize of 100 Euros.





## MIT's robot boats that self-assemble to build bridges, stages or even markets

MIT researchers have created a new autonomous robot boat prototype — which they have named “roboats” — that can target and combine with one another Voltron-style to create new structures. Said structures could be bigger boats, but MIT is thinking a bit more creatively — it envisions a fleet of these being able to join up to form on-demand urban infrastructure, including stages for concerts, walking bridges or even entire outdoor markets. The roboats would of course be able to act as autonomous water taxis and ferries, which could be particularly useful in a setting like Amsterdam, which is why MIT teamed up with Amsterdam's Institute for Advanced Metropolitan Solutions on this. Equipped with sensors, sub-aquatic thrusters, GPS, cameras and tiny computer brains, the roboats can currently follow a pre-determined path, but testing on newer 3D-printed prototypes introduced a level of autonomy that can accomplish a lot more.



New tests focused on a custom latching system, with a very high degree of precision, that can connect to specific points with millimetre accuracy, using a trial and error algorithm-based autonomous programming to make sure they connect to their target correctly. The initial use case in Amsterdam that MIT identified is overnight garbage collection, where these could act as mini barges working the canal to quickly and easily clear refuse left out by residents and store owners.

Longer-term, the vision is to see what kind of additional configurations might be possible, including larger platforms that can support people on board, and “tentacle-like rubber grippers that tighten around the pin — like a squid grasping its prey” to improve the latching mechanism in a way inspired by a somewhat terrifying visual.

## 4 cool inventions that could save the planet

We have heard about the impact that our technology-driven population is having on the planet -- from cars, to energy factories, to the over-consumption of the earth's resources. causing a lot of problems. Yet, inventors are also using these technologies to improve lives across the planet. Here are a few of their creations (or soon-to-be ones):

**1. A high-tech sieve** that makes the ocean drinkable Yes, you can already turn the ocean into drinkable water through existing, industrial-scale desalination plants. But these plants are often costly and can damage the environment: They use large amounts of energy, produce greenhouse gases and can harm marine life. So, researchers in the UK have developed a sieve made out of graphene that may be able to filter out salt using less energy. That could help provide safe, clean, drinkable water -- which is a rare resource in many countries. In fact, the United Nations predicts that in less than a decade, 14% of people around the world will not have access to sufficient water resources where they live.

### **2. A drone that pollinates**

So much of what you eat and drink every day -- apples, carrots, chocolate, even coffee -- relies on pollination, which allows plants to reproduce. In fact, about 75% of the world's crops are produced with the help of pollinators, like bees and butterflies. Yet these insect pollinators belong to a group that is facing extinction, according to a UN report. So researchers in Japan are testing drones to see if they can carry pollen from one plant to another -- just like a small insect. The researchers' drone was able to pollinate a very large flower, but there's still a lot more work to do before these machines can carry out the work of bees.

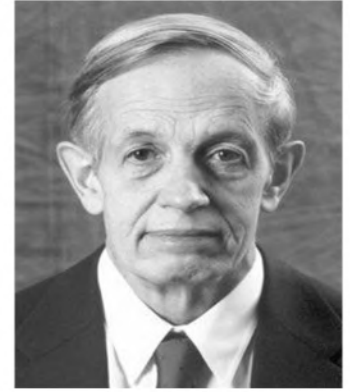
### **3. Biodegradable bullets**

Protecting the environment might seem like the last thing the US military is worried about. Just this year, however, the US Army asked for proposals for biodegradable ammunition to replace the existing rounds it uses during training exercises. The current spent rounds -- the bullet casings that are ejected from a weapon after its been fired -- are believed to take hundreds of years to biodegrade, according to the Pentagon, and they contain components that could harm the soil and water. As a result, the US Environmental Protection Agency says that military facilities make up the majority of the country's most polluted sites. So the US Department of Defense is asking for new ammunition that contains seeds to produce food for animals: "This effort will make use of seeds to grow environmentally friendly plants that remove soil contaminants and consume the biodegradable components developed under this project."

