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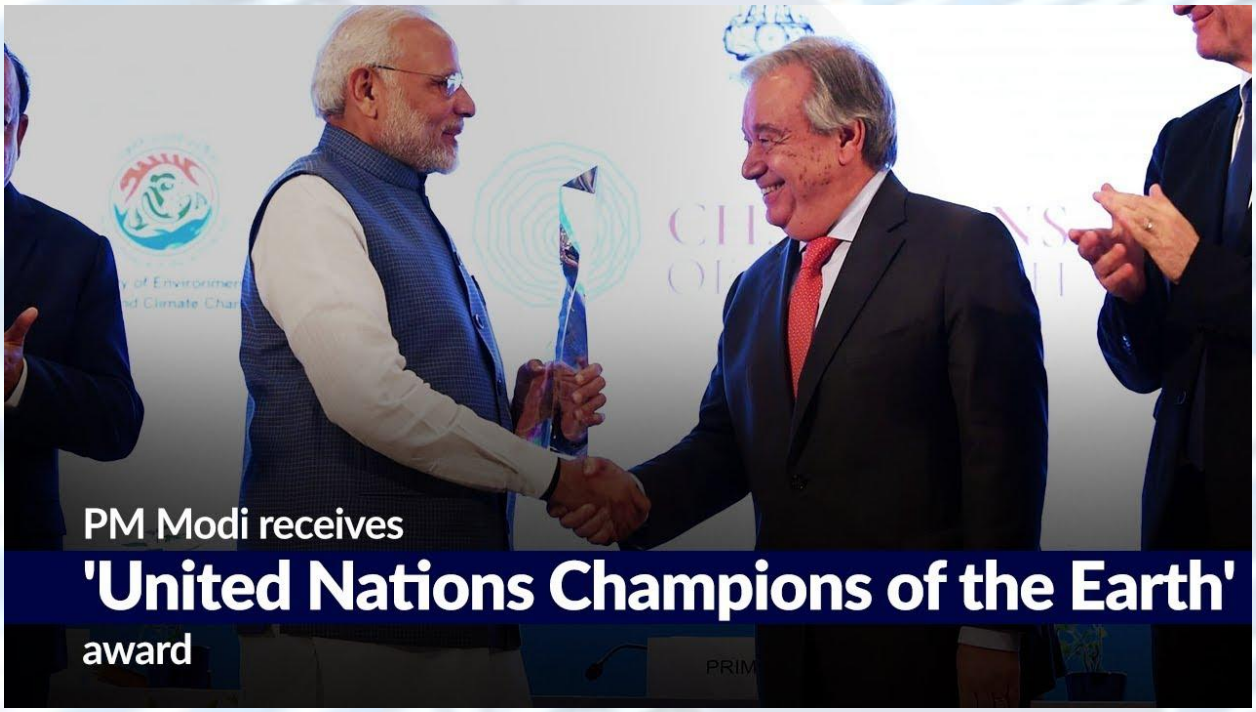
MODI'S WAR ON SINGLE-USE PLASTIC

Narendra Modi, Prime Minister of India received 'United Nations Champions of the Earth' award. His ambitious aim to eliminate all single-use plastics (items like carry bags, straws and water bottles among others) from the country by 2022, the year which coincides with 75 years of the country's independence. While referring to Modi's idea of "New India by 2022", Union environment minister Harsh Vardhan announced the target in June this year on the World Environment Day. "Plastic threatens to become a menace to humanity. A lot of it never makes it to the recycling bin. Worse, a lot of it is non-biodegradable. India is preparing to join the 'Clean Seas Campaign' and make its contribution towards saving our oceans," Modi said on the occasion. The annual average per capita consumption of plastic in India is at 11 kg as against global average of 28 kg.



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ISA: MODI'S MOST AMBITIOUS GLOBAL MOVE

International Solar Alliance, or ISA, is an Indian initiative which was jointly launched by Mr. Narendra Modi Prime Minister of India and Mr. Macron Prime Minister of France on November 30, 2015 in Paris, during COP-21, the UN Climate Conference. It was considered a ground-breaking advance on the environmental front. ISA aims at addressing obstacles to deployment at scale of solar energy through better harmonization and aggregation of demand from solar rich countries.

