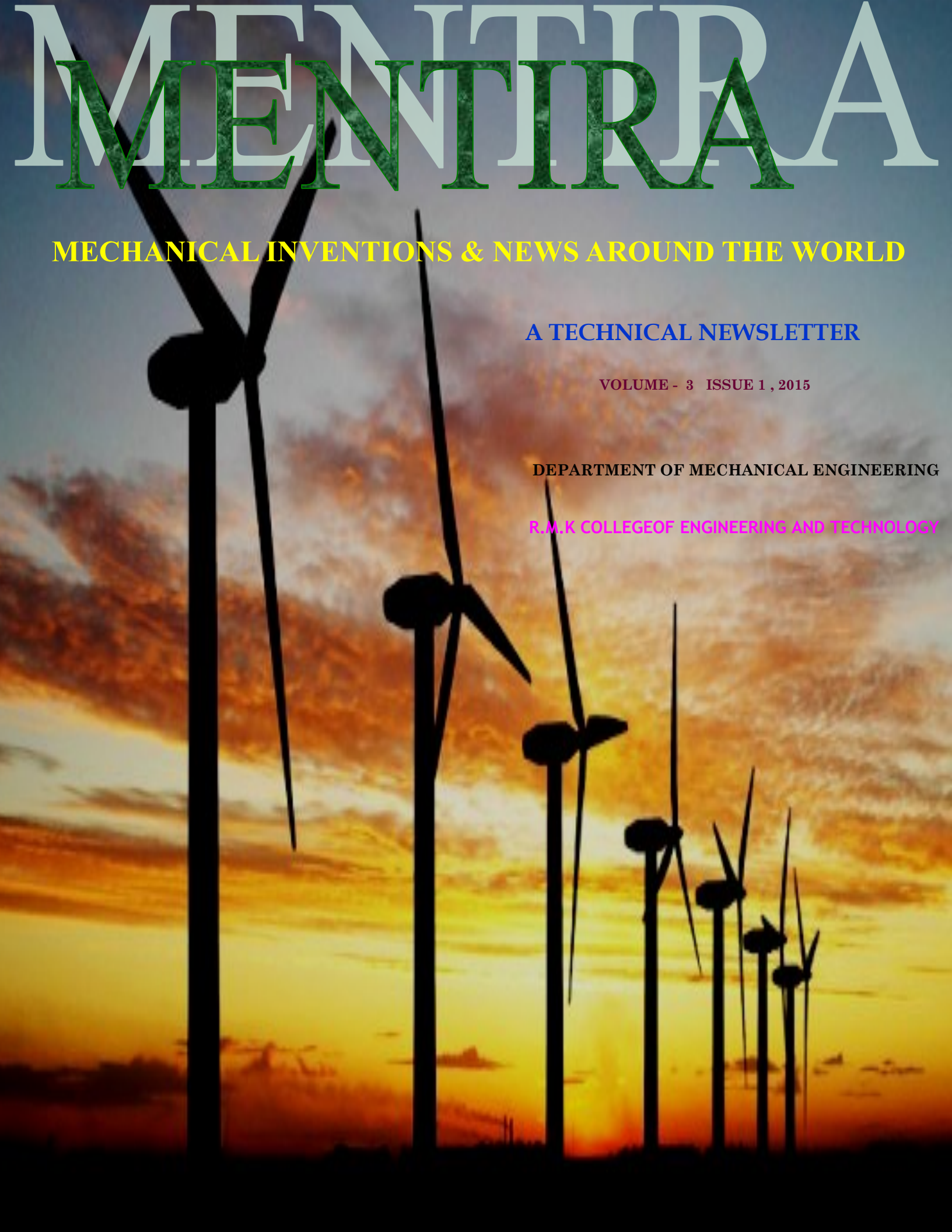
MENTIRA

MECHANICAL INVENTIONS & NEWS AROUND THE WORLD



A TECHNICAL NEWSLETTER

VOLUME - 3 ISSUE 1 , 2015

DEPARTMENT OF MECHANICAL ENGINEERING

R.M.K COLLEGEOF ENGINEERING AND TECHNOLOGY

There are more cars than people in Los Angeles

The average car has 30000 parts

It would take less than 6 months to get to the Moon by car at 60mph(95km/h)

A SELF BALANCING TWO-WHEELED CAR

Lit Motors Company founder Daniel Kim and 18-member team has invented two-wheeled car electric C-1. It has two wheels, like a motorcycle, but a steel and composite outer body, like a car. A patented control system, featuring two gyros that spin in a compartment beneath the driver's seat, is the secret to C-1's balancing act. The gyros provide the torque to keep the vehicle upright no matter what the driver does and to hold it at the precisely correct lean angle when the vehicle turns. The C-1 instead employs the foot-wide, high-speed, computerized technology of devices known as control-moment gyros (CMGs), which are mostly used for positioning satellites in space. A 10.4 kilowatt-per-hour battery pack lasts 150 to 200 miles on a single charge. (www.popsci.com)

