



PANIMALAR ENGINEERING COLLEGE

Accredited by NBA and Affiliated to Anna University
Approved by All India Council For Technical Education, New Delhi
POONAMALLEE, CHENNAI- 600 123.



DEPARTMENT OF MECHANICAL ENGINEERING

NEWSLETTER-THE TORQUE Ready to be driven

Vol. 16 | Issue 01
March 2021

EDITORIAL BOARD

Dr.P.CHINNADURAI, M.A, Ph.D.,
SECRETARY & CORRESPONDENT
Mrs. C.VIJAYARAJESWARI,
DIRECTOR
Mr.C.SAKTHIKUMAR, M.E.,
DIRECTOR
Mrs.SARANYA SREE
SAKTHIKUMAR, B.E.,
DIRECTOR

CHIEF EDITORIAL BOARD

Dr.K.MANI M.E., Ph.D.,
PRINCIPAL
Dr.L. KARTHIKEYAN, M.E., Ph.D.,
HOD / MECH

EXECUTIVE EDITOR

Dr.M. PUVIYARASAN, M.E., Ph.D.,

EDITOR- IN- CHIEF

Dr. A. ANBARASU, M.E., PH.D.,
Dr.T. MAYAVAN, M.E., Ph.D.,

ASSOCIATE EDITORS

Mr. T.S. SENTHIL, M.E.,
Mr. J. MURUGESAN, M.E.,

STUDENT EDITORIAL BOARD

Mr. P.BHUVANESH - Student
Member
Mr. J.BLESSON JOSHUA - Student
member

Inside this issue

| | |
|---------------------------|---|
| The Traub | 2 |
| First 3D printed building | 3 |
| Robobee | 4 |

FROM THE PRINCIPAL'S DESK

I appreciate the Department of Mechanical Engineering in coming up with a unique way to publish the Department newsletter. I hope that this letter will serve as a forum and opportunity for all Mechanical Engineering students and faculty to share and update information on recent breakthroughs in the area. I wish you the best of luck in your efforts to publish a large number of volumes.

FROM THE HOD'S DESK

I am really glad that our Mechanical Engineering Department is issuing this newsletter as a forerunner of the department's activities for this semester. It is critical that students know things other than the basics in all disciplines to help them in their careers. This newsletter in general will allow the professors and students to learn about the newest developments. It will undoubtedly be of benefit to the learners to enhance their knowledge base.



The Traub - Rarest motorcycle



The "Traub," the rarest motorcycle in the world, was found behind a brick wall in Chicago in 1968, and still runs to this day. An examination from Dale Walksler the current owner, reveals it can be dated back to 1916. The engine's technology was well ahead of its time, and even some mechanisms on it had never used on any other American motorcycle.

- P. Akash
III Mech

HITLER DESIGNED THE PROTOTYPE OF BEETLE DESIGN FOR VOLKSWAGEN



The World's First 3D-Printed Office Building



**P. Bhuvanesh
III Mech**

The world's first 3D-printed office building complex is open for business at the United Arab Emirates.



The approximately 2,600-square-foot, single-story, multi-building campus was designed by Gensler for the United Arab Emirates National Committee as the headquarters for the Dubai Future Foundation (DFF).



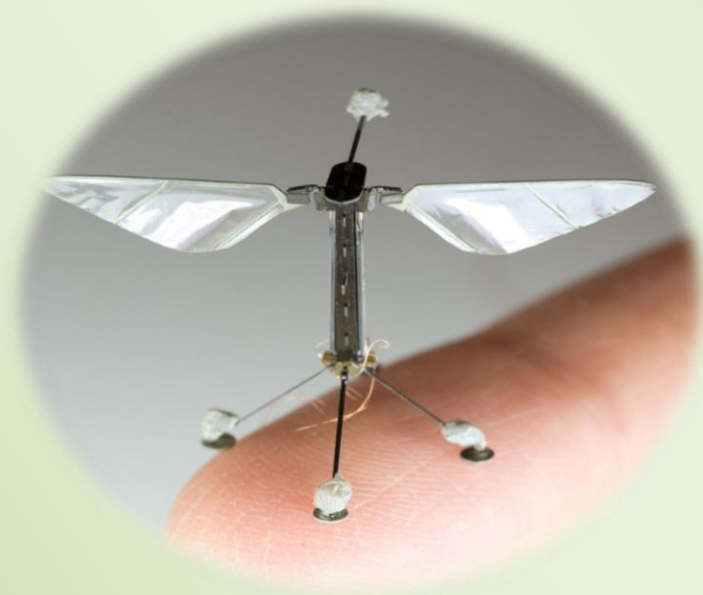
Each building is made up of multiple concrete components, which were fabricated using a 20-foot-tall by 120-foot-long by 20-foot-wide 3D printer from WinSun Global, in Shanghai, and then shipped to Dubai and assembled. The use of 3D-printing fabrication technology, plus the subsequent assembly process, the firm says, cut labor costs by 50 to 80 percent and overall construction waste by 30 to 60 percent.

ROBOBEE - *The Smallest Robot*



**M.P.Ashwin
III Mech**

RoboBee is a tiny robot developed by a Harvard University research robotics team that can fly partially untethered. RoboBee was the result of twelve years of research and solved two major technical hurdles in microrobotics.



Engineers developed a technology based on pop-up books that allowed them to build accurately and efficiently on a sub-millimeter scale. They constructed artificial muscles capable of beating the wings 120 times per second in order to accomplish flight.

The RoboBee project's goal is to create a completely autonomous swarm of flying robots that can be used for things like search and rescue, surveillance, and artificial pollination.



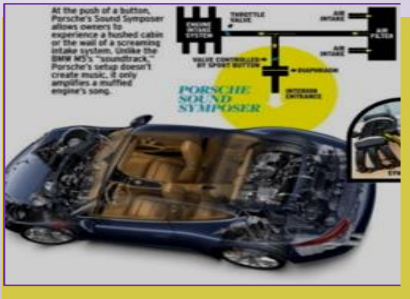
Several RoboBees sit on the ground, while another is held in tweezers with the wings activated.

The groups of RoboBees utilizing swarm intelligence will be highly useful in search and rescue efforts and as artificial pollinators. To achieve the goal of swarm intelligence, the research team has developed two abstract programming languages – Karma which uses flowcharts, and OptRAD which uses probabilistic algorithms. Potential applications for individual or small groups of RoboBees include covert surveillance and the detection of harmful chemicals.



Do you know???

Most new cars fake engine noise through speakers. They are quite silent otherwise.



Do you know???



The world record for removing and replacing a car engine is 42 seconds. This record was set by mechanics working on a Ford Escort on 21 November, 1985.