ISA is an inter-governmental treaty-based organization of countries between the Tropic of Cancer and Tropic of Capricorn, looking to promote solar energy in the member nations. Mr. Modi has said that the ISA would play the same role in future as oil-cartel OPEC plays today, hinting at the vast potential of solar energy to transform the global energy market. OPEC currently meets around half of the world's oil requirements. In the first general assembly of ISA scheduled today, India is likely to propose extending ISA membership which is currently limited to 121 countries, to all 193 members of the United Nations.

Read more at:
//economictimes.indiatimes.com/articleshow/66052143.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

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New Electronic Inventions

Electronic Pills - Collecting Data inside the Body

After years of investment and development, wireless devices contained in swallow able capsules are now reaching the market. Israel-based Given Imaging and the researchers at the University of Buffalo in New York have developed ingestible capsules that record data from inside your body.

These pills contain sensors or tiny cameras that collect information as they travel through the gastrointestinal tract before being excreted from the body a day or two later. These new electronic inventions transmit information such as acidity, pressure and temperature levels or images of the esophagus and intestine to your doctor's computer for analysis.

Doctors often use invasive methods such as catheters, endoscopic instruments or radioisotopes for collecting information about the digestive tract. So device companies have been developing easier, less intrusive ways, to gather information. Digestive diseases and disorders can include symptoms such as acid reflux, bloating, heartburn, abdominal pain, constipation, difficulty swallowing or loss of appetite.

Doctors can inspect the colon and peer into the stomach using endoscopic instruments. But some areas cannot be easily viewed, and finding out how muscles are working can be difficult.

Electronic pills are being used to measure muscle contraction, ease of passage and other factors to reveal information unavailable in the past.

Sources: givenimaging.com; buffalo.edu

Hollow Flashlight

Ann Makosinski is a 16-year-old student who competed against thousands of other young inventors from around the world to win first prize and a $25,000 scholarship at Google's International Science Fair. She invented a battery-free flashlight. A free energy device that is powered by the heat in your hand.

While visiting the Philippines, Ann found that many students couldn't study at home because they didn't have electricity for lighting. Unfortunately, this is a common problem for developing regions where people don't have access to power grids or can't afford the cost of electricity. Ann recalled reading how the human body had enough energy to power a 100-watt light bulb. This inspired her to think of how she could convert body heat directly into electricity to power a flashlight. She knew that heated conductive material causes electrons to spread outwards and that cold conductive material causes electrons to condense inwards. So, if a ceramic tile is heated, and it's pressed against a ceramic tile that is cool, then

electrons will move from the hot tile towards the cool tile producing a current. This phenomenon is known as the thermoelectric effect.

Ann started using ceramic tiles placed on top of each other with a conductive circuit between them (known as Peltier tiles) to create the amount of electricity she needed for her flashlight. Her idea was to design her flashlight so that when it was gripped in your hand, your palm would come in contact with the topside of the tiles and start heating them. To ensure the underside of the tiles would be cooler, she had the tiles mounted into a cut-out area of a hollow aluminum tube. This meant that air in the tube would keep the underside of her tiles cooler than the heated topside of the tiles. This would then generate a current from the hot side to the cold side so that light emitting diodes (LEDS) connected to the tiles would light-up.

But although the tiles generated the necessary wattage (5.7 milliwatts), Ann discovered that the voltage wasn't enough. So she added a transformer to boost the voltage to 5V, which was more than enough to make her flashlight work. Ann successfully created the first flashlight that didn't use batteries, toxic chemicals, kinetic or solar energy, and that always works when you picked it up.Time Magazine listed Ann as one of the 30 people under 30 who are changing the world.
She is working on bringing her flashlight to market and is also developing a headlamp based on the same technology.