VERTIGO – GRAVITY DEFYING ROBOT

Researchers at Disney Research Zurich worked together with mechanical engineering students at the Swiss Federal Institute of Technology in Zurich (ETH) to design and build the gravity-defying bot. The robot's front wheels are steerable like an automobile to change its direction. Two propellers of the bot can be controlled independently, enables it to scale buildings without falling to the ground. (www.livescience.com)

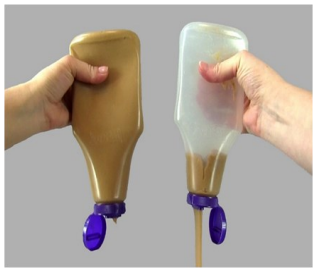
A PLANE THAT FOLDS INTO A CAR

Stefan Klein and Juraj Vaculík found AeroMobil aimed to translate personal liberty to the skies. Fourth prototype, AeroMobil 3.0 unfolded its wings, and took off on the vehicle's maiden flight. It soared in a 12-mile circle more than 800 feet off the ground and landed back at the same airfield. The prototype's 100-horsepower four-cylinder Rotax 912 engine runs on conventional gasoline. (www.popsci.com)

To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science.

- ALBERT EINSTEIN

SLIPPERY COATING

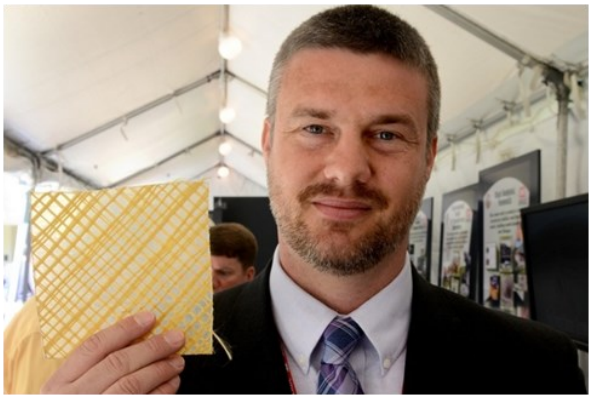


Retrieving last remaining blotches of condiments and sauces out of their containers is a frustrating affair. LiquiGlide Created by a group of MIT students is a custom coating that makes the inside of containers super-slippery, ensuring their contents come out with very little resistance. LiquiGlide is a permanently wet, liquid-impregnated surface which is designed to be hyper slippery, with the product sitting directly on a layer of liquid. (www.coolthings.com)

BALLISTIC WALLPAPER

The idea of a bullet-repelling wallpaper, won't just protect you from gunfire, it will also act as a protective net, catching all the debris, in case someone decides to shoot an RPG or detonate a bomb right on the side of your house. Ballistic wallpaper is meant for unreinforced living structures and temporary shelters. Made from kevlar fiber threads enclosed in a flexible plastic film, the wall cover can be applied onto the side of any vertical structure.

(www.coolthings.com)



ANTI-MICROBIAL PAINT SHIELD

Paint shield made by Sherwin-Williams to serve as protective and decorative cover for your walls. Unlike them, it comes with anti-microbial properties that allow it to kill various types of infection-causing bacteria. It can kill "greater than 99.9 percent of staph (staphylococcus aureus), MRSA (methicillin-resistant staphylococcus aureus), e. coli (escherichia coli), VRE (vancomycin-resistant enterococcus faecalis) and enterobacter aerogenes after two hours of exposure to the painted surface, as well as inhibit the growth of common microbes. The anti-microbial properties only stick around for up to four years at a time, requiring a fresh layer to get back the bacterial-killing potency.

(www.coolthings.com)

Only copper and precious metals are found in nature in their metallic state.

Platinum based drugs have been in use to treat cancer

The distance between insanity and genius is measured only by success. -BRUCE FEIRSTEIN

If Betelgeuse would explode transiting from the red super giant stage to supernova then our sky would light continuously for two months. It can happen anytime, within a couple of thousand years, tomorrow or even now

SYNERGY - A NEW CLASS OF AIR PLANE

Synergy is an airplane designed to safely fly one to six people directly from town to town, in less time and at less cost than airliners **or** automobiles. Its innovative technologies provide the key to economical regional transportation in the speed range between supercars and commercial jets. Right now personal airplanes are neither reasonable nor economical nor efficient. No fast planes offer the kind of seating, payload, and go-anywhere utility to compete with the family automobile, not even private jets. This is because no previous planes have used Synergy's systematic approach to reducing the **energy cost** of flight at higher airspeeds, while preserving low costs and low speed landings.