### **4. A plane that emits only water**

OK, so it fits only four people, including the pilot -- but this sleek-looking plane runs on an electrical current from a supply of hydrogen and oxygen, aided by a battery. The result? Its only emission is water vapor. "This is the first time that somebody has built an airplane that can carry more than one person and which is driven by hydrogen", says André Thess of the German Aerospace Center (DLR), which helped build the aircraft. The hope is to create emission-free air taxis -- like the HY4 -- that can easily travel from city to city in the near future. "Say you want to go between Irvine and Ventura in the Los Angeles area. It can take you between one and a half and three hours if there are traffic jams, but by plane it will take you around 35 to 40 minutes", says Josef Kallo, the HY4 project leader.

## A Beautiful Mind



John Nash, in full John Forbes Nash, Jr., (born June 13, 1928, Bluefield, West Virginia, U.S.—died May 23, 2015, near Monroe Township, New Jersey), American mathematician who was awarded the 1994 Nobel Prize for Economics for his landmark work, first begun in the 1950s, on the mathematics of game theory.

He shared the prize with John C. Harsanyi and Reinhard Selten. In 2015 Nash won (with Louis Nirenberg) the Abel Prize for his contributions to the study of partial differential equations. Nash enrolled in chemical engineering at the Carnegie Institute of Technology (later Carnegie Mellon University) in Pittsburgh before he switched to chemistry and then to mathematics, in which he finally received both bachelor's and master's degrees in 1948. Two years later, at age 22, he completed a doctorate at Princeton University. In 1951 he joined the faculty of the Massachusetts Institute of Technology (MIT), where he pursued research into partial differential equations. He resigned in the late 1950s after bouts of mental illness. He then began an informal association with Princeton, where he became a senior research mathematician in 1995.

While he was still in graduate school, Nash published (April 1950) his first paper, "The Bargaining Problem," in the journal *Econometrica*. He expanded on his mathematical model for bargaining in his influential doctoral thesis, "Non-Cooperative Games," which appeared in September 1951 in the journal *Annals of Mathematics*.

John Nash is the only person to be awarded both the Nobel Memorial Prize in Economic Sciences and the Abel Prize. In 1959, Nash began showing clear signs of mental illness, and spent several years at psychiatric hospitals being treated for paranoid schizophrenia. After 1970, his condition slowly improved, allowing him to return to academic work by the mid-1980s. His struggles with his illness and his recovery became the basis for Sylvia Nasar's biography, *A Beautiful Mind*, as well as a film of the same name starring Russell Crowe as Nash.

On May 23, 2015, Nash and his wife were killed in a vehicle accident on the New Jersey Turnpike near Monroe Township, New Jersey. They had been on their way home from the airport after a visit to Norway, where Nash had received the Abel Prize, when their taxicab driver, Tark Girgis, lost control of the vehicle and struck a guardrail.



# His story at a glance

It was the scorching summer of 1978 when Jadav Payeng, a Mishing tribal teenage boy, returned to his birthplace at Aruna saponi, a river island on the Brahmaputra. He had just completed his Class X exams from Baligaon Jagannath Baruah Arya Vidyalaya in Jorhat and was about to loop strangely back into a different phase of his life. But no one could have predicted how different. On reaching, Payeng witnessed a sight that shook him to the core.



More than a hundred snakes curved, looped and twisted lifelessly on the deserted sandbar. The boy's heart broke. And from it burst forth a springtime without bounds. Distressed and seeking counsel, the boy went to the nearby Deori community village. The snakes had been washed up to the sandbar by floods and had died without tree cover. The villagers exhorted him to grow trees to save the reptiles. For where there are trees, there are birds, and where there are birds, there will be birds' eggs and fledglings - food for snakes and their ilk. Along with their native wisdom, the villagers offered the boy 50 seeds and 25 bamboo plants. The young lad, just 15 or 16, set out all alone in April 1979 to plant life on the tough terrain of the eroded island covered with sand and silt. He sowed the seeds and shoots.