Sources: googlesciencefair.com; tedxtalks.ted.com

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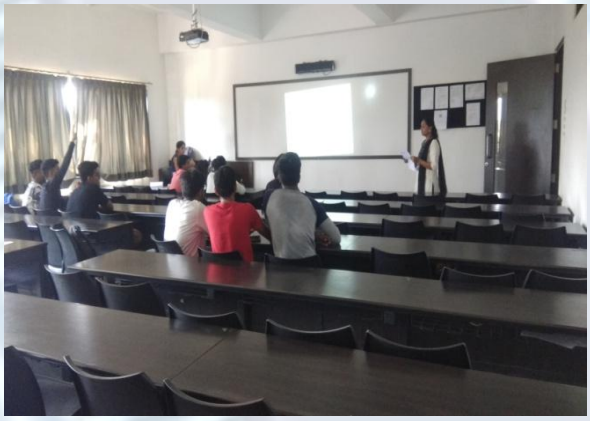
TANTROTSAV 2K18

Tantrotsav is the intra college technical competition started in 2016 to enhance students theoretical knowledge through practical hands on and competition. Which also helps the students to get an idea of various inter college technical competitions and to improve their participation in various competitions organized by colleges and IITs.

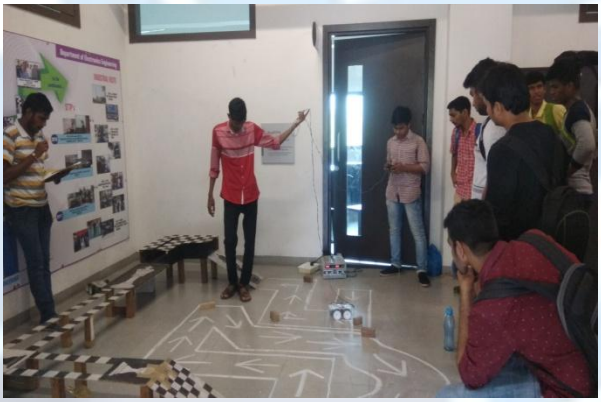
The Department of Electronics Engineering and Electronics and Telecommunication Engineering has organized six competitions in Tantrotsav 2K18. Students from various departments including First year have participated enthusiastically.

Quizze Competition- Enhances General awareness and technical knowledge among the students that is very helpful from aptitude tests point of view.



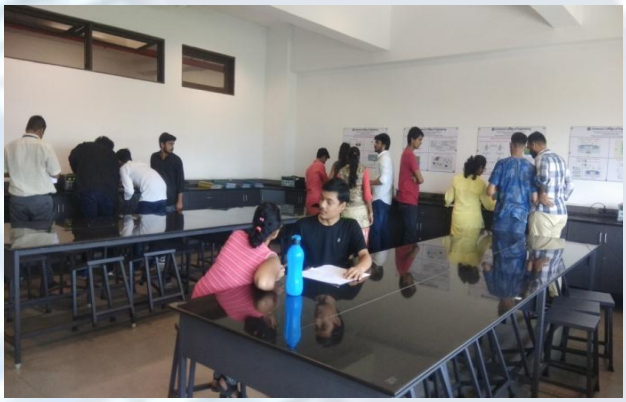
QUIZZE COMPETITION

Roborace- Roborace competition gives hands on operating of robos through racing competition.



ROBO RACE

I Only Give Negative Feedback- It's the circuit designing competition using Op-amp. This enhances circuit designing and also debugging skills among students.



I ONLY GIVE NEGATIVE FEEDBACK

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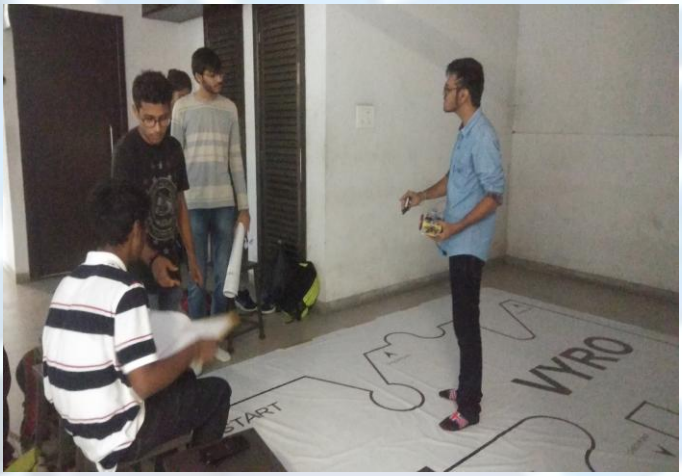
Mesh Merize(Line Follower)- Mesh merize is the robo- line follower competition that gives hands on practice of programming robo to follow path.



MESH MERIZE (LINE FOLLOWER)

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