(www.synergyaircraft.com)

A BLADELESS WINDMILL

It may look like a giant airplane window strung with Venetian blinds, but this structure, designed by Dutch architecture firm Mecanoo and installed at the Delft University of Technology this month, is a model of a machine that would convert wind to energy without any moving parts.

(www.citylab.com)

GREASELESS BALL BEARING

Ball bearings have been around for hundreds of years having been used. It does suffer from lubrication problem. Autonomous Decentralized Bearings (ADB), which eliminate the need for grease in order to function properly. Created by Japanese outfit Coo Space, the bearings don't use cages to separate and evenly space the balls. Because of this, no friction is generated during the bearings' operation, eliminating the need for lubricants to smoothen things out.

(www.coolthings.com)

We owe a lot to INDIANS, who taught us how to count without which no worth while scientific discovery could have been made

- ALBERT EINSTEIN

LIGHTEST METAL

The material, known as a "microlattice," was developed by scientists at HRL Laboratories in Malibu, California, which is co-owned by Boeing and General Motors. The new microlattice is made up of a network of tiny hollow tubes and is roughly 100 times lighter than Styrofoam. Sophia Yang, a chemist at HRL Laboratories, This was actually made from nickel-phosphorous, microlattice's network of interconnected hollow tubes mimics the structure of bridge supports, walls of the tubes are just 100 nanometers thick 1,000 times thinner than the width of a human hair.

(www.livescience.com)

SEA WATER INTO DRINKING WATER

Researchers Mona Naim, Mahmoud Elewa, Ahmed El-Shafei and Abeer Moneer from the University of Alexandria announced a new method a salt-attracting membrane, embedded with cellulose acetate powder, used to separate the solid and liquid particles in seawater. The separated liquid is then heated until it vaporizes, condensed to get rid of small impurities, and then collected as clean drinking water. The process recognized as pervaporation.

(www.coolthings.com)

ECOROTR - WIND TURBINE MOUNTING

A dome-shaped object, it bolts to the turbine's rotor, looking like a giant shield that protects it from oncoming drones, bewildered birds runs into wind turbines. The dome actually redirects and refocuses the breeze to the outer edges of a turbine's blade, which is more efficient at harnessing the wind into usable energy, effectively increasing the turbine's resulting output. ECOROTR Created by GE Global Research is expected to raise a wind turbines output by at least 3 percent.

(www.livescience.com)

Research is what I'm doing when I don't know what I'm doing. - Wernher von Braun

The greatest tide change on earth occurs in the Bay of Fundy. The difference between low tide and high tide can be as great as 54 ft. 6 in. (16.6 meters).

FACTS ABOUT SUNDAR PICHAI - CEO GOOGLE

1. Born in Chennai in the state of Tamil Nadu, India, in 1972, Sundar's full name is Pichai Sundararajan. Though he had a modest upbringing, he's now worth a reported $150 million.
2. His father, an electrical engineer, had to save for three years to buy the family a new scooter, but made sure Pichai and his brother had the best education the family could afford, at Padma Seshadri Bala Bhavan.
3. Pichai was captain of his high school cricket team before earning his bachelor of engineering degree from the Indian Institute of Technology; his MS fromStanford; and an MBA from the Wharton School of the University of Pennsylvania. When Sundar won a scholarship to Stanford, his father withdrew more than his annual salary from the family's savings to fly him to the United States.
4. Prior to joining Google, he did management consulting with McKinsey & Company.
5. Pichai has been with Google since 2004, when he joined to lead product management for Google Chrome and Chrome OS. He was involved with Google Drive and went on to oversee Gmail and Google Maps, as well.
6. In 2011, Pichai drew attention when he was considered to lead product and replace Jason Goldman at Twitter. He chose to stay with Google.
7. In 2013, Pichai took over Android founder Andy Rubin's portfolio to run mobile platforms. He was also entrusted with wooing more than a billion global users to the Android ecosystem.
8. When he was almost lured away to Microsoft, Google reportedly negotiated desperately to retain Pichai for $50 million a year in stocks.
9. Though he was just appointed CEO of Google, Pichai has effectively been responsible for day-to-day operations at Google since October 2014.
10. Now married to his love Anjali, whom he dated in India before she joined him in the United States, Pichai is the father of two.

EDITORIAL COMMITTEE

Faculty committee :-

Mr.T.G.Loganathan.Associate Professor

Mr.A.Senthil Kannan. Assistant Professor

Mr.V.Dilli Babu.Assistant Professor

Students Committee :-