Thirty-six years later, he has reaped a forest. Like all truly great people, Payeng, now in his mid-fifties, hailed the 'Forest Man of India,' planter of a jungle, resuscitator of the earth, lone green warrior, is innocent of his feat. "I never thought that my small initiative would make such a difference one day," he says. After all, Payeng, third among 13 siblings, which included seven sisters, started small and poor. His father Lakhiram and mother Aphuli Payeng sold milk for a meagre living. The 1965 deluge wrecked Aruna saponi and forced Payeng's family, among others, to move 12 kilometres away to Majuli on the other side of river. But that was not the only parting. Before relocating, acute poverty compelled his parents to leave five-year-old Jadav in the care of Anil Borthakur, a court-master at the District Judge Court in Jorhat, who looked after his schooling. After Class X, Payeng gave up school to look after the livestock left by his deceased parents. He still has a hundred cows and buffaloes and makes his living from selling milk. But he is no ordinary cattle owner.

He can lay claim to 1,360 acres of dense, defiant forest. From desolation sprouted inspiration, which swelled into an obsession. Payeng's zeal to revive the land knew no fences.

In the fertile period between April and June, he planted the forest. He rattles off the species, like names from an intimate family tree: bamboos, baheda, teak; gambhari; custard apple, star fruit, gulmohur; devil's tree, tamarind, mulberry; mango, jackfruit, plum, peach, banyan; elephant grass and medicinal plants... the list is varied and exhaustive.

The rest of the year, he collected seeds and saplings. "I covered a distance of a kilometre in five years," Payeng recalls, "and in stages it got covered with dense vegetation dominated by trees." Local inhabitants nicknamed him 'Molai' meaning 'forest' and dubbed his woodland 'Molai Forest'.

# His story at a glance(cont.)



He cycles an hour to Kartik sapori, then rows his boat for about five kilometers and then cycles again for half an hour across grassy meadows to reach his cow-shed to clean out the dung, milk the cattle, and spread cattle-manure to fertilize the fields. Milk dispatched for sale, a quick breakfast behind him at 9, and he is ready to walk into his jungle, his karmabhumi.

The forest that Payeng grew now houses five Royal Bengal tigers, over a hundred deer, wild boar, more than a hundred vultures, several species of birds, including pelicans, three or four greater one-horned rhinoceroses, besides of course, the snakes, who were at the genesis of this extraordinary story. A herd of 115 elephants visits regularly for 3-4 months. “In 35 years, the Royal Bengal tigers have feasted on 85 of my cows, 95 buffaloes and 10 pigs,” Payeng says matter-of-factly, then adds jokingly, “They (the tigers) do not know farming, you see.”

Surrounded by his beloved trees, Payeng may well have remained in their shadow had it not been for Jitu Kalita, a local wildlife photographer, who published an article on him in a vernacular daily in 2010. Today, Jitu is Jadav’s friend and mentor. The local administration has been neither of those. Hell, this forester without designation does not even own a ration card. Payeng laments the indifference of the forest department, saying that they neither helped him grow the forest nor paid heed when he informed them of the endangered rhinos regularly visiting his forest. They believed him only when a rhino was poached on in August 2012. “My younger son and I couldn’t eat for a couple of days when we saw its horn, tail and nails gouged out,” Payeng grieves.

For his remarkable solo undertaking, the Jawaharlal Nehru University invited Payeng on Earth Day and honoured him with the title of the ‘Forest Man of India’ in 2012. Later that year, the then President APJ Abdul Kalam felicitated him with a cash award in Mumbai. The same year, he was among the 900 experts who gathered at the seventh global conference of the International Forum for Sustainable Development at Evian in France. Sanctuary Asia bestowed on him the Wildlife Service Award. This year, he received the Padma Shri. However, prizes matter little to this man for whom a whole crowded forest stands up in ovation. “The Padma Shri is an award for encouragement,” he says, “but my aim has always been to do good for the country. Even the President of India has to do something for the earth; otherwise, there will be nobody left, nothing.”

Expectedly, he spends all the cash awards on more forest. He has now recruited four labourers for planting as he eyes another 5,000-acre area.

“The forest could stretch till Majuli,” he envisions, “further to Kamalabari and up to Dibrugarh district.” All his waking hours, Payeng sees the world in green. Come sunset, he wends his way back home on bicycle-boat-bicycle for his 8-pm meal. A little after-dinner apong to smoothen the day’s furrows, and it’s time for bed.

**Tomorrow is another day, and in it lie the seeds of many more forests.**