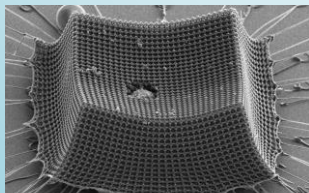




**LATEST IN MECHANICAL ENGINEERING!!**

**New Nanomaterial Resists Projectile  
Impact Better Than Kevlar**

Thinner than a human hair, new material can absorb impacts from microparticles traveling at supersonic speeds. Engineers at Caltech, MIT, and ETH Zürich have developed a nano-architected material made from tiny carbon struts that is more effective at stopping a projectile than Kevlar, a material commonly used in personal protective gear.



**INSIDE THIS ISSUE:**

- Latest Mechanical Engineering Inventions
- Vision, Mission
- Graduation day - 2023
- Jyothirgamaya - 2023
- Workshop on "Drone applications"
- Add on course on "Autodesk fusion 360"
- Faculty achievements
- Paper publications/Review
- Glimpses of Onam celebration
- PEOs
- POs and PSOs

**VISION**

"To become a centre of excellence in Mechanical Engineering, producing innovative and creative mechanical engineers to meet the global challenges"

**MISSION**

1. To Provide a platform to the students towards attaining quality education in Mechanical Engineering.
2. To Educate students about professional & ethical responsibilities and train them to build leadership and entrepreneurship qualities for their career development.
3. To Create opportunities and guide students in acquiring career-oriented jobs in the field of Mechanical Engineering.

## GRADUATION DAY - 2023

Graduation Day 2023 for the 2019-2023 batch of students was held on August 24, 2023, at the Ms. Gr. Mathew M Chalil Auditorium, VJEC. The event commenced with a Welcome Address by Dr. Benny Joseph, the Principal of Vimal Jyothi Engineering College, followed by a Presidential Address by Rev. Fr. James Chellamkottu, the Manager of VJEC. Dr. Vinu Thomas, Dean of Academics at Kerala Technological University, and Rev. Fr. Lazar Varambakath, the Bursar of VJEC, also graced the occasion. During the event, recognition was given to the top achievers, students earning minor degrees, students receiving honor degrees, as well as all the graduating students.



# JYOTHIRGAMAYA - 2023

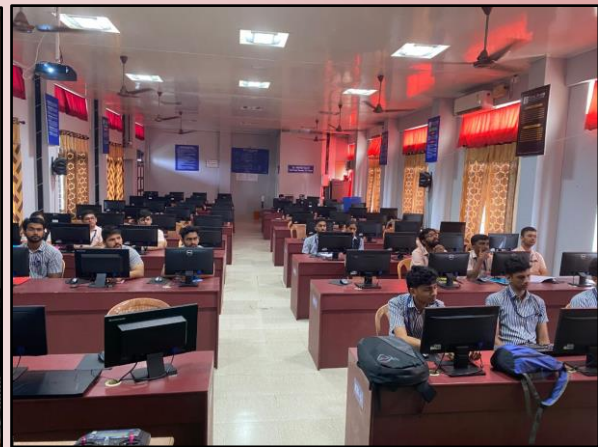
The inauguration program for the 2023 BTech and MBA batches, 'Jyothirgamaya 2023,' took place on September 4, 2023, at 9:30 AM at Msgr. Mathew M Chalil Auditorium. The event began with a Welcome Speech by Rev. Fr. Sony Vadasseril Asst. Manager, VJEC, followed by a Presidential Address by Msgr. Antony Muthukunnel, Chairman of VJEC. His Grace Mar Joseph Pamplany delivered the Inauguration and Blessing Speech. During the event, the toppers from each current batch were honored.



# WORKSHOP ON “DRONE APPLICATIONS”

IEEE ROBOTICS AND AUTOMATION SOCIETY

The IEEE Robotics and Automation Society (RAS) Workshop on Drone Applications was conducted at Vimal Jyothi Engineering College on August 17th and 18th, 2023. The Inauguration was led by Cdr Raju K Kuriakose (Retd), HOD, Department of Mechanical Engineering at VJEC. The Resource Person for the event was Mr. Akash Dinesh and his team from Enfono Technologies Pvt. Ltd., Kochi. The IEEE RAS VJEC Drone Workshop offered an enriching platform for participants to learn, collaborate, and explore the world of drone technology.



## ADD ON COURSE ON 'AUTODESK FUSION 360'

A 5-day add on course on 'Autodesk Fusion 360' by BIMLABS global was conducted for S7 Mechanical Engineering students (2020-24 Batch) at Vimal Jyothi Engineering College from September 18 to 22, 2023. The coordinators of the program were Cdr Raju K Kuriakose (Retd), HOD, Department of Mechanical Engineering, and Mr. Dilin Dinesh, Assistant Professor, Department of Mechanical Engineering, VJEC. In the session, students were introduced to the world of modern manufacturing techniques of the future, including the applications of generative design for optimizing current designs and the use of additive manufacturing to create complex components that are impossible to manufacture using conventional tools.



## **FACULTY ACHIEVEMENTS**

Mr. Biju K J, Technician in the Department of Mechanical Engineering at VJEC, has successfully completed a post-graduation program in Master of Arts (Public Administration) with a First-grade distinction from Indira Gandhi National Open University.



## **PAPER PUBLICATIONS/REVIEW**

Dr. Christopher Ezhil Singh reviewed a paper in 'Archives of Civil and Mechanical Engineering' titled: 'Effect of SPS Consolidation and Heat Treatment on Microstructure and Mechanical Behavior of FeCrAl-Y2O3 ODS Alloys with Different Ti and V Contents.' Manuscript Number: ACAM-D-23-01547.



## GLIMPSES OF ONAM CELEBRATION



### Program Educational Objectives (PEO'S)

**PEO1:** Graduates will be able to pursue successful professional career in Mechanical Engineering with sound technical and managerial capabilities.

**PEO2:** Graduates will have skills and knowledge to formulate, analyze and solve problems in mechanical engineering to meet global challenges.

**PEO3:** Graduates will be capable of pursuing mechanical engineering profession with good communication skills, leadership qualities, team spirit and professional ethics to meet the needs of the society.

**PEO4:** Graduates will sustain an appetite for continuous learning by pursue higher education and research in the allied areas of science and technology.

### Program Outcomes (POs)

**PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO2: Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3: Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations

**PO4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

**PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations



**PO6: The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO7: Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice

**PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

**PO11: Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO12: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### **Program Specific Outcomes (PSOs)**

**PSO1:** Ability to use advance design, modelling, analysis, manufacturing tools and techniques to provide a solution in mechanical engineering problems.

**PSO2:** Ability to design, develop, implement and manage a product development process.

***Staff Editor: Mr. Arunlal M P (Asst. Prof, ME)***

***Student Editors:***

***Mr. Nirmal Dev P (S7 ME), Ms. Anusree P Nair (S7 ME)***