



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. 18 | Issue #1
March 2023

EDITORIAL BOARD

CHAIRMAN

Dr.P.CHINNADURAI, M.A, Ph.D.,
Secretary & Correspondent
Mrs. C.VIJAYARAJESWARI,
Director
Mr.C.SAKTHIKUMAR, M.E.,Ph.D
Director
Mrs.SARANYA SREE
SAKTHIKUMAR, B.E.M.B.A.,Ph.D.,
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.K. THIRUSELVAM, M.E., Ph.D.,

ASSOCIATE EDITORS

Mr.S.THAMIZHSELVAN
Mr. J. MURUGESAN, M.E.,

STUDENT EDITORIAL BOARD

Mr. GOKULAKRISHNA S
Mr. SANJAY S J

FROM THE PRINCIPAL'S DESK

I congratulate the Department of Mechanical Engineering for taking the initiative to bring out this Department newsletter in a fashionable manner. I hope this newsletter will provide the platform and opportunity to all the students and staff members of Mechanical Engineering to share and update the information on recent developments taking place in the field of Mechanical Engineering. I wish all the best for bringing out many volumes successfully.

FROM THE HOD'S DESK

I am very happy that our Mechanical Engineering Department is releasing this newsletter as a fore runner of the department activities for this semester. It is of upmost importance that students know things apart from the fundamentals in all fields to help them in their future. This newsletter in general will help the faculty and students to learn the latest developments. It will surely be of help to the students to advance their skills set.

GO KART EVENT



Our recent go-kart event was a thrilling experience for the mechanical engineering students, culminating in our team clinching the first prize! Months of hard work, teamwork, and engineering expertise culminated in this exhilarating race day.

From the outset, we focused on designing a lightweight yet robust kart, optimizing every component for speed and performance. Our team brainstormed various ideas, ultimately settling on a design that incorporated a powerful engine and advanced aerodynamics. Each member played a crucial role: some handled the chassis fabrication, while others focused on tuning the engine and ensuring our safety features were top-notch.

On race day, the atmosphere was electric. As we lined up at the starting grid, adrenaline surged through us. The race itself was a test of strategy and skill, with each turn presenting its own challenges. Our kart's agility allowed us to maneuver past competitors, and our careful preparation paid off as we maintained a strong lead.

BIO MECHANICS

Although the human body is an incredibly complex biological system composed of trillions of cells, it is subject to the same fundamental laws of mechanics that govern simple metal or plastic structures. The study of the response of biological systems to mechanical forces is referred to as Biomechanics. Biomechanics is often referred to as the link between structure and function.

Although it wasn't recognized as a formal discipline until the 20th century, biomechanics has been studied by the likes of Leonardo da Vinci, Galileo Galilei, and Aristotle.

The application of biomechanics to the musculoskeletal system has led to a better understanding of both joint function and dysfunction, resulting in design improvements in devices such as joint arthroplasty systems and orthotic devices.

Basic musculoskeletal biomechanics concepts are important for clinicians eg physical and occupational therapists and orthopaedic surgeons. A therapist assessment of a patient typically includes a biomechanical analysis

Biomechanics is an interdisciplinary field that applies the principles of physics to biological systems to understand how organism move and interact with their surroundings. Biomechanics is concerned with everything from microscopic systems like muscle contraction in cells, all the way to large-scale, whole-body motions like a sprinting athlete .

Biomechanics applies the laws of physics with regards to levers, pulleys and other known functions to define and understand the complicated forces involved in biological systems